

# Memorial High School Case Study

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## Memorial High School

**School Statistics:** (All statistics from 1998-1999 school year)

**Enrollment:** 1,104 (one of the smallest high schools)

**Grades:** 9-12

**Student Ethnicity:** 44% African American; 25% Asian; 5% Latino; 1% Native American; 25% White

**Low Income:** 84%

**ESOL:** 17%

**Special Education:** 14%

**Suspension Rate:** 6%

### Performance Responsibility Index(PRI) Data:

**Student Attendance:** Percent of students attending 90% of days or more 1995-1999, and 85% of days or more in 2000.

	1995-1996	1999-2000
Memorial High School	47%	42%
Citywide high school average	47%	49%

**Staff Attendance:** Percent of staff attending 95% of days or more.

	1995-1996	1999-2000
Memorial High School	86%	76%
Citywide high school average	72%	63%

**Promotion Rate:** Percent of students who graduated in four years.

	1995-1996	1999-2000
Memorial High School	37%	46%
Citywide high school average	49%	60%

**Stanford-9 Achievement Test (SAT-9) Scores:** Percent of Students at or Above Basic.

	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
Math	4.69%	13.52%	7.34%	6.67%	13.10%
Reading	12.50%	25.41%	28.90%	18.10%	28.50%
Science	.52%	4.10%	1.83%	1.90%	8.70%

## Introduction

The years from 1995 to 2000 in Philadelphia saw the introduction of sweeping educational reforms under a comprehensive plan called *Children Achieving*. In addition to major shifts in teaching practice and reorganization of individual schools and school groupings, the School District of Philadelphia set higher standards and began to measure progress through the introduction of performance measures.

When *Children Achieving* began, Memorial High School had very few students performing at or above the basic level in any subject area on the SAT-9, and scores have increased only marginally over the course of the reform. While the principal who served at Memorial from 1990 to 1999 was in many respects a visionary leader willing to embrace the most difficult changes required of the reform, his authoritarian leadership style created a climate of fear and mistrust. The hostile work environment, combined with several other factors—inadequate supports to help teachers change their practice, little parent and community involvement, and student apathy—made implementing the reforms difficult at Memorial. As a result, teaching and learning at Memorial changed very little over the course of the reform. While a new principal started at the beginning of the 1999-2000 school year, his reform agenda remains unclear, and the climate of hostility and mistrust between teachers and the administration remains.

## School Context

Memorial High School sits in the midst of a working class residential neighborhood. The school is surrounded by mostly well

kept row houses. There are a few shopping centers nearby and a trendy shopping and restaurant area just a mile or so away. The student population reflects the diversity of the neighborhood and the city—44 percent African American, 26 percent White, 25 percent Asian, and five percent Latino. Eighty-four percent of the students come from low-income families.

The school itself consists of a large, old building with an impressive marble foyer and a double staircase. While many city schools struggle with overcrowded conditions, Memorial houses a student body appropriate for its size. The hallways are wide and well lit, and most classrooms appeared to have adequate texts and instructional materials. Graphing calculators were visible in several math classes, and the science rooms contained lab tables, burners, and sinks appropriate for conducting experiments. Although the building appeared clean, evidence of maintenance problems existed. The paint was peeling in several areas, leaks were noticeable in classroom ceilings, and the building lacked sufficient heat during the winter.

Students and teachers generally appeared to get along well, and the school and the immediate environment felt safe. During classroom observations, student disruptions were limited to a high noise level on occasion and gregarious behavior normal for teenagers. With one of the smallest student populations (1,100 students compared with 2,000 to 3,000 in other high schools), the hallways were much less chaotic. On the 1999 teacher survey, conducted by the Consortium for Policy Research in Education (CPRE), 77 percent of Memorial teachers agreed with the statement, “My students feel safe coming to and going from this school,” compared to 67 percent of all high school teachers.

As part of the reform initiative, schools were encouraged to divide into “schools-within-a-school”—termed “small learning communities” (SLCs). Particularly at the high school level, this approach was designed to overcome students’ feelings of being lost in the crowd, and to provide them a chance to explore areas within a particular career theme or interest. Memorial had created the equivalent of SLCs many years prior to *Children Achieving*. At the time of this study, there were four SLCs: Humanities, Venturing into Professions (VIP), Multicultural, and the Academy for Law, Criminal Justice and Public Administration.

The Humanities SLC offered a liberal arts course sequence for college-bound students. The VIP SLC focused on building job skills for students intending to work after graduation. The Multicultural SLC emphasized the study of other cultures and languages, and the Academy for Law, Criminal Justice, and Public Administration offered a core set of courses related to law and law enforcement. With the exception of the Law Academy, which had a maximum enrollment of 200 students, the three other SLCs served approximately 350 students each. Traditionally, the college-bound students were assigned to the Humanities SLC, and other “good students” came from across the city, selected for the Academy<sup>2</sup> program. The ESOL students were assigned to the Multicultural SLC, and the rest of the “lower achieving” student population was assigned to the VIP SLC. The special education students were taught in self-

<sup>2</sup> The Academy for Law, Criminal Justice, and Public Administration is independently managed by Philadelphia High School Academies, Inc. (PHSA) which operates 28 academy programs in 19 Philadelphia public high schools. The academies receive resources from the PHSA above and beyond those provided by the regular school budget, and even though the academies operate within non-selective public high schools, they use admissions criteria such as test scores, grades, and attendance rates to select students from across the city.

contained classrooms. In 1996, the principal pushed the SLCs to become more heterogeneous and include more ESOL and special education students.

## Leadership and Reform Priorities

### 1990-1999

From 1990-1999, Memorial High School had stable leadership under the tenure of Mr. Jones, and his management style had a strong impact on the climate and reform priorities of the school. Early on during the *Children Achieving* initiative, he made decisions with little staff input about the focus of reform efforts at Memorial. He eliminated the practice of assigning students to SLCs based on their ability level, and he sought to increase the rigor of the coursework offered to all students in math and science. In a school district with deeply entrenched methods of tracking and sorting students at the secondary level, the principal’s willingness to open up programs equitably to all students reflected a relatively progressive attitude. However, his domineering leadership style offended many teachers and had a detrimental impact on the sense of community and trust within the school. In addition, very few supports such as training and coaching were put in place to help teachers make the necessary changes in practice. As a result, Mr. Jones’ agenda was never embraced by staff in the school, and it did not have a significant impact on teaching and learning.

**Fostering Inclusion:** Mr. Jones placed a high priority, during his tenure as principal, on ensuring that all students were given the opportunity to reach the new higher standards. He believed strongly that this could not be accomplished if special education students remained segregated

within the school community, so he made the issue of inclusion into regular classrooms one of his top priorities. He was also convinced that special education students needed to be included in all SLCs. "They need to be equally represented throughout the school. It's a school goal. It's a system goal. Equity is a major issue."

In 1996, Mr. Jones unilaterally eliminated self-contained special education classes at Memorial and evenly distributed special education students throughout the building. Special education teachers became monitors of student progress, sitting in on classes when possible and making accommodations when necessary. A staff member explained that this policy was implemented against the wishes of most teachers in the school and, as a result, the teachers filed a grievance against the school administration for adopting the practice. The principal noted proudly that in the end, "I fought all the battles, grievances and arbitration, and we did inclusion before anyone else." Unfortunately, the battle over inclusion created a deep divide between the administration and the faculty, and most of the teachers at Memorial remain unsupportive of the program.

One of the main complaints teachers had about inclusion was the range of ability levels they encountered in their classrooms. A math teacher said, "It's hard to teach standard deviation if [the students] don't know their times tables." In addition, teachers felt that little support was available to help them change their classroom practice to meet the needs of the special education students. Many regular teachers believed the special education teachers "did very little" to assist them, and felt they had not received adequate training on how to effectively change their teaching methods to reach all students. One staff member noted that while the inclusion system looked nice on paper, implementation had not gone

smoothly because teachers had not bought into it. When asked if the system was working, she said, "I can't honestly say it does or doesn't work, and it's still difficult." She described the topic as a "highly sensitive area" which, up until 1998, no one discussed, because "if you mentioned it, it was big trouble."

**Improving Math:** In 1995, after looking at the initial SAT-9 test score data, Mr. Jones decided that the school needed to reform its math and science programs because scores in those subject areas were particularly low. After seeing a presentation on the Interactive Math Program (IMP) recommended by staff from the Urban Systemic Initiative,<sup>3</sup> Mr. Jones decided—with little input from the rest of the school staff—that it should be adopted by the math department. He found some willing teachers and sent them to LaSalle University for training, and by the 1996-1997 school year, 20 percent of the students at Memorial were taking IMP classes. This percentage increased to 50 percent the next year and, by 1999, Mr. Jones pushed the math department toward full implementation of the program. He analyzed student performance data and compared a representative sample of students who had taken three years of the IMP curriculum with a group who had taken the traditional math track, and found that, "In every situation, the IMP kids were better—English, math, and science. It was astounding." He saw this as justification for adopting the program schoolwide.

Initially, the math teachers at Memorial were able to choose whether or not they would teach IMP or the traditional math curriculum, so there was little contention over the program. However, by the 1998-

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<sup>3</sup> The Philadelphia Urban Systemic Initiative was a five-year (1995-2000) systemic change effort funded by the National Science Foundation with the goal of getting high levels of mathematics and science achievement among all students in the School District.

1999 school year when Mr. Jones wanted all math teachers to begin teaching IMP, several teachers raised objections. The ESOL teachers felt that IMP was not appropriate for non-native English speakers because, "It's language based, and we're giving it to students with language barriers." Other teachers felt the program was too advanced for their students. When, despite these objections, the principal chose to adopt the program schoolwide, many teachers were upset. They felt marginalized, and this created tension between the teachers and the administration.

**Making Science More Rigorous.** As noted above, science was also chosen by Mr. Jones as another area in need of reform at Memorial due to the low test scores on the initial administration of the SAT-9. During the 1997-1998 school year, the traditional science sequence of general physical science, biology, and technology was replaced with biology, chemistry, and physics, which all students were required to take. The principal wanted every student taking more rigorous courses, so he eliminated easier science courses like environmental studies. To help teachers improve their instructional methods, Mr. Jones focused some professional development resources on having science teachers learn more hands-on activities. While a few science teachers were skeptical about offering higher-level classes to a traditionally low-achieving student body, the majority of the staff felt positively about the changes and believed they had the necessary support to make the transition.

## 1999-Present: New Administration

Mr. Jones, principal of Memorial High School for nine years, retired at the end of the 1999 school year, and a new principal, Mr. Lewis, was appointed to replace him.

Mr. Lewis previously worked in the school as an assistant principal, but left for three years to work in the private sector. He said he was "encouraged" by several people in the school to apply for the principalship when it became available. No doubt, Mr. Lewis was encouraged to apply because of his relaxed and easy-going administrative style, a sharp contrast to the authoritarian demeanor of Mr. Jones. During his first year at Memorial, Mr. Lewis made major modifications to the reform agenda of the school—making changes to the science and math curriculum and adding a focus on English and technology. He also recognized the need to improve the hostile feelings between teachers and administrators in the school. The major components of his agenda are outlined by subject area below.

**Changing the Science Sequence.** With the change in administration at the beginning of the 1999-2000 school year also came more changes to the science curriculum. Instead of biology, by the fall of the 2000-2001 school year, all of the ninth grade students were required to take an introductory physics course focused on general physical concepts. The course, Physics First, was something the new principal said "the District is advocating," and he felt required to implement it. Physics First was a program recommended by the USI. The course is intended to introduce students to basic concepts in physics without using formulas and math. With the implementation of Physics First in ninth grade, the sequence of science courses changed to chemistry in tenth grade, biology in eleventh grade, and another physical science course in twelfth grade to complete the four-year science requirement.

This new sequence of courses frustrated the science teachers at Memorial because it required them to revamp their curriculum. They had just adapted to the

biology, chemistry, and physics sequence implemented only a few years earlier under Mr. Jones, and as one teacher noted, “now it's all changing again.” In addition, the science teachers felt marginalized because the principal did not consult with them about this decision. Because Mr. Lewis believed he had no choice but to introduce the new course sequence, he did not seek faculty opinions about whether or not the change should be made. When researchers visited the school at the end of the 1999 school year, teachers were struggling to prepare for the new courses. One teacher noted that she was having difficulty finding physics materials appropriate for the ninth grade and was struggling to get the introductory physics class designed for the next year.

**Rethinking Math Instruction.** The previous principal dedicated time, energy, and resources to ensuring implementation of IMP schoolwide, and he believed it had a significant impact on student achievement. With the new principal, the future of IMP remains unclear. Mr. Lewis was not sure IMP was the right program for the school because it did not offer enough basic skill-building. He said:

*I want to blend the computational skills missing from IMP, but keep with the open-ended tasks in IMP and combine it with a project-based curriculum. I'm not sure how we're going to do that yet, if we're going to switch math series or something else. It's an on-going discussion in the math department.*

He also noted the difficulty of staffing the IMP classes because of the high rate of teacher turnover. He said:

*We had nine teachers trained to do IMP, but not all of them are still here. In the fall when I started, there were three math positions open and all three of them were IMP positions.*

*Only one of the people we hired was able to do IMP. The other two classes were empty for a month because we couldn't get teachers. So those were not IMP classes. It's a big problem.*

**Setting New Priorities.** In addition to the changes in the math and science programs, the new administration brought a new set of priorities to the school. Attendance became the number one issue for Mr. Lewis because “if they're not here, they can't learn.” When probed for his views on English, math and science, he said:

*I believe strongly that the English department drives the academics of the whole school. If the kids can't read and write, they can't do math and science. I've asked teachers to elevate writing, to get kids doing more of it in every subject area. I want them to be writing across the curriculum each year and working on vocabulary. From that, everything should seep out.*

Another priority for Mr. Lewis was technology. He said:

*I've also tried to give more structure to technology. Every student entering next year will have a computer literacy course. I want them to be exposed to web page design and e-commerce eventually...I've set up some carts with a laptop computer, printer, and wires which can go into any room. All the rooms are wired for the internet. I'm trying to uplift ideas among the teachers about how to use technology. I'm looking for some outside partners to give us time, money, expertise—anything.*

These topics reflected Mr. Lewis' priorities and not necessarily those of the teachers at Memorial. Six months into his administration, many teachers remained

unaware of his reform focus. This is discussed in more detail below.

## Professional Community

A growing body of research positively links strong professional community to student achievement. Creating a strong professional school culture involves setting high expectations for both teacher and student performance, valuing adults' and students' learning, being open to new ideas, and encouraging sharing among staff. In addition, schools with a strong professional culture have leadership that promotes the school's vision, actively works to create an environment focused on learning, and invites everyone—administrators, parents, teachers, and students—to shape the school vision and contribute to its enactment. Because of the dictatorial leadership style of Mr. Jones, Memorial lacked this sense of strong professional community. Staff morale was very low, and a high level of mistrust existed between teachers and the administration. Even though Mr. Jones has retired, the sense of mistrust remains. It is not yet clear if the new principal will be able to create a more positive culture.

***Principal-Teacher Relations.*** Under the tenure of Mr. Jones, teachers and SLC coordinators at Memorial felt that initiatives, mandates, and requirements were “shoved” down their throats. One staff member summed up the sentiments of many when she said, “Should we even have SLCs?...If the principal is going to make all the decisions, let's just be a high school.”

As the following table demonstrates, teachers' responses on the 1999 CPRE teachers' survey (administered while Mr.

Jones was principal) reflected their strong feelings of alienation.

Statement:	Percent Agree Memorial HS	Percent Agree All HS Teachers
Teachers are involved in making the important decisions in this school.	11.6	36.3
The principal at this school communicates a clear direction for our school.	34.9	59.7
The principal at this school is strongly committed to shared decision-making.	18.6	44.1
The principal has confidence in the expertise of the teachers.	27.9	69.6
It's OK in this school to discuss feelings, worries, and frustrations with the principal.	20.9	53.1
Teachers support the principal in enforcing school rules.	58.1	71.4

On another survey item, teachers were asked, "About how many teachers in the school are active in decision-making and/or planning committees e.g., Local School Council, Building Committee or other committees?" Fewer than three percent of Memorial teachers reported that most or nearly all teachers were involved, compared with 27 percent for high school teachers generally. In addition, fewer than half of Memorial teachers reported feeling respected by the principal compared to 70 percent of all high school teachers.

On every survey item related to the relationship between teachers and the administration, Memorial scored significantly lower than high schools generally. At the time the survey was administered, during Mr. Jones' tenure, teachers did not feel they were active participants in the decisions affecting the school, or that the principal viewed them as partners in reform.

The poor professional climate in the school was also reflected in the fact that Memorial High School experienced a high rate of teacher turnover. Over the past four years (1996-1999) 40.3 percent of the teachers at Memorial High School were new to the

school. This is one of the highest rates among high schools in the District. Only four other comprehensive high schools (out of 22) had more teacher turnover.

Recognizing these problems, the new principal, Mr. Lewis, made improving the climate and sense of community in the school a high priority. He wanted to encourage more communication, and created an "open door policy," so people would feel free to talk with him "anytime about anything." However, despite his intentions, there continues to be little discussion of major areas of instructional decision-making within the school, and teachers seem generally unaware of the principal's reform priorities. When asked about the principal's vision of the school, one teacher noted:

*He hasn't really set forth a vision. That's what makes it difficult. We don't know where he's going. It makes it difficult as a department. We need to know, who is taking the lead on this? We haven't received any information from him.*

When asked about the instructional priorities of the new principal, another teacher said:

*There aren't any. At least that's how I perceive it. Our SAT-9 is next week and he's been pressuring teachers to get kids prepared for it. We also have an accreditation plan we have to get ready before the committee comes to the school, so I've heard a lot about that. I don't know if there is a big picture of where he wants the school to go. At least I haven't really heard about it.*

While Mr. Lewis said he worked hard to include more teachers in the decision-making process in the school, the department chairs and SLC coordinators reported feeling more alienated than ever. When asked how often they had met with the new principal within the first six months of his tenure, one of the staff leaders said, "We have not met with the new principal at all this year," and another said, "We've had very little input into the decision-making process. I know him from being an assistant principal, and he's a very nice guy, but I'm not sure where he stands on certain things."

Teachers at Memorial did not believe the new principal had a coherent instructional vision or focus for the school. Whether or not this was simply because he was new to the school and had not had enough time to articulate his vision is not known. Unfortunately, the climate of mistrust and miscommunication, developed under the previous principal, continued under the new administration.

**Teacher-Teacher Relations.** Due to the climate established under the tenure of the previous principal, teachers at Memorial High School seemed to be united by a sense of "It's us against the administration" rather than any deep sense of collegiality.

While there were examples of collaboration from the past, there was a feeling that momentum had slowed, and any progress that had been made to change teaching practices and enhance curriculum had been lost. Several SLC Coordinators and teachers could give examples of professional development and collaborative curriculum planning that had occurred several years ago, but few could give examples of these activities occurring currently. In addition, teachers reported feeling less and less empowered to take risks and work together.

**Teacher-Students Relations.** In general, the students and teachers appeared to have established easy relationships with each other. In most classrooms, the environment did not seem stressful or hostile, and for the most part, students and teachers were respectful of one another. Teachers reported that the SLC structure had a positive impact on the school because it created a sense of belonging for students, making it less likely kids would get "lost in the shuffle." One teacher reported that the main benefit of SLCs was, "You get to grow with the kids and get a sense of them, you gain insight about their minds, because you see them so often...You can keep an eye on them and things don't get out of control."

Despite the feelings of good will, there remained a definite sense among teachers at Memorial that not all students could achieve at high levels—one of the underlying and most fundamental principles of the *Children Achieving* reform. On the 1999 teacher survey, over 90 percent of the teachers at Memorial agreed with the statement, "The attitudes and habits of my students greatly reduce their chances for academic success." Many teachers at Memorial, and in many other high schools, noted that given the high absentee rate among students (more than 50 percent of students miss 18 or more school days per year), it is impossible for

some students to learn what is necessary to meet high standards. Teachers also reported that the life circumstances of some students made it difficult for them to learn. One teacher pointed out that a number of immigrant students in the school, prior to coming to the United States, had lived on the streets (particularly those students from Cambodia) and had no formal schooling experience. He said, "Those students need a different kind of support—basic skills related to sitting in their seats, coming prepared to class, and learning how to study."

Teachers also lamented the low skill levels of their students. One of the science teachers explained that she emphasized concepts and process rather than working through equations because students' math skills were so weak. She said that most of them did not understand basic algebra. "Most don't even know that they need to divide an equation by the same thing on both sides, and I'd rather not spend time teaching them that." Instead, she tried to convey to them "a feel for what variables are changing, which are constant, and how they interact." She felt she could not introduce more rigorous content because students would not understand it.

Teachers' perceptions that inclusion was not working only reinforced their belief that not all students can learn at high levels. As one teacher noted, "We all think they [the special education students] can achieve. Of course we do. But there are different levels of achievement."

## Parent/Community Involvement

As in most other city high schools, parent involvement at Memorial was quite low. Numerous teachers noted that few parents attended parent-teacher conferences,

assemblies, or other school events. The president of the Home and School Association said it was difficult to get parents involved in activities at the school because they either did not have the time or simply were not interested. He noted that "as far as parents go, at the high school level, you lose them. We've tried to have meetings. You start with 15 to 20 people and end up with five to seven."

While this apathy may be typical of the attitude of the parents of high-school age children, it can also be attributed, at least in part, to the climate established in the school under the tenure of Mr. Jones. A functioning local school council with elected parent representation was never established at Memorial, and little was done to welcome parents into the school. A parent described a climate of fear among the school staff related to the principal. When he had a problem with a grade his daughter received, he tried to meet with Mr. Jones to discuss it, but could not get an appointment to see him. To force the issue, he called the cluster leader who then arranged for a meeting.

While the new principal believed he needed to improve the climate of the school and reach out to parents, it was too soon to tell if progress was made. It was also not clear if he had a strategy for changing these relationships.

## Supports for Reform

Reforming classroom instruction, at the heart of *Children Achieving*, is the most challenging of goals. Fundamental change in teaching practice occurs over an extended period of time and only with significant support and opportunity for experimentation—both of which were in short supply at Memorial High School. As the above section illustrates, teachers did not feel free to experiment with their

instructional methods due to the oppressive climate in the school. In addition, the few supports put in place to help teachers make the rigorous changes in practice needed to meet the demands of the reform proved to be inadequate. This is discussed in more detail next.

## Supports for Changing Instruction

**Small Learning Communities.** In the *Children Achieving* agenda, SLCs were expected to be a vehicle for improving instruction at all grade levels. By bringing teachers together, encouraging and supporting collaboration, and breaking down isolation, they were intended to advance their members' knowledge of practice and their use of that knowledge. At Memorial, conversations intended to improve curriculum and instruction did not happen in any systematic way. Teachers had no common scheduled meeting time during the school day. The previous principal, Mr. Jones, reported that this was simply "not doable" in terms of the roster. When teachers did have a common prep period, the principal explained that he could not, because of the union contract, dictate how they used that time. As a result, SLC teams met when they could find the time, and this happened infrequently—only six to eight times per year.

Providing common planning time to SLC teams was difficult because many teachers were assigned to more than one SLC. Because teachers at the high school level must be certified in the particular subject area in which they teach (unlike middle and elementary schools), if there was a shortage of a particular type of teacher, in a particular content area, he or she would be assigned to cover that subject in another SLC. At Memorial, this was particularly problematic in the math and science departments. As one of the math

teachers noted, "We're spread so far apart. One way that comes into play is when you have your SLC meetings. We're supposed to discuss [particular] children. A teacher who might be integral to helping the child might be absent from the meeting because they're rostered to another SLC."

In addition, SLC teams at Memorial lacked the authority to make decisions about their own curriculum and resources. Mr. Jones imposed the IMP program on the entire school, and also revamped the science courses. All SLCs were required to implement these changes. While SLCs were given their own budgets, Mr. Jones told them how to spend the money. For example, the Multicultural SLC had an annual budget of \$14,300, but the principal said they must use the money to pay for their own photocopying, phone bills, and internet time. Because they lacked the necessary time and authority to engage teachers in conversations about curriculum and instruction, some teachers at Memorial believed SLCs existed "in name only."

**The Teaching and Learning Network (TLN).** The other main support for instructional change in the *Children Achieving* agenda was the Teaching and Learning Network which operated out of the cluster office.<sup>4</sup> The main objective of the TLN was to provide professional development and support to teachers as they redesigned curricula and revised pedagogy and assessment procedures in accordance with District standards. The TLN in the Memorial cluster consisted of one coordinator and four facilitators who served the comprehensive high school, two special admission high schools, and nine K-8 schools.

<sup>4</sup> A comprehensive neighborhood high school and its feeder middle and elementary schools constitute a cluster. Clusters are a key structural support in the *Children Achieving* theory of how to improve schools and student achievement. They serve as the locus of professional development and social services for schools.

Staff at Memorial High School viewed the cluster staff and, more specifically, the TLN facilitators, as unhelpful. Staff described the assistance offered by facilitators as “useless” and “pointless.” One teacher described the cluster system as a “waste of money” and another described the training offered by the cluster staff as “cutesy and unrealistic.” Teachers complained that the cluster professional development staff had very little high school experience and thus had nothing to offer them as trainers. On the 1999 teacher survey, only one-quarter of Memorial teachers agreed with the statement, “Overall, the professional development experiences sponsored by my cluster and school this year have led me to make changes in my teaching.” In addition, only 20 percent of teachers at Memorial agreed that the overall effect of the TLN had been positive. These sentiments were consistent with those expressed by high school teachers throughout the city.

**Department Chairs.** While many high schools had to cut department head positions in order to fund the newly created position of Small Learning Community Coordinator, under the tenure of Mr. Jones, department chairs were created in English, math, science and social studies. Mr. Jones was able to establish these positions because department chairs are cheaper than department heads—teachers in the “chair” position do not receive an increase in salary or have as much time outside of the classroom as department heads. The people selected for these positions were to act as instructional leaders within their subject areas. Mr. Jones felt this was an important position to add to the school because “SLC coordinators are not curriculum coordinators [and] they rarely have expertise.” While there was some initial resentment in the school as to how the department chairs were selected, several teachers mentioned that the person in that

position proved helpful to them in terms of offering advice on classroom management, instruction, and curriculum. However, the department chairs had only one period of release time per day, and there was no scheduled time for teachers within the same departments to meet, so their impact was hampered.

**University Partnerships.** Memorial High School did not have a strong external partner working with faculty and staff schoolwide. Instead, external partnerships were more narrowly focused on particular areas and through the SLCs. In 1993, the Multicultural SLC was awarded a technology grant from the Community College of Philadelphia (CCP). CCP provided them with support including training and money to finance a computer lab. The Humanities SLC had a relationship with Temple University whereby the SLC took in student teachers and practicum teachers. In exchange, the teachers in the SLC attended the Temple Institute on Disabilities to learn how to teach kids with special needs. While these partnerships were well aligned with two of the priorities of the school, technology and inclusion, it is not clear from the data if they made any significant impact on instruction. The impact may have been diluted because of the high teacher turnover rate at Memorial and/or because only a few teachers participated in the training.

**Urban Systemic Initiative (USI).** The instructional reforms at Memorial High School centered on math and science, and the USI was an important support for the curriculum changes made in the school. Because the Interactive Math Program was implemented schoolwide, most of the math teachers participated in the IMP training sessions offered by the USI staff in the School District. Some of the science teachers also participated in USI professional development. In addition, through grants offered by USI, teachers

purchased books and materials. While the training provided by USI in math impacted the curriculum—primarily on increasing the rigor of the coursework required of students—the training had not yet created fundamental changes in teaching methods.

Overall, the supports available to assist teachers in changing instruction proved to be inadequate. As a result, teaching methods and student achievement changed very little over the course of the reform. A more detailed description of instruction is provided in the next section.

## Classroom Instruction

Both principals at Memorial High School promoted the *Children Achieving* philosophy of standards-based instruction and wanted teachers to use constructivist teaching techniques to help students reach the standards. Constructivist teaching involves creating classroom opportunities for students to test their own understandings of phenomena and to construct explanations that take in new knowledge. The types of instructional strategies that characterize a standards-driven classroom include—opportunities for investigations and classroom discussion, cooperative small group activities, opportunities for students to review and reflect on their own and each other’s work; opportunities for analytic writing, and the use of “manipulatives” and other hands-on activities.<sup>5</sup> In addition to the use of innovative teaching techniques, standards-based instruction should improve the intellectual quality of student work by promoting higher-order thinking, providing deeper knowledge of a topic, encouraging substantive conversation, and making

connections to the world beyond the classroom.<sup>6</sup>

As part of the *Children Achieving* evaluation, researchers conducted observations of teaching at Memorial High School in 1997, 1998, and 1999. An analysis of these observations shows that many teachers used traditional instructional methods instead of constructivist techniques, and this changed little over the course of the reform. However, the intellectual rigor of some courses, especially those in math, increased with the adoption of IMP. Unfortunately, many teachers lacked the necessary subject area knowledge to adequately teach math at this higher level. The following are summary excerpts from classrooms observed by members of the evaluation team. They represent the range of teaching and learning taking place in the school.

Below is an example of the most traditional type of teaching observed:

Biology Class, 10<sup>th</sup> grade (June 3, 1998):

*There are approximately 12 students in class. It is early June and the teacher is filling time with a video called “The Human Body” with Bill Nye, the Science Guy. It describes the purpose and pathway of white blood cells. This engaging video moves between being a cartoon, a set of illustrations, funny scenarios with “real people,” and various lessons that should be learned about the body and the blood in particular. The teacher made points throughout the video, but she asked no questions, so it was difficult to know if students were learning anything. There was a low level of tension in*

<sup>5</sup> E. Simon, E. Foley, and C. Passantino. *Making sense of standards: Implementation issues and the impact on teaching practice*. Philadelphia: Consortium for Policy Research in Education, 1998.

<sup>6</sup> F. Newman, W.G. Secada, and G.G. Wehlage. *A guide to authentic instruction and assessment: Vision, standards and scoring*. Madison, WI: Wisconsin Center for Education Research, University of Wisconsin-Madison, 1995.

*the room, as the teacher was yelling at students periodically to sit up to keep them from sleeping. Toward the end of the period, the teacher informed the group that if they failed to sit up, they would receive a writing assignment the following day.*

This lesson falls far short of the type of standards-based instruction envisioned by *Children Achieving*. There was a very low level of student engagement, the teacher did little to try to involve them, and the emphasis was on discipline as opposed to teaching and learning. No constructivist teaching techniques were used and the intellectual rigor of the lesson was very low.

The next lesson is an example of one that uses innovative techniques, but falls short in terms of intellectual challenge:

Chemistry Class, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grades (May 27, 1998):

*There are 19 students in the class. The lesson is about atoms, molecules, and electrons with a focus on the meaning of different suffixes and prefixes in chemical compounds. At the start of the class, the teacher reviewed with students what they had done the day before, which was building methane and ethane molecules using marshmallows and toothpicks. Several of the students had not been present the day before, so she spent some time creating groups in which there was at least one student who had attended the earlier class. The introduction to the lesson was cursory; students should build more models, this time of ethene, propene, and ethyne. Surprisingly, the teacher told them up-front that propene "has three carbons; so only one of those bonds is double," thus negating the investigative potential of the lesson.*

*This lesson seemed fairly elementary to me for high school students, especially because any of the really tricky things (such as the fact that propene could have only one double bond because it only has three carbons) were pointed out to the students in advance. The students seemed to find the model building very simple, but during the introductory part of the class, they didn't seem to be that serious about it, or maybe they simply weren't listening. They frequently asked questions or gave blank stares about things that the teacher had talked about moments earlier. The teacher asked challenging questions, but she frequently needed to break them into short leading probes in order to get responses. For example, "What is the difference between methane and ethane?" turned into a series of short questions that she had to lead the class to answer.*

In this lesson, the teacher used small groups and encouraged peer collaboration with the potential for students to "construct" their own knowledge of chemical compounds. She also had students using manipulatives. However, the teacher provided the students with the main "finding" of the experiment up front, thus reducing the intellectual rigor of the lesson. Student engagement in the experiment was quite low, and the teacher did not try to relate the lesson to real-world issues.

In another example, the intellectual rigor of the lesson was high, but it was taught in a traditional manner without enough explanation for students to understand the concept:

### IMP Class, 10<sup>th</sup> grade (May 8, 1999)

*There were 19 students and two teachers in the class: Ms. SG (the subject of this observation) and her co-teacher. [Every IMP class is required to have two teachers.] The second teacher only handled the warm-up problem. The main lesson was the final part of a unit on statistical concepts called "Is there really a difference?" The students were learning about chi-square. The main activity of the class involved a problem which had to do with the "fairness" of the coins flipped by three different people. After being given a set of data, students were supposed to answer the question, "According to chi-square, whose coin is the fairest?" The previous day they had predicted that Bernard's coin was the least fair and Cynthia's was the fairest. Students worked individually to conduct calculations for each of the people's coins.*

*This lesson, although it was covering a topic area that seems fairly advanced for a high school math curriculum, was really much more like a traditional algebra class. Students were just filling numbers into a formula, with no indication that they understood what the numbers meant. I am not sure that the teachers fully understood the statistic. The warm-up problem used chi-square in a wholly inappropriate and confusing way, and the rest of the class was basically a demonstration of several similar problems. The concept of chi-square was never fully elaborated on, and there was no attempt to explain it.*

While the implementation of IMP increased the rigor of the math curriculum at Memorial, as demonstrated above, many teachers had not adopted the constructivist

teaching techniques intended to accompany it. In this lesson, students simply plugged numbers into an equation without understanding why, and the teacher made no attempt to connect the lesson to real-world issues. In addition, the teacher did not fully understand the concept she was trying to teach, thus making it much more difficult for students to learn.

As the above classroom observation excerpts demonstrate, some teachers at Memorial successfully adopted constructivist teaching techniques and increased the intellectual rigor of their lessons. However, most teachers were in a transitional phase and in need of more support to make fundamental changes in their practice.

## Conclusion

Implementing standards-based instruction requires much of those who work in schools. It requires new curriculum and deep pedagogical changes that occur only over extended periods of time with intensive support. Teachers at Memorial High School were not provided with enough guidance, time, or support to make these changes. They did not receive adequate training to make the transition to standards-based instruction. Opportunities to participate in content-based professional development, work collaboratively with other teachers, observe expert colleagues, and receive coaching in their own classrooms did not happen with the frequency needed to create widespread changes in practice.

In addition to the lack of supports, the professional climate in the school was one of mistrust and miscommunication. Teachers did not participate in developing the reform agendas set by either the

former or current principal. As a result, many never bought into the reforms nor did much to change their practice.

Under these conditions, it is not surprising that instruction and student achievement have improved only marginally. As the chart on the first page of this case study illustrates, scores on the SAT-9 improved very little at Memorial High School over the course of *Children Achieving*. For future progress to occur, teachers must believe that the reforms are both desirable and doable, and they must be provided with the time, support, and opportunity to develop new skills.