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AUTHOR Tullis, Richard J.; And Others
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ABSTRACT

The Nongraded Primary Learning Communities Program (NPLCP) was introduced at the beginning of the 1990-91 school year in three Houston Independent School District elementary schools. This evaluation describes the implementation of the NPLCP; examines the effect of the NPLCP on students' standardized achievement test scores; and evaluates teacher opinion of the NPLCP. There were no differences of attendance rates of program students and students in a comparison group. While most of the teachers thought that the nongraded approach was more developmentally appropriate than the approach used in the graded classroom, they expressed reservations about the quality of the class management and individualized instruction training that they received. The teacher survey form is appended. Contains 7 references. (LB)

An Evaluation of the Non-Graded Primary Learning Communities Program

Tullis, Richard J., Ed.D.
Ronacher, Karl, MBA
Sanchez, Kathryn S., Ed.D.
Gonzalez, J.

HISD RESEARCH & EVALUATION
HOUSTON INDEPENDENT SCHOOL DISTRICT

AN EVALUATION OF THE NON-GRADED PRIMARY LEARNING COMMUNITIES PROGRAM 1990–91

DEPARTMENT OF RESEARCH & EVALUATION
HOUSTON INDEPENDENT SCHOOL DISTRICT

Abstract

The Non-Graded Primary Learning Communities Program (NPLCP) was introduced at the start of the 1990–91 school year in three Houston Independent School District elementary schools (Oak Forest, Pleasantville, and Whittier). This evaluation describes the implementation of the NPLCP, examines the effect of the NPLCP on standardized achievement test scores of students and evaluates teacher opinion toward the NPLCP. No differences of attendance rates between program students and a comparison group were noted. While most of the teachers thought that the Non-Graded approach was more developmentally appropriate than the graded classroom, they expressed reservations about the quality of the class management and individualized instruction training that they received.

Introduction

The Non-Graded Primary Learning Communities Program (NPLCP) was conceptualized and planned during the 1989–90 school year. Principals from Oak Forest, Pleasantville, and Whittier desired a program that would allow students to work through the first three years of school at their own academic pace. A focal goal of the program was to eliminate the threat of retention during the initial three school years. To accommodate these goals, an educational approach that eliminated traditional placement in grade based on age was adopted. Under the new plan, students were aggregated as a cohort for the first three school years (grades kindergarten through second). The program was implemented during the 1990–91 school year.

The following research questions were addressed:

1. What were the demographic characteristics of the program students and the randomly selected comparison group?
2. Did the standardized achievement test scores of program students differ from (1) the comparison group and (2) the program schools' previous second grade students?
3. Were there differences in attendance rates between students who participated in the program, the randomly selected comparison group and the schools' previous second grade students?
4. What perceptions did teachers have about the methods and results of the program?

Review of the Literature

The Non-Graded approach recognizes that students learn at different rates. Students are allowed to progress at an individual pace rather than as classes or groups. In a non-graded classroom, designations such as kindergarten, first, or second grade are eliminated. Flexible groupings allow students to proceed from one level of work to another when ready. The design allows teachers the flexibility to modify instruction to be developmentally appropriate to each learner, increasing student mastery while decreasing frustrations caused by an educational pace that may be too quick or slow. Thus, the student's progress is not dependent upon that of others in the room. The student's own readiness, interest, and capacity to learn and master tasks set the pace of instruction. If the non-graded approach to learning is fully implemented, each student is expected to assume responsibility for learning. An ideal Non-Graded school would discover all the needs, interests, abilities, and deficiencies of each child and provide a unique program for each student. However, according to Haden and King (1974), non-graded settings seldom reach the ideal. Instead, the constraints of time, money, and teacher energy make complete individualization impractical. As a result, practical experience strikes a compromise between a completely individualized approach and conventional instruction by grades.

In terms of class organization, non-graded settings allow for different age groupings for each subject area. Based on teacher opinion and student progress, the composition of student instructional groups can be changed at any time. This single feature provides maximum flexibility to the teacher when diagnosing student difficulties and prescribing remediation or promotion. As a result, failure, retention, and grade skipping are replaced by continuous progress as the student proceeds at an individualized rate. Slower students are not forced to progress with the class even though mastery may not be attained, and brighter student can forge ahead without the fear of boredom and triviality. Haden and King (1974) argue that the Non-Graded school is not a radical departure from traditional graded schools. Economy of time was the primary reason for the change to graded classrooms. The graded philosophy requires students to fit the curriculum; the non-graded philosophy fits the curriculum to the student. Proponents of the non-graded approach assert that the program reduces the negative effects of retention.

Relative to the discussion of the effects of student retention, Shepard and Smith (1989) have found that kindergarten retention does not boost subsequent academic achievement. They also write that regardless of what the extra year may be called, there is a social stigma for children who attend an extra year. As a result, these authors maintain that the possibility of retention fosters inappropriate academic demand in first grade. Thus, students are compelled to meet the system requirements or fail. Failure in the first grade may present more than transient educational deficiencies as expressed in continued and expanded student frustration which may be linked to future failure. It should be pointed out that the failure a non-graded classroom is attempting to limit is academic in nature. That is, although the program focuses on developmentally appropriate practices in a non-threatening setting, the practices are designed to improve student academic performance. As a result, one very positive outcome of a non-graded approach should be increases in student achievement. At this time, no literature has been found that investigates the impact of a non-graded program on individual student achievement.

Many of HISD's programs focus on older children. This focus may be interpreted by some as an effort to repair the effects of previous educational failings. The Non-Graded philosophy is a preventive program, one that attempts to limit the need for future remedial programs. According to Haden and King (1974) there are both advantages and disadvantages of the Non-Graded philosophy. A list of these advantages and disadvantages follows:

Advantages

- a sense of success, confidence, and self-reliance enhances positive development of the student's self-concept,
- the elimination of pressures due to boredom and excessive competition might reduce some forms of undesirable behavior,
- the dilemma of whether to promote or retain a student at the end of the year is avoided,
- learning and instruction is related to a specific child and teachers are likely to work more closely with parents,
- by allowing the student to progress at his own rate, students may avoid the damaging effects of failure and repetition,
- the instructional philosophy moves in the direction of individual diagnosis and prescription,
- students absent from school for extended periods may resume their work more smoothly and more effectively as compared to a student in a graded school,
- the program provides a stimulus for experimentation and the introduction of new and different practices: improved mental and emotional health is a possible by-product,
- continuous progress eliminates the gaps that occur when pupils miss certain aspects of instruction because of double promotion,
- there are many social advantages in having children of differing ages and diverse abilities working together,
- student learning becomes the primary focus as compared to the number of years a student spends in school, and
- instruction is individualized.

Disadvantages

- too much time and planning are needed to establish and carry out an effective Non-Graded program because the teacher needs to plan for more grades,
- because non-grading requires a flexible personality, teacher turnover may increase because of requests for transfer or resignations,
- finding textbooks may be difficult since most textbooks are designed for graded programs,
- excessive time may be spent with parents because they have no way to understand the progress of their children,
- there may be a persistent tendency on the part of teachers to revert to uniform expectations and standards,
- it is not certain that improved learning will result,
- because each teacher has more than one grade a wider range of instructional materials will be needed, making the program more expensive,
- serious problems may arise when pupils transfer into or out of the school and parents may exert pressure to move children to higher levels,
- students will not put forth the effort to achieve grade standards because non-grading has no fixed standards,
- most Non-Graded programs merely substitute levels for grades, and
- increased time will be devoted to diagnosis, record keeping, and reporting.

Program Description

The Non-Graded Primary Learning Communities Program was initiated in the Houston Independent School District (HISD) during the 1990–91 school year. In the fall semester of 1991, the program was operationalized at Whittier, Oak Forest, and Pleasantville elementary schools. Officials at these schools believed that early childhood programs should provide a safe environment that promotes the physical, social, and emotional development of young children through *developmentally appropriate practices.* A developmentally appropriate school gears its academic program to individual students. More specifically, developmentally appropriate programs take into account the cognitive and physical development of each student and apply the teaching methodology best suited to each student. The purpose of the Non-Graded Primary Learning Communities Program was to reduce retention rates and the perceived negative effects associated with retention, increase the use of developmentally appropriate practices, and reduce academic testing in the early grades.

Program staff believed that students enter school at age five with varying levels of social, academic, and physical development. The NPLCP asserts that schools are responsible for providing an environment capable of meeting individual student needs. As stated in the program proposal, the NPLCP supports the educational philosophy that students should not be hurried into experiences for which they are not ready. A Non-Graded environment provides an alternative to traditional graded classrooms by helping children advance successfully through several levels of achievement without waiting for an academic year to pass and without being bound by the restrictions associated with the concept of grade levels. The NPLCP emphasizes the continuous progress of each student, tries to provide developmentally appropriate experiences, and uses an integrated approach to instruction. Participating schools used two instructional models during the first year: a self contained multi-age room and a multi-age cluster or pod. Clusters or pods are a method of grouping students according to various ability levels.

Most students from Whittier, Oak Forest, and Pleasantville participated in the program. At Pleasantville all students in kindergarten through second grade except magnet students participated in the program. With the exception of one self-contained first grade classroom and one self-contained second grade classroom, all students at Oak Forest participated in the program.All students at Whittier were in the program. The following NPLCP student selection criteria were utilized by school principals:

- Oak Forest
  1. Students were randomly assigned to the program.
  2. Traditional self-contained first and second grade opportunities remained.
- Pleasantville
  1. All students except magnet students were eligible for the program.
- Whittier
  1. All students participated in the program.

According to NPLCP principals various strategies were employed in selecting and/or assigning teachers to the NPLCP. For example, at Whittier, all primary grade teachers (K-2) were involved in the program. At that school, 7 of the 12 kindergarten through third grade teachers were new to the school for the 1990-91 school year. Oak Forest reported that 9 of 10 NPLCP teachers had taught at the school in previous years. Those teachers who did not teach NPLCP courses in grades 1 and 2 did so by choice. The principal allowed teachers who chose not to

participate in the program to remain in traditional settings. Teachers volunteered for the NPLCP at Pleasantville.

All principals stressed the need to communicate directly with parents. Parent involvement was a key to the program proposal and principals indicated they met with most of the parents. One component of the meetings was to discuss the structure of the program and how it differed from a traditional K-2 offering.

Number of students served and costs

Six hundred and twenty-one students participated in the Non-Graded Primary Learning Communities program. According to the program proposal, dated May 1, 1990, the total cost of operating the NPLCP for the 1990–91 school year was $88,264. The total costs included eight inservice days for 28 NPLCP teachers, registration fees and material costs for the McCracken Workshop (Whole Language), consultant fees and materials. Based on this information, the cost per student served was $142.

At all schools, the principals stressed a developmentally appropriate curriculum. Visits to various classrooms indicated the NPLCP teachers had developed print rich environments that allowed students to be actively engaged in hands-on learning. It should be stressed that teachers were using manipulatives, but that many felt more were required. The Project Access curriculum was indicated in the NPLCP proposal as being the instructional model for the program. Future evaluations should investigate the NPLCP curriculum in detail. Such an evaluation should be implemented before the start of the next school year to ensure complete coverage of the program's curriculum and instructional processes.

Methodology

A combination of analytical methods were used to respond to the research questions. Information about the implementation procedures was obtained through interviews with the school principals. The specific methodology and analytic technique used to answer each research question are discussed immediately prior to the findings relative to that question.

Tours of non-graded classrooms were completed at Oak Forest and Whittier Elementary Schools. At Whittier, observations of the program in action were made. The principal at Oak Forest accompanied Research and Evaluation staff on a tour of that campus' program. Although students were not in the classrooms at Oak Forest, discussions of program needs and curriculum were conducted with teachers. No classroom visits were held at Pleasantville Elementary.

To identify NPLCP participants, student identification numbers obtained from program school principals were matched with the student master file to isolate demographic and achievement data. To provide the most statistically appropriate comparison group, second grade students were randomly selected from all second grade students in HISD. It was believed that this approach increased the generalizability of the study. Comparison group selection was accomplished via a computerized random number generator. To incorporate the views of teachers in the NPLCP into the evaluation, a survey was developed (see Appendix 1). The intent of the survey was to identify potential strengths and weaknesses of program implementation and teacher training. All program teachers were surveyed.

Study Limitations and the Need for Future Research

Because the request for this evaluation was received during the second semester of the 1991 school year, Research and Evaluation staff had no real opportunity to participate in or evaluate the initial implementation of the program. Thus, formative elements could not be incorporated into this report. Another limiting factor is the obvious differences in student demographic characteristics for each NPLCP school (see Research Question 1). Based on discussions with the principals at each NPLCP school, no common selection process or criteria for student participants appears to have been used. As a result, each principal used completely different approaches to selecting student participants. Consequently, each school may be viewed as a separate and unique program that is operating under a similar rubric of NPLCP. However, because all school personnel were operating under the same proposal and from the same set of goals and objectives, it was felt by Research and Evaluation that for the preliminary investigation of the effects of NPLCP on student achievement, all participants could be compressed into a single treatment group. Future evaluations should address this limitation and investigate program impact both within and between the campuses. If in future evaluations the programs at each school are investigated, a stratified comparison group should be formed to better reflect the socioeconomic characteristics of each school.

Results

Question 1 What were the demographic characteristics of the program students and the randomly selected comparison group?

Method

To obtain information about the students in the Non-Graded Primary Learning Communities Program (NPLCP), student roll sheets were gathered from Whittier, Oak Forest, and Pleasantville elementary schools. A randomly selected comparison group had previously been derived. The comparison group was created by searching the student master file and randomly selecting 620 students who were enrolled in the second grade in 1990-91. Each second grade student in HISD, excluding those in the program, had an equal chance of being selected for the comparison group. For the NPLCP, 621 students were identified by school principals as participating in the program. However, when the Student Master File was searched, only 596 complete student records could be matched to the names and student identification numbers provided. As a result, the analyses of program participant data are limited to 596 cases.

Findings

Ethnic Composition of NPLCP Students by School and Gender

	Asian	Black	Hispanic	White	Total	
Schools	%	%	%	%	n	%
Oak Forest						
Female	0	9	13	24	104	**47**
Male	2	10	18	24	107	**53**
Total	2	19	31	48	**211**	**100**
Pleasantville						
Female	0	57	0	0	79	**57**
Male	0	43	0	1	60	**43**
Total	0	99	0	1	**139**	**100**
Whittier						
Female	0	4	30	14	118	**48**
Male	0	2	35	15	128	**52**
Total	0	6	65	29	**246**	**100**
Total	1	32	38	29	**596***	**100***

*25 missing observations

Ethnic Composition of Randomly Selected Comparison Students by Gender

Gender	Asian %	Black %	Hispanic %	White %	Total n	Total %
Female	1	17	23	6	294	47
Male	2	18	26	7	326	53
Total	3	35	50	13	620	100

Demographic data for the three program schools document the ethnic uniqueness of each school. It is clear that each program serves different populations. Of particular interest is the program at Pleasantville where 99% of the participants are Black. This compares to the school average of 94% Black, 5% Hispanic, and <1% White. Thus, although the program appears to be selective to a single ethnic group, the program demographics closely resemble the general demographics of Pleasantville Elementary. In fact, the ethnic distributions of each program closely resemble the ethnicity of each school specifically.

Question 2 Did the standardized achievement test scores of program students differ from (1) the comparison group and (2) the program schools' previous second grade students?

Method

In order to measure the impact of the NPLCP, achievement test scores from the April 1991 administration of the Metropolitan Achievement Tests, Sixth edition (MAT6), functioned as the dependent variable in a series of regression analyses. The two independent or explanatory variables were 1990 MAT6 scores and program participation status. For both the 1990 and 1991 MAT6 tests, Normal Curve Equivalent (NCE) scores were used as the unit of analysis. The following MAT6 batteries were analyzed separately: Reading, Math, Language, Complete Battery. Dummy values of '0' for the comparison group and '1' for the program group were included in each analyses.

Two comparison groups were used to answer the research question. The first analysis compares the NPLCP students to the randomly selected HISD second grade sample. The purpose of this analysis was to allow for a generalization of program effects to all second grade HISD students. In the second analysis, students who attended second grade in the three NPLCP schools during the 1989-90 school year were used as the comparison group. Relative to this group, the 1990 MAT6 scores served as the dependent measures, while the 1989 MAT6 scores served as the independent measures. None of these students participated in the NPLCP. The purpose of this second analysis was to identify the impact of the program on NPLCP students.

Findings

Comparison of Program Students and the Randomly Selected Comparison Group

This section of the analysis compares the randomly selected HISD comparison group to the program group. The program group consisted of 621 students. The students of the program group were divided as follows: 269 kindergarten students, 169 first grade students, and 183 second grade students. Since the regression analysis required that each student have both a pre-test (1990 MAT6) and a post-test (1991 MAT6) score, only second grade students were used (no test scores were available for students in kindergarten, and for first grade students, only the 1991 MAT6 was available). Of the 183 program students who were in the second grade, 26 had missing data fields and were not used in the analysis. This left a program group of 157 students who were included in the analyses. The randomly selected HISD comparison group consisted of 620 students. From this sample, 373 students were matched by the MAT6 pretest/posttest criterion. As a result, the regression analyses involved 157 NPLCP and 373 HISD comparison group second graders.

Effect of NPLCP on 1991 MAT6 Score

Reading

Mean NCE Reading Scores

	1990	1991	Gain/Loss
NPLCP	55	45	-10
Oak Forest	60	48	-12
Pleasantville	45	38	- 7
Whittier	58	49	- 9
Comparison Group (HISD)	57	51	- 6
HISD (All 2nd grade)	52	52	0

When inspecting the differences of MAT6 Reading NCE means for the program in general and program schools individually, a general decrease of NCE is noted from the 1990 to 1991 tests. In fact, students who participated in the program lost 10 NCEs on average. This value should be compared to an average loss of 6 NCEs for the randomly chosen comparison group and no change of NCE for all HISD second graders for the same time period. Although it appears that the program students are losing more ground than the comparison group of other HISD second graders, the reader is cautioned to note that a range of losses is evidenced in the data. It is also important to point out that for smaller groups of students, it is possible to expect more variation of student scores from year to year. Thus, it is not surprising that program schools exhibited a range of difference scores. In contrast to the program schools, the larger, more diverse comparison group exhibited a smaller loss of 6 NCEs. Nevertheless, results presented here indicate that program students exhibited reduced reading skills as compared to the comparison group or HISD in general.

To completely identify whether this loss is due to program effects or some other influence such as might be experienced at the school, a second analysis that compares the progress of program students to the progress of other second graders who attended the program schools in the previous year is required. The reader is referred to page 13, "A Comparison of Program Students to Previous Second Grade Students."

Using regression analysis, it is possible to estimate the impact of a program on student achievement. For the analysis of MAT6 Reading NCEs, an estimated coefficient for program participation of -4.04. The negative sign in the coefficient indicates a negative program effect. That is, participation in the program led to generally lowered NCEs in Reading. As a result, a prediction of the reading score of a typical HISD second grade student who attended the NPLCP would be four NCEs below similar second grade students who did not attend the program. Fifty-eight percent of the total variance in MAT6 reading scores was attributable to students' previous test scores and whether they attended the NPLCP.

Math

Mean NCE Math Scores

	1990	1991	Gain/Loss
NPLCP	64	49	-15
Oak Forest	59	52	- 7
Pleasantville	49	42	- 7
Whittier	76	53	-23
Comparison Group (HISD)	63	63	0
HISD (All 2nd grade)	61	62	1

Losses similar to those noted for the Reading analysis were revealed in the analysis of Mathematics NCEs. However, the losses at Whittier are over three times greater than those at Oak Forest or Pleasantville. Keeping this in mind, it is difficult to generalize across the programs. One factor that may have influenced the differences of Math NCE is the elevated average NCE at Whittier in the first grade. The reader is directed to the observation that although Whittier demonstrates the greatest loss, the average NCE for 1991 remains the highest of the program schools. As with the previous discussion a comparison of students who were enrolled in the program to students from the same schools is called for to isolate program effects from school effects (see page 14). It is important to note that at all program schools, losses were greater than would be expected based on the average gains/losses of the comparison group and HISD second graders.

To estimate the impact of the program on individual student Mathematics NCEs, a regression analysis yielded a program participation coefficient of -12.84. This value indicates that if a typical HISD second grade student attended the NPLCP, he could expect to score, on average, thirteen NCEs below similar second grade students in HISD who did not attend the program. However, this result should be interpreted with caution due to Whittier's elevated 1990 Mathematics NCE which tends to skew the results in a negative direction. Thirty-eight percent of the total variance in MAT6 math scores was attributable to students' previous test scores and whether they attended the NPLCP.

Language

Mean NCE Language Scores

	1990	1991	Gain/Loss
NPLCP	64	47	-17
Oak Forest	67	46	-21
Pleasantville	51	41	-10
Whittier	75	55	-20
Comparison Group (HISD)	62	59	- 3
HISD (All 2nd grade)	58	57	- 1

Schools that participated in the program demonstrated an average loss of 17 NCEs on the MAT6 Language subtest. The losses ranged from 21 NCEs to 10 NCEs. As with the previously discussed analyses, Pleasantville demonstrated the most moderate decrease. The comparison group lost 3 NCEs while HISD second graders remained the same. However, and as with the previous analyses, it is necessary to remember that until the program students are compared to students who attended the same schools, program effects are difficult to ascertain.

The program participation coefficient for language was -12.73. If a typical HISD second grade student attended the NPLCP, he could expect to score approximately thirteen NCEs below similar HISD second grade students. Forty-five percent of the total variance in MAT6 language scores was attributable to students' previous test scores and whether they attended the NPLCP.

Complete Battery

Mean NCE Complete Battery Scores

	1990	1991	Gain/Loss
NPLCP	61	48	-13
Oak Forest	62	49	-13
Pleasantville	48	39	- 9
Whittier	69	53	-16
Comparison Group (HISD)	61	57	- 4
HISD (All 2nd grade)	57	57	0

Program students also demonstrated decreases of Complete Battery NCEs greater than either the comparison group or HISD second graders. Pleasantville students had the least loss (-9 NCEs) while Whittier documented the greatest loss (-16 NCE). On average, program school losses of NCE for the Complete Battery were from two to four times as great as the comparison group. In contrast, HISD second graders as a whole maintained their achievement level.

The Program Participation coefficient for the complete battery was -9.14. If a typical HISD second grade student attended the NPLCP, he could expect to score nine NCEs below similar second grade students in HISD. Fifty-seven percent of the total variance in MAT6 complete battery scores was attributable to students' previous test scores and whether they attended the NPLCP. The reader is cautioned to consider the following discussions before concluding that the program had a deleterious effect on student achievement.

Comparison of Program Students to Previous Second Grade Students

This section compares program students at Whittier, Oak Forest, and Pleasantville elementary schools to students at the same schools before the program was implemented. To verify that the program did in fact have effects, achievement test scores of second grade NPLCP students at the three elementary schools were compared to the scores of second grade students from the 1989–90 school year from the same elementary schools. As different cohorts, these two groups brought with them potentially different ability levels and backgrounds. Unless these considerations are kept in mind, generalizations derived from this information will be misleading.

The comparison group in this analysis consisted of 156 students from Whittier, Oak Forest, and Pleasantville who attended the second grade during the 1989–90 school year. Of those, 30 students did not have 1989–90 MAT6 scores and therefore were not used in the analysis. The program group consisted of 157 students. For the comparison group, the independent variables were 1989 MAT6 and negative program participation, while the dependent measure was the 1990 MAT6. The independent variables for the program students were 1990 MAT6 and program participation and the dependent measure was the 1991 MAT6.

Program Students and Previous Second Grade Students at Program Schools
MAT6 NCEs Regressed with the Previous Year's MAT6 NCEs

Reading

Mean NCE Reading Scores

	First Grade	Second Grade	Gain/Loss
NPLCP Students	55	45	-10
Comparison Group	55	45	-10
HISD (1990 and 1991)	52	52	0

Students who attended the program demonstrated losses of MAT6 Reading NCEs similar to students who attended the program schools in previous years. In contrast to the previous comparison of NPLCP students to the randomly selected HISD comparison group losses in Reading NCEs, these results indicate that the program has no real effect on student reading achievement other than would be normally expected in the schools these students attend. Thus, it is possible to state that the losses of reading NCE . re school based effects and not program effects.

The Program Participation coefficient for reading was .08. This value means that students who attended the program could expect to have reading scores similar to those of previous students who were enrolled in non-NPLCP courses at the same school. Fifty-one percent of the total variance in MAT6 reading scores was attributable to students' previous test scores and whether they attended the NPLCP.

Math

Mean NCE Math Scores

	First Grade	Second Grade	Gain/Loss
NPLCP Students	64	49	-15
Comparison Group	60	52	-08
HISD (1990 and 1991)	61	62	1

Students who participated in the NPLCP lost 15 NCEs in MAT6 Mathematics. The comparison students who attended second grade in the same schools the previous year lost an average of 8 NCEs, seven less than the program students.

The program participation coefficient for math was -4.09. Accordingly, program students could expect to achieve four NCEs below the typical second grade students of the previous year. Thirty-one percent of the total variance in MAT6 math scores was attributable to students' previous test scores and whether they attended the NPLCP.

Although there is an obvious decrease in the mathematics achievement of program students as compared to the previous years second graders, the effect is not as great as that described earlier where program students are compared to the HISD comparison group. A combination effect is suspected with both the program and the schools causing losses of NCE in mathematics. This effect should be further investigated in future reports. The investigations should compare the curriculums from each school to the HISD project Access curriculum utilized elsewhere in the district. Also, differences of student achievement for each school should also be investigated.

Language

Mean NCE Language Scores

	First Grade	Second Grade	Gain/Loss
NPLCP Students	65	47	-18
Comparison Group	59	50	- 9
HISD (1990 and 1991)	58	57	- 1

A loss of 18 NCEs was demonstrated by program students as compared to a loss of 9 for the previous year's second graders. The reader is referred to the previous discussion for mathematics. A similar pattern is suspected here. Further study of the impact of NPLCP on Language is called for in future years.

The program participation coefficient for language was -5.75. If a typical HISD second grade student attended the NPLCP, he could expect to score five and three quarters NCEs below second grade students enrolled at the three schools the previous year. Thirty-one percent of the total variance in MAT6 language scores was attributable to students' previous test scores and whether they attended the NPLCP.

Complete Battery

Mean NCE Complete Battery Scores

	First Grade	Second Grade	Gain/Loss
NPLCP Students	61	48	-13
Comparison Group	57	48	- 9
HISD (1990 and 1991)	57	57	0

NPLCP students demonstrated an average loss on the MAT6 Complete Battery of 13 NCEs from the 1990 to the 1991 MAT6 administrations. This loss is 4 NCEs greater than the 9 NCE loss of the comparison group. Both groups demonstrated losses greater than the HISD second grade population, which did not experience a change of NCE. These results point to a negative school effect and to a lesser extent a negative program effect.

The Program Participation coefficient for the complete battery was -2.51. If a typical HISD second grade student attended the NPLCP, he could expect to score two and a half NCEs below second grade students enrolled at the three schools the previous year. Forty-six percent of the total variance in MAT6 complete battery scores was attributable to students' previous test scores and whether they attended the NPLCP.

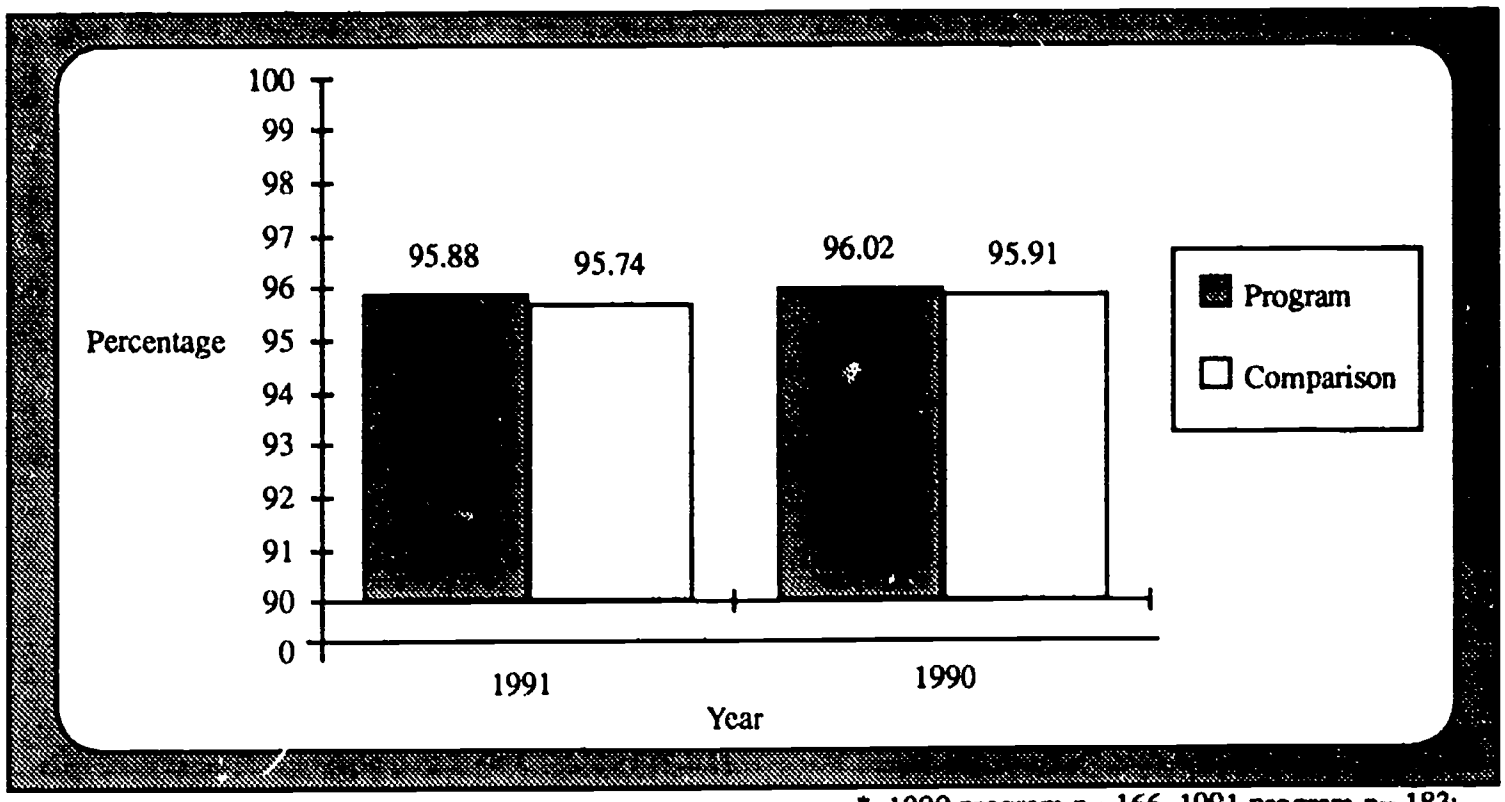
Question 3 Were there differences in attendance rates between students who participated in the program, the randomly selected comparison group and the schools' previous second grade students?

Method

In examining whether a difference exists between the attendance rates of program and comparison group students, a regression analysis was performed. Furthermore, a separate regression was conducted to compare program students to students in the second grade at the same schools the previous year.

Findings

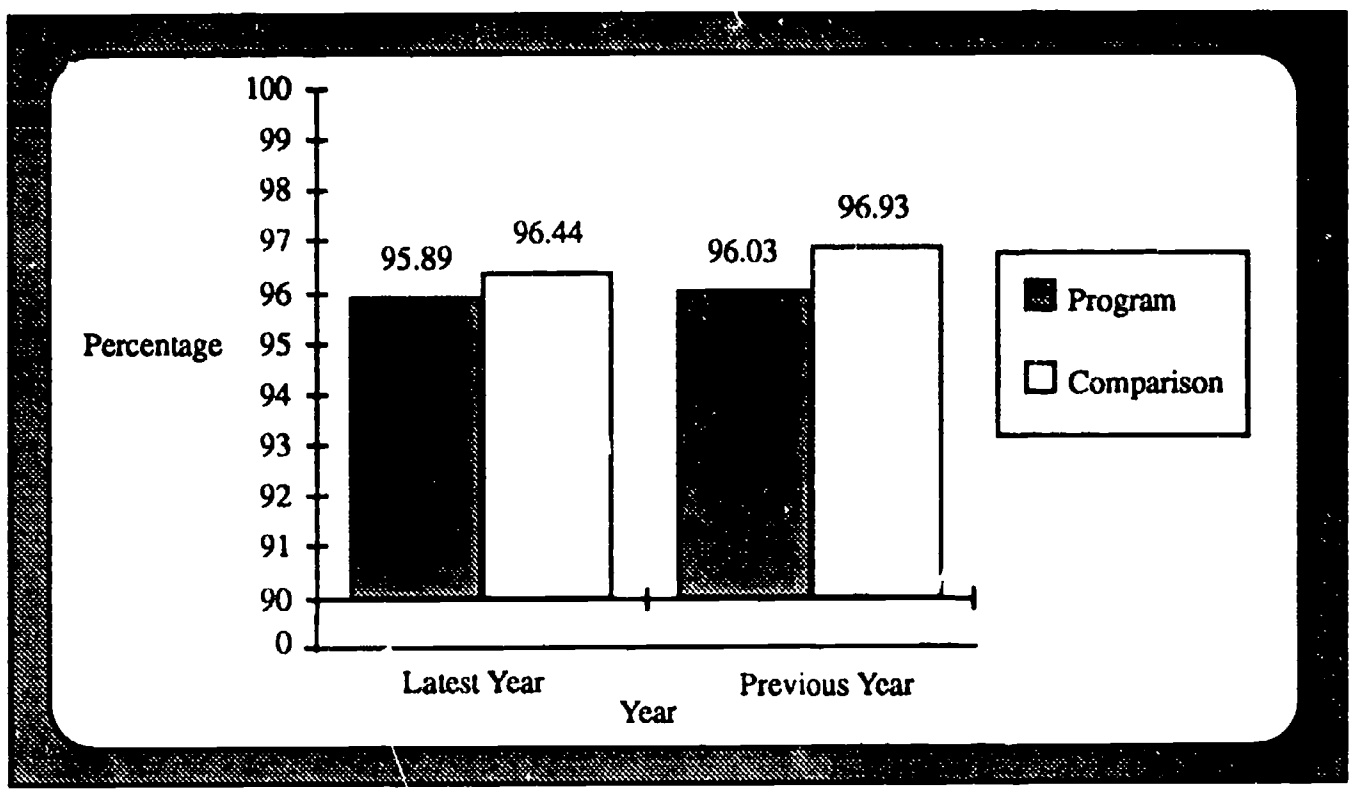
Attendance Rates for Program and Comparison Students by Year*



* 1990 program n= 166, 1991 program n= 183;
1990 comparison n= 528, 1991 comparison n= 620

Program participation did not affect the number of times a student attended school. There was not a significant difference between the attendance rates of program and comparison students.

Attendance Rates for Program Students and the Previous Year's Second Grade Students*



* 1990 program n= 167, 1991 program n= 184;
1989 comparison n= 153, 1990 comparison n= 156

There was not a significant difference in the attendance rates of students at Whittier, Oak Forest, and Pleasantville this year compared to students in those schools last year.

Question 4 What perceptions did teachers have about the methods and results of the program?

Method

To obtain a measure of the impact of the Non-Graded Primary Learning Communities Program from the teachers' perspective, a survey instrument was developed. The survey instrument was designed to collect information about instruction and evaluation, training and implementation. Information about the instrument's reliability and/or validity is not currently available. Surveys were distributed to 28 teachers. A total of 27 surveys were returned and deemed acceptable for use in this analysis. Because some teachers failed to complete the survey, some questions contain fewer than 27 responses. The following tables present data gathered from the survey. Topics in bold immediately before a given table are program goals. Program goals were obtained from the program proposal.

Findings

1. Instruction/Evaluation

Participating schools will implement two models during the first year: (a) a self-contained multi-age classroom and (b) a multi-age cluster or pod.

What model of instruction do you use?

	self-contained classroom		cluster/pod		Total	
Campus	n	%	n	%	n	%
Whittier	10	40	1	4	11	44
Oak Forest	4	16	4	16	8	32
Pleasantville	5	20	1	4	6	24
Total	**19**	**76**	**6**	**24**	**25***	**100**

*** 2 missing observations**

Seventy-six percent of those teachers responding to the survey indicated that they use a self-contained classroom while 24 percent indicated that they used clusters or pods. In an interview, the principal at Oak Forest recommended a cluster or pod design for the program. No data exists to document the adequacy of either model. An follow-up investigation of the development of NPLCP students enrolled in the 6 clusters (pods) as compared to those NPLCP students who were enrolled in self-contained classrooms might help resolve a basic issue surrounding program design.

The pilot will develop K-2 learning communities that will provide developmentally appropriate experiences.

As compared to a graded classroom, do you feel the Non-Graded approach offers a more developmentally appropriate environment?

	Yes		No		Total	
Campus	n	%	n	%	n	%
Whittier	10	42	1	4	11	46
Oak Forest	6	25	2	8	8	33
Pleasantville	5	21	0	0	5	21
Total	**21**	**88**	**3**	**12**	**24***	**100**

*** 3 missing observations**

Eighty-eight percent of those teachers responding to the survey indicated that they believe the Non-Graded program does offer a better environment for learning. Because a large majority of teachers felt that the non-graded approach offers a developmentally appropriate environment, school officials should consider investigating the validity of this belief. That is, what is a developmentally appropriate environment. A second question should center on a comparison of the two NPLCP models and a traditional class model to investigate if one model is in fact more developmentally appropriate than another. Simply because the program teachers believe that the program is more appropriate does not necessarily make it so.

The pilot will develop K-2 learning communities that will emphasize continuous progress of students.

Do you develop individual instructional plans for each student?

	Yes		No		Total	
Campus	n	%	n	%	n	%
Whittier	8	31	3	11	11	42
Oak Forest	1	4	7	27	8	31
Pleasantville	6	23	1	4	7	27
Total	**15**	**58**	**11**	**42**	**26***	**100**

*** 1 missing observation**

Schools are responsible for providing learning experiences suitable for each individual's developmental stage.

Do you group students?

	Yes		No		Total	
Campus	n	%	n	%	n	%
Whittier	7	28	3	12	10	40
Oak Forest	8	32	0	0	8	32
Pleasantville	6	24	1	4	7	28
Total	**21**	**84**	**4**	**16**	**25***	**100**

*** 2 missing observations**

Fifty-eight percent of the teachers surveys indicated that they develop individualized instructional plans for each student. Eighty-four percent of those teachers responding to the survey indicated that they do group students. It is important to point out that the failure to develop individualized instructional plans for each student or to group students appropriately undermines the "developmentally appropriate" intention of the program. The complete individualization of the curriculum is called for if the program is to be developmentally appropriate. On the other hand, the necessity for developmental appropriateness to work out individualized plans has not been well established in the literature. To resolve this issue, an evaluation of the impact of individualized plans on student development and/or achievement should be undertaken in the future.

2. Training

Which training sessions did you attend?

Did you attend the **McCracken Whole Language Workshop?**

	Yes		No		Total	
Campus	n	%	n	%	n	%
Whittier	9	35	2	7	11	42
Oak Forest	8	31	0	0	8	31
Pleasantville	4	15	3	12	7	27
Total	**21**	**81**	**5**	**19**	**26***	**100**

*** 1 missing observation**

Did you attend the training session on **Evaluation?**

	Yes		No		Total	
Campus	n	%	n	%	n	%
Whittier	11	41	1	3	12	44
Oak Forest	8	30	0	0	8	30
Pleasantville	4	15	3	11	7	26
Total	**23**	**86**	**4**	**14**	**27**	**100**

Did you attend the training session on **Materials Exploration: Whole Language?**

	Yes		No		Total	
Campus	n	%	n	%	n	%
Whittier	10	37	2	7	12	44
Oak Forest	8	30	0	0	8	30
Pleasantville	4	15	3	11	7	26
Total	**22**	**82**	**5**	**18**	**27**	**100**

Did you attend the training session on **Materials Exploration: Mathematics?**

Campus	Yes n	Yes %	No n	No %	Total n	Total %
Whittier	10	37	2	7	12	44
Oak Forest	8	30	0	0	8	30
Pleasantville	4	15	3	11	7	26
Total	**22**	**82**	**5**	**18**	**27**	**100**

Did you attend the training session on **Planning for Effective Instruction: Make and Take Materials Development Workshop?**

Campus	Yes n	Yes %	No n	No %	Total n	Total %
Whittier	10	37	2	7	12	44
Oak Forest	8	30	0	0	8	30
Pleasantville	4	15	3	11	7	26
Total	**22**	**82**	**5**	**18**	**27**	**100**

The program proposal stated that it would provide training.

Please rate the training you received on **Class Management.**

Campus	Poor n	Poor %	Adequate n	Adequate %	Excellent n	Excellent %
Whittier	8	35	2	9	1	4
Oak Forest	7	30	1	4	0	0
Pleasantville	2	9	2	9	0	0
Total	**17**	**74**		**22**	**1**	**4**

Seventy-four percent of those teachers responding to the survey indicated that the training they received on Class Management was poor and 22 percent felt the training was adequate. One teacher stated that the class management training was excellent.

Please rate the training you received on **Evaluation and Assessment.**

Campus	Poor n	Poor %	Adequate n	Adequate %	Excellent n	Excellent %
Whittier	3	14	6	27	2	9
Oak Forest	0	0	8	36	0	0
Pleasantville	0	0	2	9	1	5
Total	**3**	**14**	**16**	**72**	**3**	**14**

Fourteen percent of those teachers responding to the survey indicated that the training they received on Evaluation and Assessment was poor, 72 percent felt it was adequate and 14 percent thought it was excellent.

Please rate the training you received on **Instruction (whole group).**

Campus	Poor n	Poor %	Adequate n	Adequate %	Excellent n	Excellent %
Whittier	3	14	7	32	1	5
Oak Forest	2	9	6	27	0	0
Pleasantville	0	0	1	5	2	9
Total	**5**	**23**	**14**	**64**	**3**	**14**

Twenty-three percent of those teachers responding to the survey indicated that the training they received on Instruction (whole group) was poor, 64 percent felt it was adequate and 14 percent thought it was excellent.

Please rate the training you received on **Individualized Approaches to Instruction.**

Campus	Poor n	Poor %	Adequate n	Adequate %	Excellent n	Excellent %
Whittier	6	32	3	16	1	5
Oak Forest	3	16	4	21	0	0
Pleasantville	1	5	1	5	0	0
Total	**10**	**53**	**8**	**42**	**1**	**5**

Fifty-three percent of those teachers responding to the survey indicated that the training they received on Individualized Approaches to Instruction was poor and 42 percent felt it was adequate. One teacher thought the training was excellent.

Implementation Comments

To further understand the implementation process the survey allowed for open-ended responses. Some of the comments are listed below.

List any problems you had teaching a Non-Graded class.

Keeping the other children involved in an activity while I work individually.

There were too many changes in one year.

Getting started, meeting needs of so many levels, insufficient time for planning, lack of materials.

There was not enough time to prepare for the changes in the program. It was difficult to work out a management system to accommodate three grade levels at the same time.

Providing the great number of manipulative materials necessary for the youngest children.

I was not clear about how to meet the needs of all my students.

I do not believe that all children are best served in a Non-Graded class environment.

Not having all the special equipment and materials I would like to have to work with my students.

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Appendix 1

Non-Graded Primary Learning Communities
1990-91 Pilot Program
Teacher Survey

The purpose of this survey is to learn about your perceptions of the effectiveness of the Non-Graded Primary Learning Communities 1990-91 pilot program. Please circle the correct answer or fill in the blank for each of the following items.

Demographic Information

Gender: Male Female

Ethnicity: Asian Black Hispanic White Other

Campus: Oak Forest Whittier Pleasantville

What subject do you teach?_____

Teaching experience (in years): HISD _____ Other _____

Instruction/Evaluation

What model of instruction do you use: self-contained classroom cluster/pod

Do you have adequate materials and supplies to perform your job? Yes No

If "No", what are you lacking? _____

_____

_____

As compared to a graded classroom, do you feel the *Non-Graded* approach offers students a more developmentally appropriate environment? Yes No

Why or why not? _____

_____

_____

Do you develop individual instructional plans for each student? Yes No

If "Yes", how? _____

_____

_____

List five methods other than standardized tests you use to evaluate the performance of your students:

_____ _____ _____

_____ _____

Please answer the questions on the back of this sheet.

Do you group your students? Yes No

If "Yes", how?_____

_____

_____

Training

Which training sessions did you attend?

Date	Topic	Attendance	
June 11-13	McCracken Whole Language Workshop	Yes	No
June 14	Evaluation	Yes	No
June 25-28	Materials Exploration: Whole Language	Yes	No
June 25-28	Materials Exploration: Mathematics	Yes	No
July 30-August 2	Planning for Effective Instruction: Make and Take Materials Development Workshop	Yes	No

Please rate the training you received on the following variables:

Class management	poor	adequate	excellent
Evaluation and assessment	poor	adequate	excellent
Instruction (whole group)	poor	adequate	excellent
Individualized approaches to instruction	poor	adequate	excellent

List any problems you had teaching a Non-Graded class. _____

_____

_____

Has adequate technical support been provided to help you cope with these problems? Yes No

Please explain. _____

_____

_____

Appendix 2

1990–91 MAT6 NCE Regressed with 1989–90 MAT6 NCE and Program Participation Status for a Randomly Selected Comparison Group and Program Students

Reading

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
1989–90 MAT6	.67	.025	26.195	.0000
Program Participation	-4.04	1.249	-3.239	.0013
Constant	12.52	1.635	7.654	.0000

Adjusted R-Square = .5832

Math

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
1989–90 MAT6	.56	.035	15.977	.0000
Program Participation	-12.84	1.620	-7.924	.0000
Constant	26.60	2.434	10.928	.0000

Adjusted R-Square = .3885

Language

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
1989–90 MAT6	.69	.035	19.480	.0000
Program Participation	-12.73	1.596	-7.982	.0000
Constant	15.32	2.383	6.430	.0000

Adjusted R-Square = .4555

Complete Battery

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
1989–90 MAT6	.72	.03	24.97	.0000
Program Participation	-9.14	1.34	-6.78	.0000
Constant	13.13	1.91	6.84	.0000

Adjusted R-Square = .5722

Program Students and Previous Second Grade Students at Program Schools MAT6 NCEs Regressed with the Previous Year's MAT6 NCEs

Reading

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
Previous MAT6	.61	.04	17.00	.0000
Program Participation	.08	1.54	.05	.9592
Constant	11.41	2.29	4.95	.0000

Adjusted R-Square = .5134

Math

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
Previous MAT6	.47	.04	11.27	.0000
Program Participation	-4.09	1.74	-2.34	.0198
Constant	23.64	2.84	8.32	.0000

Adjusted R-Square = .3191

Language

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
Previous MAT6	.54	.05	11.05	.0000
Program Participation	-5.75	1.96	-2.94	.0036
Constant	18.75	3.21	5.83	.0000

Adjusted R-Square = .3098

Complete Battery

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
Previous MAT6	.60	.04	15.44	.0000
Program Participation	-2.50	1.62	-1.55	.1233
Constant	13.74	2.54	5.41	.0000

Adjusted R-Square = .4655

Regression Results for Attendance: Program and Comparison Students

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
1989–90 Attendance Rate	.59	.031	18.69	.0000
Program Participation	-.16	.303	-.55	.5804
Constant	39.06	3.038	12.85	.0000

Adjusted R-Square = .3340

Regression Results for Attendance: Program and Previous Year's Second Grade Students

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic	Significance of t
Previous Year's Attendance	.56	.049	11.33	.0000
Program Participation	-.16	.332	-.50	.6147
Constant	41.45	4.851	8.54	.0000

Adjusted R-Square = .2905

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