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ABSTRACT

Project GRAD (Graduation Really Achieves Dreams) is a not-for-profit school-community collaborative designed to improve instructional quality and culture within at-risk feeder school systems in inner cities. This research-based school reform model reforms large urban school systems through incremental expansion, one K-12 feeder cluster at a time. It prescribes a strong, well-articulated K-12 curriculum that ensures that all students are insulated from academic failure, graduate from high school with direction, and pursue higher education. The targeted curricular areas are math, reading, classroom management and student discipline, parental involvement, and pursuit of college. The most prominent element/activity of the intervention is the provision of intensive professional development activities for all relevant personnel. The program also offers a college scholarship program and community support. The overall goal of the 1998-99 evaluation was to provide a summative assessment of project effectiveness/impact and formative assessment/documentation of its implementation elements and processes in the Houston Independent School District, Texas. Results indicate that the Project GRAD model had consistent, predictable, positive impacts on student discipline, academic performance, time on task, and college attendance. (Contains 63 references.) (SM)

Project GRAD

–Graduation Really Achieves Dreams –

1998–99

PROGRAM EVALUATION REPORT

by

Kwame A. Opuni, Ph.D.

December 20, 1999

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EXECUTIVE SUMMARY

Project Description

Project GRAD is a not-for-profit school-community collaborative whose sole purpose is to improve the instructional quality and culture of at-risk feeder school systems in the nation's inner-cities. The methodical and successful search by Project GRAD for the most cost-effective solutions to the unique instructional needs of inner-city K-12 schools has produced the Project GRAD Model, a research-based school-reform model designed to reform large urban school systems through incremental expansion, one K-12 feeder cluster of schools at a time. The model prescribes a strong and well articulated kindergarten through 12th-grade curriculum that ensures that all students, regardless of socio-economic status, are insulated from academic failure, eventually graduate from high school with distinction, and pursue higher education. The targeted curricular areas of the model are math, reading, classroom management and student discipline, parental involvement, and the pursuit of college.

In five years, Project GRAD has emerged on the national scene as perhaps the most prominent, resourceful, and comprehensive urban school-reform initiative in the country. Project GRAD's successes have demonstrated that the intricate and problematic challenges confronting the nation's inner-city school systems can be overcome with appropriate resources, strategies, perseverance, and school-community collaboration. The model's replication has expanded in two significant ways: locally, from its first feeder system of nine schools (Davis High Feeder) in 1994-95 to two additional feeder school systems (Yates High and Wheatley High) during the last three years; and nationally, with implementation efforts underway in Atlanta, Columbus, Los Angeles, Nashville, and Newark.

Project Year 1998-99 Evaluation Goals

The overall goal of the 1998-99 evaluation was to provide: a) a summative assessment of the project's effectiveness/impact; and b) a formative assessment/documentation of the project's implementation elements and processes. This executive summary provides a synopsis of the summative evaluation findings.

SUMMARY OF MAJOR EVALUATION FINDINGS

Project Effectiveness/Impact

With the firm rooting of Project GRAD's unique blend of curricular practices in the Davis feeder schools, and continuing expansion of the model into the Yates cluster of schools, the successes that began in the Davis Vertical Team of schools in 1994-95 have received incremental validation in the Yates Vertical Team of schools. The following evaluation findings vividly demonstrate why the initiative has emerged as one of the nation's most powerful and effective curricular reform models.

1. Project Impact on College Attendance

Since Project GRAD's humble beginnings in 1989, the annual 12% of college-bound high school graduates of Davis High School has increased to an average annual rate of 50%, a figure that significantly exceeds the national average of 37% for Hispanic seniors and about 33% for African American seniors (U.S. Dept. of Education, 1994). Out of the Davis High School's graduating class of 292 in May 1999, 175 students qualified for the college scholarships of whom 102 students are already in college. Twenty-five are making plans to enter in the spring semester of year 2000. Indeed,

over 800 Davis High graduates have entered college since 1991-92. The number of students entering college from Yates High School more than doubled from 40 in 1998 to 97 in 1999, the first year of the Conoco-Grizzard scholarship program.

2. Project Impact on Student Behavior/Discipline

- Davis feeder elementary schools experienced a 74% overall reduction (1,017 to 268) in the number of discipline-related student referrals to the offices of principals by the end of the fourth year of CMCD's implementation.
- In the Yates feeder schools, where pre-project year data were unavailable, the number of referrals to the offices of principals declined by 22% from 935 in year one to 729 in year two of CMCD's implementation.
- All of the Davis feeder schools experienced moderate/significant improvements in student discipline and conduct between 1994-95 and 1998-99.
- Davis schools with substantial levels of perceived improvements in student discipline/conduct included: Martinez Elementary, Lamar Elementary, Ryan Elementary, and Marshall Middle.
- Yates schools with substantial levels of perceived improvements in student discipline/conduct were: Blackshear, MacArthur, Peck, Whidby, Ryan Middle, and Cullen Middle.

3. Project Impact on Instructional Time-on-Task

After five years of CMCD implementation in Davis feeder schools and two years of CMCD implementation in Yates feeder schools, teachers have observed substantive increases in the time saved daily for productive instructional use. Consequently, participating teachers lengthened the 1998-99 school year by 14 days (Davis elementary schools); 15 days (Marshall Middle); 11 days (Davis High); 15.5 days (Yates elementary schools); 12 days (Cullen Middle); and 10.5 days (Ryan Middle) at no cost to the district.

4. Project Impact on Student Performance

a) Annual Schoolwide Snapshots

Most participating schools have experienced substantive increases in student performance levels in reading and math since Project GRAD was initiated. Table ES-1. illustrates the gains achieved in the percent of students passing the Texas Assessment of Academic Skills (TAAS) test since Project GRAD was initiated five years ago (1994–99) in the Davis Feeder Pattern and three years ago (1996–99) in the Yates Feeder Pattern. To facilitate a longitudinal assessment of TAAS data, the 1998-99 TAAS results have been adjusted to reflect Houston ISD's testing/exemption policies prior to 1998-99.

Table ES-1. Improvement in TAAS Passing Rates in Project Schools

Davis Feeder Schools	Math ('94-99)	Reading('94-99)
Davis Feeder Elementary Schools	44% – 69%	63% – 71%
Marshall Middle School	28% – 61%	45% – 61%
Davis High School	42% – 77%	51% – 77%
Yates Feeder Schools	**Math ('96-99)**	**Reading ('96-99)**
Yates Feeder Elementary Schools	70% – 67%	74% –76%
Cullen Middle School	39% – 61%	56% – 61%
Ryan Middle School	55% – 65%	80% – 75%
Yates High School	25% – 71%	63% – 83%

b) Longitudinal Cohort Monitoring: Statistical Analyses

In the wake of high student mobility rates, which necessitate the inclusion of new or recent student arrivals representing about 50% of students tested in all participating schools, annual school-wide snapshots of student performance levels may not be the best measures of the model's impact. Consequently, cohort monitoring is recommended for the Project GRAD model whose philosophical premise is a guarantee of: a) a solid foundation in early grades, and b) an adequate insulation from academic failure if students stay through high school. The performance levels of the Project GRAD's cohorts were statistically compared to comparison cohorts in corresponding Houston ISD schools with similar demographic and performance levels, in determining the models' effectiveness. *In each of the following nine cohort comparisons, Project GRAD students significantly outperformed students in the corresponding comparison school(s).*

Davis Lower Primary Cohort: Grades K-4

- The 1998-99 Fourth Grade Students (Grades K-4 Cohort) in Davis feeder schools, who had been tested in kindergarten (Fall 1995) with the Woodcock Reading Mastery Test-Revised (WRMT-R) instrument and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the spring 1999 **TAAS test.**
- The 1998-99 Fourth Grade Students (Grades K-4 Cohort) in Davis feeder schools, who had been tested in kindergarten (Fall 1995) with the Woodcock Reading Mastery Test-Revised (WRMT-R) instrument and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the **Stanford test.**
- In both reading and math, the achievement of significant Effect Sizes on the TAAS and Stanford-9 tests demonstrated that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Davis Upper Primary/Middle Cohort: Grades 3-7

- The 1998-99 Seventh Grade Students (Grades 3-7 Cohort, Marshall Middle School's seventh grade students from Project GRAD elementary schools), who had been tested in third grade (Spring 1995) with the TAAS test and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the spring 1999 **TAAS test.**
- The 1998-99 Seventh Grade Students (Grades 3-7 Cohort, Marshall Middle School's seventh grade students from Project GRAD elementary schools), who had been tested in third grade (Spring 1995) with the TAAS test and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the **Stanford test.**
- In both reading and math, the achievement of significant Effect Sizes on TAAS and Stanford-9 tests further demonstrated that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Yates Lower Primary Cohort: Grades 1-3

- The 1998-99 Third Grade Students (Grades 1-3 Cohort) in Yates feeder schools, who had been tested in first grade (Fall 1996) with the Stanford-9 Achievement test and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the spring 1999 **TAAS test.**

- The 1998-99 Third Grade Students (Grades 1-3 Cohort) in Yates feeder schools, who had been tested in first grade (Fall 1996) with the Stanford-9 Achievement test and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the spring 1999 **Stanford test.**
- In both reading and math, the achievement of significant Effect Sizes on the TAAS and Stanford-9 tests further demonstrated that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Yates Upper Primary Cohort: Grades 3/4-6

- The 1998-99 Fifth Grade Students (Grades 3-5 Cohort) in Yates feeder schools, who had been tested in third grade (Spring 1997) with the TAAS test and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the **TAAS.**
- The 1998-99 Fifth Grade Students (Grades 3-5 Cohort) in Yates feeder schools, who had been tested in third grade (Spring 1997) with the TAAS test and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the **Stanford.**

Yates Middle School Cohort: Grades 6-8

- The 1998-99 Eighth Grade Students (Grades 6-8 Cohort) in Yates feeder schools, who had been tested in fifth grade (Spring 1996) with the TAAS test and re-tested with spring 1999 Stanford test, outperformed students in comparison cohort in both math and reading on the **Stanford.**

c) Grade Equivalent (GE) Scores of Yates Lower Primary Cohort

- The overall average GE score of the first grade cohorts in all 12 schools in 1996-97 was one month above the national average GE score in reading and three months below the national average score in math. These cohort averages increased by: a) two GE units to three months above the national average in reading by the end of third grade (Spring 1999); and b) six GE units to three months above the national average score in math by the end of third grade (1999).
- In three years, seven out of 12 Yates elementary schools showed increases of one to six academic months above grade level in reading, while 10 schools showed average increases of 1-13 months above grade level expectations in math.

Concluding Comments

These findings vividly demonstrate the consistent and predictable impacts of the Project GRAD model on student discipline, academic performance, time-on-task, and college attendance. It is not surprising that Project GRAD continues to remain in the national limelight as one of the nation's most powerful and effective curricular reform initiatives. Indeed, Project GRAD provides a significant demonstration of the productive character of concerted public and private searches for solutions to the challenges that face today's inner-city schools. As Project GRAD expands into a third feeder cluster of schools during the 1999-2000 school year, it has substantially revealed its many strengths and context-related challenges. The appreciation of these challenges provides the insights and opportunities for improving not only the elements of the respective components of the model, but also the tailoring of implementation strategies and perspectives to the needs of project beneficiaries.

PROJECT GRAD EVALUATION: 1998-99

INTRODUCTION

Project GRAD's Perspectives

Project GRAD is a not-for-profit school-community collaborative whose sole purpose is to improve the instructional quality and culture of at-risk feeder school systems in the nation's inner-cities. The methodical and successful search by Project GRAD for the most cost-effective solutions to the unique instructional needs of inner-city K-12 schools has produced the Project GRAD Model, a research-based school-reform model designed to reform large urban school systems through incremental expansion, one K-12 feeder cluster of schools at a time. Major components of the model are: MOVE IT Math (Mathematics focus); Success for All (Reading focus); Consistency Management & Cooperative Discipline (Classroom Management and Student Discipline); Communities In Schools (Parental Involvement); and the Scholarship Program (College focus).

The model's replication has expanded in two significant ways: locally, from its first feeder system of nine schools (Davis High Feeder) in 1994-95 to two additional feeder school systems (Yates High and Wheatley High) during the last three years; and nationally, with implementation efforts underway in Atlanta, Columbus, Los Angeles, Nashville, and Newark. In five years, Project GRAD has emerged on the national scene as perhaps the most prominent, resourceful, and comprehensive urban school-reform initiative in the country. Project GRAD's successes have demonstrated that the intricate and problematic challenges confronting the nation's inner-city school systems can be overcome with appropriate resources, strategies, perseverance, and school-community collaboration.

Goals of 1998-99 Evaluation

The research goals of this fifth-year evaluation of Project GRAD were to: 1) document and determine the level of implementation of the five major interventions of the Project GRAD Model; 2) determine the levels of the project's critical/facilitating implementation factors and support systems; 3) assess the effectiveness of the project in increasing student performance in reading and mathematics; 4) assess the effectiveness of the project in improving student discipline; 5) document the college attendance rates of graduates from participating high schools; 6) document possible threats or adverse factors to the project's effective implementation, and 7) provide formative feedback for project improvement. In effect, the report targets all substantive process and summative elements of the model's implementation.

CHALLENGES FACING INNER-CITY K-12 SCHOOLS

Empirical research findings from numerous studies have confirmed the observations of many educators that the pedagogical skills and classroom management skills of teachers are the strongest predictors for determining the effectiveness of student learning (Fullan, 1991; Wang, Haertel, and Walberg, 1993; Slavin, 1997). Many researchers, however, continue to doubt the ability of inner-city school systems to provide instructional interventions that can bring success to all of the children living in America's impoverished inner-city communities. In the opinion of these individuals, it is the:

"*conditions of students' lives, the communities in which they live, and the 'learning credentials' students bring to the classroom (rather than the instructional and other experiences which teachers and schools provide) that determine their success in school*"(Hixson, 1994).

Adverse Home and Student Characteristics

If many educators have lost hope in the inner-city school systems, it is mainly because of the pervasive presence of many problematic *home conditions*, *student characteristics*, and *school factors* that have seemingly crippled the effectiveness of urban school systems. The most prominent of the *home conditions/factors* are the: 1) low educational attainment levels of parents; 2) lack of family role models with college education; 3) absence of college aspirations in the family for the children; 4) high poverty levels and low job-related skills; 5) lack of "print-rich" home environments; 6) high percentage of single-parent homes and female heads of households; and 7) high levels of crime, violence, and drug use in such neighborhoods.

The most prevalent *student characteristics* in inner-city communities are students': 1) low interest in school and lack of aspirations for the pursuit of college education; 2) frequent conduct/disciplinary problems at school and lack of respect for rules and authority; 3) poor reading and math skills; 4) lack of hope and confidence in their intellectual and financial ability to meet the academic and financial expectations of college; and 5) high mobility rates. In light of the preceding factors, one would expect a school system solution analogous to the kind of intensive care services provided in medical/health facilities for patients with acute health needs.

Inadequate School Conditions

Unfortunately, however, many of the nations inner-city schools are plagued with factors/conditions that render student success more precarious. The most prominent of the *school conditions* are the: 1) inadequate discipline management skills of teachers; 2) lack of effective teaching skills among a large proportion of teachers for meeting the special learning styles (auditory, tactile-kinesthetic, and visual) of inner-city students; 3) inadequate teacher confidence in the belief that all children can achieve academic success; 4) high teacher burnout rates, low morale, and turnover rates; 5) lack of effective and age-appropriate instructional materials, especially manipulatives, for engaging and nourishing the curiosity, interests, and skills of primary school children; 6) lack of effective and well-funded research-based curricula for reading and math; and 7) lack of adequate teacher commitment to the demands of instructional reform.

Even though each of the preceding factors alone may not present a major problem, a combination of two or more of the factors could present a major and seemingly insurmountable challenge to overcome. In view of the high prevalence of such factors in inner-city schools, one can appreciate why many reform efforts have failed and often led to the high turnover rates of many inner-city school superintendents. It is also apparent why improving the effectiveness of inner-city schools requires the long term support of many and diverse educational stakeholders.

Seeds of the Solution

Elements of Project GRAD's curriculum model emerged in 1993-94 as a result of a relentless search by a school-business collaborative for a lasting solution to the preceding challenges facing Houston ISD, an inner-city school system. The seeds of Project GRAD had been planted in 1998-89 through the establishment of a four-year college scholarship program, the Tenneco Presidential Scholarship Program, for eligible graduates of Davis High School. By 1991-92, the rate of Davis High School graduates entering college had more than doubled, but the collaborative had seen little to no change in the average performance levels of students on the SAT. It was then that the full appreciation of the need for a comprehensive curriculum intervention in the primary grades became apparent; hence, the development of the Project GRAD model.

THE PROJECT GRAD MODEL

Curricular Perspectives

Project GRAD focuses on effective pedagogic practices in mathematics, reading, and student discipline, especially in the primary grades. Beyond the primary curriculum, the model prescribes a strong and well-articulated secondary curriculum that ensures that every elementary student, regardless of socio-economic circumstances, is insulated from academic failure, eventually graduates from high school with distinction, and pursues higher education. The ambitious and comprehensive character of Project GRAD is demonstrated by its focus on the needs of the whole child, the entire feeder system of schools (grades K-12), training of all school personnel, and the involvement of the whole "village" of educational stakeholders: parents, foundations, universities, businesses, and community leaders.

Project GRAD's successes and potential demonstrate the productive possibilities of collaborative searches for answers to the challenges that face the nation. In five years, Project GRAD has emerged on the national scene as perhaps the most prominent, resourceful, and comprehensive urban school-reform initiative in the country, with the vision, philosophy, and strategies for preparing inner-city youth for the new millennium.

Conceptual Elements

Project GRAD's instructional model focuses on several interdependent and mutually reinforcing elements and factors, namely: mathematics, reading, student discipline, pursuit of college, and parental/community involvement. Table 1 depicts the model's core strategic components and the respective instructional areas they address, in order to ensure maximum success for all children.

Table 1. Core Components and Targeted Goal Areas For Meeting the Instructional Needs of Inner-City K-12 Students

Core Elements	Targeted Goals
1. Effective Research-based Discipline and Classroom Management program	1. To develop students' self-discipline, confidence, and resilience, while arousing their natural excitement for learning; and to maximize the productive use of instructional time
2. Effective Research-based Math program	2. To nourish and develop students' interest, skills, and performance in math
3. Effective Parental Involvement and Education program	3. To improve parental literacy skills and assist parents to access community resources for addressing home factors that adversely affect the success of their children in school
4. Effective Research-based Reading program	4. To nourish and develop students' interest, skills, and performance in reading
5. A Comprehensive Scholarship program	5. To plant and nourish seeds of hope in parents to encourage and support their children to work toward college; and to eliminate or significantly reduce student uneasiness about college and motivate them to attend college

MAJOR COMPONENTS OF THE PROJECT GRAD MODEL

The most prominent element/activity common to all of the major interventions (see Table 2) is the provision of intensive professional development activities for all relevant personnel involved in the implementation of each intervention. Such training ensures that all pertinent personnel (teachers, administrators, parents, etc.) are fully conversant with the expectations of the respective intervention, and have the required skills and knowledge to implement the intervention. Even though CMCD, MIM, and SFA have been widely and individually piloted and validated as effective innovative programs, it is only Project GRAD that has concurrently replicated all three programs in a single location (Slavin et al, 1994, Slavin and Madden, 1995; Freiberg et al, 1995; Freiberg, 1996; Schoecraft, 1994). The following are brief descriptions of the major interventions and elements of the model (Table 2).

Table 2. Major Goals, Components, and Critical Implementation Elements of the Project GRAD Model

Project Goals/Objectives	**Project GRAD Implementation Elements**	
Project Outcomes	***Major Interventions (Strategies)***	***Critical Facilitating Implementation Factors/Conditions***
1. Improved student conduct/discipline and student performance & increased time-on-task.	1. Effective Implementation of Consistency Management & Cooperative Discipline (CMCD)	1. Initial Year Training & Subsequent Years' Training for New Teachers 2. Ongoing Follow-Up Training & Resource Support (Consultants, Facilitators, Instructional Materials, etc.) 3. District Leadership's Support & Reform Orientation 4. Long-term Funding Commitment 5. Strong Externally-Driven Project Management and Leadership 6. Ongoing Evaluation & Improvement of the Model 7. Collaborative Vertical Team Planning & Leadership Among Project Schools (Entire Vertical Team as Unit of Reform) 8. Strong Commitment of Principals to the Model's Effective Implementation (Effective Instructional Leadership)
2. Increased student performance in math.	2. Effective Implementation of MOVE IT Math (MIM)	
3. Increased student performance, in reading/language arts.	3. Effective Implementation of Success for All (SFA)	
4 Improved parental involvement and high school graduation rates.	4. Effective Implementation of CIS services	
5. Increased number and percent of high school graduates entering college.	5. Effective Implementation of the Scholarship Program	

The Major Interventions

Consistency Management & Cooperative Discipline

CMCD is a research-based instructional/discipline management program that combines instructional effectiveness through consistency in classroom organization with student self-discipline developed cooperatively in the classroom. CMCD builds on shared responsibility for learning and classroom

organization between teachers and students. CMCD was developed at the University of Houston-Central campus. The implementation of the model entails a needs assessment and the development of a responsive plan that includes a series of workshops and instructional materials befitting the assessed needs.

The themes of CMCD are prevention, organization, caring, cooperation, and classroom/school community communication. CMCD is based on the following ten classroom management dimensions: Establishing Positive Classroom Norms; Management Philosophy and Values; Organization for Active Classroom Learning Environments; Development of Cooperative Discipline Strategies for Students; Management Approaches for the First Days and Weeks of School; Building Self-Discipline in The Classroom; Management Approaches for the Second Half of the School Year; Building School-Wide Self-Discipline; Parent/Community Roles in School and Classroom Management; and Self-Improvement Through Self-Assessment.

CMCD emphasizes the achievement of instructional effectiveness through consistency in classroom organization, with student self-discipline developed cooperatively. Recent empirical research findings from 61 research experts, 91 meta-analyses, and 179 handbook chapters and narrative reviews, which represented 11,000 relationships, have revealed that the teaching skills and classroom management skills of teachers are the strongest factors that determine the effectiveness of student learning (Wang, Haertel, and Walberg, 1993). Consequently, the enhancement of the skills of teachers is the most cost-effective approach for increasing students' interest and academic performance.

CMCD responds to the changing needs of students by establishing consistency within the classroom and throughout the school, while providing for flexibility and responsiveness to the unique instructional styles of teachers. CMCD builds over a two- or three- year period to provide a stable and orderly learning environment in which students become self-disciplined by experiencing greater responsibility. Greater responsibility is provided through a series of activities that allow students to become partners in the classroom.

Students gain self-discipline by resolving conflicts, solving problems, and participating in decisions. They gain self-discipline by having responsibility for managing the classroom. These experiences, established by the teacher, enable students to test their own sense of values and build important bridges to their future roles in the larger society. CMCD encourages consistent communication between teachers and parents through telephone calls, grade-level newsletters, progress reports, and other school activities.

CMCD's staff development model has evolved from empirically-based insights of the developer's years of field-testing and prescriptions of staff development researchers (Joyce and Showers, 1988; Pittman, 1985; Freiberg, Buckley, and Townsend, 1983; Freiberg, 1994; ; Freiberg and Others 1995; Freiberg, 1996; Olatokunbo & Slavin, 1997). As a result of CMCD's demonstrated effectiveness, its adoption by schools in the United States, Italy, and the Netherlands had increased from three schools in 1995 to 45 schools in 1998. The staff development component has four major implementation phases.

Phase I. *Awareness and Initial Implementation of CMCD*

This introductory training phase focuses on CMCD themes and dimensions, preferably in the spring preceding the initial implementation year, using a training site away from the assigned school(s) of teachers.

Phase II. *Summer Academy for Teachers and Administrators*

The focus areas of this session include team building, integration of management with instruction, creation of positive learning environments, and what to do during the first days of the school year.

Phase III. *Ongoing Implementation Follow-Up Support*

A series of 3-hour follow-up sessions, preferably six sessions, are conducted throughout the year at the school site for one school or a group of schools. Teachers are given extended information on the program dimensions, the opportunity to demonstrate the use of video tape recordings of their classroom activities, and taught how to analyze such recordings and student feedback for improving their skills.

Phase VI. *Continuance*

To help address the problem of teacher turnover rates in inner-city schools, a team of two or three well-trained and school-based facilitators from the school train new teachers in CMCD strategies during the second year and beyond. During the second year, continuing support is provided by school-based facilitators and university-based CMCD researchers.

Student discipline significantly affects many critical factors that determine a school's student achievement levels. Among the critical factors are teacher morale, teacher job-related stress levels, teacher retention/turnover rates, student time-on-task, and overall amount of learning that takes place (Feitler and Tokar, 1982; Cichon and Koff, 1980). Time-on-task studies by Jane Stallings support the observation that a positive relationship exists between the proportion of instructional time spent on disciplinary management tasks and the extent of student learning. When classrooms experience more student misbehavior, less time is spent on task, and less achievement gain is made by students (Stallings, 1985). Consequently, it is not surprising that many educators regard discipline as one of the most important school effectiveness factors.

In inner-city school systems where student disciplinary problems could be pervasive, ignoring the discipline factor may negate the most promising of instructional initiatives (Etzioni, 1984). Recognizing the vital importance of student discipline and the need to nurture a sense of responsibility in all students, CMCD provides the mechanisms by which consistent and constructive strategies are adopted across the entire school and vertical team, with substantive support from the home (Freiberg, 1996; Freiberg, and others, 1996; Jones, 1982; Lasley and Wayson, 1982).

MOVE IT Math

MOVE IT–an acronym for Math Opportunities, Valuable Experiences, and Innovative Teaching-was developed at the University of Houston-Victoria campus with the funding support of Union Carbide, Eisenhower Mathematics/Science Grants Program, and the American Federation of Teachers. The program inculcates in students a belief in themselves to *know they know*, consequently love mathematics, and do well in mathematics. MOVE IT Math is a student-centered, K-6 instructional program that uses a wide variety of manipulatives to address the unique needs of students with auditory, kinesthetic, or visual learning styles.

The program uses a variety of techniques – including songs, games, and manipulatives – to instill math facts. Students learn how to "skip count," multiply, and "tap and tally" to add large numbers. MOVE IT Math seeks a balance among skills, concepts, and problem solving in math instruction. One of the most prominent merits of the program is its unparalleled capability of instilling in early primary

students a math-related self-confidence and the notion that math is fun and easy. When a first grader correctly solves upper grade math problems such as: subtracting 2,540,159 from 8,002,011; multiplying 7,586,423 by 3; and dividing 7,842,843,096 by 6, and ends with a shrug, a smile, and words of pride, "It's simple," one cannot resist appreciating the effectiveness of MOVE IT Math.

The program is organized around the following seven strands reflective of the National Council of Teachers of Mathematics (NCTM) standards and the Texas Essential Elements: 1) problem solving; 2) patterns, relations, and functions; 3) number and numeration; 4) operations and computation; 5) measurement; 6) geometry; and 7) probability, statistics, and graphing. The training of teachers in MOVE IT Math consists of three 30-hour instructional blocks: Level 1 (Everyone can Learn Math); Level 2 (Enrichment and Acceleration); and Level 3 (Advanced Topics). Emphasis in Level 1 is on algebra and strands 1, 2, 3, and 4, while the emphasis on Levels 2 and 3 is on strands 1, 2, 5, 6, and 7. The program provides teachers with a computerized database of over 1,000 lessons covering the seven strands from a curriculum library of more than 250 exemplary teacher resource materials such as Family Math and Math Their Way.

Innovative features of MOVE IT Math include:

1. Immersion in manipulatives until program strategies are internalized;
2. Introduction to algebra in the early grades;
3. Use of children's literature and science to give meaning and purpose to mathematics;
4. Emphasis on understanding rather than memorization;
5. Student discovery of the "rules" of mathematics through pattern examination; and
6. Flexibility in exposition and acceptance of alternative ways of problem solving.

MOVE IT Math has been recognized by the Southwest Educational Development Laboratory (serving Texas, Arkansas, Oklahoma, Louisiana, and New Mexico) as one of the five best "successful practices" in mathematics education in its five-state region. All school sites that have piloted MOVE IT Math since 1989 have shown significant improvements in teacher and student interest in math, student performance in math, and other curricula areas such as student discipline and school attendance.

Success for All

Success for All (SFA) is a research-based school-wide reading and writing program for students in grades Pre-K–5 (Slavin et al, 1994); Slavin and Madden, 1995). SFA extends to the middle school grades through Cooperative Integrated Reading and Composition (CIRC) activities. The philosophical thrust of the program is prevention and early intervention, to ensure that every student succeeds in reading throughout the elementary grades. SFA was began in Baltimore in 1986 by a faculty group at Johns Hopkins University and the Baltimore City Public Schools. Since the initial piloting in one school in the 1987-88 school year, SFA has expanded to more than 750 schools in 40 states across the United States. Studies of SFA, involving more than 75 SFA and 75 control schools over periods of up to seven years, have been conducted in inner-city, inner-suburban, and rural schools. Third-party evaluations by the state of Tennessee (Ross, Sanders, & Wright, 1998) and Abt Associates (Stringfield et al., 1997) have found positive effects on standardized measures, as have numerous school district evaluations (Slavin, Madden, & Wasik, 1997).

SFA is based on two essential principles: prevention, and immediate intensive intervention. Learning problems must be prevented by providing students with the best available classroom programs and by

engaging parents in support of their children's school success. When learning problems are encountered, corrective interventions must be immediate, intensive, and minimally disruptive to students' progress in the regular program. In effect, students receive intensive help when their problems are small so that they do not fall behind to require remedial instruction or face retention in later grades. SFA is composed of the following elements: reading and writing program, cooperative learning activities, tutors for students, eight-week assessments, early implementation as early as preschool and kindergarten, a family support team, a full-time building-level facilitator, staff support teams, and professional development.

Cooperative Integrated Reading and Composition (CIRC) CIRC is regarded as the secondary school version of Success for All and was developed by the faculty of Johns Hopkins University. CIRC is a reading and writing instructional program consisting of three principal elements: story-related activities, direct instruction in reading comprehension, and integrated language arts/writing. In all these activities, students work in heterogeneous learning teams. All activities follow a regular cycle that involves teacher presentation, team practice, independent practice, peer-pre-assessment, additional practice, testing, and team recognition.

Students are first assigned to teaching groups according to their reading level and then assigned to pairs (or triads) within their reading groups. The pairs are assigned to teams composed of partners from two reading groups. Students' scores on all quizzes, compositions, and book reports are used to determine the team score. CIRC uses cooperative learning activities built around story structure, prediction, summarization, vocabulary building, decoding practice, writing, and direct instruction in reading comprehension skills.

The hands-on and student-centered merits of working in such small cooperative groups are apparent as students read to each other, work together to identify characters, settings, problems, and problem solutions in narratives, summarize stories to each other, and work together on writing, reading comprehension, and vocabulary activities. The effectiveness of CIRC in significantly increasing students' reading comprehension and language skills in English has been documented in the research literature (Stevens et al, 1987) and in Spanish (Hertz-Lazarowitz et al, 1993; Slavin & Madden, 1995).

Communities In Schools (CIS) Social Support and Case Management

Communities In Schools (CIS) is a non-profit, dropout prevention, and social service agency that provides guidance, counseling, community outreach, and family case-management services to at-risk children. Through the services of CIS, at-risk students and their parents become aware of private and public community resources and how to access these resources to meet their social, economic, health, and other needs. CIS provides support services for students that enable them to appreciate learning, stay in school, and improve their academic performance. CIS ensures that students have easy access to its services by placing full-time social workers and project managers in schools to work with teachers, counselors and parents.

The placement of staff in schools follows one of two staffing models: the full-staffing or three-person model, or the one-person model. The full-staff model sites have one or two caseworkers and a program assistant, while the one-person model has one caseworker. At the full-staffing sites, CIS staff provide comprehensive, holistic, student-centered programs, including counseling, tutoring, mentoring, crisis intervention, enrichment, pre-employment training, and summer job placement. At the one-person model sites, the primary focus is on parental training and involvement, crisis intervention for students and their families, and information referral for both students and parents.

CIS services are tailored to fit the needs of the students it serves. At the elementary and secondary levels, CIS staff monitors the needs of students and their parents in order to identify appropriate instructional support activities for them. Parental involvement and support activities are organized in most schools to enhance communication between teachers and parents. At all levels, students are assisted by CIS staff to solve personal and home problems that can potentially render them at-risk or lead them to dropout of school. The role of the CIS component to the overall effectiveness of the model is critical in such an inner-city community of high poverty levels. The research literature substantiates the positive and critical relationships that exist between educational success and parental involvement (Walberg, 1984; Etzioni, 1984; Gough, 1991, Radin, 1979; Unger, 1985). As indicated by a concerned observer: "*Trying to educate the young without the help and support from the home is akin to trying to rake leaves in a high wind*" (Gough, 1991).

The Scholarship Program

The promise of Project GRAD is a guarantee of a college scholarship by which the attainment of college education can become a reality for all students. The program has four major elements, namely: Walk for Success, the Contract, Summer Institute, and a College Scholarship of $1,000 per year for four years. Activities of this component focus on cultivating a culture of high academic expectations, hope, and the ability and motivation for pursuing college after high school. Much effort is invested in the program to eliminate or reduce significantly student uneasiness about college curricula.

Walk for Success

Walk for Success is a grassroots campaign to inform parents of the scholarships and to recruit students, especially incoming high school freshmen into the Scholarship Program. Volunteers from the community are recruited to join alumni, teachers, staff, mentors, university volunteers, and students to visit homes of students. During the Walk for Success or visits to the homes of students, parents are fully informed of the scholarship program and the need for students to stay in school and meet all the eligibility requirements for earning the scholarships. Parents and students are asked to commit to the expectations of the program by signing the Scholarship Contract. Parents of high school students, students, and teachers meet and review the status of each student every year to ensure that the expectations of the contract are met.

The visits to student homes provide the opportunity for parents and students to commit to the expectations of the program by signing the Scholarship Contract. In many of the homes of Davis students, if it had not been for Project GRAD, many would not have dreamed of college attendance as an achievable option. A recent survey of over 200 recipients of Project GRAD scholarships provided much credence to the belief of many educators that the parental role is vital in ensuring the success of educational reform in America's inner-cities.

A questionnaire survey, conducted in 1995, revealed that 42% of the scholarship recipients had parents who did not have a high school education, while another 47% indicated that their parents completed only high school. Most of the scholarship recipients (71%) indicated that they were the first in their families to attend college. When the students were asked to rate ten factors to indicate the leading factors that motivated them to stay in school, graduate from high school, and pursue college education, *parental encouragement*, *the scholarship*, and the *Summer Institute* emerged as the top three. In response to a separate item that had asked the students to identify the strongest factor that facilitated

their motivation to stay focused on learning and pursue college education, 71% identified *parental encouragement* as the strongest factor (Opuni, 1995).

A recent study by the National Center for Educational Statistics (NCES, 1994, p. 36) reported that in both 1980 and 1990, most high school sophomores identified their parents (Mothers 65% in 1980, 83% in 1990; Fathers, 59% in 1980, 77% in 1990) as the source of adult recommendation or encouragement to attend college, followed by their teachers (32% in 1980, 66% in 1990), and Guidance Counselors (32% in 1980, 65% in 1990). However, since for many potential first-generation college students, much of the advice and encouragement come from guidance counselors and teachers, one can appreciate the impact of the Walk for Success in educating parents to help nurture their children's hopes of going to college.

Over the years, it has become apparent to project staff that the visits to the homes of students by teachers and other volunteers seem to have a tremendous impact on parents by assuring them that the school system cares. In the words of Robert Rivera, Project GRAD's Manager for the CIS Component, "the visits convey a powerful message of hope" to the parents by dispelling their misconceptions about college as a privileged opportunity for only the financially advantaged. In effect, changing the instructional culture in the classroom without changing the attitudes of parents about college could significantly undermine the achievement of Project GRAD's ultimate goal (i.e. pursuit of college education).

The Contract

In order to remain in the program and be eligible for the scholarship upon graduation, the student must: 1) be a graduate of the participating feeder high school; 2) take a minimum of three years of mathematics, including Algebra I, Geometry, and Algebra II; 3) maintain a 2.5 grade point average in core academic subjects; 4) attend and complete a minimum of two Summer Institutes at the participating local university or universities; and 5) graduate on time with his/her class. The preceding expectations represent the centerpiece of the scholarships program, collectively referred to as the Contract, which is signed by the student and parent(s).

Summer Institute

The Summer Institute is a four-week summer instructional program organized by the participating local universities for students in the scholarship program. The institute offers intensive academic instruction in a technologically enriched university setting. Major instructional areas emphasized by the institute include mathematics, reading, writing, study skills, time management, critical thinking, science, and the development of leadership skills. The program helps to reduce student apprehensions about university expectations by familiarizing students with college life and curricula.

Annual College Scholarship for four years

The scholarships serve as the framework and motivation for keeping students in the feeder pattern, where there is adequate protection against academic failure to ensure graduation from high school and onward pursuit of college education. The scholarship program provides the motivation for students, parents, and teachers to increase their academic expectations. Project GRAD-Houston's scholarships Program provides $1,000 per year scholarships to eligible graduating seniors in participating high school for four years in any college or university.

Critical Facilitating Implementation Factors

The intricate challenges that characterize inner-city communities and their schools require a correspondingly relentless and responsive project implementation process. Without such an orientation, resource support, monitoring, evaluation, and ongoing refinements of the implementation process, the instructional interventions are bound to achieve a limited success. The review of major school reform initiatives in America's urban school systems and the experiences of Project GRAD developers and staff have revealed that eight implementation strategies, conditions, and support systems facilitate the achievement of the model's five major goals. These process factors are listed in Table 1, and briefly described below.

Initial Year Training & Subsequent Years' Training for New Teachers

As mentioned earlier by Wang, Haertel, and Walberg (1993), the teaching skills and classroom management skills of teachers are the strongest factors that determine the effectiveness of student learning. Consequently, the key to the model's success is the effective acquisition of all substantive initial training of teachers in CMCD, MIM, & SFA and the effective implementation of such skills/strategies. Ensuring the full participation of teachers in all substantive training elements of each of the major instructional components is the first critical goal in the implementation process. Furthermore, in light of the high teacher attrition/turnover rates and the increasing enrollments in inner-city schools that necessitate the hiring of more teachers, all new teachers who are hired after the initial year of training should be given the same initial training in the respective components. Without such annual opportunities for new teachers during the first several years, the achievement of a significant critical mass of the new instructional culture may be seriously undermined, especially in schools with more than 10% annual teacher turnover rate. Project GRAD therefore provides ongoing training opportunities in CMCD, MIM, and SFA for all newly hired teachers.

Ongoing Follow-Up Training & Resource Support (Consultants, Facilitators, Instructional Materials)

All the major project components (SFA, MIM, CMCD) have facilitators/consultants assigned to each of the project schools to ensure that new teachers are effectively transitioned into the instructional culture of project schools. All previously trained teachers are also provided with needed support by these facilitators and consultants. Since these facilitators and consultants do not have line authority over the teachers and operate outside of the teacher appraisal process, teachers find it easier to ask them for assistance in resolving pertinent instructional problems and challenges.

Each of the three instructional components of the model has specific instructional materials designed for implementing its prescribed strategies. Examples of such materials are: the pre-stamped Good News post cards and tape recorders (CMCD): a computerized database containing over 1,000 lessons, balance beams, and the Binder (MIM); and reading materials (SFA). The responsiveness of project personnel in meeting the instructional material needs of project teachers determines the degree to which each of the components can be implemented. In situations where teachers have to develop such materials themselves, any opportunities and resources that enable such materials to be developed or acquired, will facilitate the effective implementation of the component. CMCD, for instance, periodically organizes Make and Take Workshops, where teachers use their creativity to develop instructional materials from resources provided by CMCD.

District Leadership's Support & Reform Orientation

The success of such an externally-driven comprehensive reform initiative involving teachers, parents, administrators, and community organizations depends considerably on the degree of support provided by the school district's Board of Education and administration. A strong commitment to the success of the initiative from the Superintendent and School Board facilitates the development of collaborative and supportive relationships between Project GRAD personnel and the various departments of the school district. Changing or improving the instructional culture (i.e. practices, philosophies, etc.) of participating schools to ensure optimum success for all children is a formidable task that requires the willingness, time, and effort of all school personnel. It is thus vital that the initial momentum of district leadership commitment and support for Project GRAD is sustained and enhanced throughout the replication and expansion phases.

Long-Term Funding Commitment

Unlike many educational initiatives that promise a quick fix and then often cut funding prematurely before meaningful results occur, Project GRAD's programmatic perspective and commitment are long-term. In light of the severity of inner-city school challenges and problems, the need for long-term funding for such initiatives cannot be understated.

Strong Externally-Driven Project Management and Leadership

As an external change agent with no line authority over building-level principals, who hold the keys to the full implementation of the model in their respective schools, the need for Project GRAD administrators to develop and nourish collaborative leadership and effective consultative relationships with district leadership and school administrators is of primary importance. The leadership skills of Project GRAD's administrators are therefore a critical determinant of the degree of success the model's implementation can achieve; and the time frame within which the achievement can occur. The closeness and responsiveness of Project GRAD's administrators to the daily needs and demands of Project GRAD, contribute significantly to the continuing success of the project's effective implementation. Close monitoring of all relevant school activities and effective communication among project staff, principals, departmental/cluster chairpersons, program facilitators, and consultants facilitate early detection of problems, weaknesses, and areas of trouble so that appropriate corrective measures can be taken. Problems or weaknesses in project implementation are therefore not allowed to reach crisis levels before corrective measured are taken.

Ongoing Evaluation & Improvement of the Model

The relentless and long-term commitment of Project GRAD's administrators ensure that concerns of teachers, facilitators, and principals that are discussed during monthly meetings, retreats, or occasional meetings are reviewed and addressed. In addition, student test scores, discipline/conduct records, evaluation findings, and other needs are regularly reviewed to ensure that all students are equitably supported and meeting grade-level expectations. Consequently, the project experiences ongoing refinements to ensure the enhancement and achievement of a critical mass of instructional quality and culture, improved school climate, and teacher satisfaction levels. Project GRAD is provided with periodic systemic feedback through comprehensive annual reports to ensure that project developers and administrators have quality data for relevant planning and refinement decisions. All critical implementation elements and performance benchmarks are monitored to ensure efficient use of project resources and maximization of curriculum reform benefits owed to all major stakeholders.

The quality or health of the inner-city school environment/climate significantly affects and dictates the speed and extent to which the critical mass of the new instructional culture is achieved and sustained (Anderson & Walberg, 1994; Bossert, 1988; Gonder & Hymes, 1994; Hoy & Hannum, 1997). It is therefore essential that critical school climate elements are monitored closely to identify areas requiring corrective measures or leadership attention.

Collaborative Vertical Team Planning & Leadership Among Project Schools: Entire Vertical Team as Unit of Reform

As a feeder-pattern school reform model, Project GRAD envisions the active participation of the entire feeder system of schools in the decision to reform the curriculum and engage the local community in a common search for more effective ways to educate the children of the community. The involvement of the entire feeder pattern of schools facilitates more effective planning, better articulation and alignment of the curriculum, a more representative unit of reform in large inner-city school systems, and closer monitoring for ongoing refinements. The model serves as a mechanism for districtwide reform through incremental expansion or replication, one feeder pattern at a time.

The goals of Project GRAD models would be difficult to accomplish without the appropriate school climate and *enabling conditions* which are the responsibilities of building-level administrators. To empower principals as instructional leaders, who are fully knowledgeable of the expectations of each Project GRAD component at the classroom level, the principals must participate in all SFA, CMCD, and MIM training sessions that are provided for the teachers. Annual two-three day retreats may also be organized for the principals of the entire feeder pattern and the non-school-based administrators of Project GRAD. Such retreats provide a forum for sharing, reflection, troubleshooting, planning, and review of the vision and ideals of the model. Throughout the year, project principals may conduct regular vertical team meetings at least once every eight weeks for all project GRAD administrators to deliberate, plan, share ideas, solve problems, assess progress, and strengthen the leadership team.

Strong Commitment of Principals to the Model's Effective Implementation: Effective Instructional Leadership

As indicated by Sebring and Bryk (1995) of the Consortium on Chicago School Research, *"principals are the single most important actors in promoting reform at the building level."* As Project GRAD's instructional leaders, with the authority to appraise the work of classroom teachers, Project GRAD principals should not only acquire the knowledge and skills central to CMCD, MIM, and SFA/CIRC, but should also secure and promote schoolwide engagement of all faculty and staff in the new instructional culture.

In order to incorporate the instructional expectations of Project GRAD into teacher appraisals or ensure that teachers adopt the new instructional strategies, it is important that teachers perceive their administrators as reasonably familiar with the pedagogic expectations of the components. Even though perceptions do not always translate into facts, perceptions generally drive a substantial portion of human behavior. Another critical dimension required of the leaders of new instructional initiatives is the extent to which the building-level administrator: a) monitors/supervises classroom practices through regular visits and conversations, and relentlessly encourages resistors or poor implementors to implement fully the recommended practices; b) recognizes and supports teachers who are effectively implementing the model; and c) integrates the model's practices into teacher appraisals. Furthermore, the responsiveness of administrators to teacher needs/concerns regarding the implementation of the new instructional culture is a critical dimension of instructional leadership at the building level.

UNIQUE STRENGTHS OF THE PROJECT GRAD MODEL

Overlapping Outcomes Addressed by Multiple Components

Even though each of the major instructional components of Project GRAD has one or two primary curricular outcomes as targets, it has been indicated by project teachers that the components have many overlapping educational outcome areas they significantly impact (Opuni, 1996). Table 3 shows the many instructional opportunities and support systems provided for students to ensure that they are successful in the K–12 curriculum. The enhancement of any of the correlates has been known to lead to educational excellence (Payne, 1997; Lee and Others, 1996; Peterson, 1997; Hoy, and Hannum, 1997; Brookover, and others, 1996).

The model's robustness is a product of its broad, comprehensive, research-based, and multi-stakeholder perspectives. Project GRAD's comprehensive design and aligned components facilitate effective school functioning, including classroom management, parental involvement, school leadership, and professional development, thus ensuring that all students achieve the most from their school experience. The parameters of the model are defined by its scope, philosophical perspectives, and unique blend of components. Even though each of the model's components (CMCD, MIM, SFA, CIS, and Scholarship Program) has been successfully implemented locally and/or nationally with significant degrees of success, the combination of all these parts as a unified model provides unprecedented critical and comprehensive thrust.

The fact that the impact areas/educational-outcome areas are directly or indirectly targeted by each of the instructional components ensures that the outcome area would be positively impacted. Since the educational outcome areas targeted by Project GRAD are the same areas that have posed the greatest challenge to inner-city school systems, the multi-targeting of the educational outcome areas by the instructional components of Project GRAD gives the model not only a compelling face validity but also content validity as a delivery system. The robustness of the model is also viewed within the context of America's inner-city school systems, where poverty levels, juvenile delinquency levels, dropout rates, academic failure rates, teacher burnout rates, and student suspension rates are high.

Table 3. Educational Outcome Areas Directly or Indirectly Impacted by Major Components of Project GRAD

Correlates of Educational Effectiveness	CMCD	CIS	MIM	SFA	Scholarship Program
Student Self-Esteem	✓	✓	✓	✓	✓
Student Behavior/Discipline	✓	✓	✓	✓	✓
Consistency in Classroom Practices	✓	✓	✓	✓	✓
Consistency in Teacher Expectations	✓	✓	✓	✓	✓
Student Interest in Reading	✓	✓	✓	✓	✓
Student Performance in Reading	✓	✓	✓	✓	✓
Student Interest in Math	✓	✓	✓	✓	✓
Student Performance in Math	✓	✓	✓	✓	✓
Parental Involvement	✓	✓	✓	✓	✓
Teacher–Student Relations	✓	✓	✓	✓	✓
Student–Interest in School	✓	✓	✓	✓	✓
Student–Student Relations	✓	✓	✓	✓	✓

Child-Centered and Child-Driven Curriculum

Whether it is alphabet songs and cooperative reading tasks in SFA, instructional games in MOVE IT Math, participation in classroom management in CMCD, or selection of teaching strategies to ensure success for all students and teachers, the extent of student participation in Project GRAD is considerable. With such high levels of participation, not only are students empowered to identify with the instructional process, but also assured that their individual needs are addressed. As indicated by the following observation of Lemahieu, Roy, and Foss (1997):

> *"No longer is listening to lectures, reading from text, and answering worksheets or questions thought to be appropriate or effective way to reach all students. Many students need hands-on experiences in which they can engage, discuss, manipulate, and question the content being studied. Teachers need to use a wide variety of instructional methods to meet the diverse needs of students (especially in urban settings)."*

Entire Feeder Pattern as Unit of School System Reform

The sheer size of an inner-city school district such as Houston ISD (over 210,000 students and 12,000 teachers) is a great challenge to even the best of educational leaders. To effectively enhance the instructional culture at the classroom level, closely monitor implementation of instruction, secure adequate instructional resources, and provide intensive staff development may be an insurmountable task. But with a single cluster of schools vertically aligned, with a representative group of Pre-K–12 schools, bound by a common attendance area, the entire school district can engage in effective reform, one feeder system at a time. With incremental expansion, adequate and sustainable critical mass of the new instructional culture can be achieved within the school district.

Responsiveness of Project GRAD Model

Since inner-city school systems are open systems within dynamic community environments, the Project GRAD Model cannot be set on "cruise control"; hence the need to regard it as a Responsive Model. In effect, not only is the model dynamic, it is also responsive to the changing needs of teachers, students, participating schools, and state or district curricular expectations. The success of the model depends on a continuing effort by all project staff to closely address minor and major implementation challenges/problems/concerns that emerge during the implementation process.

Community Empowerment

The involvement of parents and community leaders, volunteers, organizations, and institutions through SFA, CMCD, MOVE IT Math activities, especially CIS activities (e.g. GED programs, Citizenship Classes, health and employment referrals, etc.) and support programs such as Walk for Success, and the Summer Institute have accomplished several goals. First, the social climate of the entire Davis community has become one of hope, belief in the school system, pride, and overall empowerment. Many Davis High School graduates have gone to college and returned as the first college graduates in their families. A number of the Tenneco scholarship recipients have returned to teach at Davis High School. Second, the feeling of empowerment and ownership is evident from parental contacts with the schools and school activities, as well as participation in Shared-Decision Making Committees (Principals, parents, teachers, community leaders) that manage each feeder school.

PROGRAM EVALUATION DESIGN

Goals of 1998-99 Evaluation

The 1998-99 school year was the fifth full year of implementation of: MOVE IT Math in the Davis Feeder elementary schools; and CMCD in Lamar, Jefferson, and Ryan. The 1998-99 school year was the fourth implementation year of: CMCD at Martinez, Looscan, Lee, Sherman, and Marshall; MOVE IT Math at Marshall; Success for All in all elementary schools; and CIRC at Marshall Middle School. In addition, 1998-99 was the third full year of implementation of: CMCD at Davis High School; and MOVE IT Math in Yates Feeder Pattern elementary and middle schools. The 1998-99 was also the second year of SFA's implementation in Yates elementary schools. In view of the project's implementation and impact expectations, the following were the goals of the 1998-99 evaluation to:

- determine the levels of the project's facilitating implementation factors and support systems;
- assess the effectiveness of the project in increasing student performance in reading and mathematics;
- assess the effectiveness of the project in improving student discipline;
- document the college attendance rates of graduates from participating high schools;
- document possible threats or adverse factors to the project's effective implementation; and
- provide formative feedback for project improvement.

Participating Schools

The nine Project GRAD elementary schools in the Davis Feeder Pattern are Davis High, Marshall Middle, and the following seven elementary schools: Jefferson, Lamar, Lee, Looscan, Clemente Martinez, Ryan, and Sherman. The fifteen schools in the Yates Feeder Pattern are: Yates High, Cullen Middle, Ryan Middle, and the following elementary schools: Blackshear, Douglass, Dodson, Foster, Hartfield, Lockhart, MacArthur, Peck, Turner, Thompson, TSU/HISD Lab School, and Whidby. The total student population in the Davis Feeder pattern is about 6,200, while that of Yates Feeder Pattern is approximately 9,100. Matched comparison schools in HISD were identified for each Project GRAD school based on student demographic characteristics, performance characteristics, promotion rates, and teacher characteristics.

Data Collection

The Woodcock Reading Mastery Test-Revised (WRMT-R) instrument was used to collect baseline/pre-test data on all kindergarten students (a targeted cohort) in Davis Feeder Pattern schools at the beginning of the 1994-95 school year. Comparable baseline data were also collected on students in matched comparison schools in 1994-95. Student demographic data, disciplinary records, and test scores on a state-administered criterion-referenced test, the Texas Assessment of Academic Skills (TAAS) for 1993-99 school years were obtained from HISD's student masterfile and district publications. In addition, demographic data on project teachers were also obtained from HISD's personnel masterfile, district publications, and other sources. Project GRAD Teacher Survey (Davis Elementary Schools), Middle School Teacher Survey (Cullen, Marshall, and Ryan), and Project GRAD Teacher Survey (Yates Feeder Elementary Schools) were developed by the evaluator and administered at the end of the 1998-99 school year to collect feedback on all project components.

The following were the return rates of the teacher surveys: Jefferson, 100%; Lamar 50%; Lee, 93%; Looscan, 93%; C. Martinez, 72%; Ryan, 91%; Sherman, 92%; Marshall, 37%, Davis High 54%; Blackshear, 84%; Cullen, 100%; Douglass, 97%; Dodson, 50%; Foster, 61%; Hartsfield, 100%; Lockhart, 90%; MacArthur, 70%; Peck, 80%; Turner, 59%; Thompson, 86%; TSU/HISD Lab School, 88%; and Whidby, 71%. The following were the numbers of teachers in project schools: Davis, 99; Jefferson, 42; Lamar, 22; Lee, 16; Looscan, 27; C. Martinez, 38; Ryan, 23; Sherman, 37; Marshall, 72; Blackshear, 33; Cullen, 42; Douglass, 26; Dodson, 40; Foster, 34; Hartsfield, 21; Lockhart, 34; MacArthur, 28; Peck, 20; Ryan Middle 46; Turner, 44; Thompson, 35; TSU/HISD Lab School, 7; and Whidby, 31.

Data Analyses: Academic Performance

Mathematics and reading test scores were used in the assessment of project impact. The following reflects the types of test score analysis performed:

- the 1994–1999 TAAS passing rates for third through tenth grade for Davis and Yates Feeder Patterns were discussed;
- the Woodcock Reading Mastery Test (WRMT-R) NCE scores in Reading Readiness and Basic Skills sub-scales were used as covariates to assess the impact of Project GRAD on the academic performance of Davis Vertical Team's kindergarten–fourth grade cohort;
- the 1994–1999 TAAS reading and mathematics passing rates of project students were used to assess the extent of project impact or effectiveness in Davis feeder schools;
- the Spring 1999 TAAS/Stanford mathematics and reading test scores of 1st-3rd, 3rd–6th, and 6th–8th grade students in Yates Feeder schools were compared to corresponding students of comparison schools; and
- the TAAS mathematics and reading test scores of 6th–8th grade students in Cullen, Marshall, and Ryan Middle Schools were compared to corresponding students in comparison schools.

Statistical analyses that were performed included Analysis of Variance (ANOVA), Analysis of Covariance (ANCOVA), and Multiple Analysis of Covariance (MANCOVA). The analyses were used to compare the performance of project students to students in the comparison schools. A Chi Square (χ^2) test was used to assess the impact of Project GRAD on students' disciplinary referrals, and other comparisons involving proportions. All survey and interview data were analyzed using qualitative procedures.

Limitation of 1998-99 Evaluation: High Sample Mortality Rates

The high "sample mortality" rates caused by the high student mobility rates in Project GRAD and comparison schools reduced the number of cohort students who had WRMT-R pre-test data (Table 4). The high annual student mobility rates in the participating schools are evident from the following student mobility rates (1995/96): Jefferson, 27%; Lamar, 24%; Lee, 47%; Looscan, 28%; Martinez, 55%; Ryan, 50%; and Sherman, 25%. Table 4 shows the high mortality rates between students pre-tested with the Woodcock and post-tested with the Stanford-9. Overall, the number of students tested in 1994-95 declined from 218 to 110 in 1998-99, a decrease of 50%. Consequently, sample sizes for a few schools were too small to facilitate the performance of reliable statistical analyses of some project

schools with their respective comparison schools. Even though Yates feeder schools had a comparably high cohort mortality rates (Table 5), the larger sizes of the cohorts of the respective schools facilitated the performance of statistical analyses involving the individual project schools.

Table 4: Sample Mortality Rates of Davis Vertical Team's Grades K-4 Student Cohort (1994/95–1998/99)

Project GRAD Schools	1994-95 #	1997-98 #	1998-99 #	Mortality '94-99 (K-4)
Jefferson Elem.	59	41	35	41%
Lamar Elem.	19	9	5	74%
Lee Elem.	11	8	5	55%
Looscan Elem.	22	14	11	50%
Martinez(C) Elem.	43	31	15	65%
Ryan Elementary	29	12	14	52%
Sherman Elem.	35	26	25	29%
Total	**218**	**141**	**110**	**50%**

Table 5: Sample Mortality Rates of Yates Vertical Team's Grades 1-3 Student Cohort (1996/97–1998/99)

Project GRAD Schools	1996-97 #	1998-99 #	Mortality '94-99 (1-3)
Blackshear Elementary	75	54	28%
Dodson Elementary	85	42	51%
Douglass Elementary	75	35	53%
Foster Elementary	111	56	50%
Hartsfield Elementary	70	27	61%
MacArthur Elementary	40	26	35%
Peck Elementary	37	17	54%
Lockhart Elementary	93	59	37%
Thompson Elementary	82	47	43%
TSU Lab School	15	8	47%
Turner Elementary	96	45	53%
Whidby Elementary	98	56	43%
Total	**877**	**472**	**46%**

CURRICULUM REFORM CHALLENGES: PROJECT GRAD'S PILOT SITES

With an enrollment of 212,000, Houston Independent School District (HISD), the nation's sixth largest school system and the largest in Texas, has had its share of the problems and challenges that plague major inner-city school systems. Project GRAD's pilot sites were among, the most challenging communities in HISD to serve as the pilot sites for the Project GRAD Model. The Davis, Yates, and Wheatley Vertical System of schools are entirely or partially located in communities designated by the U. S. Department of Labor as Empowerment/Enhanced Enterprise Zones because of their high poverty levels. Most of the current project GRAD elementary schools have 85%-100% of their students participating in the federal government's free/reduced-price breakfast and lunch program.

Academic Performance Levels

The following sample of data on the Davis and Yates communities indicate how challenging it was in undertaking a reform initiative in such communities. Of the approximately 174 students who graduated annually from Davis High School, between 1985 and 1989, only 20 students (12%) pursued college education. In 1993, only 11% and 20% of Marshall Middle School's (Davis Vertical Team) sixth grade students achieved percentile scores of 50th or above in reading and math respectively on the Norm-Referenced Assessment Program for Texas (NAPT). The proportions of Davis High School's 11th grade students with percentile scores at or above 50th were 10% in reading and 36% in math respectively.

Socio-economic Indicators

The 1990 Census revealed that 44% of adults in the Yates community did not obtain high school diploma, while 23% were high school graduates who never attended college. Similarly, 42% of the adults in the Davis community received a maximum of middle school education, 24% were high school dropouts, while only 19% obtained high school diploma. In effect, as high as 66% of the adults in the Davis community never completed high school. In the Yates community, per capita income was $7,103; population living below the poverty level was 47%; percent of active recipients of Aid to Families with Dependent Children (AFDC) was 19%; percent of Food Stamps and Social Security Income (SSI) recipients was 46%; and the percent of single-parent families was 42%, of which 78% of the families were headed by females. As parents and other significant adults are the most powerful role models to children, one could appreciate how the syndrome of low educational achievement and its associated low income levels could cripple a child's vision of adulthood, educational aspirations, and sense of worth. Such problematic and daunting contextual characteristics, typical of America's inner-city communities, reflect the enormity of the challenge that confronted Project GRAD when it was initiated in 1994/95 in the Davis Vertical Team of schools and in 1996/97 in the Yates Vertical Team of schools.

CRITICAL FACILITATING IMPLEMENTATION FACTORS/CONDITIONS

Initial Year Training & Subsequent Years' Training for New Teachers

All substantive initial training elements were successfully completed by the end of: 1994-95 in the Davis feeder elementary schools (CMCD, MIM, & SFA); 1995-96 in Marshall Middle (SFA/CIRC, MIM, & CMCD); 1997-98 in Davis High (CMCD); 1996-97 in the Yates elementary schools (MIM);

and 1997-98 in the Yates elementary schools (SFA & CMCD). All relevant resources for the initial phase have also been provided for all participating schools. Training for new teachers who missed the initial phase of professional development activities has been provided by the staff of MIM, SFA, and CMCD in the succeeding years. During the initial two years of Project GRAD's implementation, over 30,000 hours of teacher training, covering CMCD, MIM, and SFA, were provided for teachers in the Davis feeder system.

Ongoing Follow-Up Training and Resource Support

The 1998 Staff Development Conference

The 1998-99 school year began with a four-day Project GRAD Conference in August 1998, at the George R. Brown Convention Center for all project teachers, staff, and administrators. Many instructional and non-instructional staff participated in the refresher training sessions in math, reading, student discipline, classroom management, and school climate activities. Topics addressed in the training sessions were many and covered the entire spectrum of project activities; examples of which are as follows:

Success for All Sessions:

- Reading Wings: Meaningful Sentences
- Reading Wings: Cooperative Learning
- Early Learning/Reading Roots (for new teachers)
- Reading Wings (New Teachers)
- Early Learning: Centers & Thematic Learning
- Transition to English (From Bilingual to English)
- Early Learning: Planning Thematic Units
- Reading Roots: Extended STaR with Literature
- Reading Wings: Writing
- Assessment in Reading Roots
- Oral language Development (General)
- Oral language Development (TEKS Training)

CMCD Sessions:

- Quick Start: First days and Weeks of School (Classroom Management Strategies Workshop I, Year II): Davis Feeder Elem. Refresher and Marshall Middle School Refresher
- Preventing Classroom Problems Before They Begin (New Teacher Training)

Move It Math Sessions:

- Fair Lands-How to get Started and Keep It Going
- Fractions From the Concrete to the Abstract (Upper)
- Living in a Piecemeal World (Primary)
- Weaving Motley and Mates Throughout Your Day
- Balance Beams-Balancing Act (Primary)
- Fair lands Beyond the Blocks to Application (Upper)
- Teaching Plans, Lesson Plans, and the New Binders

Consistency Management & Cooperative Discipline Activities

The 1998-99 school year was the CMCD's fourth year of implementation at Marshall Middle School, third year of implementation at Davis High School, second year of implementation in Yates feeder elementary schools, and first year of implementation in Yates middle schools. One or two school-based consultants per project school continued to provide follow-up support and training for project teachers during the school year. Generally, each school had access to the support services of a CMCD consultant for one day each week. The CMCD consultants conducted ongoing informal walk-abouts and participated in formal walk-abouts in their assigned school. They further provided support for schools in: developing curriculum for specific school needs, establishing school objectives, and assisting new and veteran teachers with program implementation.

Table 6 shows a list of CMCD's training opportunities that were provided for teachers and administrators of Yates and Davis feeder schools in 1998-99.

Table 6. Major CMCD Staff Development Opportunities: 1998-99

Date	Schools Participating	Workshop/Training Focus
July 1998	*Davis & Yates Elem. Schools*	Quick Start: First Days & Weeks of School Workshop –4 Sessions
August 1998	*All Schools*	Preventing Classroom Problems Before They Begin: New Teacher One Day Workshops –2 sessions;
	Davis Elem. Schools	Quick Start: First Days & Weeks of School Workshops–2 sessions
	Yates Elementary Schools	Quick Start: First Days & Weeks of School Workshops–2 sessions
	Marshall Middle School	Quick Start: First Days & Weeks of School Workshops– 1 session
	Davis High School	Quick Start: First Days & Weeks of School Workshops–2 sessions
September 1998	*Cullen Middle School*	Workshop I: How to be Consistent – 1 session
	Ryan Middle School	Workshop I: How to be Consistent – 1 session
October 1998	*Yates Elem. Schools*	Fall Workshops – four sessions: Maintaining Consistency: Follow-Up & Follow Through
	Cullen Middle School	Workshop II: Effective Use of Time & Learning from Each Other
	Ryan Middle School	Workshop II: Effective Use of Time & Learning from Each Other
	Marshall Middle School	Fall Workshops – four sessions: Incorporating Active Learning Into Your Daily Teaching
	Davis High School	Fall Workshops – four sessions: Incorporating Active Learning Into Your Daily Teaching
November 1998	*Cullen Middle School*	Workshop III: Managing Cooperative Grouping (1 session)
	Ryan Middle School	Workshop III: Managing Cooperative Grouping (1 session)
December 1998	*Cullen Middle School*	Workshop IV: After Winter Break: Starting Over With a New Perspective (1 session per school)
	Ryan Middle School	
January 1999	*Marshall Middle School*	After Winter Break Workshop: Effectively Meeting the Needs of Your Students (Learning Styles)
February 1999	*Cullen Middle School*	Workshop V: Helping Children to be Successful at School and at Home (1 session for Cullen & 1 session for Ryan)
	Ryan Middle School	
March 1999	*Yates Elem. Schools*	Spring Workshops–four sessions: Building a CMCD Climate
	Davis High School	Spring Workshop–four sessions: Examining the data and continuing to improve.
	Cullen Middle School	Workshop VI: Strategies for the End of Year and Creating a Caring Community (1 session for Cullen & 1 session for Ryan)
	Ryan Middle School	
April 1999	*Ryan Middle School*	Retreat Workshop: Rededicating: Competence, Commitment, and Concern
May 1999	*Cullen Middle School*	Retreat Workshop: Focusing on the Big Picture

Other major training activities organized by CMCD for its staff, parents, and school personnel included the CMCD Statewide Conference on June 1-2, 1998; CMCD July Facilitator Training (July 13-16, 1998); Monthly Consultant Meetings; CMCD Spring Planning Staff Retreat (January 7, 1999); School-Based Facilitator Meetings, and CMCD Parent Workshops (Fall 1998 and Spring 1999).

MOVE IT Math Activities

The 1998-99 year was the fourth implementation year of MOVE IT Math at Marshall Middle School and the third year of its implementation in Yates feeder pattern schools. Davis feeder pattern schools continued to receive ongoing instructional support from their assigned math consultants. The consultants provided lesson planning support and continued to provide on-site services one day per

week for teachers. Campus-based math facilitators continued to organize at least one parent meeting or training session per month. Consultant time at Sherman and C. Martinez was increased to two days per week.

One significant resource support was the development of *Quick Checks* for kindergarten through second grade. Quick Checks were one-on-one assessments of students' comprehension skills in MIM and/or ability to apply MIM strategies. Quick Checks are used as a diagnostic instrument by the Math Consultants to assess students' strengths and weaknesses. Results of the assessments were reported back to the teachers of the tested students along with specific recommendations. The assessment findings were also shared with the principals of the students. The success of this instructional support framework has prompted a request by principals to have the scope of the instrument expanded to cover kindergarten through sixth grade.

Success for All Activities

The 1998-99 project year was the fifth year of SFA implementation in Davis elementary schools, the fourth year of CIRC implementation in Marshall Middle School, and the second year of SFA implementation in Yates elementary schools. Participating schools were visited by consultants from the Success for All Foundation in Baltimore during the 1998-99 school year. Schools visited by the SFA consultants in spring 1999 included: Jefferson (March 3); Lamar (March 7); Lee (February 3); Looscan (March 8); C. Martinez (March 30); Ryan Elementary (March 9); Sherman (March 2); and Marshall Middle (February 2). Through such implementation visits, each school's SFA program was evaluated to identify program strengths and weaknesses.

Each of the Project GRAD elementary schools continued to have one on-site full-time Success for All facilitator. The facilitators supported teachers and other school staff by: organizing Success for All materials for teachers; setting up the 90-minute block for SFA activities; supervising the 8-week assessment of students' reading levels; analyzing assessments; and assigning students to teachers. The facilitators also monitored tutoring, assigned tutoring slots, provided professional leadership in trouble-shooting and problem-solving, and helped to align SFA elements with TAAS expectations. SFA facilitators continued to meet monthly to provide a forum for growth, sharing, networking, support, problem solving, and planning. To enable the project staff to fully meet the tutoring needs of project students, all students needing intensive reading intervention in the Davis feeder elementary schools were provided with reading tutors by the One-to-One reading program.

Perceived Levels/Quality of Ongoing Follow-Up Training & Resource Support for Teachers

It is critical that all participating teachers are provided with ongoing technical support and relevant instructional materials to enable them to fully implement the instructional prescriptions of CMCD, MIM, and SFA. Without an effective support system for new teachers, many students in these inner-city schools, are likely to lose the insulating protection that Project GRAD guarantees to all students. In many small-sized Project GRAD schools, a mediocre performance by one or two teachers could significantly weaken and fluctuate the overall TAAS and Stanford test results of their students.

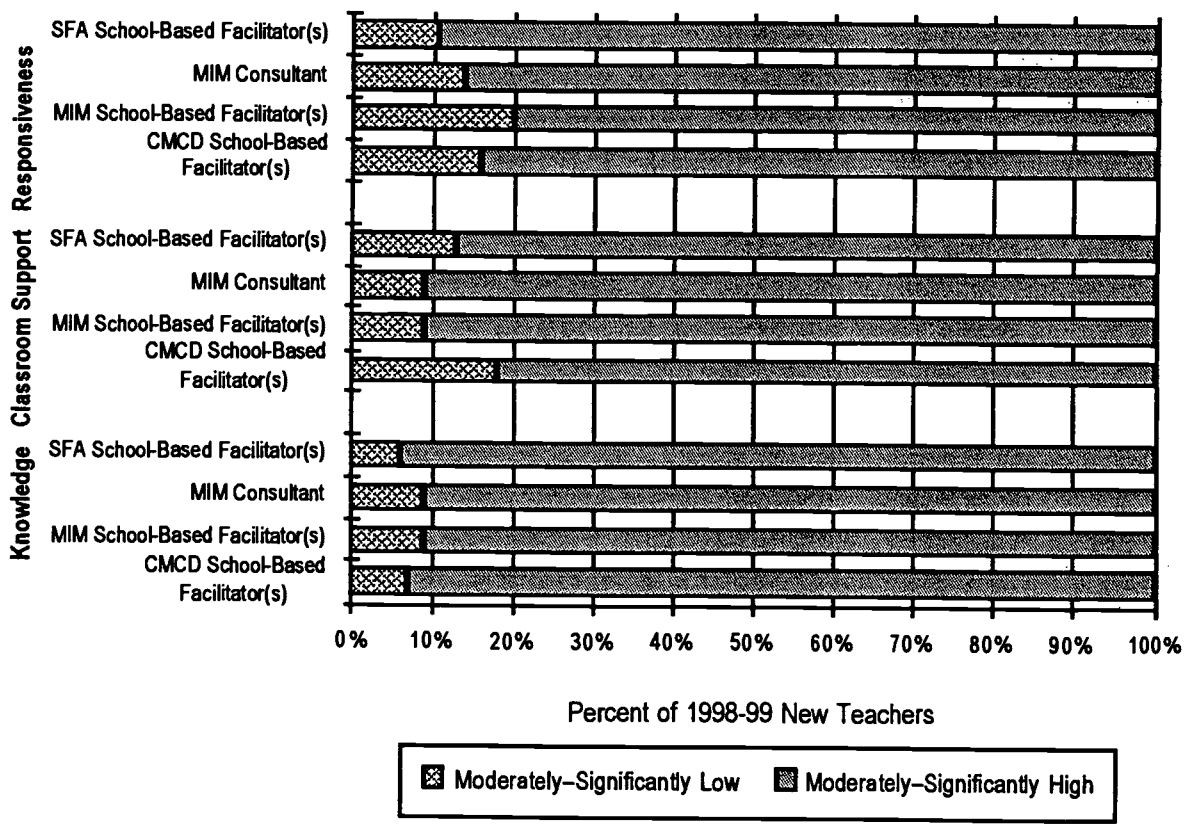
Consequently, one would expect all of the teachers to: a) have confidence in the *knowledge* and insights of their assigned facilitators and consultants; b) receive adequate *support* from them; and c) perceive them as *responsive* to their instructional needs. In small schools with small numbers of teachers, it is probably as easy or difficult to score 100% as it is to score 50% in all three areas of facilitator support and leadership being discussed in the following section. Nevertheless, facilitators

and consultants should closely monitor these perceptual measures and strive to increase their levels, especially if they are below 75%.

Davis Feeder Schools: Perceptions of New Teachers

Fifty-three (53) new teachers participated in this assessment. Figure 1 provides measures of the extent to which new teachers perceived their facilitators and consultants as knowledgeable, supportive, and responsive. The chart may be interpreted by examining either: a) the percentage of the teachers who perceived the levels of their facilitator's *knowledge*, *support*, and *responsiveness* as moderately or significantly low; or b) the percentage of the teachers who perceived the levels of their facilitator's *knowledge*, *support*, and *responsiveness* as moderately or significantly high.

Figure 1 Percent of Davis Feeder New (1998-99) Teachers Who Perceived the Level of Component-Related Knowledge of their Facilitators, Classroom Visits and Support from their Facilitators, and Responsiveness of the Facilitators to their Needs as **Low** or **High**

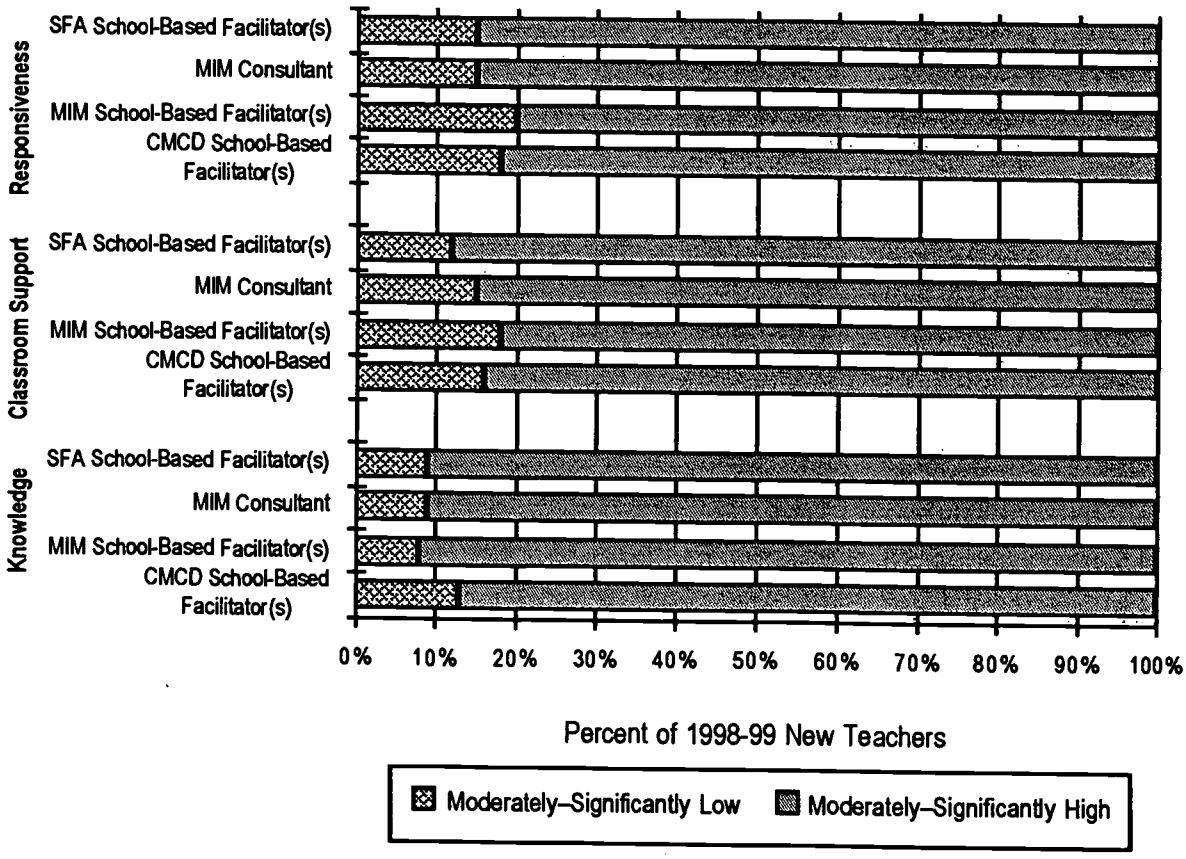


- Overall, the measures were moderately/significantly high in all three areas, especially the measures of the amount of knowledge or extent of component-related skills the facilitators or consultants possessed (Figure 1). None of the measures was below 75% in the Moderately/Significantly High category.
- New teachers were therefore adequately supported during the school year in the Davis feeder schools.

Yates Feeder Schools: Perceptions of New Teachers

- Fifty-four (54) new teachers from Yates feeder elementary schools participated in this portion of the assessment.
- The new teachers in the Yates feeder schools were also supported well in 1998-99 (Figure 2). The measures were moderately/significantly high in all three areas (i.e. *knowledge*, *supportiveness*, and *responsiveness*) and in all three instructional programs (CMCD, MIM, & SFA).

Figure 2 Percent of Yates Feeder New (1998-99) Teachers Who Perceived the Level of Component-Related Knowledge of their Facilitators, Classroom Visits and Support from their Facilitators, and Responsiveness of the Facilitators to their Needs as **Low** or **High**



Perceptions of Davis and Yates Teachers Hired Before 1998-99

Teacher Perceptions of Facilitator/Consultant Knowledge

- Overall, most of the Davis and Yates feeder elementary teachers (≥75%) perceived their facilitators and consultants as moderately/significantly knowledgeable about SFA, MIM, and CMCD (Table 7).

- Schools with the lowest proportions of their teachers (<75%) perceiving some of their facilitators and consultants as moderately/significantly knowledgeable about the components were: Jefferson (CMCD, 68%); Lee (CMCD, 65%); Blackshear (CMCD, 73%); Dodson (CMCD, 73%; MIM Consultant; 73%, and SFA, 62%); TSU/HISD Lab (MIM Facilitator, 50%; and SFA Facilitator, 50%); and Whidby (SFA, 60%).

Table 7. Teacher Perception of Facilitator/Consultant Knowledge: Percent of School's Teachers Assessing level/quality as Moderately/ Significantly **High**

School	CMCD Non-School Based Facilitator	MIM School-Based Facilitator	MIM Consultant	SFA School-Based Facilitator
Jefferson Elementary	68	77	91	94
Lamar Elementary	94	82	100	100
Lee Elementary	65	90	84	86
Looscan Elementary	100	100	100	100
Martinez, C. Elementary	100	88	84	88
Ryan Elementary	100	100	100	100
Sherman Elementary	90	100	95	96
Blackshear Elementary	73	81	79	81
Dodson Elementary	73	75	73	62
Douglass Elementary	94	94	89	94
Foster Elementary	92	100	93	100
Hartsfield Elementary	91	86	91	80
Lockhart Elementary	94	85	90	90
MacArthur Elementary	90	100	92	77
Peck Elementary	88	92	89	82
Thompson Elem.	84	92	85	80
TSU/HISD Lab.	100	50	100	50
Turner Elementary	79	77	87	81
Whidby Elementary	100	83	89	60

Level of Component-Related Classroom Monitoring/Visits/Support

- Overall, most of the Davis feeder elementary teachers (≥75%) perceived their facilitators and consultants as moderately/significantly demonstrating supervisory and supportive behaviors that facilitated the effective implementation of SFA, MIM, and CMCD (Table 8).
- The schools with a significant proportion (≥25%) of their teachers perceiving some of their facilitators and consultants as demonstrating moderately/significantly low levels of required supervisory and supportive behaviors were: Jefferson, C. Martinez, Dodson, Lee, MacArthur, TSU Lab, and Whidby (see shaded cells in Table 8).

Table 8. Level of Component-Related Classroom Monitoring/Visits/Support: Percent of School's Teachers Assessing level/quality as Moderately/Significantly **High**

School	CMCD Non-School Based Facilitator	MIM School-Based Facilitator	MIM Consultant	SFA School-Based Facilitator
Jefferson Elementary	91	50	74	88
Lamar Elementary	93	75	88	94
Lee Elementary	71	80	72	67
Looscan Elementary	91	100	100	100
Martinez, C. Elementary	88	75	72	86
Ryan Elementary	100	100	100	100
Sherman Elementary	79	92	95	96
Blackshear Elementary	75	80	79	80
Dodson Elementary	55	75	90	75
Douglass Elementary	100	94	94	100
Foster Elementary	100	86	86	86
Hartsfield Elementary	77	86	86	79
Lockhart Elementary	88	88	80	83
MacArthur Elementary	91	92	100	70
Peck Elementary	88	91	91	91
Thompson Elem.	95	81	95	92
TSU/HISD Lab.	25	25	67	50
Turner Elementary	80	83	88	88
Whidby Elementary	94	71	80	56

Facilitator/Consultant Responsiveness to Teachers' Needs

- As indicated in Table 9, most of the Davis and Yates feeder elementary teachers perceived their facilitators and consultants as moderately/significantly responsive to their needs/concerns.
- The schools with a significant proportion (≥25%) of their teachers perceiving their facilitators and consultants as being moderately/significantly non-responsive to their needs were: Blackshear, Jefferson, Lee, Martinez, Dodson, MacArthur, TSU Lab, Thompson, and Whidby (see shaded cells in Table 9).

Table 9. Facilitator/Consultant Responsiveness to Teachers' Needs
Percent of School's Teachers Assessing level/quality as
Moderately/Significantly **High**

School	CMCD Non-School Based Facilitator	MIM School-Based Facilitator	MIM Consultant	SFA School-Based Facilitator
Jefferson Elementary	94	72	80	94
Lamar Elementary	80	88	100	94
Lee Elementary	74	90	84	81
Looscan Elementary	100	100	100	100
Martinez, C. Elementary	72	88	75	88
Ryan Elementary	100	100	100	100
Sherman Elementary	95	100	95	92
Blackshear Elementary	70	79	72	80
Dodson Elementary	91	84	92	67
Douglass Elementary	100	100	88	95
Foster Elementary	93	100	86	100
Hartsfield Elementary	82	85	90	91
Lockhart Elementary	88	81	79	77
MacArthur Elementary	86	100	100	70
Peck Elementary	88	90	90	90
Thompson Elem.	84	74	86	70
TSU/HISD Lab.	67	34	67	50
Turner Elementary	80	80	88	88
Whidby Elementary	88	65	71	50

Long-Term Funding Commitment

The continuing funding of Project GRAD by public, private, local, and national organizations/ foundations has enabled the initiative to receive substantive refinement and expansion. The following is a list of prominent pioneering contributors to this initiative.

- Ford Foundation
- The Houston Annenberg Challenge
- Lucent Technologies
- Houston Endowment
- Cullen Foundation
- Brown Foundation
- Houston Independent School District
- John and Rebecca Moores
- Edgar and Mary Frances Monteith
- University of Houston System
- University of Houston-Victoria
- Gordon & Mary Cain Foundation
- Lee & Joseph D. Jamail Foundation
- Margaret & James A. Elkins Trust
- Univ. of Texas Health Science Center
- IPAA Educational Foundation
- Barbara Bush Texas Fund for Family Literacy
- GTE Corporation
- Meadows Foundation
- Rockwell Fund
- Linda & Ken Lay
- Mr. & Mrs. Charles R. Lee
- Kent Sweezey
- Sara Lee Corporation
- Hevrdejs Foundation
- SMR Natural Gas Ventures
- and Bridgemill Foundation
- William Monteloene
- Benjamin F. Biaggini
- Hobby Family Foundation
- McNair Foundation
- Continental Airlines
- Arthur Andersen & Co
- Gailo Trust
- Continental Airlines
- El Paso Energy
- Tenneco, Inc.
- Conoco, Inc.
- Grizzard Foundation
- Fayez Sarofim & Co.
- Shell Oil Foundation
- Ray C. Fish Foundation
- Ranger Insurance Co.
- Morgan & Co.
- Nations Bank Fund
- Kathryn and Jim Ketelsen
- Powell Foundation
- Strake Foundation
- Texas Education Agency
- Episcopal Health Charities
- Bank of America Foundation
- Houston Chronicle

Long-term funding and other resource commitments from the Houston community increased significantly during the 1998-99 project year. The following individuals and organizations were the new major partners of Project GRAD in 1998-99:

- The Houston Annenberg Challenge
- Aspiring Youth of Houston
- Southern Chinese Newspaper Group
- Galleria Chamber of Commerce
- Alpha Kappa Alpha Sorority Inc.
- MPAQ, Inc.
- The Houston Chronicle
- Volunteer Houston
- Leadership Houston
- Sheinfeld, Maley & Kay
- Kiwanis Club of Houston
- Consulate General of Mexico
- Alpha Kappa Omega Chapter
- National Conference for Community & Justice

A demonstration of the funding commitment to the expansion of Project GRAD is the funding proposal by The Houston Annenberg Challenge ($4 million), Houston Endowment ($4 million), Shell Oil (1 million), and Houston ISD ($2.8 initially and $7 million thereafter) to replicate the Project GRAD model in four additional feeder school systems in the next six years.

Houston ISD's Leadership Support and Reform Orientation

Project GRAD continues to enjoy direct and indirect contextual nourishment from the unabated districtwide wave of reform. Houston ISD's Board of Education and Superintendent, Dr. Rod Paige, continue to encourage an unprecedented level of community involvement in all segments of the district's organization and management. The cultivation of the collaborative spirit of involvement in all relevant stakeholders of the Houston community has already yielded substantial dividends in the onward crusade to make the Houston Independent School District a national model worthy of the trust and respect of all.

Major examples of the district's reform initiatives include: a decentralized governance and building-level empowerment framework; the creation of shared decision-making (SDM) committees of teachers, administrators, parents, and community leaders in all schools; an increasing number of charter schools; out-sourcing of service contracts; management/leadership training for all administrators; and many curriculum refinement initiatives. The leadership and management strategies adopted by the Superintendent of schools continue to illustrate the unique and selective application of many business principles and solutions to the challenges and problems facing the school district. It is not surprising to many, why the superintendent recently received a state award as the Texas superintendent of the year and the Richard R. Green Award as one of the nation's two most outstanding urban educators during the October 14, 1999 conference of the 58 largest school districts in the country.

Houston ISD's Board of Education and Superintendent's support for Project GRAD was given a major boost in the spring of 1999, when the School Board approved, during the March 25, 1999 Board meeting, a commitment of $1.3 million for year 2000 and $1.5 million for year 2001. The district plans to further fund the maintenance costs in all six feeder systems, which will amount to about $7 million annually.

Commitment of Principals to the Model's Effective Implementation: Effective Instructional Leadership

Teacher Perceptions of Administrator Knowledge of Project Components

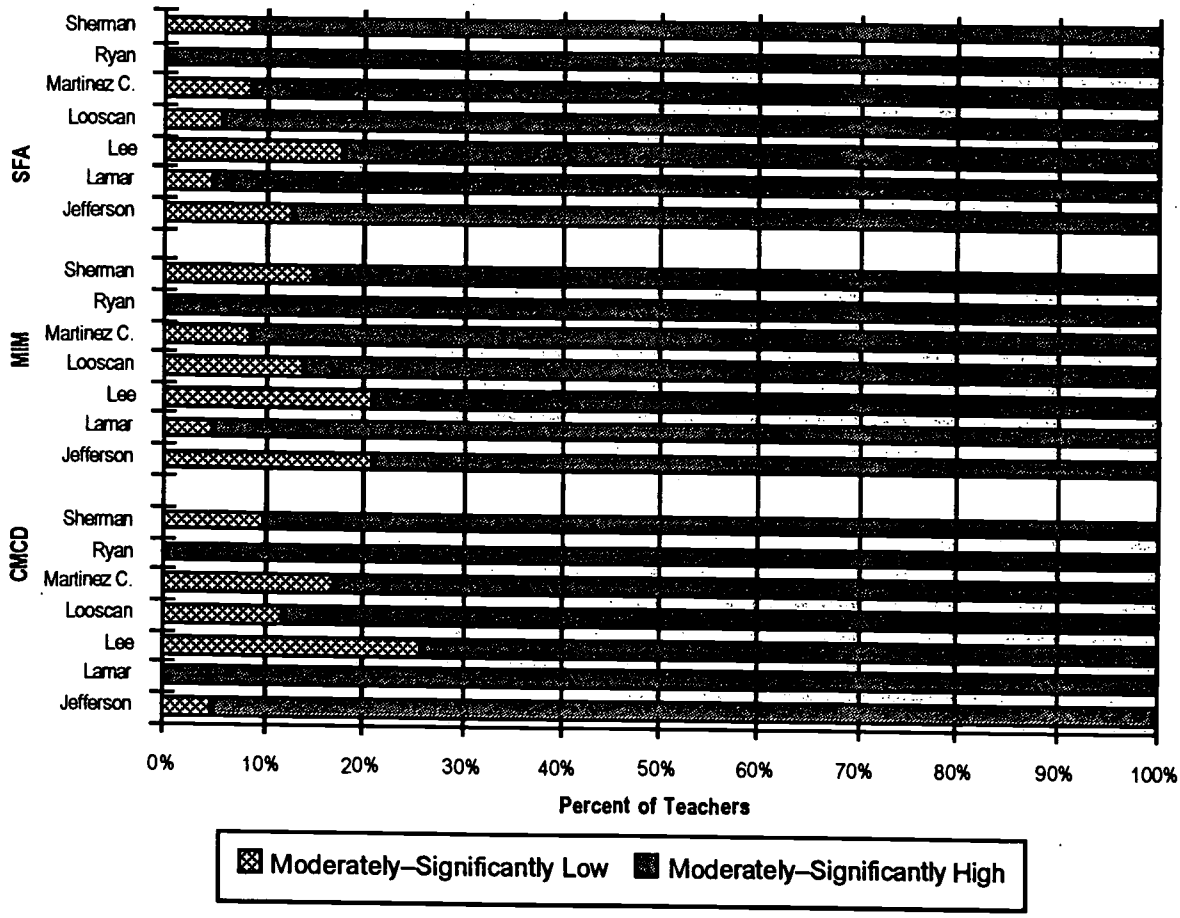
Figure 3 shows teacher perceptions of the extent to which their building level administrators were knowledgeable in the prescribed instructional practices and expectations of CMCD, MIM, and SFA in the 1998-99 school year. Even though perceptions do not always translate into facts, perceptions generally drive a substantial portion of human behavior, and should therefore be monitored. It is important that teachers perceive their administrators as adequately familiar with the pedagogic expectations of the components.

Davis Feeder Schools

- Overall, most of the Davis feeder elementary teachers (≥75%) perceived their administrators as moderately/significantly knowledgeable about SFA, MIM, and CMCD (Figure 3).

- Schools with the highest proportions of their teachers (≥95%) perceiving their administrators as moderately/significantly knowledgeable about the components were: Jefferson (CMCD); Lamar (CMCD, MIM and SFA); Looscan, (SFA); and, Ryan (SFA, MIM, and CMCD).

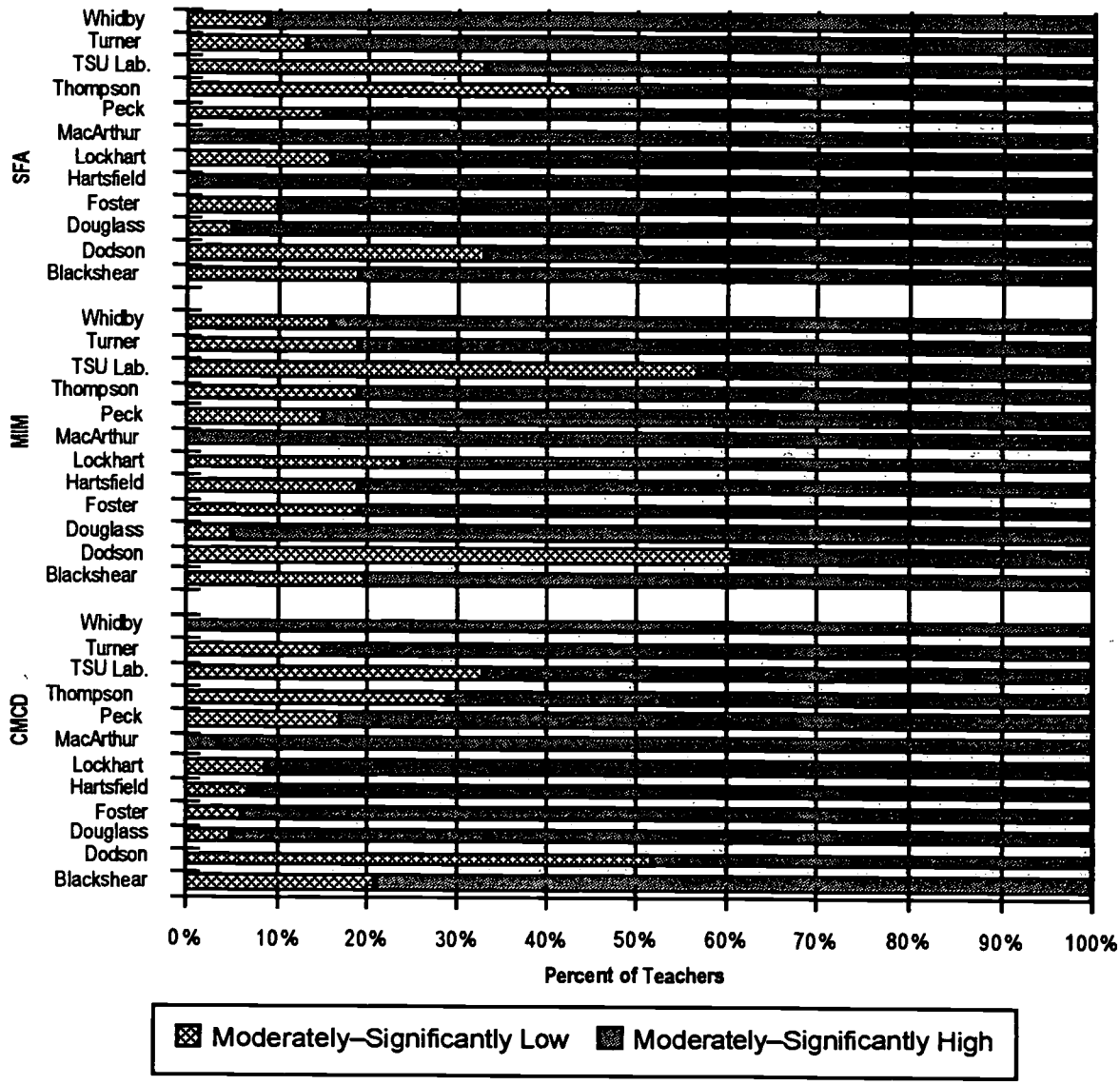
Fig. 3 Percent of Davis Feeder Elementary Teachers Who Perceived the Level of Administrator Knowledge of Components as **Low** or **High**



Yates Feeder Elementary Schools

- Overall, most of the Yates feeder elementary teachers (≥75%) perceived their administrators as moderately/significantly knowledgeable about SFA, MIM, and CMCD (Figure 4).
- Schools with significant proportions (≥95%) of their teachers perceiving their administrators as moderately/significantly high in their knowledge about the components were: Douglass (CMCD, MIM, and SFA); MacArthur (CMCD, MIM, and SFA); Hartsfield (SFA); and Whidby (CMCD).

Fig. 4 Percent of Yates Feeder Elementary Teachers Who Perceived the Level of Administrator Knowledge of Components as **Low** or **High**



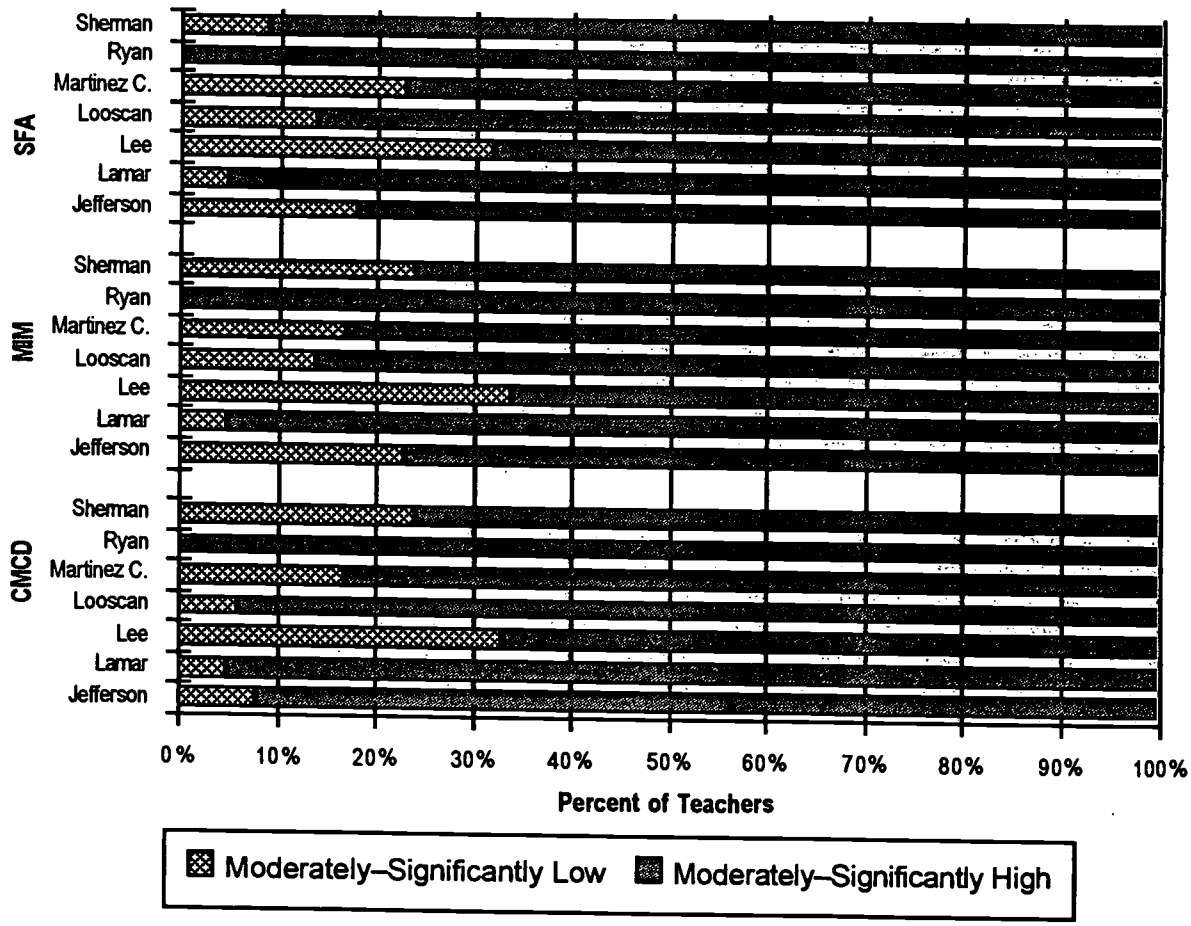
Teacher Perceptions of Supervision Levels of Classroom Practices

Another critical dimension required of the leaders of new instructional initiatives is the extent to which the building-level administrator(s): a) monitors/supervises classroom practices through regular visits and conversations, and relentlessly encourages resistors or poor implementors to effectively implement the recommended practices; b) recognizes and supports teachers who are effectively implementing the model; and c) integrates the model's practices into teacher appraisals. Figure 5 reflects teacher perceptions of the extent to which such monitoring and supportive leadership occurred in project schools in 1998-99.

Davis Feeder Elementary Schools

- In general, most of the Davis feeder elementary teachers (≥75%) perceived their administrators as moderately/significantly demonstrating supervisory and leadership behaviors that facilitated the effective implementation of SFA, MIM, and CMCD (Figure 5).

Fig. 5 Percent of Davis Feeder Elementary Teachers Who Perceived the Level of Component-Related Classroom Monitoring/Supervision/Visits by Building-level School Administrator(s) as **Low** or **High**

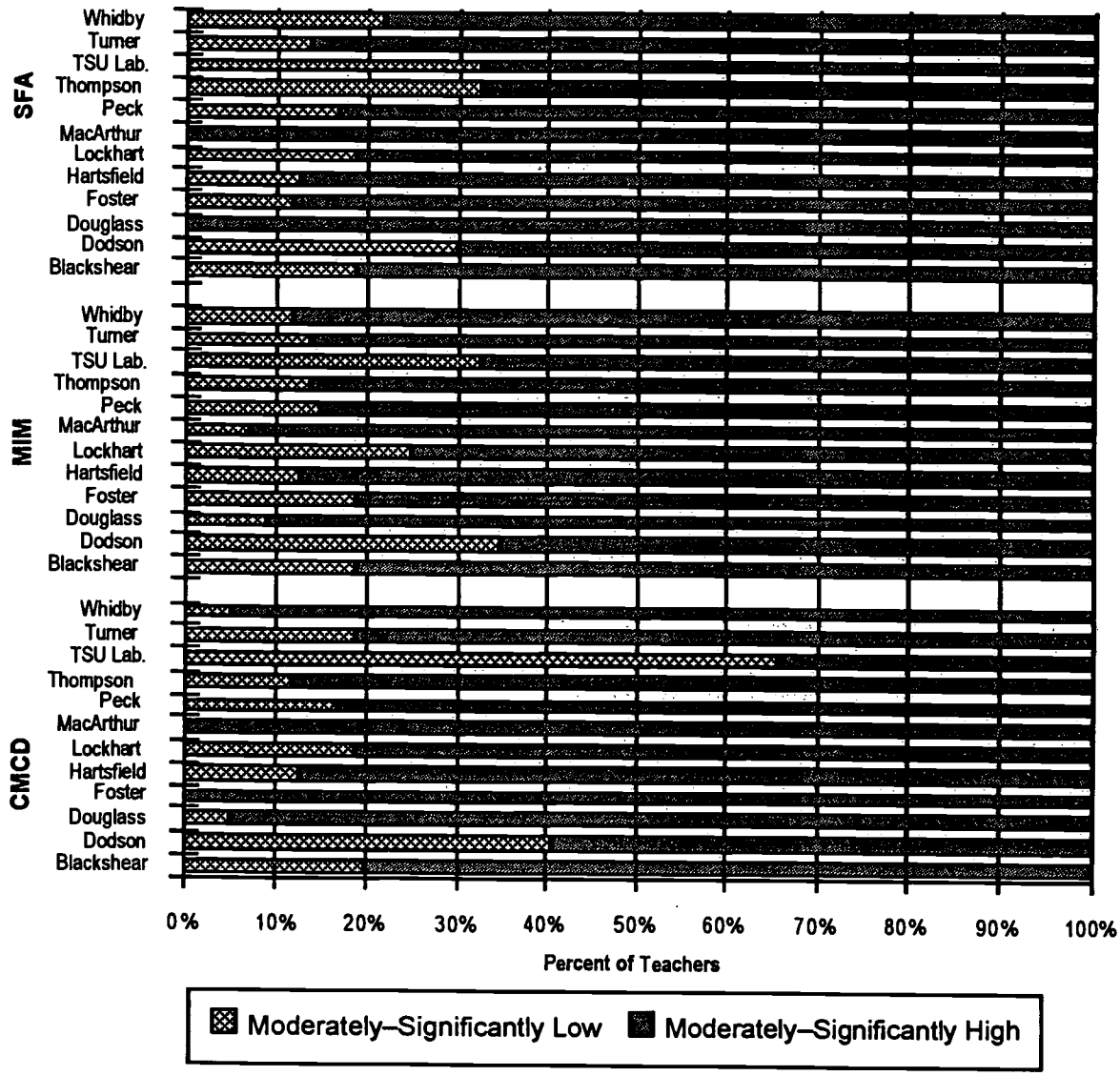


- Schools with significant proportions (≥95%) of their teachers perceiving their administrators as demonstrating moderately/significantly high levels of the required leadership behaviors were: Lamar (CMCD, MIM, and SFA); Looscan (CMCD); and Ryan (CMCD, MIM, and SFA).
- Lee Elementary School had a significant proportion (≥25%) of its teachers perceiving their administrator as demonstrating moderately/significantly low levels of the required leadership behaviors in all three program areas (CMCD, MIM, and SFA) during the 1998-99 school year.

Yates Feeder Elementary Schools

Overall, most of the Yates feeder elementary teachers (≥75%) perceived their administrators as moderately/significantly demonstrating supervisory and leadership behaviors that facilitated the effective implementation of SFA, MIM, and CMCD (Figure 6).

Fig. 6 Percent of Yates Feeder Elementary Teachers Who Perceived the Level of Component-Related Classroom Monitoring/Supervision/Visits by Building-level School Administrator(s) as **Low** or **High**



- Schools with significant proportions (≥95%) of their teachers perceiving their administrators as demonstrating moderately/significantly high levels of the required leadership behaviors were: Douglass, 96% for CMCD, and 100% for SFA; Foster, 100% for CMCD; MacArthur, 100% for CMCD and SFA; and Whidby, 96% for CMCD.

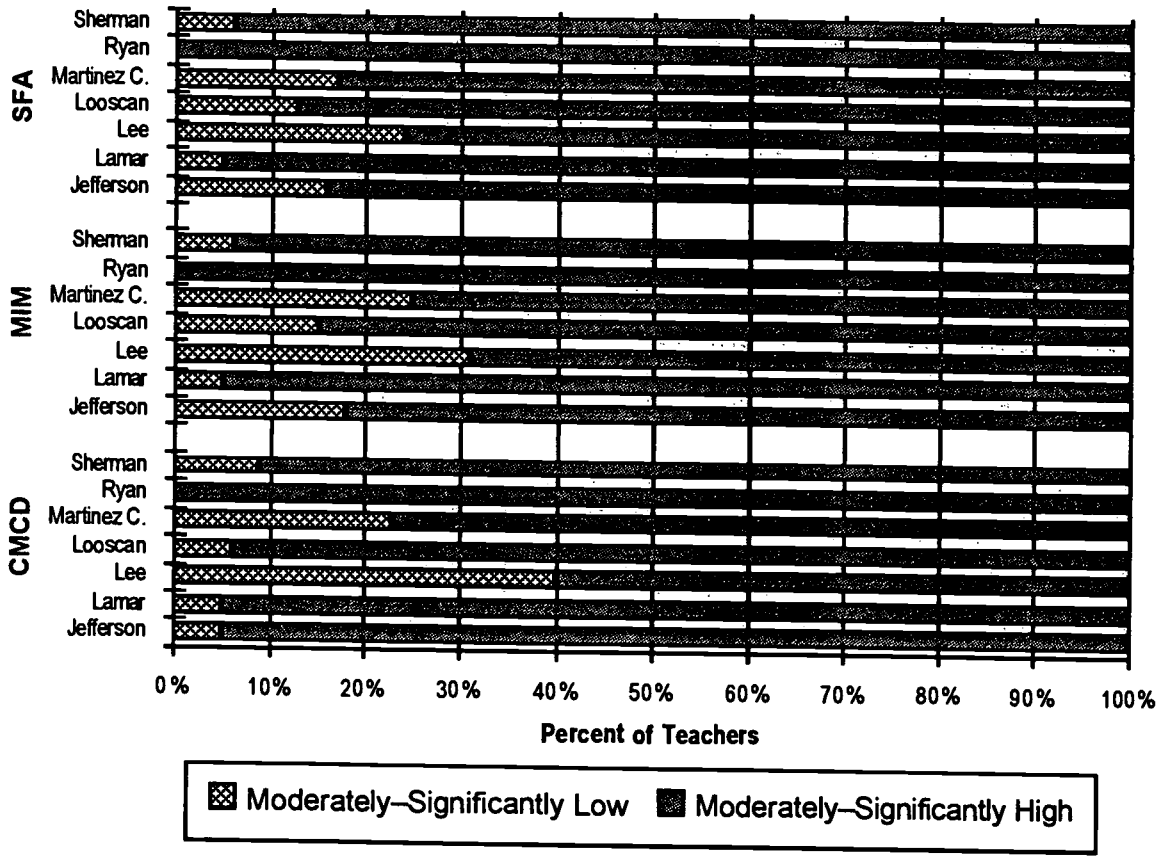
Teacher Perceptions of Administrator Responsiveness to Their Instructional Needs

The responsiveness of administrators to teacher needs/concerns about the effective implementation of the new instructional culture is a critical dimension of instructional leadership at the building level. Figures 7 and 8 depict the perceptions of Davis and Yates feeder elementary teachers about the extent to which their building-level administrators responded to their component-related needs and concerns.

Davis Feeder Elementary Schools

As indicated in Figure 7, schools with the highest proportion of their teachers perceiving their administrators as moderately/significantly responsive to their needs/concerns were: Jefferson, (CMCD); Ryan, (CMCD, MIM, and SFA); Lamar (SFA, MIM, and CMCD); Looscan (CMCD); Sherman (SFA and MIM).

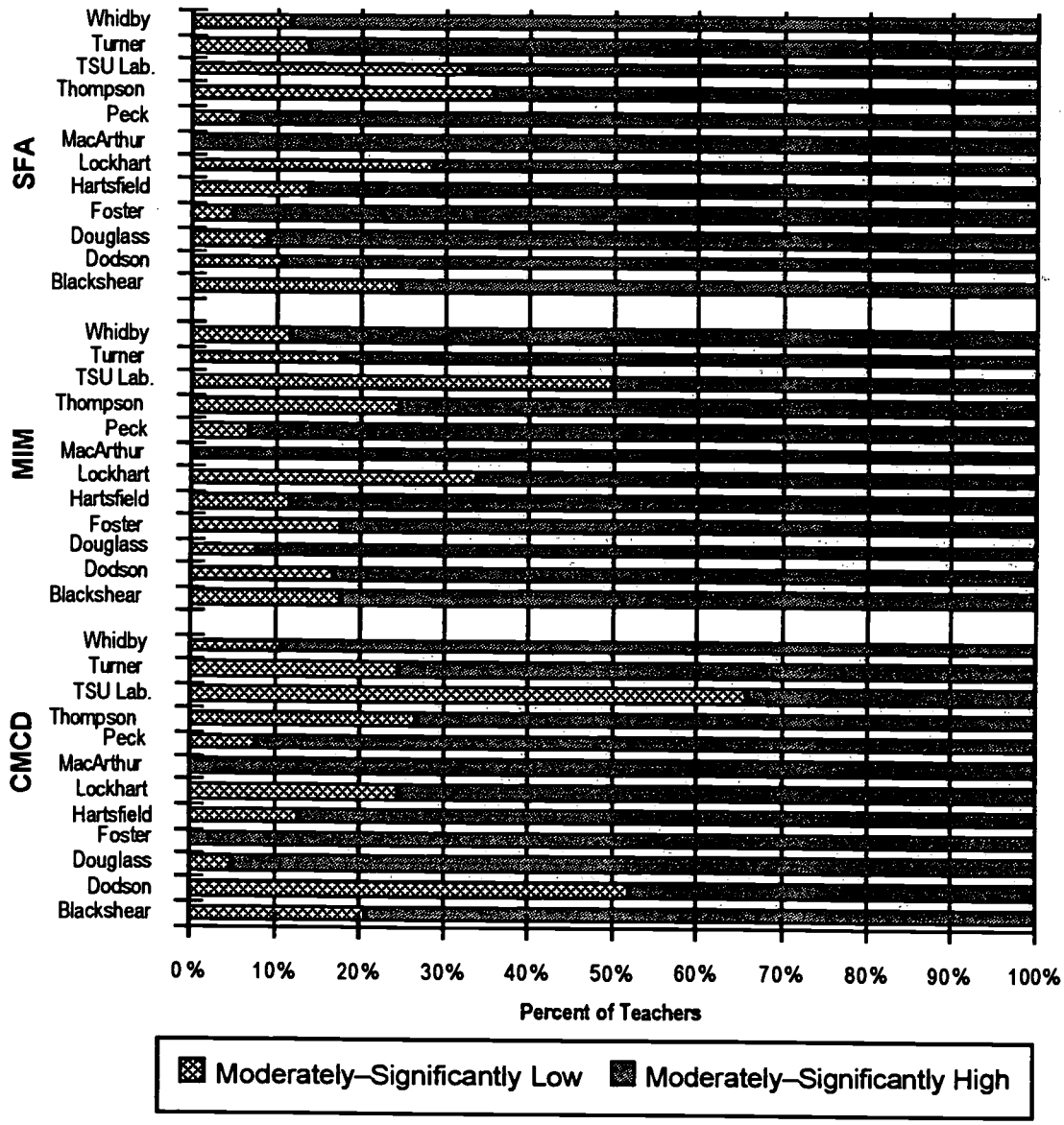
Fig. 7 Percent of Davis Elementary Teachers Who Perceived the Responsiveness of Building-level Administrator(s) to their Component-Related Instructional Needs as **Low** or **High**



- The percent of teachers who perceived the levels of Administrator Responsiveness to their needs as moderately/significantly low for MIM (31%) and CMCD (40%) appear to be high for Lee Elementary School.

Yates Feeder Elementary Schools

Fig. 8 Percent of Yates Elementary Teachers Who Perceived the Responsiveness of Building-level Administrator(s) to their Component-Related Instructional Needs as **Low** or **High**



- Overall, most of the Yates feeder elementary teachers (≥75%) perceived their administrators as moderately/significantly responsive to their instructional needs/concerns (Figure 8).
- Schools with the highest proportion (≥95%) of their teachers perceiving their administrators as moderately/significantly responsive to their needs/concerns were: Douglass, 95% for CMCD, Foster, 100% for CMCD and 95% for SFA; and MacArthur, 100% for CMCD, MIM, and SFA.
- The percent of teachers who perceived the levels of Administrator Responsiveness to their needs as moderately/significantly low appear to be high for: Dodson (CMCD); Lockhart (MIM); Thompson (SFA); and TSU Lab School, (CMCD, MIM, and SFA).

Other Facilitating Implementation Factors/Conditions

Vertical Team Planning & Leadership Among Project Schools

The principals of participating schools continued to participate in all SFA, CMCD, and MIM refresher training sessions that were provided for the teachers during the 1998-99 school year. The principals also had the opportunity to attend the annual two/three day retreats. Such retreats provided a forum for sharing, reflection, troubleshooting, planning, and review of the vision and ideals of the model. Throughout the year, project principals met monthly through vertical-team meetings to deliberate, plan, share ideas, discuss problems, assess progress, and strengthen the leadership team.

Ongoing Evaluation & Improvement of the Model

As this report demonstrates, Project GRAD is provided with periodic systemic feedback to ensure that project developers and administrators have quality data for relevant planning and refinement decisions. All critical implementation elements, performance benchmarks, and school climate elements are monitored to ensure efficient use of project resources and maximization of curriculum reform benefits owed to all major stakeholders, especially the children. The administrators of Project GRAD continue to strengthen the overall model with the introduction of new components such as a fine arts program and other secondary-level strategies made possible through the GEAR UP initiative. All the new components are being implemented in the 1999-2000 project year and will be fully presented in the 1999-2000 evaluation report.

The Scholarship Program

Walk for Success

The 1998-99 Walk for Success was conducted on October 10, 1998. It was a huge success. Over 1,000 volunteers, including parents, teachers, students, administrators, and business leaders, visited over 3,500 homes in the attendance areas of Davis feeder pattern, Yates feeder pattern, and Wheatley High School. Over 1,500 Project GRAD contracts were signed by parents and students as a result of the Walk for Success.

High School Graduates Entering College

Both the number of graduating seniors and the percentage of the graduating class entering college have increased substantially since 1988. Before the initiation of the Scholarship Program in 1988 approximately 174 students graduated from Davis High annually of whom 12% attended college. By the end of the 1998/99 school year, the number of graduates had reached 292. Since Project GRAD's humble beginnings in 1989, the annual 12% of college-bound high school graduates of Davis High School has increased to an average annual rate of 50%, a figure that significantly exceeds the national average of 37% for Hispanic seniors and about 33% for African American seniors (U.S. Dept. of Education, 1994). The number of students entering college from Yates High School more than doubled from 40 in 1998 to 97 in 1999, the first year of the Conoco-Grizzard scholarship program.

Out of the 292 Davis High School's graduating class of May 1999, 175 students qualified for the college scholarships. As many as 102 students are already in college and 25 are making plans to enroll during the spring semester of year 2000. Efforts are underway to find out the proportion of the remaining 48 scholarship recipients who have not yet enrolled. Over 800 Davis High graduates have entered college since 1991-92. The success of the Scholarship Program in generating college bound

seniors in the Davis feeder community is succinctly documented, in a recent book by Dennis Shirley (1997):

> *"The Presidential Scholarship Program greatly helped to change attitudes toward higher education in Davis and the Near North Side.... As word of funding for college spread throughout the community, students' attitudes toward the feasibility of higher education underwent a sea of change....*[As observed by Donna King, an English teacher] *'The Tenneco scholarships helped them to see beyond their immediate situation. When I started here in 1982, none of the kids thought about college; now almost all of them do. The kids believe in the future more and are willing to aspire beyond menial labor at McDonalds'"*

Project GRAD's Summer Institutes

The 1999 Summer Institute was an outstanding success and involved a combined total of 676 students from Davis (341 students), Yates (273 students), and Wheatley (62 students) high schools. Universities that participated in this four-week summer instructional program were the University of Houston-Downtown, University of Houston-Central, and the Texas Southern University. The institute has been organized annually since 1990.

Communities In Schools Activities

CIS Project Managers in Project GRAD schools continued to provide many instructional support services for students, teachers, and parents of project schools throughout the 1998-99 school year. The Project Managers provided information and referrals, and coordinated community services. They also organized numerous after-school enrichment activities for students. Examples of such activities included sports, field trips, carnivals, cultural activities, parades, drug prevention presentations, Black Heritage Month activities, and Hispanic Heritage Month activities. CIS enlisted VISTA volunteers to recruit mentors and tutors for Davis feeder schools. Whenever possible, resources and expertise were sought from the local community to partner with CIS in addressing the needs of students and their parents.

Parent and Community Involvement Programs

As a powerful reinforcement to the activities of Project GRAD's CIS component, a unique parent and community involvement initiative, the *Parent University*, was created in 1998. This initiative was the product of several meetings with parents, teachers, and administrators that culminated in the formation of the Parent University Board of Trustees. Its first meeting was held on November 18, 1998. Subsequent to the creation of the Board of Trustees, numerous parent training and workshops were conducted for parents from January 1999 through May 1999.

The purpose of these workshops was to equip parents with the skills that could enable them to actively and meaningfully support the education of their children. Over 150 Parent University Workshops and 80 GED and ESL classes were conducted for parents in the Davis feeder community during the 1998-99 school year. These activities generated over 2,500 participants between January and April of 1999. Over 200 parents attended the end-of-year Parent Recognition ceremony in May 1999.

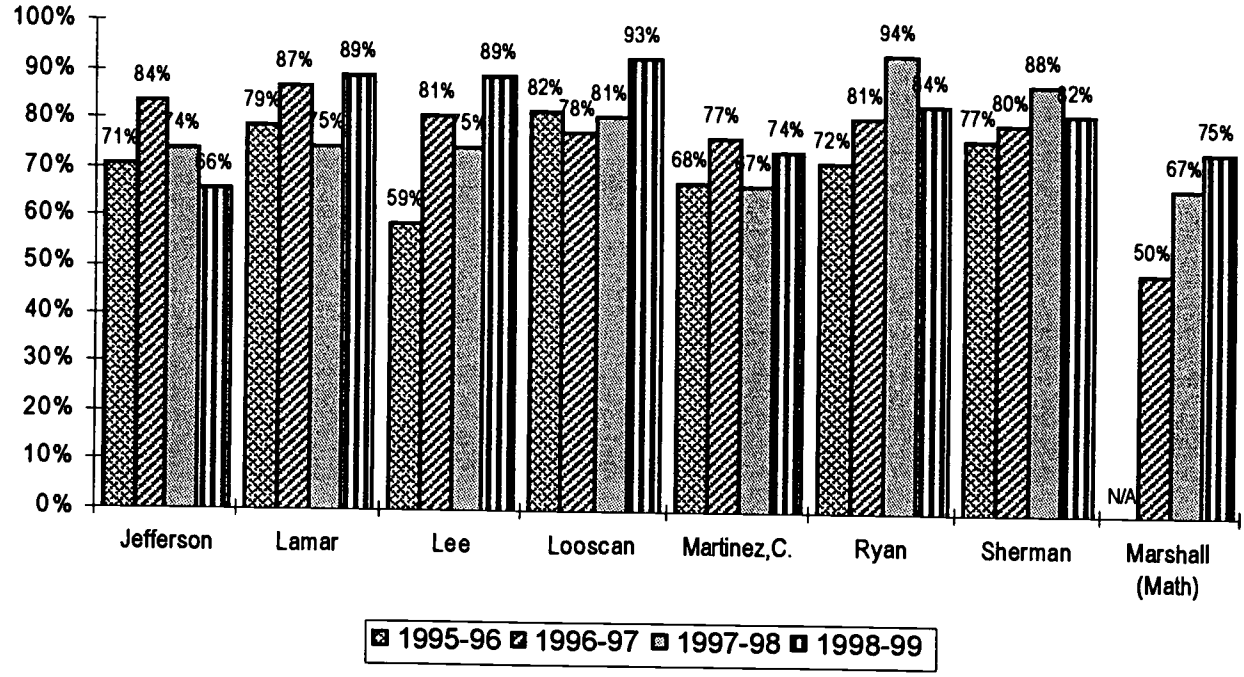
TEACHER PERCEPTIONS OF PROJECT IMPLEMENTATION LEVELS

As previously indicated, the teaching skills and classroom management skills of teachers are the strongest factors that determine the effectiveness of student learning (Wang, Haertel, and Walberg, 1993). The full and consistent adoption of the prescribed instructional practices and beliefs by all teachers within and across grade levels ensures that all students are insulated from educational failure as they move from kindergarten through 12th grade. Schoolwide implementation of CMCD, MIM, and SFA is therefore assessed annually in all participating schools.

Davis Feeder Schools

Davis Feeder Schools' MOVE IT Math Implementation Levels

Fig. 9. Davis Feeder Schools: Teacher Assessment of Levels of MIM Implementation (1995-99)



- Overall, MIM levels of implementation in 1998-99 were significantly high (≥75%) for all schools, except for Jefferson (Figure 9). The levels of MIM implementation appear to have declined during the last two years.
- Significant and consistent improvements were made in implementation levels during the last three years by Lee, Looscan, and Marshall.

Davis Feeder Schools' CMCD Implementation Levels

- Overall, CMCD's levels of implementation in 1998-99 were significantly high (≥75%) for all schools, except for Davis High (Figure 10).
- All of the Davis feeder schools have shown significant and consistent improvements in implementation levels since 1995-96.

Fig. 10. Davis Feeder Schools: Teacher Assessment of Levels of CMCD Implementation (1995-99)

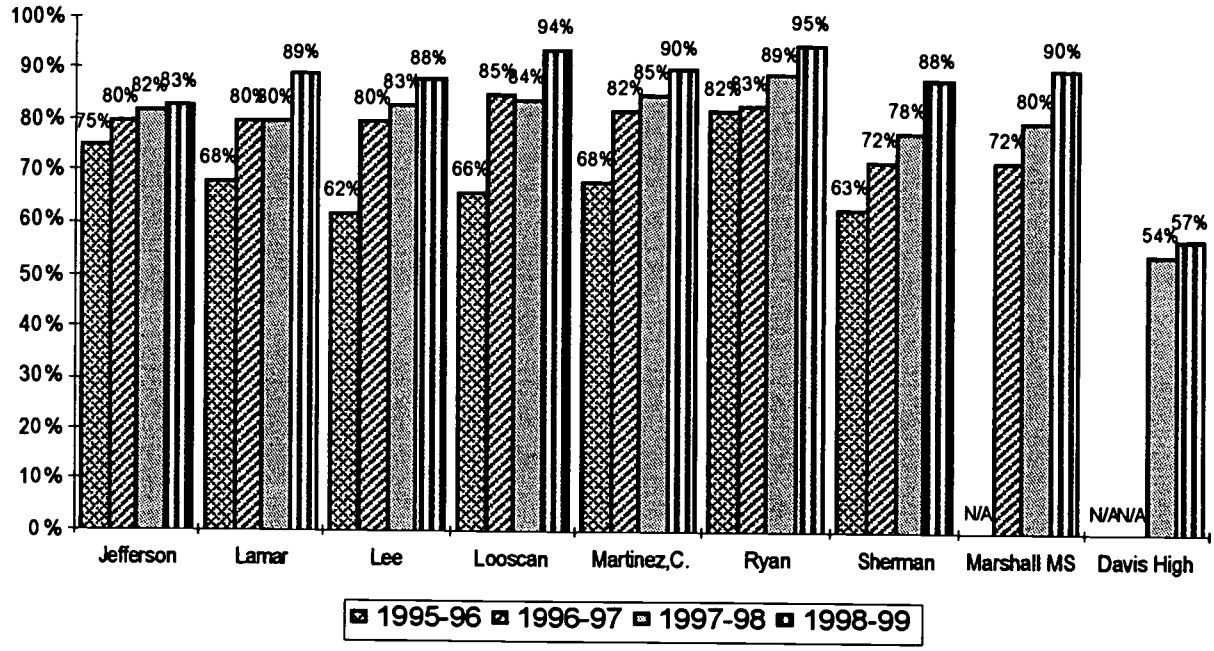
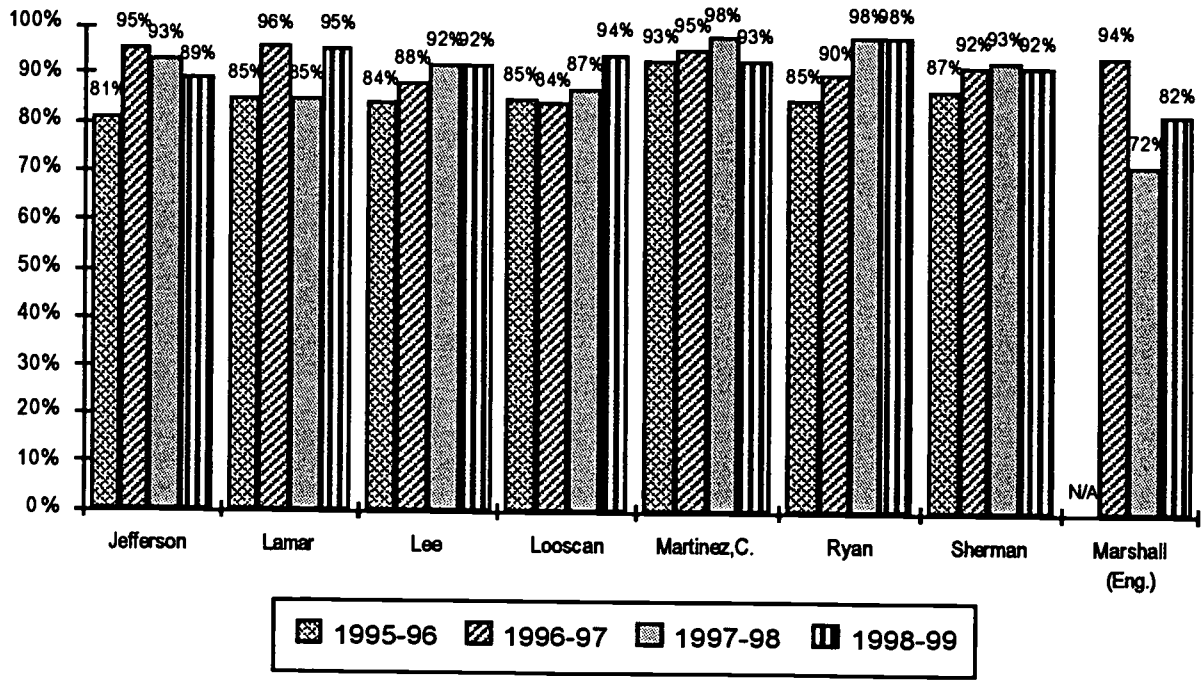


Fig. 11. Davis Feeder Schools: Teacher Assessment of Levels of SFA/CIRC Implementation (1995-99)



Davis Feeder Schools' SFA/CIRC Implementation Levels

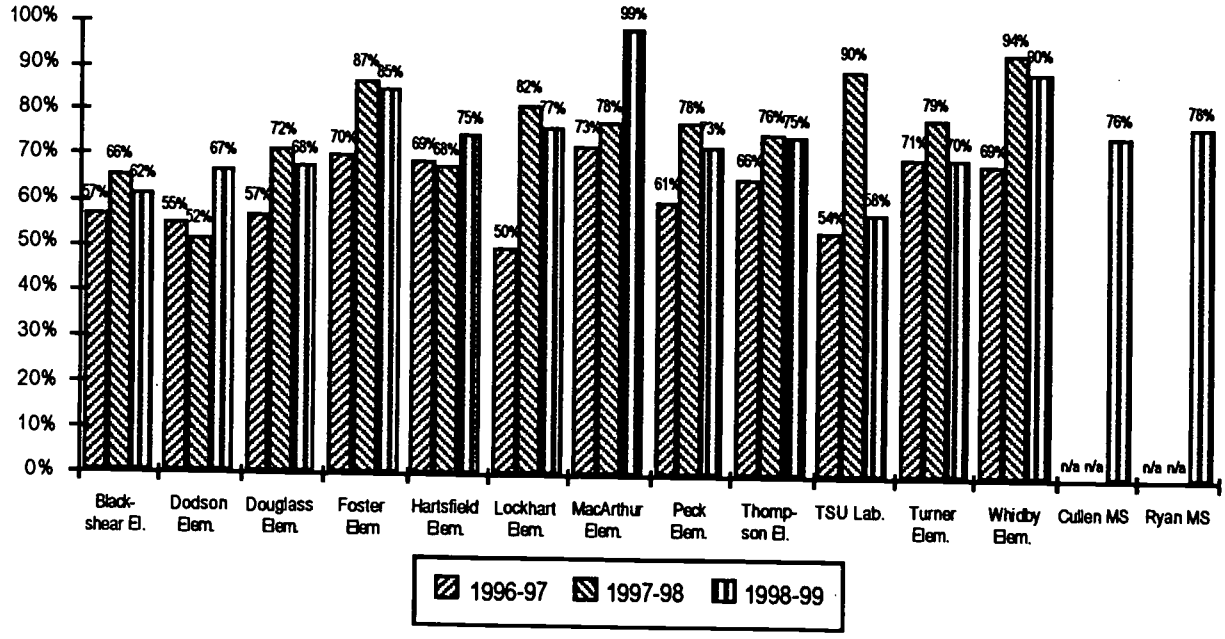
- As shown in Figure 11, SFA/CIRC levels of implementation in 1998-99 were significantly high (≥75%) for all schools.
- There has been a consistently high SFA implementation in all the Davis schools since 1995-96.

Yates Feeder Schools

Yates Feeder Schools' MIM Implementation Levels

- Overall, MIM levels of implementation in 1998-99 were significantly high (≥75%) for the following seven schools: Foster, Hartsfield, MacArthur, Thompson, Whidby, Cullen, and Ryan (see Figure 12).
- Schools that have shown significant increases since the project started in 1996-97 are: Foster, 70%-85%; Lockhart, 50%-77%; MacArthur, 73%-99%; and Whidby, 69%-90%.
- Schools, in which the implementation levels were below 65% were Blackshear and TSU Lab School.

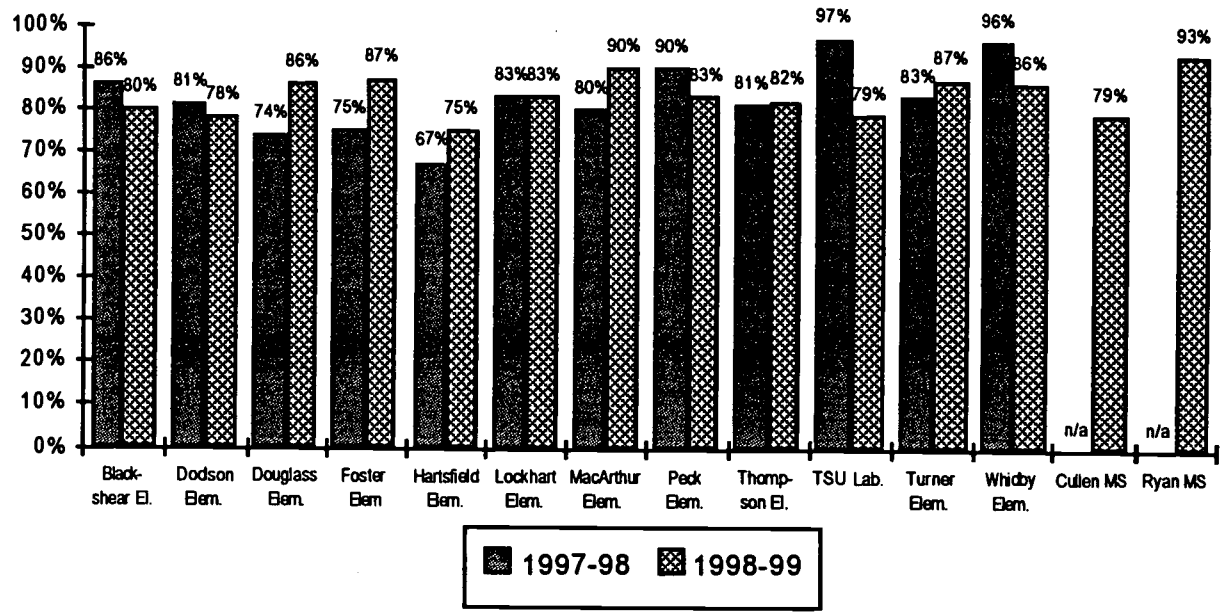
Fig. 12. Yates Feeder Schools: Teacher Assessment of Levels of MIM Implementation (1995-99)



Yates Feeder Schools' CMCD Implementation Levels

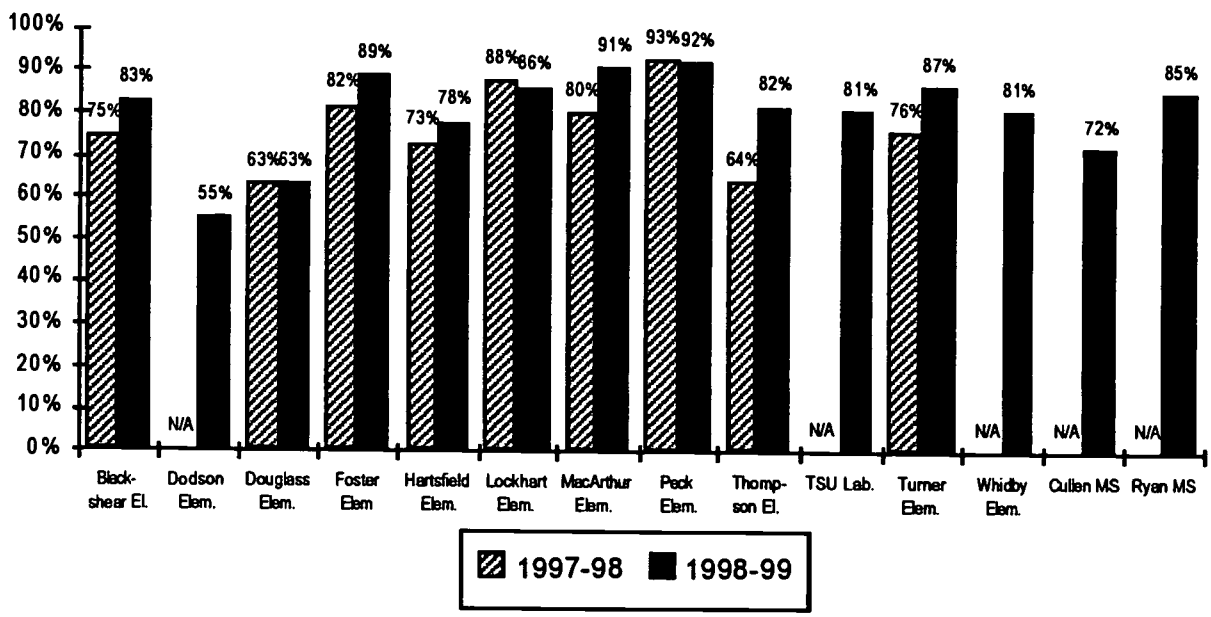
- Overall, CMCD levels of implementation in 1998-99 were significantly high (≥75%) for all schools in the Yates feeder pattern (Figure 13).
- High levels of CMCD implementation have been maintained for the last two consecutive years in 13 of the 14 Yates feeder schools.

Fig. 13. Yates Feeder: Teacher Assessment of Levels of CMCD Implementation (1997-99)



Yates Feeder Schools' SFA Implementation Levels

Fig. 14. Yates Feeder: Teacher Assessment of Levels of SFA Implementation (1997-99)



- Overall, SFA levels of implementation in 1998-99 were significantly high (≥75%) for Yates feeder schools except for the following three schools: Dodson, Douglass, and Cullen (see Figure 14). Schools in which the implementation levels were below 65% were Dodson, Douglass, and Cullen.

PROJECT IMPACT ON STUDENT DISCIPLINE

Disciplinary Referrals to Principal's Offices: Davis Feeder Elementary Schools

Figure 15 and Table 10 show a 74% overall reduction in the number of referrals to principal's offices by the end of the fourth year of CMCD's implementation in the Davis elementary schools. A Chi Square (χ^2) test of proportions indicated that the reductions in referral rates were statistically significant at 0.001 level. In the Yates feeder schools, where pre-project year data were unavailable, the number of referrals to the offices of principals declined by 22% from 935 in year one to 729 in year two of CMCD's implementation. With fewer student referrals to the principal's offices, principals had more time to play their role as the instructional leaders of their schools.

Figure 15. Student Referrals to Principal's Offices in Davis Feeder Elementary Schools (1994-95 – 1997-98)

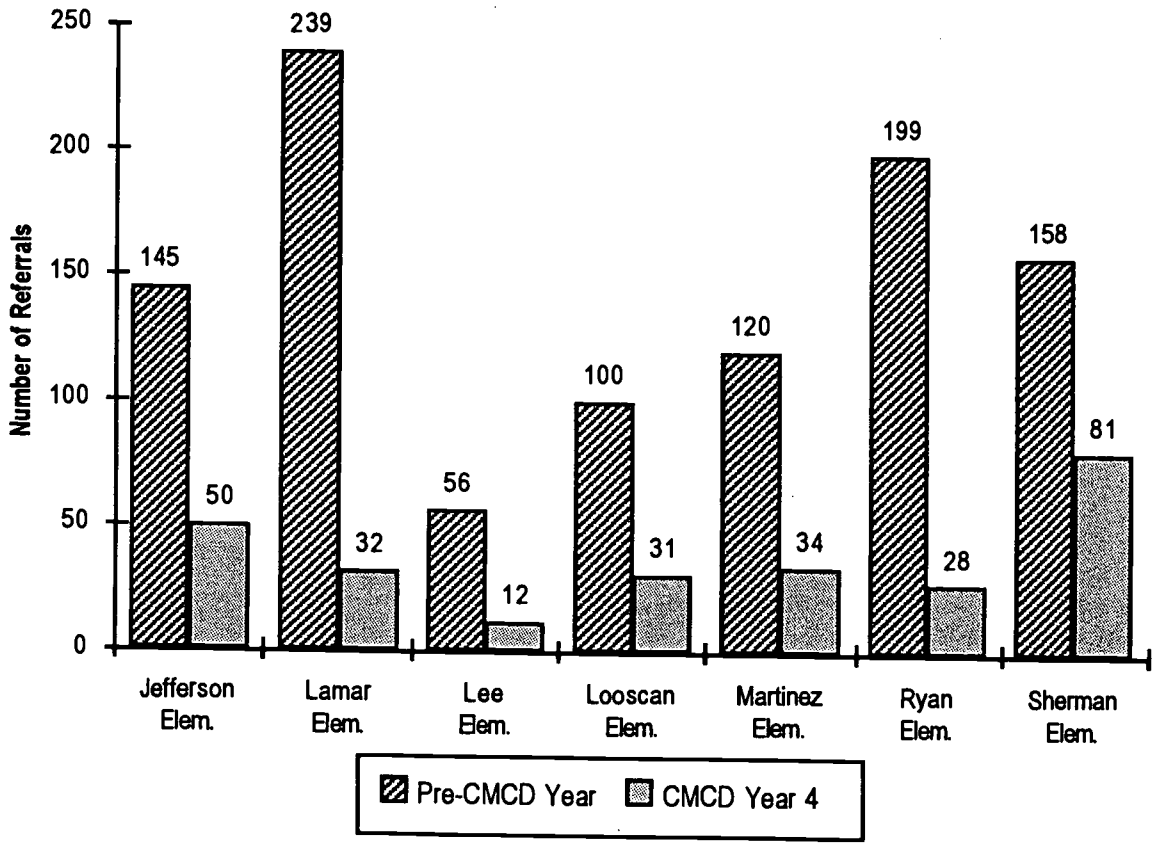


Table 10. Reductions (%) in Student Referrals to Principal's Office in Davis Feeder Elementary Schools: Pre-CMCD (1994-95) & CMCD Year 4 (1997-98)

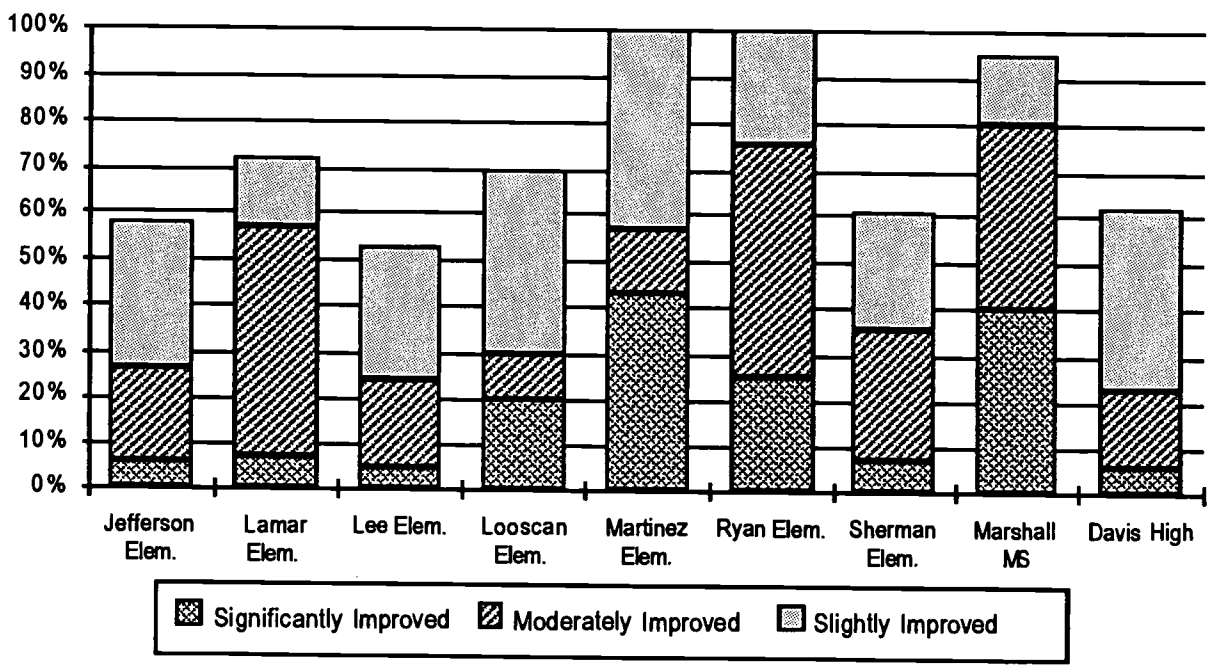
School (Enrollment, '95)	Pre-CMCD	CMCD Year 4	% Reduction in Year 4
Jefferson Elementary (718)	145	50	66%*
Lamar Elementary (411)	239	32	87%*
Lee Elementary (232)	56	12	79%*
Looscan Elementary (419)	100	31	69%*
Martinez Elementary (623)	120	34	72%*
Ryan Elementary (440)	199	28	86%*
Sherman Elementary (709)	158	81	49%*
All 7 Schools (3,552)	**1017**	**268**	**74%***

**Significant, p <.001, corrected for continuity for 1df*

Teacher Assessments of CMCD Impact on Student Behavior/Discipline

Davis Feeder Schools

Figure 16. Davis Feeder Teacher Perceptions of Improvements in Student Discipline/Conduct Since Project GRAD Started



- As shown in Figure 16, all of the Davis feeder schools experienced moderate/significant (≥40%) improvements in student discipline and conduct between 1994-95 and 1998-99.

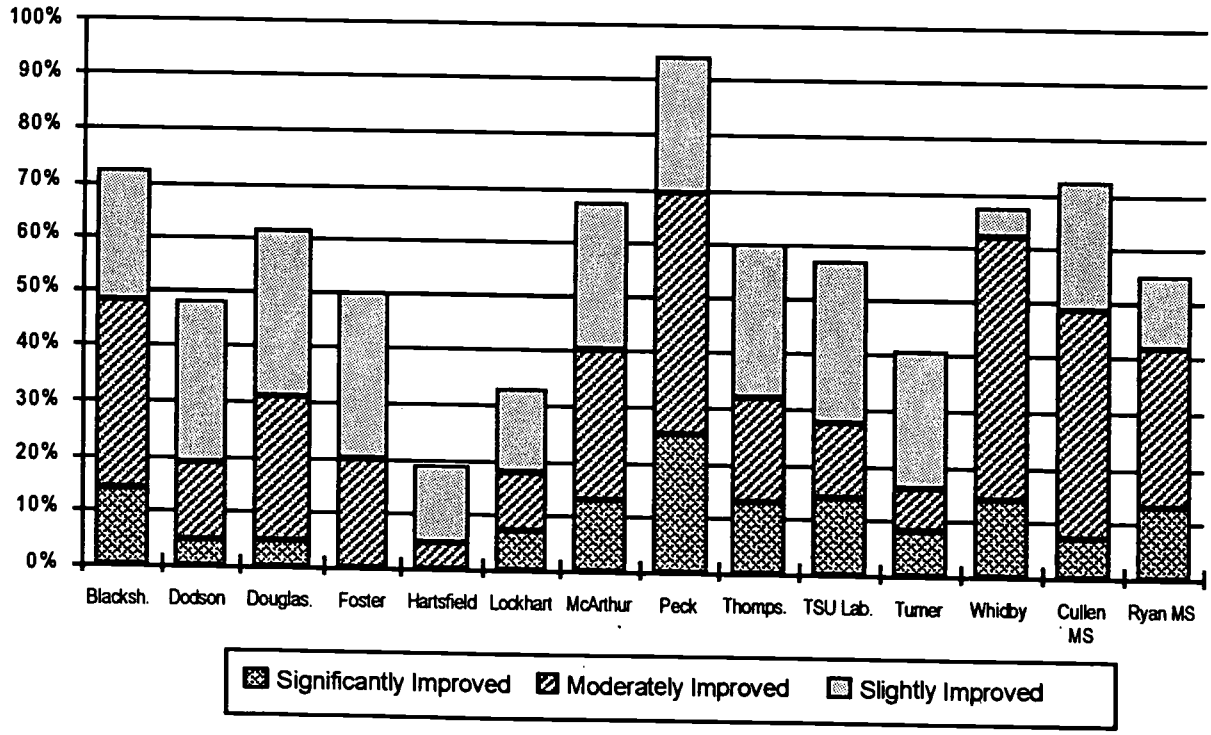
- Schools with substantial levels of perceived improvements (moderate and significant ≥40%) in student discipline/conduct included: Martinez, Marshall Middle, Ryan Elem., and Lamar (Fig. 16).

The preceding findings illustrate the significant progress achieved in student discipline/conduct since the beginning of the CMCD program. The following nationally standardized measures (CASE scores) indicate the extent to which most of the schools had disciplinary levels much lower than the national average (i.e. 50) prior to CMCD's implementation or during the early years of CMCD's implementation: Davis High, 41; Marshall Middle, 35; Jefferson, 41; Lamar, 49; Lee, 39; Looscan, 50; C. Martinez, 35; Ryan Elementary, 32; and Sherman, 16.

Yates Feeder Schools

Each of the participating schools in the Yates feeder pattern has experienced improvements in student discipline/conduct (see Figure 17). Yates feeder schools with substantial levels of perceived improvements (moderate and significant ≥40%) in student discipline/conduct were: Blackshear, Cullen Middle, MacArthur, Peck, Ryan Middle, and Whidby. The improvements illustrate the significant progress achieved in student discipline/conduct since the beginning of CMCD's implementation. The following nationally standardized measures (CASE scores) indicate the extent to which most of the schools had disciplinary levels much lower than the national average (i.e. 50) prior to CMCD's implementation: Cullen Middle, 28; Ryan Middle, 30; Blackshear, 64; Douglass, 29; Dodson, 21; Foster, 28; Hartfield, 29; Lockhart, 25; MacArthur, 40; Peck, 35; Turner, 46; Thompson, 27; TSU/HISD Lab School, 85; and Whidby, 45.

Figure 17. Yates Feeder Teacher Perceptions of Improvements in Student Discipline/Conduct Since Project GRAD started



Project Impact on Instructional Time-on-Task

A major merit of the Project GRAD model, especially the CMCD component, is the impact on student time-on-task. Teachers were therefore asked through surveys to estimate the amount of discipline-related time they had saved because of the use of CMCD strategies. Teachers have consistently indicated that they have saved substantial amounts of time because of CMCD practices (Table 11).

Based on a 180-day school year and six instructional hours per day, Davis feeder pattern appear to have saved in 1996-97 an equivalent of 3.6 weeks at the elementary school level and 3 weeks at the middle school level for use as additional instructional days, without actually lengthening the school day or year. Findings in Yates Feeder elementary schools, and subsequent annual assessments in Davis feeder schools, continue to provide incremental validation of this merit of the CMCD program. The effectiveness of CMCD to free precious time for productive instructional use is apparent in Table 11.

Table 11 Estimate of Additional Time Available For Instruction Resulting from CMCD Practices*

Years of CMCD Implementation	Project Year	Average Time Saved Daily	Total Days Saved Per Year
Davis Elem. Schools: Year 2	1995-96	14 minutes	7 days (1.4 wks.)
Year 3	1996-97	36 minutes	18 days (3.6 wks.)
Year 5	1998-99	28 minutes	14 days (2.8 wks.)
Marshall Middle Sch.: Year 1	1995-96	20 minutes	10.5 days (2.0 wks.)
Year 2	1996-97	30 minutes	15 days (3.0 wks.)
Year 3	1997-98	31 minutes	15.5 days (3.0 wks.)
Year 4	1998-99	30 minutes	15 days (3.0 wks.)
Davis High School: Year 2	1997-98	14 minutes	7 days (1.4 wks.)
Year 3	1998-99	22 minutes	11 days (2.2 wks.)
Yates Elem. Schools: Year 1	1997-98	37 minutes	18.5 days (3.7 wks.)
Year 2	1998-99	31 minutes	15.5 days (3.0 wks.)
Cullen Middle School Year 1	1998-99	24 minutes	12 days (2.4 wks.)
Ryan Middle School Year 1	1998-99	20 minutes	10.5 days (2.0 wks.)

* Assessments of teachers who were in participating schools prior to CMCD's implementation.

After five years of CMCD's implementation in Davis feeder schools and two years of CMCD's implementation in Yates feeder schools, teachers have observed substantive increases in the time saved daily for productive instructional use that non-CMCD schools in the district are lacking. Consequently, participating teachers appear to have lengthened the 1998-99 school year by 14 days (Davis elementary schools), 15 days (Marshall Middle), 11 days (Davis High), 15.5 days (Yates elementary schools), 12 days (Cullen Middle), and 10.5 days (Ryan Middle), at no cost to the district.

Table 11 reveals a consistent pattern of about 30 minutes of time saved daily (3 weeks yearly) by teachers, after the first year of CMCD's implementation. As vivid memories of the levels of student discipline in project schools prior to CMCD's implementation begin to fade, after four or five years of CMCD's implementation, these perceptual assessments are likely to decline slightly, even though the three weeks of additional instructional time may remain in CMCD schools.

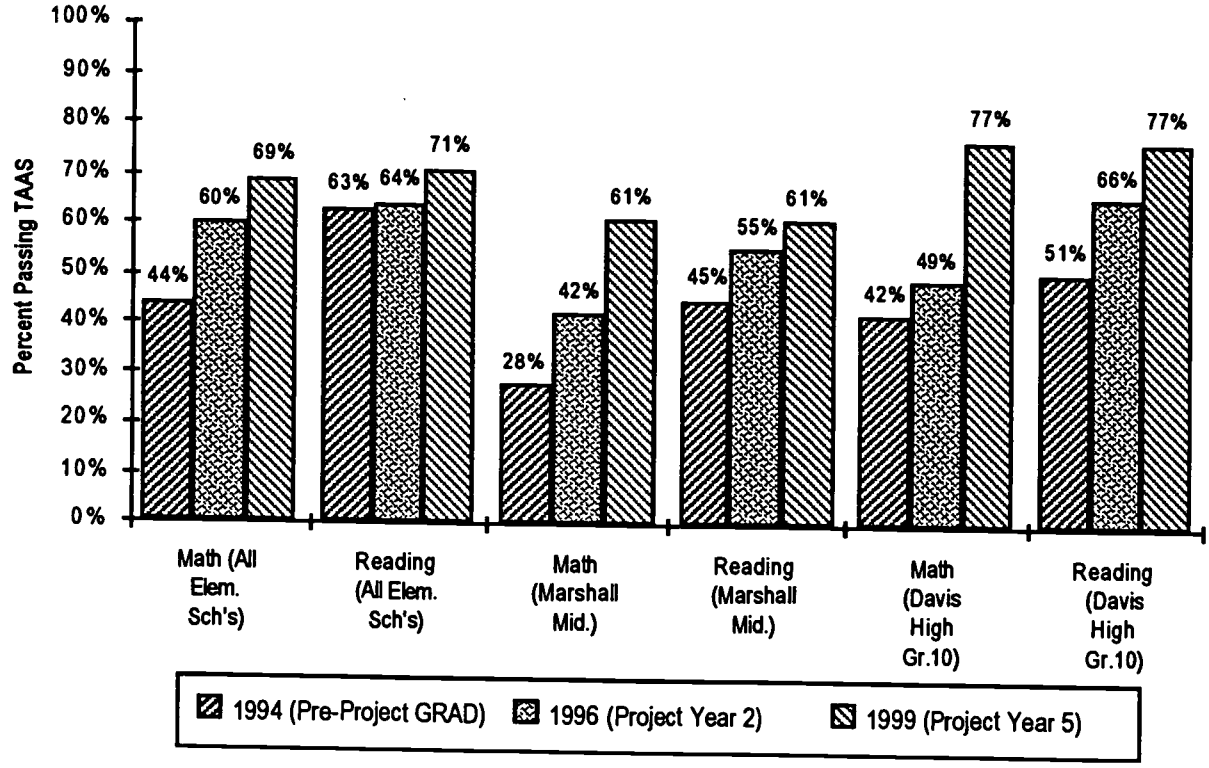
PROJECT IMPACT ON ACADEMIC PERFORMANCE: DESCRIPTIVE ANALYSIS

Davis Vertical Team of Schools

After four or five years of MOVE IT Math, CMCD, and CIS implementation in the Davis feeder elementary schools, three years of CMCD in Davis High School, and four years of CMCD, SFA, and MOVE IT Math in Marshall Middle School, the curriculum of Davis Feeder school system has received a significant infusion of Project GRAD components. The steady increases in TAAS passing rates in mathematics and reading, in spite of the high student mobility rates, demonstrate the momentum of the new instructional culture that has developed in the feeder system (Figures 18-19).

Davis Feeder Pattern Schools Grades 3–10

Figure 18. Davis Vertical Team of Schools: Percent of Students Passing TAAS Math and Reading (1994, 1996, & 1999)



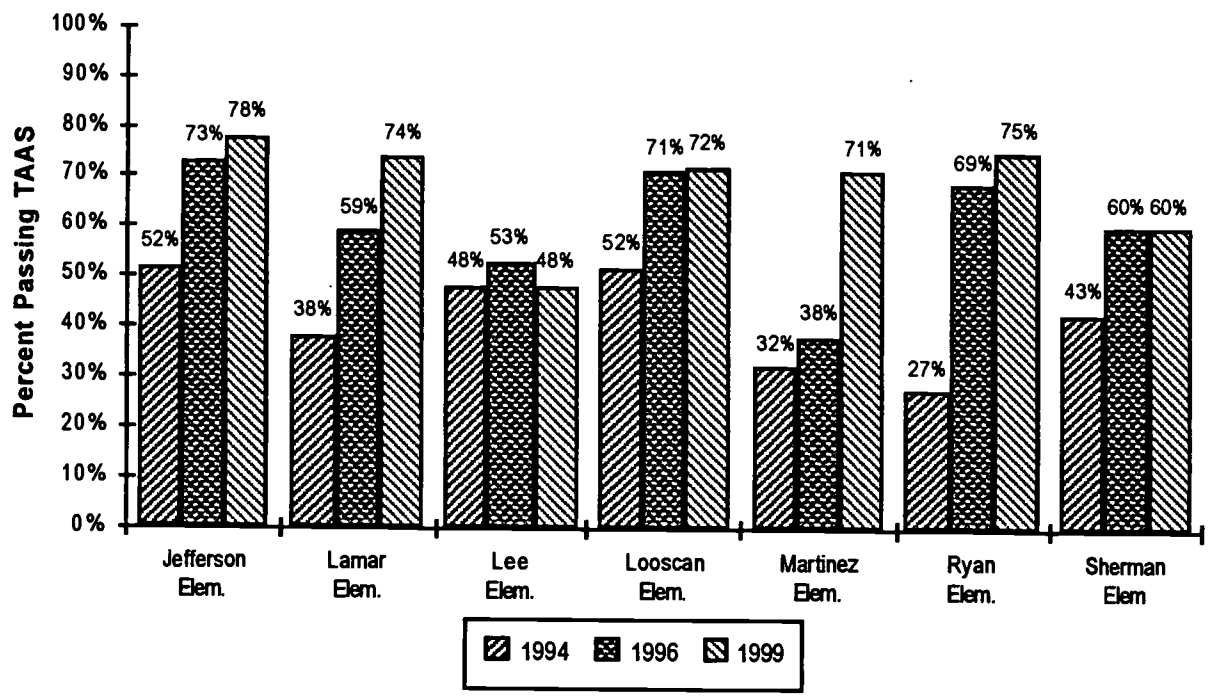
- The substantial and pervasive impact of Project GRAD as an academic performance enhancer for all levels of the curriculum is apparent from Figure 18.
- At the elementary school level (Grades 3–6), student performance levels have experienced a higher rate of change in mathematics than in reading, even though the performance levels in reading have been generally higher.

- The middle school level shows a pattern similar to that of the elementary level, with the passing rate in mathematics experiencing a major boost from 28%–61% in five years, as compared to an increase from 45%–61% in reading.
- Davis High School has experienced an increase of over 25% in the proportion of students passing the TAAS Exit test (required for high school graduation) since 1994.

Davis Feeder Elementary Schools Grades 3–6

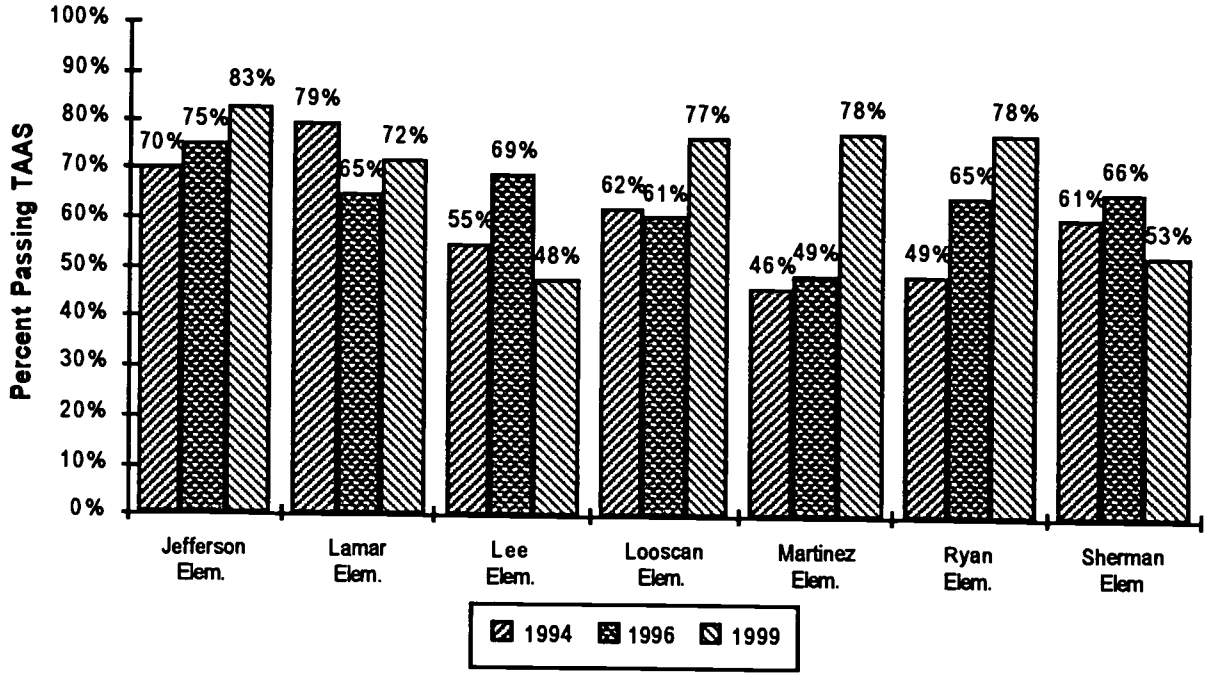
As shown in Figures 19 (Math) & 20 (Reading), the academic gains at the elementary school level have occurred in, generally, six of the seven schools. As is generally the case, schools with much lower passing rates prior to Project GRAD's initial year (1994-95), have experienced greater increases.

Figure 19. Davis Vertical Team's Elementary Schools: Percent of Students Passing TAAS Math (1994, 1996, & 1999)



- As shown in Figure 19, of the five project schools with less than 50% of their students passing the TAAS in math before the initiation of Project GRAD in 1994, only one project school (Lee Elementary) was back in that performance range in 1999, after a slight improvement in 1996.
- As shown in Figure 19, Lee Elementary and Sherman Elementary schools suffered a decline in student performance in reading between 1995 and 1999.

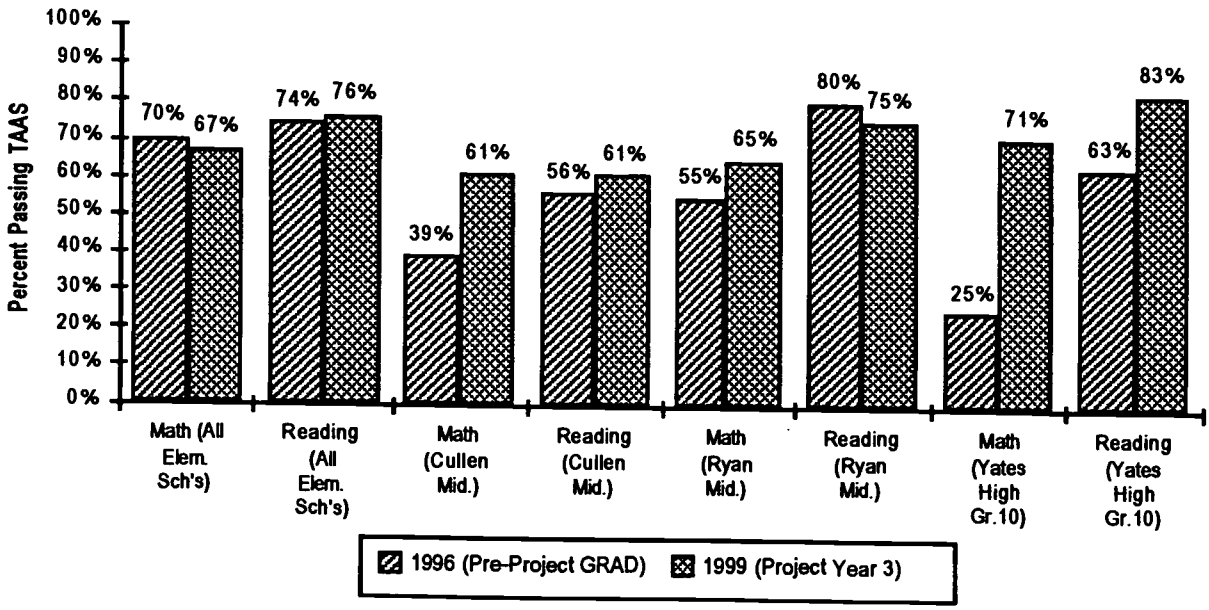
Figure 20. Davis Vertical Team's Elementary Schools: Percent of Students Passing TAAS Reading (1994, 1996, & 1999)



Yates Vertical Team of Schools

Yates Feeder Pattern Schools Grades 3-10

Figure 21. Yates Vertical Team of Schools: Percent of Students Passing TAAS Math and Reading (1996 & 1999)



After three years of MOVE IT Math in Yates feeder elementary schools, and two years of CMCD and SFA in participating elementary schools, the Project GRAD curriculum is steadily taking root in the Yates feeder schools. In view of the high (35-50%) student mobility rates in most of participating schools, the achievement of consistently higher levels of student performance may take a few more years. The cohort studies, presented in the latter part of this report, demonstrate the substantial impact of Project GRAD on students who have remained in the feeder system.

- As shown in Figure 21, Yates feeder middle and high schools have experienced moderate to significant increases in TAAS passing rates in mathematics and reading since 1996.
- Levels of performance in the elementary schools continue to be moderately high.

PROJECT IMPACT ON ACADEMIC PERFORMANCE: STATISTICAL ANALYSES

Davis Feeder System Cohorts (Grades K-4 & 3-7)

The Reading Readiness and Basic Skills sub-scales of the WRMT-R were used to collect school/reading readiness measures on project and comparison students when Project GRAD began in 1994-95. The Reading Readiness subscale consists of Visual-Auditory Learning and Letter Identification measures, while the Basic Skills subscale is composed of Word Identification and Word Attack (phonic and structural analysis) measures. An assessment of the Reading Readiness level of the project's 1994-95 kindergarten students indicated a group/cohort average percentile score of 28 on the WRMT-R test. The Reading Readiness subscale was used as a covariate or baseline measure in determining the impact of Project GRAD on student achievement in reading and mathematics. Even though a baseline measure in mathematics is the ideal covariate for adjusting post-test measures in mathematics, the difficulty in finding a nationally normed assessment instrument for measuring kindergarten students' skills in mathematics, necessitated the use of the WRMT-R Reading Readiness and Basic Skills subscales as covariates for adjusting students' post-test scores in reading and mathematics.

A statistical measure that has been added to the current year's measures of statistical significance is Effect Size, which is used to assess the magnitude of the difference between the means of the two groups/cohorts being compared. The Effect Size takes into account the size of the difference between means, regardless of whether or not that difference is statistically significant. In most studies, an Effect Size of +0.50 or -0.50 is regarded as an important/significant finding but in educational studies, especially in inner-city settings, an Effect Size of +0.33 or -0.33 or larger is regarded as an important/significant educational finding. An Effect Size of +0.33 or -0.33 indicates that the mean score of the experimental/project group is a third of a standard deviation more or less than the mean score of the comparison group.

Lower Primary Cohort: 1994-95 Kindergarten Students (4th Grade in 1998-99)

As Tables 12, 13, 14, and 15 indicate, the Lower Primary Cohorts have outperformed their comparison cohorts for three consecutive years in mathematics and two consecutive years in reading. These accomplishments have occurred even though three of the seven comparison schools have also implemented Success for All reading programs since Project GRAD was initiated.

Project GRAD's Third Year (K-2)

Table 12. 1994-95 WRMT-R & **1996-97 Stanford-8 Mathematics**
Total NCE Scores of Project GRAD Second Grade Students and those in Comparison Schools: MANCOVA of Independent and Dependent Variables

Subject	Group Size	WRMT-R 1994-95 Group Means	1996-97 SAT-8 Adjusted Group Mean	F
Mathematics	Project GRAD (n=108)	56.36	50.62	4.83*
	Basic Skills	38.90		
	Reading Readiness			
	Comparison Schools (n=96)			
	Basic Skills	57.30	44.58	
	Reading Readiness	46.62		

* Significant $p<0.05$.

Project GRAD's Fourth Year (K-3)

Only two of the control schools participated in the spring 1998 testing; hence the smallness of the control group's sample size (Table 13 & 14). The Project GRAD mathematics cohort was composed of 11% African American, 86% Hispanic, and 3% white, with 88% in the federal government's lunch program, while the comparison cohort was composed of 9% African American, 84% Hispanic, and 7% white, with 81% in the federal government's lunch program. The Project GRAD reading cohort (Table 14) was composed of 11% African American students, 85% Hispanic, and 4% white, with 94% in the federal government's lunch program, while the comparison cohort was composed of 6% African American, 87% Hispanic, and 7% white, with 81% in the federal government's lunch program.

Table 13. 1994-95 WRMT-R & **1997-98 Stanford-9 Mathematics**
Total NCE Scores of Project GRAD Third Grade Students and those in Comparison Schools: MANCOVA of Independent and Dependent Variables

Subject	Group Size	WRMT-R 1994-95 Group Means	1997-98 SAT-9 Adjusted Group Mean	F
Mathematics	Project GRAD (n=113)	55.79	49.79	7.89*
	Basic Skills	53.68		
	Reading Readiness			
	Comparison Schools (n=32)**			
	Basic Skills	39.66	40.61	
	Reading Readiness	42.63		

*Significant $p<0.05$ ($p=0.006$); ** Students in two comparison schools participated in this assessment.

Table 14. 1994-95 WRMT-R & **1997-98 Stanford-9 Reading** Total NCE Scores of Project GRAD Third Grade Students and those in Comparison Schools: MANCOVA of Independent and Dependent Variables

Subject	Group Size	WRMT-R 1994-95 Group Means	1997-98 SAT-8 Adjusted Group Mean	F
Reading	Project GRAD (n=111)	55.84	47.72	4.87*
	Basic Skills	53.71		
	Reading Readiness			
	Comparison Schools (n=31)**	40.16	41.42	
	Basic Skills	41.68		
	Reading Readiness			

*Significant $p<0.05$ ($p=0.029$); ** Students in two comparison schools participated in this assessment.

Project GRAD's Fifth Year (K-4)

- The 1998-99 Fourth Grade Students (Grades K-4 Cohort) in Davis feeder schools who had been tested in kindergarten (Fall 1995) with the Woodcock Reading Mastery Test-Revised (WRMT-R) instrument and re-tested with the spring 1999 TAAS test outperformed students in comparison cohort in both math and reading on the TAAS test (Table 15).
- In both reading and math, the Effect Sizes for the TAAS tests demonstrate that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Table 15. 1994-95 WRMT-R & **1998-99 TAAS Mathematics & Reading** Total NCE Scores of Project GRAD Fourth Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

Subject	Group Size	WRMT-R 1994-95 Group Means	1998-99 SAT-9 Adjusted Group Mean	F	Effect Size
Mathematics	Project GRAD (n=88)	30.38	67.71	9.26*	0.47**
	Reading Readiness				
	Comparison Schools (n=86)	47.09	58.42		
	Reading Readiness				
Reading	Project GRAD (n=87)	30.62	66.00	24.81*	0.78**
	Reading Readiness	45.88	50.93		
	Comparison Schools (n=86)				
	Reading Readiness				

*Significant $p<0.05$ (Math, $p=0.003$; Reading, $p=0.000$); ** Significant Educational Finding: ES= ≥ 0.33

- The 1998-99 Fourth Grade Students (Grades K-4 Cohort) in Davis feeder schools who had been tested in kindergarten (Fall 1995) with the Woodcock Reading Mastery Test-Revised (WRMT-R) instrument and re-tested with spring 1999 Stanford-9 Achievement test

outperformed students in comparison cohort in both math and reading on the Stanford test. (Table 16).

- In both reading and math, the Effect Sizes for the Stanford-9 tests demonstrate that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Table 16. 1994-95 WRMT-R & **1998-99 Stanford-9 Mathematics & Reading** Total NCE Scores of Project GRAD Fourth Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

Subject	Group Size	WRMT-R 1994-95 Group Means	1998-99 SAT-9 Adjusted Group Mean	F	Effect Size
Mathematics	Project GRAD (n=96) Reading Readiness	29.04	61.40	19.28*	0.69**
	Comparison Schools (n=89) Reading Readiness	46.34	49.54		
Reading	Project GRAD (n=96) Reading Readiness	29.04	55.17	17.55*	0.65**
	Comparison Schools (n=89) Reading Readiness	46.24	43.99		

*Significant p<0.05 (Math, p=0.000; Reading, p=0.000); ** Significant Educational Finding: ES= ≥0.33

Upper Primary/Middle: Grades 3-7

1. The 1998-99 Seventh Grade Students (Grades 3-7 Cohort, Marshall Middle School's seventh grade students from Project GRAD elementary schools) who had been tested in third grade (Spring 1995) with the TAAS test and re-tested with the spring 1999 TAAS test outperformed students in comparison cohort in both math and reading on the TAAS (Table 17).
2. In both reading and math, the Effect Sizes for the TAAS tests indicate that the performance differences between Project GRAD students and the comparison students were significant educational findings (Tables 17).

Table 17. **1994/95 TAAS** (Covariates) & **1998/99 TAAS** Math and Reading NCE Scores of Davis Third–Seventh Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

	Group Size	1994-95 TAAS Group Mean	1998-99 Adjusted TAAS Group Mean	F	Effect Size
Math	Marshall Middle School's Seventh Grade Students from Project Elementary Students (n=93)	41.29	64.30	20.30*	0.47**
	Comparison Cohort (n=96)	39.55	54.51		
Reading	Marshall Middle School's Seventh Grade Students from Project Elementary Students (n=91)	41.87	54.98	11.62*	0.34**
	Comparison Cohort (n=100)	40.21	48.22		

*Significant p<0.05 (Math, p=0.000; Reading, p=0.001); ** Significant Educational Finding: ES= ≥0.33

- The 1998-99 Seventh Grade Students (Grades 3-7 Cohort, Marshall Middle School's seventh grade students from Project GRAD elementary schools) who had been tested in third grade (Spring 1995) with the TAAS test and re-tested with the spring 1999 Stanford-9 Achievement test outperformed students in comparison cohort in both math and reading on the Stanford (Table 18).
- In both reading and math, the Effect Sizes for the Stanford-9 tests show that the performance differences between Project GRAD students and the comparison students were significant educational findings (Tables 18).

Table 18. 1994/95 TAAS (Covariates) & **1998/99 Stanford** Math and Reading NCE Scores of Davis Third–Seventh Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

	Group Size	1994-95 TAAS Group Mean	1998-99 Adjusted Stanford Group Mean	F	Effect Size
Math	Marshall Middle School's Seventh Grade Students from Project Elementary Students (n=99)	38.17	50.36	24.65*	0.53**
	Comparison Cohort (n=96)	40.04	41.00		
Reading	Marshall Middle School's Seventh Grade Students from Project Elementary Students (n=97)	39.35	48.19	22.24*	0.51**
	Comparison Cohort (n=102)	39.83	39.23		

*Significant $p<0.05$ (Math, $p=0.000$; Reading, $p=0.000$); ** Significant Educational Finding: ES= ≥ 0.33

Performance of Individual Davis Elementary Schools Grades K-4 Cohort (1994–1999)

Even though all of the seven Davis feeder elementary schools have experienced moderate to considerable academic improvements since the initiation of Project GRAD three years ago, an analysis of math and reading test scores of the kindergarten–4th grade cohort, when compared to their respective comparison groups, show gains that were statistically significant. With only five or fewer students in Lamar and Lee Elementary schools' cohorts, the two schools were excluded from some of the statistical analyses pertaining to individual schools.

Performance in Mathematics

Spring 1999 TAAS: Math

As shown in Table 19, Jefferson, Looscan, Ryan, and Sherman elementary schools significantly outperformed their comparison schools in math on the spring 1999 TAAS test. The Effect Sizes for Jefferson, Looscan, Ryan, Martinez, and Sherman elementary schools were also significant. Even though the performance difference between C. Martinez and its comparison school in TAAS Math was not statistically significant, the Effect Size was significant in favor of the comparison school.

Table 19. 1994-95 WRMT-R (Reading Readiness) & **1998-99 TAAS Math** NCE Scores of Davis Grades K-4 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1994-95 WRMT-R Group Mean	1998-99 Adjusted TAAS Group Mean	F	P. Level	Effect Size
Jefferson Elem.	33	28.39	71.71	4.93*	0.031	0.45**
Comparison Sch.	24	45.58	60.48			
Looscan Elem.	10	52.50	75.85	8.84*	0.007	1.20**
Comparison Sch.	15	43.80	56.84			
C. Martinez Elem	14	20.71	55.90	0.03***	0.869	–0.50**
Comparison Sch.	64	46.88	65.27			
Ryan Elem.	12	43.00	73.95	14.04*	0.000	1.09**
Comparison Sch.	54	38.07	54.73			
Sherman Elem.	19	22.32	59.41	4.34*	0.041	0.56**
Comparison Sch.	24	38.07	49.54			

** Significant: p < 0.05; (Comparison group was outperformed by Project GRAD students)*

** Significant Educational Finding: ES= ≥0.33; ****Project GRAD students were outperformed by Comparison group***

Spring 1999 Stanford: Math

As shown in Table 20, Jefferson, Looscan, and Ryan elementary schools significantly outperformed their comparison schools in math on the spring 1999 Stanford-9 test. Indeed, the average Grade Equivalent scores exceeded the national grade-level expectations by four academic months for Jefferson, two academic years for Looscan, and 1.6 academic years for Ryan. The Effect Sizes for Jefferson, Looscan, and Ryan elementary schools were also significant. Martinez and Sherman also achieved higher performance levels than their comparison schools, as indicated by their significant Effect Sizes.

Table 20. 1994-95 WRMT-R & **1998-99 Stanford Math** NCE Scores of Davis Grades K-4 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1994-95 WRMT-R Group Mean	1998-99 Adjusted Stanford Group Mean	F.	P. Level	Effect Size
Jefferson Elem.	35	27.14	64.95	12.01*	0.001	0.80**
Comparison Sch.	25	47.16	48.40			
Looscan Elem	11	50.00	65.12	5.17*	0.033	0.76**
Comparison Sch.	15	43.80	54.24			
C. Martinez Elem	15	20.33	52.15	1.76	0.188	0.36**
Comparison Sch.	78	42.31	45.92			
Ryan Elem.	14	40.64	61.66	9.32*	0.003	0.85**
Comparison Sch.	56	37.61	46.82			
Sherman Elem.	25	21.76	49.47	1.91	0.171	0.37**
Comparison Sch	56	37.61	43.12			

** Significant: p < 0.05; (Comparison group outperformed by Project GRAD students)*

** Significant Educational Finding: ES= ≥0.33

Performance in Reading

As shown in Tables 21 and 22, Project GRAD schools that significantly outperformed their comparison schools on the TAAS reading tests were Jefferson and Ryan, while Jefferson and Lamar outperformed their comparison schools on the Stanford test in reading. Project schools with significant Effect Sizes were Jefferson (TAAS and Stanford), Looscan (TAAS and Stanford), Martinez (TAAS), Ryan (TAAS), and Lamar (Stanford). The average Grade Equivalent scores (Stanford) exceeded the national expectations by: one academic month for Jefferson, and six months for Looscan.

Spring 1999 TAAS: Reading

Table 21. 1994-95 WRMT-R & **1998-99 TAAS Reading** NCE Scores of Davis Grades K-4 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1994-95 WRMT-R Group Mean	1998-99 Adjusted TAAS Group Mean	F.	P. Level	Effect Size
Jefferson Elem.	33	28.39	71.29	20.49*	0.000	1.09**
Comparison Sch.	23	46.57	47.90			
Looscan Elem	10	52.50	67.51	1.36	0.256	0.53**
Comparison Sch.	14	45.14	58.89			
C. Martinez Elem	14	20.71	62.18	1.67	0.201	0.41**
Comparison Sch.	62	45.71	53.17			
Ryan Elem.	14	46.09	66.46	4.73*	0.033	0.62**
Comparison Sch.	56	37.61	54.06			
Sherman Elem.	18	23.06	52.41	1.02	0.315	0.26
Comparison Sch.	56	37.61	47.18			

* *Significant: p < 0.05; (Control group was outperformed by Project GRAD students);* ** Significant Educ. Finding: ES= ≥0.33

Spring 1999 Stanford: Reading

Table 22. 1994-95 WRMT-R & **1998-99 Stanford Reading** NCE Scores of Davis Grades K-4 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1994-95 WRMT-R Group Mean	1998-99 Adjusted Stanford Group Mean	F.	P. Level	Effect Size
Jefferson Elem.	35	27.14	60.81	22.33*	0.000	1.00**
Comparison Sch.	25	45.16	40.18			
Lamar Elem.	6	17.83	54.72	7.20*	0.016	1.03**
Comparison Sch.	14	40.71	38.59			
Looscan Elem	11	50.00	56.09	0.96	0.337	0.42**
Comparison Sch.	15	43.80	48.00			
C. Martinez Elem	15	20.33	38.14	2.27	0.135	–0.34**
Comparison Sch.	78	42.31	45.12			
Ryan Elem.	14	40.64	45.80	0.06	0.801	– 0.06
Comparison Sch.	56	37.61	46.82			
Sherman Elem.	25	21.76	44.95	0.56	0.456	0.31
Comparison Sch.	56	37.61	41.46			

* *Significant: p < 0.05; (Control group was outperformed by Project GRAD students);* ** Significant Educ. Finding: ES= ≥0.33

Yates Feeder System Cohorts

(Grades 1-3, 4-6, & 6-8)

The pre-project year (1995-96) TAAS test scores and 1996-97 Stanford test scores were used as covariates in an Analysis of Covariance model to determine the impact of the project on student performance in math and reading. Three student cohorts were identified for the assessment of Project GRAD's impact on the academic performance of participating students. The 1996-97 first grade students were tested with the Stanford-9 to provide a baseline data for a *lower primary* cohort (First Grade Cohort). The 1996-97 fourth grade was selected as the *upper primary* cohort for having a pre-Project GRAD baseline test data (1995-96 third grade Texas Assessment of Academic Skills test scores). The 1996-97 sixth grade cohort was selected to be the *middle school* cohort.

Lower Primary Cohort: 1996-97 First Grade Students (3rd Grade in 1998/99)

MOVE IT Math was the first of the major instructional components to be implemented in Yates Feeder elementary schools in 1996-97, followed by SFA and CMCD in 1997-98. In effect, 1998-99 was the third year of MIM implementation, while it was the second full year of SFA and CMCD implementation in the Yates vertical schools.

- Table 23 shows that the 1998-99 third grade students in Yates elementary schools outperformed students of the corresponding comparison schools in both mathematics and reading on the spring 1999 TAAS test.

Table 23. 1996/97 Stanford (Covariates) & **1998/99 TAAS** Math and Reading NCE Scores of Yates First–Third Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

	Group Size	1996-97 Stanford Group Mean	1998-99 Adjusted TAAS Group Mean	F	Effect Size
Math	Yates Elementary Schools (n=446)	44.39	50.12	52.48*	0.43**
	Comparison Schools (n=446)	52.56	40.79		
Reading	Yates Elementary Schools (n=401)	55.57	50.55	30.98*	0.34**
	Comparison Schools (n=429)	61.46	43.23		

*Significant p<0.05 (p=0.000, Math; p=0.000, Reading); ** Significant Educational Finding: ES= ≥0.33

- Table 24 shows that the 1998-99 third grade students in Yates elementary schools outperformed students of the corresponding comparison schools in both mathematics and reading on the spring 1999 Stanford-9 test.

Table 24 1996/97 Stanford (Covariates) & **1998/99 Stanford** Math and Reading NCE Scores of Yates First–Third Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

	Group Size	1996-97 Stanford Group Mean	1998-99 Adjusted Stanford Group Mean	F	Effect Size
Math	Yates Elementary Schools (n=472)	44.39	52.48	85.52*	0.51**
	Comparison Schools (n=484)	52.56	42.23		
Reading	Yates Elementary Schools (n=435)	54.52	45.71	34.08*	0.33**
	Comparison Schools (n=459)	60.48	39.75		

*Significant p<0.05 (p=0.000, Math; p=0.000, Reading); ** Significant Educational Finding, ES= ≥0.33

Upper Primary Cohort: Grade 3-6 Students (1995/96–1998/99)

The nature of project impact on the performance of students in the upper primary grades is similar to the impact experienced by students in the lower primary grades. The magnitude of the performance difference between Project GRAD upper primary cohort and their comparison cohort was, however, not as big as the difference between the lower primary cohort and their comparison cohort.

- Table 25 shows that the 1998/99 sixth grade students in Yates feeder elementary schools also outperformed students of the corresponding comparison schools in mathematics and reading on the spring 1999 TAAS test.

Table 25. 1995/96 TAAS (Covariates) & **1998/99 TAAS** Math and Reading NCE Scores of Yates Third-Sixth Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

	Group Size	1995-96 TAAS Group Mean	1998-99 Adjusted TAAS Group Mean	F	Effect Size
Math	Yates Elementary Schools (n=399)	61.43	63.25	8.07*	0.16
	Comparison Schools (n=406)	62.11	59.83		
Reading	Yates Elementary Schools (n=385)	52.54	53.86	19.32*	0.26
	Comparison Schools (n=403)	49.66	48.19		

*Significant p<0.05 (p=0.005, Math; p=0.000, Reading)

Table 26 shows that the 1998/99 sixth grade students in Yates feeder elementary schools also outperformed students of the corresponding comparison schools in mathematics and reading on the spring 1999 Stanford-9 test.

Table 26. 1995/96 TAAS (Covariates) & 1998/99 Stanford Math and Reading NCE Scores of Yates Third-Sixth Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

	Group Size	1995-96 TAAS Group Mean	1998-99 Adjusted Stanford Group Mean	F	Effect Size
Math	Yates Elementary Schools (n=441)	59.18	47.43	5.63*	0.13
	Comparison Schools (n=445)	60.09	45.18		
Reading	Yates Elementary Schools (n=427)	50.02	42.64	7.16*	0.16
	Comparison Schools (n=433)	47.97	40.15		

*Significant p<0.05 (p=0.018, Math; p=0.008, Reading)

Middle School Cohort: Grade 6-8 Students (All Schools Combined)

Table 27 shows that the 1998-99 eighth grade students in Yates feeder middle schools (Cullen & Ryan) outperformed students of the corresponding comparison schools in mathematics and reading on the spring 1999 Stanford-9 test.

Table 27. 1995/96 TAAS (Covariates) & 1998/99 Stanford Math and Reading NCE Scores of Yates Fifth-Eighth Grade Students and those in Comparison Schools: ANCOVA of Independent and Dependent Variables

	Group Size	1996-97 TAAS Group Mean	1998-99 Adjusted Stanford Group Mean	F	Effect Size
Math	Yates Middle Schools (n=260)	56.43	41.14	17.27*	0.34**
	Comparison Schools (n=295)	56.20	36.76		
Reading	Yates Middle Schools (n=256)	51.90	41.91	5.65*	0.19
	Comparison Schools (n=291)	51.21	39.22		

*Significant p<0.05 (p=0.000, Math; p=0.018, Reading); ** Significant Educational Finding, ES= ≥0.33

Cullen and Ryan Middle Schools: Grades 6–8 (Individual Schools)

Table 28. Spring 1996 TAAS Math & 1999 Stanford-9 Math Scores of Cullen and Ryan Eighth Grade Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Middle School	Group Size	1995-96 Group Mean	1998-99 Adjusted Group Mean	F	Effect Size
Cullen MS	Cullen (n=111)	59.31	41.33	3.44	0.18
	Comparison School (n=123)	49.77	38.22		
Ryan MS	Ryan (n=196)	54.29	40.50	9.90*	0.36**
	Comparison School (n=172)	60.79	36.15		

*Significant p<0.05 (Cullen, p=0.065 ; Ryan, p=0.002); ** Significant Educational Finding, ES= ≥0.33

Tables 28 and 29 show that during the second year of Project GRAD implementation (MOVE IT Math) in Cullen and Ryan Middle Schools, the eighth grade students at Ryan outperformed students of the respective comparison school in both mathematics and reading. The Effect Size, demonstrating the magnitude of the difference in performance in mathematics between Ryan students and those of its

comparison school, was also significant. Students at Cullen performed better in both mathematics and reading than those of its comparison school, but the magnitude of the differences were not statistically significant.

Table 29. Spring 1996 TAAS & 1999 Stanford Reading Scores of Cullen and Ryan Eighth Grade Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Middle School	Group Size	1995-96 Group Mean	1998-99 Adjusted Group Mean	F	Effect Size
Cullen MS	Cullen (n=112) Comparison School (n=121)	55.01 47.14	41.50 39.48	1.38	0.14
Ryan MS	Ryan (n=144) Comparison School (n=170)	49.47 54.11	42.28 38.92	4.77*	0.23

*Significant $p<0.05$ (Cullen, $p=0.241$; Ryan, $p=0.030$); ** Significant Educational Finding, ES= ≥ 0.33

Performance of Individual Elementary Schools Grades 1-3 Cohort (1996-99)

Spring 1999 TAAS: Math

Table 30. 1996-97 Stanford & **1998-99 TAAS Math** NCE Scores of Yates Grades 1-3 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1996-97 Stanford Group Mean	1998-99 Adjusted TAAS Group Mean	F.	P. Level
Blackshear Elem.	52	37.02	34.70	0.81	0.370
Comparison Sch.	41	40.79	31.74		
Dodson Elem.	38	45.60	54.63	13.13*	0.001
Comparison Sch.	43	50.76	39.20		
Douglass Elem	32	48.85	50.09	5.30*	0.024
Comparison Sch	43	50.76	40.04		
Foster Elem	55	37.40	42.87	1.73	0.192
Comparison Sch.	34	51.74	36.88		
Hartsfield Elem	23	46.00	62.00	14.78*	0.000
Comparison Sch	34	51.74	40.29		
Lockhart Elem.	57	42.00	54.09	9.75*	0.002
Comparison Sch.	34	51.74	38.61		
MacArthur Elem.	25	48.75	44.11	2.36	0.131
Comparison Sch.	24	48.06	34.30		
Peck Elem.	16	43.00	51.03	5.57*	0.022
Comparison Sch.	43	50.76	37.75		
Thompson Elem.	43	50.64	48.46	0.78	0.378
Comparison Sch.	50	57.88	45.27		
TSU/HISD Lab	N/A	N/A	N/A	N/A	N/A
Comparison Sch.					
Turner Elem.	44	46.13	55.11	4.38*	0.043
Comparison Sch.	50	58.95	49.84		
Whidby Elem.	54	49.71	57.57	5.24*	0.024
Comparison Sch.	50	58.95	49.96		

** Significant: $p < 0.05$; (Comparison group was outperformed by Project GRAD students)*

As shown in Table 30, all of the Yates elementary schools performed better than their comparison schools on the spring 1999 TAAS in math. Project GRAD schools that significantly outperformed their comparison schools in math were: Dodson, Douglass, Hartsfield, Lockhart, Peck, Turner, and Whidby.

Spring 1999 Stanford: Math

As depicted in Table 31, all of the Yates elementary schools performed better than their comparison schools on the spring 1999 TAAS in math. Project GRAD schools that significantly outperformed their comparison schools in math were: Dodson, Douglass, Foster, Hartsfield, Lockhart, Peck, Thompson, Turner, and Whidby.

Table 31. 1996-97 Stanford & **1998-99 Stanford** Math NCE Scores of Yates Grades 1-3 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1996-97 Stanford Group Mean	1998-99 Adjusted Stanford Group Mean	F.	P. Level
Blackshear Elem.	54	37.07	34.60	0.13	0.723
Comparison Sch.	56	36.68	35.51		
Dodson Elem.	42	45.35	52.58	8.09*	0.006
Comparison Sch.	45	50.65	43.04		
Douglass Elem	35	47.17	52.81	6.15*	0.015
Comparison Sch	45	50.65	43.59		
Foster Elem	56	37.79	51.49	16.48*	0.000
Comparison Sch.	36	49.51	35.23		
Hartsfield Elem	27	43.17	51.10	8.98*	0.004
Comparison Sch	36	49.51	36.98		
Lockhart Elem.	59	40.86	54.93	21.02*	0.000
Comparison Sch.	36	49.51	36.06		
MacArthur Elem.	26	49.00	46.83	0.40	0.529
Comparison Sch.	24	48.06	43.22		
Peck Elem.	17	42.65	58.03	12.52*	0.001
Comparison Sch.	45	50.65	41.81		
Thompson Elem.	47	48.80	53.90	5.37*	0.023
Comparison Sch.	51	57.39	46.77		
TSU/HISD Lab	N/A	N/A	N/A	N/A	N/A
Comparison Sch.					
Turner Elem.	45	44.16	58.06	6.81*	0.010
Comparison Sch.	55	57.54	49.29		
Whidby Elem.	56	49.66	62.71	18.10*	0.000
Comparison Sch.	55	57.54	49.89		

** Significant: $p < 0.05$; (Comparison group was outperformed by Project GRAD students)*

Spring 1999 TAAS: Reading

An analysis of reading test scores of the 1st–3rd grade cohort groups in Project GRAD and comparison schools shows gains by most of the project schools that were statistically significant. Students at TSU/HISD Lab School were not included in the analysis because of the small size of the cohort group.

Table 32. 1996-97 Stanford & **1998-99 TAAS Reading** NCE Scores of Yates Grades 1-3 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1996-97 Stanford Group Mean	1998-99 Adjusted TAAS Group Mean	F. Value	P. Value
Blackshear Elem.	51	44.99	38.44	0.06	0.811
Comparison Sch.	35	49.78	37.51		
Dodson Elem.	36	59.73	55.44	23.62*	0.000
Comparison Sch.	44	57.39	35.50		
Douglass Elem	27	53.01	49.37	10.73*	0.002
Comparison Sch	44	57.37	34.32		
Foster Elem	45	49.87	40.38	0.37	0.544
Comparison Sch.	33	60.39	43.04		
Hartsfield Elem.	21	55.33	56.76	4.66*	0.036
Comparison Sch.	33	60.39	44.25		
Lockhart Elem.	49	56.24	56.15	7.58*	0.007
Comparison Sch.	33	60.39	44.33		
MacArthur Elem.	24	50.84	51.77	4.68*	0.036
Comparison Sch.	22	63.40	38.51		
Peck Elem.	15	59.05	47.14	4.34*	0.042
Comparison Sch.	44	57.37	35.54		
Thompson Elem.	41	63.02	49.61	1.14	0.290
Comparison Sch.	49	66.37	53.98		
TSU/HISD Lab					
Comparison Sch.	N/A	N/A	N/A	N/A	N/A
Turner Elem.	35	58.83	55.82	0.41	0.524
Comparison Sch.	46	69.83	53.65		
Whidby Elem.	53	62.15	56.36	0.60	0.440
Comparison Sch.	46	69.83	53.76		

* *Significant: $p < 0.05$; (Comparison group was outperformed by Project GRAD students)*

- As shown in Table 32, Project GRAD schools that significantly outperformed their comparison schools on the sping 1999 TAAS were: Dodson, Douglass, Hartsfield, Lockhart, MacArthur, and Peck Elementary Schools.

Spring 1999 Stanford: Reading

- As shown in Table 33, Project GRAD schools that significantly outperformed their comparison schools on the spring 1999 were: Dodson, Hartsfield, Lockhart, Peck and Turner elementary schools.

Table 33. 1996-97 Stanford & **1998-99 Stanford Reading** NCE Scores of Yates Grades 1-3 Students and those in Comparison School: ANCOVA of Independent and Dependent Variables

Schools	Group Size	1996-97 Stanford Group Mean	1998-99 Adjusted Stanford Group Mean	F. Value	P. Value
Blackshear Elem.	55	44.54	36.02	0.82	0.367
Comparison Sch.	41	47.01	38.53		
Dodson Elem.	41	59.27	45.25	7.72*	0.007
Comparison Sch.	45	57.40	36.26		
Douglass Elem	34	51.35	39.76	2.21	0.142
Comparison Sch	45	57.40	34.23		
Foster Elem	47	48.81	39.91	0.77	0.383
Comparison Sch.	34	59.91	36.71		
Hartsfield Elem.	24	53.53	47.27	4.26*	0.044
Comparison Sch.	34	59.91	37.20		
Lockhart Elem.	50	55.62	49.62	10.38*	0.002
Comparison Sch.	34	59.91	37.96		
MacArthur Elem.	26	49.86	48.45	2.14	0.151
Comparison Sch.	23	62.58	40.93		
Peck Elem.	15	59.05	46.02	4.65*	0.035
Comparison Sch.	45	57.40	36.22		
Thompson Elem.	44	62.19	46.28	0.03	0.860
Comparison Sch.	50	66.06	46.78		
TSU/HISD Lab	N/A	N/A	N/A	N/A	N/A
Comparison Sch.					
Turner Elem.	37	57.49	56.05	15.28*	0.000
Comparison Sch.	54	66.94	45.76		
Whidby Elem.	54	61.92	50.50	2.41	0.123
Comparison Sch	54	66.94	46.35		

* *Significant: $p < 0.05$; (Comparison group was outperformed by Project GRAD students)*

Grade Equivalent Scores of Yates Grades One Through Three Cohorts

The availability of Stanford-9 baseline test data for the first grade students in Yates feeder elementary schools has facilitated this discussion of cohort performance levels. After three years of exposure to Project GRAD programs, the Stanford test data for the same students were examined and compared to the national grade level norms. Table 34 shows the Grade Equivalence (GE) levels of students in the participating schools during the first few weeks of the first grade and the end of third grade.

Table 34. STANFORD-9: Average Grade Equivalent Scores of Yates Feeder Schools 1st grade (1995-96) to 3rd Grade (1998-99) Cohort

Elementary Schools	Number in 1st-3rd Grade Cohort	Academic Months Below (–) Above (+) National Average in Reading (Grade 1)	Academic Months Below (–) Above (+) National Average in Math (Grade 1)	Academic Months Below (–) Above (+) National Average in Reading (Grade 3)	Academic Months Below (–) Above (+) National Average in Math (Grade 3)
Blackshear	55	-2	-6	-4	-7
Dodson	42	+3	-3	+1	+2
Douglass	34	-1	-2	-5	+3
Foster	47	-1	-5	-6	0
Hartsfield	24	0	-4	+2	+2
Lockhart	50	+1	-4	+3	+5
Peck	15	+3	-4	+1	+6
Thompson	44	+3	-1	0	+2
Turner	37	+2	-3	+6	+5
Whidby	54	+3	-1	+4	+13
MacArthur	26	-1	-1	+2	+1
TSU Lab	8	-3	-5	-5	+4
All Schools	**472**	**+1**	**–3**	**+3**	**+3**

10 months = One academic year

- The average GE score of the first grade cohorts in the 12 schools in 1996-97 was one month above the national average in reading and three months below the national average in math. These cohort averages increased: a) by two GE units to three months above the national average in reading by the end of third grade (Spring, 1999); and b) by six GE units to three months above the national average in math by the end of third grade (Spring, 1999).
- In three years, seven schools showed increases of one to six academic months above grade level in reading, while 10 schools showed average increases of 1-13 months above grade level expectations in math.

MAJOR CHALLENGE TO THE DEVELOPMENT AND SUSTENANCE OF THE MODEL

High Teacher Turnover Rates

High teacher turnover rates continue to be a formidable challenge to the full installation of the Project GRAD model in both the Davis and Yates feeder schools. Since Project GRAD's success depends on a substantive investment in teachers, the loss of teachers to other schools or school districts could have adverse effects on the long term sustenance of the new instructional culture. The loss of Project GRAD-trained teachers means that new teachers have to undergo the same professional development preparation others underwent.

Without teachers who appreciate the new instructional culture, the critical mass of the new instructional practices could be threatened, even after several years of project implementation. If most of the teachers who have left were among the resistors to the new instructional culture, then their departure would help sustain the critical mass achieved so far. On the other hand, if a large proportion of teachers who left were among the most effective implementors, then there may be a decline in the rate of progress already achieved. Table 35 and 36 show teacher turnover rates in Project GRAD's Davis feeder schools and Yates feeder schools for year one through year five for Davis feeder and years one through three for Yates feeder schools.

Davis Feeder Schools (Year 1-5)

Table 35. Davis Feeder Schools: Teacher Attrition/Turnover Rates*

SCHOOL	Annual Percentage Rate (& # of Teachers)					Cumulative #
(# of Teachers)	1994-95	1995-96	1996-97	1997-98	1998-99	1994-99
Jefferson (43)	10% (4)	7% (3)	14% (6)	14% (6)	18%(8)	27
Lamar (22)	8% (2)	21% (5)	14% (3)	36% (8)	14% (3)	21
Lee (14)	7% (1)	7% (1)	7% (1)	21% (3)	28% (4)	10
Looscan (27)	13% (4)	7% (2)	0%(0)	7% (2)	11% (3)	11
C. Martinez (43)	23% (8)	26% (9)	18% (7)	42% (18)	11% (5)	47
Ryan ES (22)	13% (3)	18% (4)	35% (8)	18% (4)	9% (2)	21
Sherman (35)	17% (6)	14% (5)	23% (8)	20% (7)	40% (14)	40
Marshall (63)	15% (11)	9% (7)	14% (10)	6% (4)	9% (6)	38
Davis HS (99)	15% (13)	14% (13)	19% (17)	19% (17)	19% (17)	77

* *Number in parenthesis indicates number of teachers who left. The fact that large proportions of pre-project GRAD teachers remain in the respective schools indicate that many/most of the teacher departures might be new teachers.*

- The teacher turnover rates reflected in Table 35 clearly show the magnitude of the challenge facing Project GRAD in the Davis feeder school system.

- Overall, the nine Davis schools appear to have lost 292 teachers in five years. Even though many of the departures might be new teachers, retirees, or experienced teachers who were hired by Project GRAD as facilitators and consultants, the departure rate could still be regarded as a major problem.
- Even though these figures are crude estimates of teacher departures from participating schools, if this is a "brain drain" involving experienced/trained teachers, one could imagine how problematic and costly it might be for project administrators to maintain high levels of project implementation in participating schools.

Yates Feeder Schools (Year 1-3)

Table 36. Yates Feeder Schools: Teacher Attrition/Turnover Rates*

SCHOOL	Annual Rate		Cumulative		SCHOOL	Annual Rate		Cumulative
(# of Teachers)	1996-97	1997-98	1996-99		(# of Teachers)	1996-97	1997-98	1996-99
Blackshear (33)	15% (5)	6% (2)	7		Thompson (35)	14% (5)	8% (3)	8
Dodson (40)	25% (10)	20% (8)	18		TSU Lab (7)	28% (3)	57% (4)	6
Douglass (26)	0% (0)	15% (4)	4		Turner (44)	16% (7)	49% (4)	11
Foster (34)	17% (6)	9% (3)	9		Whidby (31)	13% (4)	13% (4)	8
Hartsfield (21)	9% (2)	14% (3)	5		Cullen MS (42)	7% (3)	16% (7)	10
MacArthur (34)	13% (1)	6% (2)	3		Ryan MS (46)	17% (8)	15% (7)	15
Peck (20)	10% (2)	35% (7)	9		Yates HS (118)	6% (8)	7% (9)	9
Lockhart (34)	29% (10)	23% (8)	18					

* *Number in parenthesis indicates number of teachers who left. The fact that large proportions of pre-project GRAD teachers remain in the respective schools indicate that many/most of the teacher departures might be new teachers.*

- Overall, teacher turnover rates in Yates feeder schools appear to be similar to those in Davis feeder schools.
- In three years, Yates feeder schools appear to have lost 140 of their teachers. A need to further investigate the teacher departure rates may be undertaken in future research efforts.

TEACHER OBSERVATIONS ABOUT PROJECT ELEMENTS AND CHALLENGES/CONCERNS

Perhaps the most critical barometric indicators of the status of a substantive change in the expected changes in the instructional culture of project schools are teacher attitudes and conversations about the reform. As succinctly stated by Timar and Kirp: "How teachers talk about school improvement colors their actions in the classroom. And those actions, in turn, powerfully influence the success of efforts to achieve educational excellence" (Timar and Kirp, 1989). As a reflection of what Judson Hixson

refers to as attitudinal infrastructures, *"Directly addressing these attitudes, assumptions, and feelings must be a priority for staff development and a prerequisite for substantive change in instruction and other aspects of the operation of urban schools."*

Yates Feeder Schools

Success for All

The 1998-99 school year was the second full year of SFA implementation in the Yates feeder elementary schools. Approximately 178 comments were made by teachers to explain the factors underlying the positive or negative attitudes teachers have about SFA and its implementation. Fifty-eight percent (58%) of the comments were positive, while 42% pertained to: a) the perceived weaknesses in the SFA program, or factors limiting b) the full implementation of the program. In the opinion of teachers who like the program: "The program works!" (Foster Teacher); "I can see the reading progress of each child" (Blackshear Teacher); "SFA is a great program, teachers think it is a good program but a lot of work" (Douglass Teacher). Other teachers, however, perceive weaknesses in the program. In the opinion of one teacher, whose observations appeared to represent the views of many others, "Teachers have to add many other non-SFA components in order to have the students perform at the level the district expects." (Whidby Teacher). A few of these teachers expressed that SFA has not significantly benefited their students.

Perceived Lack of Phonics Component in SFA

Of the 78 "unfavorable" comments, most of them mentioned the lack of strong phonics strategies as SFA's greatest weakness. Many of these teachers expressed that they preferred the Open Court/Distar phonics-based reading program they had been implementing prior to the initiation of SFA. The following is a representative sample of teacher comments about this perceived inherent weakness:

- *We like Open Court because the children learn to read sooner and easier using Open Court; teachers want a strong phonetic-based program;*
- *Students are not learning! No phonics in SFA!, Rhyming and segmentation are weak.*
- *Word recognition vs. phonics; go phonics.*
- *Distar is much better*
- *All grade teachers felt it* [SFA] *is a good program. However, the program should implement phonics earlier.*
- *We are currently using Open Court, a phonics-based program. It works. Since our program is working, why change?*

Highly Structured

Fourteen of the teacher comments referred to the perception of teachers that the program was too structured and seemingly left little or no room for teacher creativity in order to address the individual needs of students. One teacher referred to SFA as "too restrictive! Does not treat teachers as creative individuals."

Too Fast-Paced

One characteristic of SFA that was identified as a weakness was the time frame within which the required activities occurred, referred to by one teacher as the "unyielding schedules." Five teachers

commented that the program was too rushed, with limited time to cover too many activities. The teachers indicated that the pace was too fast for slower students.

Effective SFA Elements

More than 70% of the teachers indicated that they were comfortable with the implementation of SFA in their schools. Teachers in participating schools expressed that virtually all of the elements of SFA seemed to be working well for them.

CMCD

The 1998-99 school year was the second year of CMCD implementation in the Yates feeder elementary schools. Approximately 174 comments were made by teachers to explain the factors underlying the positive or negative attitudes teachers have about CMCD and its implementation. One-hundred and thirty of the comments (75%) were positive, while 25% (44 comments) pertained to either: a) the perceived weaknesses in the program, or factors limiting b) the full implementation of the program. Most of the 44 non-positive comments mentioned excessive paperwork load and time requirements as two of CMCD's implementation challenges. Many teachers indicated that they lacked the time necessary for planning and developing the instructional materials needed for the effective implementation of CMCD practices.

There was a high and consistent level of teacher satisfaction with the implementation of CMCD and the observed successes in all participating schools. The following sample of responses to a survey item that required the teachers to indicate the reasons for the positive attitudes teachers had toward CMCD illustrate this general observation:

- *Because CMCD really works; the children have great self-esteem; in the lower grades, managers top the list (Blackshear Teachers);*
- *It has helped with discipline problems and empowerment of students* (Dodson Teacher);
- *Results are visible; teachers are seeing success* (Foster Teachers);
- *The program is a success; Good teachers know the program works* (Douglass);
- *Manager system really works well for teachers on this campus* (TSU Lab Teacher);
- *Teachers have seen a positive effect in the classroom, hallways, bathroom, and cafeteria; I have fewer behavior problems and the managers have saved me time* (Whidby Teacher); and
- *Because the managers are a big help; and the routine helps to cut down on confusion* (Turner Teacher).

Effective CMCD Elements

More than 95% of the teachers indicated that they were comfortable with the implementation of CMCD in their schools. Teachers in participating schools identified many elements of CMCD that seemed to be working well for them, the most prominent of which was the "manager system," followed by Good News Post Cards, Go Around Cup, Conduct Chart, and Stop Sign. Other equally mentioned elements included the Hand Signal, Exit Ticket, Absence Packet, and the Reward System.

MOVE IT Math

The 1998-99 school year was the third full year of MIM implementation in the Yates feeder elementary and middle schools. Approximately 188 comments were made by teachers to explain the factors underlying the positive or negative attitudes teachers have about MIM and its implementation. One-hundred and thirty-two (132) of the comments (70%) were positive, while 30% (56 comments) pertained to either: a) the perceived weaknesses in the program, or factors limiting b) the full implementation of the program.

For those teachers who were concerned about the merits of MIM, most of their worries centered on how they could improve the performance of their students on the TAAS and Stanford, if they relied on only MIM. They complained that: there were "no MIM workbooks"; "teachers have too much to do;" MIM has "too many games," "TAAS objectives are not covered;" "too much time needed to prepare for every lesson;" "the program lacks structure," "many teachers don't understand MIM themselves;" and MIM "is not as effective as Montessori math program." In the opinion of a few of these teachers, MIM is a time-consuming supplemental program, and a group of enrichment activities, with no "hardback book" nor focus on basic math skills.

From the perspective of teachers with positive attitudes toward MIM, the program's manipulatives, activities, and strategies are "great!" In their opinion, MIM facilitates the learning of concepts, and teaches even the kindergarten students high level math skills. The following are a sample of some of the positive comments:

- *Test scores are increasing, especially math, in my room; MIM works!"*
- *To really know the effectiveness of MIM, you must see it in action;*
- *I have seen children who did not enjoy math turn into children who started asking me "Is it time for math?"*
- *I love the materials and use them all.*
- *I find it extremely helpful in supporting the learning of difficult concepts through concrete experiences.*

Effective MIM Elements

More than 67% of the teachers indicated that they were comfortable with the implementation of MIM in their schools. One teacher indicated that his/her comfort level with MIM's implementation has increased significantly since the Binder was put together. Teachers in participating schools identified virtually all of the elements of MIM as working well for them.

Davis Feeder Schools

Success for All

One general observation about SFA is its ability to elicit almost as much favorable comments from veteran and new teachers as well as unfavorable comments from other veteran and new teachers. While about 60% of the teachers seemed to love the program because of its carefully structured practices, consistency, and effectiveness, about 40% of the teachers were critical of its perceived weaknesses. Many teachers commented on SFA: as a very good and well structured program; as having "strong components from which we can see the progress and growth of students' reading

skills; and that it is easy to implement." In the words of one teacher "The program works!!!," while another teacher expressed that "There is no need to wonder where you go next; follow the schedule and it's hard to go wrong." The following is a sample of some of the positive comments:

- *It's a great program!*
- *I have seen significant changes in my students ability to comprehend reading material even though in the beginning of the year their skills were limited.*
- *I think that the teachers support the SFA program because they see the great results in the students' reading ability.*
- *Now that I am familiar with the process, I can spend more time concentrating on how to make the material valuable to the student rather than wondering where to begin.*
- *It's a great* feeling *to have students to learn to read and truly love books.*
- *I think it is a positive program but like I said there is a lot of things to cover and not a lot of time.*

Many teachers mentioned the numerous elements of SFA that had won their satisfaction and interests. Examples included; Reading Roots, homogenous grouping, listening comprehension, meaningful sentences, reading together (buddy buzzing), daily schedule of activities, STAR–Lee Conmigo, reading rehearsal–story activities, letter activities, celebrations, STAR – Alphabet Song, partner reading, guided group reading and treasure hunt, prior knowledge and vocabulary building, two-minute edit, quick erase, phonics, teaching the sounds and formation of letters, and thematic connections.

The following is a sample of some of the critical/unfavorable comments:

- *Too structured, no room for creativity.*
- *As mentioned before – there's no help in reaching the lower functioning students. They have memorized all of the stories & have no basic phonics skills. They're frustrated!*
- *The students learn the books by memorization but still can not read.*
- *There's not enough creativity allowed in this program.*
- *Students need phonics instruction past the first grade level! Many students who are failing, 2nd and 3rd grade students can't sound out words like oatmeal. Even if they're retained in the same grade they won't get the phonics instruction they need in the SFA program. There needs to be a supplementary phonics program for grades 2 – 5.*
- *It's a ton of work, so it's hard to get it perfect.*

In response to a survey item that asked teachers to identify specific elements of SFA that seemed ineffective or not working for them, several SFA elements were mentioned, of which the following quotes are examples: "the amount of paperwork in charting scores can become overwhelming (I feel that this time could be used to monitor students who may need teacher assistance", "still need phonics training"; "90 minutes is too long for the younger children"; "lessons too repetitive"; "little or no room for creativity or spontaneity"; "too much time is spent on treasure hunts – for comprehension, yes – but, they do more writing than actual reading"; "the treasure hunts, because you give the students the answers"; "sometimes there's not enough time to complete all of the components"; "having to dig in libraries to find Spanish STAR books related to thematic unit"; "there is no spelling portion of SFA"; and "the pace has been too fast."

From these opposing perspectives it was not surprising that two teachers stated simply: "Most teachers feel it's effective, but of course there are drawbacks in all programs." "Like I said, I think the program is good but there was too much to cover in the small amount of time." In spite of the diverse

comments, a large majority (over 80%) of the teachers indicated that, overall, they liked SFA and were comfortable with its implementation.

CMCD

Overall teachers were very positive about CMCD, its effectiveness, and how it has made their teaching easier. A few teachers, however, indicated that CMCD did not work well with some students, in spite of its many merits. Many commented positively on CMCD as follows:

- *The program has helped to provide strategies to monitor/change student behavior and allow student to "take charge" of their own behavior;*
- *The managers are quite helpful. I don't know what I'd do without them. They emerge as leaders;*
- *CMCD allows students to face their own responsibility and helps to manage the classroom;*
- *allows more time for instruction;*
- *Gives students something to look forward to;*
- *It's schoolwide – everyone is on the same page;*
- *CMCD is a positive reinforcer system for good behavior. Negative reinforcement usually works as long as the teacher is present, positive reinforcement goes a long way in maintaining the desired behavior;*
- *Most teachers seem to implement the program, and I think it is obvious to see which classes use this approach;*
- *It's a good, consistent program that works. It just needs a little tweaking;*
- *Student behavior is better in the school;*
- *The manager system makes my life much easier;*
- *I like the responsibility the children have for their behavior;*
- *Helps me to organize and run my class smoothly;*
- *Provides structure and allows the students to have a sense of ownership of the classroom; and*
- *It's cut down on behavioral problems and makes teaching more pleasant.*

Several elements of CMCD were mentioned by many teachers as merits that have won their satisfaction. The following were the most mentioned: managers, my time/your time, conduct chart, reward system, Rules, Rights, Consequences, good news post cards, rewards, Go for the Gold, posted objectives, assignments & sponges, peace process, substitute teacher folder, managers' chart, homework sign, absence folder, being consistent, conduct bucks, recognition, positive reinforcements, morning journals, smooth running of classroom and instruction, exit notes, music during their time, calls home, brag bag, and celebrations. Of the preceding examples, the manager system was mentioned by about 95% of the teachers.

A few comments that were critical of CMCD included the following:

- *Too many signs to post in room along w/other programs (Too cluttered, causes less visibility);*

- *We still lack skills to deal with kids who carry lots of anger;*
- *Not every component works for everybody; and*
- *Exit tickets – I sometime forget about them; I hate any extra paperwork that must be read!*

Other elements that some teachers had difficulty implementing were: absence packets, "writing the objective for each day – it's too much," parent volunteers, tools for learning, "post cards home – not enough time!" Magna Carta, and kids who do not respond well to positive reinforcement. A couple of teachers, however, indicated a need for a video for teachers that provide insights and skills for working with very difficult students. Overall, however, about 96% of the teachers indicated that they were comfortable with the implementation of CMCD in their classrooms.

MIM

After five years of MIM implementation, most teachers had positive comments about the program's many strengths and why teachers and students continue to like and implement MIM. Teachers of inner-city schools often complain about lack of instructional materials, especially manipulatives. It is thus surprising when a couple of MIM teachers complained about MIM in these words: "Too many manipulatives!" and "It's overwhelming-too much material." Even though most teachers did not elaborate with many words, the general observation was that MIM is a "Great program" that develops the skills of children from the "Concrete to abstract – builds a foundation for the students." The most rewarding of MIM's merits is the observation of many of the teachers that students, not only love math, but more importantly, they "perform better in Math;" and "I implement it 100% and know the positive & outstanding results you get from your students." The following were some of the positive comments from the participating teachers:

- *They like the way Move IT Math approaches mathematics instruction.*
- *Students develop confidence in their abilities. They don't fear math. Concepts are introduced early and students do quite well.*
- *All materials and manipulatives were effective. MIM is a good program I really like the hands on activities for the children. MIM is a way students can actually get hands-on practice with math.*
- *MIM has helped me understand and even enjoy Math more. It was frustrating at the start, learning about MIM, but I honestly see the value in MIM" methods and organization.*
- *All materials & resources are provided. Lesson plans are more structured & detailed.*
- *Students are able to advance when they are ready – a lot of groups peer tutoring.*
- *Student are able to recognize numbers at a faster pace. They are able to add & subtract earlier in the year. The children learned a lot with the variety of hands on activities.*
- *I like the binder, it was very helpful. The binder has helped a lot.*

Teachers mentioned numerous elements of MIM that were working well for them but the most often mentioned were the manipulatives, fractions, songs, the binder, and the hands-on opportunities students get in the instructional process. A sample of the elements were: Tap & Tally, Motley & Friends/Skip Counting Techniques/Balances; Monster math, fractions multiplication and division, manipulatives, overhead materials, Fairlands, problem solving, Chunk-It, Butterfly Lattice, Binder &

Lesson Plans, word problems, and student centered learning. From the preceding list, it was not surprising that about 20% of the teachers simply stated that they liked "Everything!" and "All." Several teachers indicated that MIM elements they had difficulty implementing or were dissatisfied with included Fairlands and MIM's lack of workbooks for students.

A few teachers were, however, critical of MIM and indicated that the program should be regarded as a math enrichment program, or a supplementary program because of the elements it lacks. Several other teachers indicated their dissatisfaction with MIM with these words:

- *Some teachers feel that the basics of math (i.e. multiplication tables) are neglected.*
- *The program is poorly organized; the facilitators try to force acceptance of the program and were defensive, and the students are not able to make the bridge from the manipulatives to the abstract as the program suggests.*
- *Even though the relevance for each component was taught during training, some people don't understand why we teach everything.*
- *Although the training showed me many activities – I never was allowed a classroom demonstration so implementation has been impossible.*
- *Not developmentally appropriate; moves too fast – no time for in-depth learning.*
- *It doesn't cover ALL objectives that should be taught; no books for students.*
- *Students need other resources in addition to MIM.*
- *It confuses the students. They can't transfer the knowledge when they go to another school.*

TEACHER RECOMMENDATIONS FOR PROGRAM IMPROVEMENT

Yates Feeder Schools

As is generally the case with comprehensive formative feedback surveys, many of the responding teachers preferred to comment on the weaknesses of the respective elements of the model without making any recommendations for program refinement. There were, however, several who provided recommendations for the continuing refinement of the program. With teachers in the Yates feeder schools in the third year of Project GRAD's implementation, the need for formative feedback on recommendations necessitated the inclusion of this section into the 1998-99 report.

Major Recommendations

Need for Grassroots Participation in Program Development Decisions

In the opinion of one teacher "Wonderful things are happening in the Yates feeder schools due to Project GRAD. However, more collaboration [participation in decisions] between the schools and Project GRAD is needed. The organization [Project GRAD] "mandates" too many directives to the schools. Where are the collaborations?" A few teachers indicated a need for better communication channels that eliminate the fear they have for constructively criticizing elements of the program that are deficient or talking openly about aspects of the program they would like to see improved.

Supplement SFA with a Phonetically-based Reading Program

Several teachers indicated that they did not think SFA was an effective program for their students and would recommend that SFA is discontinued or significantly improved. Ten teachers indicated a need for further refresher training, while nine teachers requested for more intensive training in phonics and the accommodation of strategies from other reading programs such as Open Court or Distar.

Other Recommendations

CMCD

Several teachers asked for: summer workshops, Make and Take workshops, training in how to work with inner-city parents, and opportunities to observe effective CMCD teachers.

MIM

Several teachers asked for: demonstration lessons, with some model lessons on video; refresher training on Fairlands in the Spring semester (38 teachers); more training during class hours; and the use of children during training sessions. Other teachers further asked for: model lesson plans related to TAAS, sample Quick Test questions, math workbooks for students or lessons pre-duplicated, and more structured lessons like those in SFA.

Several comments/suggestions were also made to improve the use of the Binder; these were examples:

- *The binder did not allow enough time for some difficult topics to be taught. Also, I would like to see the binder stick to a topic and not jump around. For example: do all of the balance in sequence, not broken up. We can come back to it as review.*
- *Make binder bilingual friendly.*
- *Improve the binder to be more realistic, time-wise, and not spend so much time on Fairlands. Binder with lessons needs to be looked at again and revised – They're too much when you have only 1 year to teach it.*

SFA

Many teachers requested for more of the following: charts with vocabulary, books, pictures, Big Books & Starbooks, copies of model lessons, transparencies, phonetic manipulatives, and xeroxing funds.

CONCLUSION

In five years, Project GRAD has made significant improvements in changing the instructional culture of Davis feeder pattern schools, while making significant progress in replicating the model in the Yates feeder schools. With the firm rooting of Project GRAD's unique blend of curricular practices in the Davis feeder schools, the academic successes of students in: a) math and reading; and c) disciplinary levels and referrals to principal's offices that began during the initial years have continued into the fifth year. The expansion of Project GRAD in the 1996-97 into Yates Feeder Pattern Schools has further revealed successes similar to those experienced in the Davis feeder system. The following summary of 1998-99 evaluation findings is a vivid validation of these observations.

Program Strengths and Effectiveness

Impact on Student Behavior/Discipline

- Davis elementary schools experienced a 74% overall reduction (1,017 to 268) in the number of referrals to principal's offices by the end of the fourth year of CMCD's implementation.
- In the Yates feeder schools, where pre-project year data were unavailable, the number of referrals to the offices of principals declined by 22% from 935 in year one to 729 in year two of CMCD's implementation.
- All of the Davis feeder schools have experienced moderate/significant improvements in student discipline and conduct between 1994-95 and 1998-99.
- Davis schools with substantial levels of perceived improvements in student discipline/conduct included: Martinez, Marshall Middle, Ryan Middle, and Lamar.
- Yates schools with substantial levels of perceived improvements in student discipline/conduct were: Blackshear, Cullen Middle, MacArthur, Peck, Ryan Middle, and Whidby.

Impact on Time-on-Task

After five years of CMCD implementation in Davis feeder schools and two years of CMCD implementation in Yates feeder schools, teachers have observed substantive increases in the time saved daily for productive instructional use. Consequently, participating teachers lengthened the 1998-99 school year by 14 days (Davis elementary schools); 15 days (Marshall Middle); 11 days (Davis High); 15.5 days (Yates elementary schools); 12 days (Cullen Middle); and 10.5 days (Ryan Middle) at no cost to the district.

Impact on Student Performance

Annual Schoolwide Snapshots

Most participating schools have experienced substantive increases in student performance levels in reading and math since Project GRAD was initiated. Table 37. illustrates the gains achieved in the percent of students passing the Texas Assessment of Academic Skills (TAAS) test since Project GRAD was initiated five years ago (1994–99) in the Davis Feeder Pattern and three years ago (1996–99) in the Yates Feeder Pattern. To facilitate a longitudinal assessment of TAAS data, the 1998-99 TAAS results have been adjusted to reflect Houston ISD's testing/exemption policies prior to 1998-99.

Table 37. Improvement in TAAS Passing Rates in Project Schools

Davis Feeder Schools	Math ('94-99)	Reading('94-99)
Davis Feeder Elementary Schools	44% – 69%	63% – 71%
Marshall Middle School	28% – 61%	45% – 61%
Davis High School	42% – 77%	51% – 77%
Yates Feeder Schools	**Math ('96-99)**	**Reading ('96-99)**
Yates Feeder Elementary Schools	70% – 67%	74% –76%
Cullen Middle School	39% – 61%	56% – 61%
Ryan Middle School	55% – 65%	80% – 75%
Yates High School	25% – 71%	63% – 83%

Cohort Monitoring (Statistical Analyses)

In the wake of high student mobility rates, which necessitate the inclusion of new or recent student arrivals representing about 50% of students tested in all participating schools, annual school-wide snapshots of student performance levels may not be the best measures of the model's impact. Consequently, cohort monitoring is recommended for the Project GRAD model whose philosophical premise is a guarantee of: a) a solid foundation in early grades, and b) an adequate insulation from academic failure if students stay through high school. The performance levels of the Project GRAD's cohorts are statistically compared to comparison cohorts in corresponding Houston ISD schools with similar demographic and performance levels, in determining the models' effectiveness.

Davis Lower Primary Cohort: Grades K-4

- The 1998-99 Fourth Grade Students (Grades K-4 Cohort) in Davis feeder schools, who had been tested in kindergarten (Fall 1995) with the Woodcock Reading Mastery Test-Revised (WRMT-R) instrument and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the spring **1999 TAAS test.**
- The 1998-99 Fourth Grade Students (Grades K-4 Cohort) in Davis feeder schools, who had been tested in kindergarten (Fall 1995) with the Woodcock Reading Mastery Test-Revised (WRMT-R) instrument and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the **Stanford test.**
- In both reading and math, the achievement of significant Effect Sizes on the TAAS and Stanford-9 tests demonstrated that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Davis Upper Primary/Middle Cohort: Grades 3-7

- The 1998-99 Seventh Grade Students (Grades 3-7 Cohort, Marshall Middle School's seventh grade students from Project GRAD elementary schools), who had been tested in third grade (Spring 1995) with the TAAS test and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the spring **1999 TAAS test.**
- The 1998-99 Seventh Grade Students (Grades 3-7 Cohort, Marshall Middle School's seventh grade students from Project GRAD elementary schools), who had been tested in third grade (Spring 1995) with the TAAS test and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the **Stanford test.**
- In both reading and math, the achievement of significant Effect Sizes on TAAS and Stanford-9 tests further demonstrated that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Yates Lower Primary Cohort: Grades 1-3

- The 1998-99 Third Grade Students (Grades 1-3 Cohort) in Yates feeder schools, who had been tested in first grade (Fall 1996) with the Stanford-9 Achievement test and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the spring **1999 TAAS test.**

- The 1998-99 Third Grade Students (Grades 1-3 Cohort) in Yates feeder schools, who had been tested in first grade (Fall 1996) with the Stanford-9 Achievement test and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the spring **1999 Stanford test.**
- In both reading and math, the achievement of significant Effect Sizes on the TAAS and Stanford-9 tests further demonstrated that the performance differences between Project GRAD students and the comparison students were significant educational findings.

Yates Upper Primary Cohort: Grades 3/4-6

- The 1998-99 Fifth Grade Students (Grades 3-5 Cohort) in Yates feeder schools, who had been tested in third grade (Spring 1997) with the TAAS test and re-tested with spring 1999 TAAS test, outperformed students in comparison cohort in both math and reading on the **TAAS.**
- The 1998-99 Fifth Grade Students (Grades 3-5 Cohort) in Yates feeder schools, who had been tested in third grade (Spring 1997) with the TAAS test and re-tested with spring 1999 Stanford-9 Achievement test, outperformed students in comparison cohort in both math and reading on the **Stanford.**

Yates Middle School Cohort: Grades 6-8

- The 1998-99 Eighth Grade Students (Grades 6-8 Cohort) in Yates feeder schools, who had been tested in fifth grade (Spring 1996) with the TAAS test and re-tested with spring 1999 Stanford test, outperformed students in comparison cohort in both math and reading on the Stanford.

Grade Equivalent Scores of Yates Lower Primary Cohort

- The overall average GE score of the first grade cohorts in the 12 schools in 1996-97 was one month above the national average in reading and three months below the national average in math. These cohort averages increased by: a) two GE units to three months above the national average in reading by the end of third grade (Spring, 1999); and b) six GE units to three months above the national average in math by the end of third grade (Spring, 1999).
- In three years, seven out of 12 Yates elementary schools showed increases of one to six academic months above grade level in reading, while 10 schools showed average increases of 1-13 months above grade level expectations in math.

The preceding academic performance findings vividly demonstrate the consistent and predictable impacts of the Project GRAD model on student performance at all grade levels, especially the primary grades. The only major challenges facing the model are: a) the significant reduction of the considerable wave of student departures from program schools; and b) the identification of effective strategies for addressing the skill deficiencies in math and reading of new students who enroll in program schools every year.

College Attendance

Since Project GRAD's humble beginnings in 1989, the annual 12% of college-bound high school graduates of Davis High School has increased to an average annual rate of 50%, a figure that significantly exceeds the national average of 37% for Hispanic seniors and about 33% for African

American seniors (U.S. Dept. of Education, 1994). Out of the Davis High School's graduating class of 292 in May 1999, 175 students qualified for the college scholarships of whom 102 students are already in college. Twenty-five are making plans to enter in the spring semester of year 2000. Indeed, over 800 Davis High graduates have entered college since 1991-92. The number of students entering college from Yates High School more than doubled from 40 in 1998 to 97 in 1999, the first year of the Conoco-Grizzard scholarship program.

Levels of Critical Implementation Factors

Formative assessments and observations of teachers, evaluator, and project staff indicate generally strong and healthy implementation conditions, factors, and support systems for both Davis and Yates feeder schools. In effect, levels or quality of the following project implementation indicators were encouraging and substantial: 1) Initial year training and subsequent years' training for new teachers; 2. Ongoing follow-up training and resource support; 3. District leadership's support and reform orientation; 4. Long-term funding commitment of Project GRAD partners; 5. Strong externally-driven project management and leadership; 6. Ongoing evaluation and improvement of the model; 7. Collaborative Vertical Team planning and leadership among project schools; and 8. Strong commitment of principals to the model's effective implementation.

Perceived Weaknesses in the Model

Overall, formative feedback on the major elements of the Project GRAD model were positive and constructive. Most of the perceived weaknesses seemed minor but relevant to the perceived contextual needs of students and teachers of the Davis and Yates Feeder schools. Several of the teachers expressed that the SFA program lacked a strong phonics-based component.

The critical comments leveled at SFA by several teachers, mostly from Yates feeder schools, seemed to prompt the following three questions: 1) Are the observations accurate?; 2) If the observations are not accurate, are the observations a reflection of the difficulty teachers face in shifting from Distar/Open Court strategies to SFA strategies?; or 3) Is it a reflection of teacher unwillingness to invest the energy, time, etc., to fully implement the SFA program? Answers to the preceding questions need to be determined to facilitate either the strengthening of the phonics component of the SFA program by the SFA Foundation, or the adoption of strategies by Project GRAD personnel to ensure that teacher misperceptions about SFA are adequately corrected. If the criticisms are found to be baseless, then it may be necessary to encourage teachers who continue to resist strongly the implementation of SFA's instructional prescriptions to transfer to non Project GRAD schools.

Perceived Challenges in the Model's Implementation

Critical Implementation Factors

Even though the levels of the critical implementation factors are currently high, continued monitoring and strengthening of each is imperative since a significant weakening in any of the factors/conditions can adversely affect the rate and quality of the project's implementation and sustenance. In effect, it is as equally important to strengthen the project's funding support as it is to strengthen the instructional leadership at the building level.

Governance Challenges in the Partnership

It is a formidable task to know the real intentions of teachers who are critical of the work load or pressures placed on them by Project GRAD, and who may look for reasons to resist implementation

pressures from building-level administrators or Project GRAD personnel. Project GRAD's role as the driving force behind this formidable reform initiative, although without any line authority over participating district administrators, teachers, and building-level administrators, is a delicate, probably frustrating, and a difficult one. Nevertheless, Project GRAD administrators have done superbly well in handling this delicate balance by working with and through the schools to accomplish all pertinent implementation goals. The challenge is bound to increase in the years ahead, in view of the increasing number of participating schools, locally and nationally. It is thus essential that project administrators make continuing efforts to involve grassroots stakeholders in major implementation decisions. As Project GRAD continues to expand into a substantial number of district schools, it is also critical that the district leadership continues to nourish the healthy partner relationships with confidence, openness, and involvement that befit an instructional reform of this magnitude.

Teacher Turnover Rates

High teacher turnover rates continue to be a major challenge to the full installation of the Project GRAD model in both the Davis and Yates feeder schools. Since Project GRAD's success depends on a substantive investment in teachers, the loss of teachers to other schools or school districts may have adverse effects on the long term sustenance of the new instructional culture. The loss of Project GRAD-trained teachers means that new teachers have to undergo the same professional development preparation others have received. In five years, the nine Davis schools appear to have lost 292 teachers, while in three years, the fifteen Yates feeder schools appear to have lost 140 of their teachers. It should, however, be mentioned that many of the departures appear to be new teachers, retirees, or experienced teachers who were hired by Project GRAD as facilitators and consultants. Even though these figures are crude estimates of teacher departures from participating schools, if this is a "brain drain" involving experienced/trained teachers, one could imagine how problematic and costly it might be for project administrators to maintain high levels of project implementation in participating schools.

Concluding Comments

As Project GRAD expands into a third feeder cluster of schools during the 1999-2000 school year, it has significantly revealed its many strengths and challenges. The appreciation of these challenges and strenghths provides the insights and opportunities for improving not only the elements of the respective components of the model but also the tailoring of the implementation strategies and perspectives to the needs of project beneficiaries.

As Project GRAD gears up for local and national expansion, it may be necessary to explore ways of expanding its local decision-making processes to include several experienced teachers selected by their peers. This grassroots advisory group of teachers from each participating school should have strong ties with their peers and should not be project facilitators nor consultants. Feedback from the advisory group on major implementation issues and concerns may strengthen grassroots participation in the model's implementation.

The consistent and predictable capacity of the model to improve student performance, discipline, and pursuit of college education has been significantly demonstrated by schools in the Davis and Yates vertical team of schools. It is therefore not surprising why Project GRAD continues to remain in the national limelight as one of the nation's most prominent, effective, and resourceful business and school initiatives. Indeed, Project GRAD provides a powerful demonstration of the productive character of concerted public and private searches for solutions to the challenges that face today's inner-city schools.

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