

DOCUMENT RESUME

ED 226 083

UD 022 649

AUTHOR Tompkins, Leroy J.
TITLE Evaluation of the 1981 Basic Skills Summer School Program.
INSTITUTION Montgomery County Public Schools, Rockville, Md. Dept. of Educational Accountability.
PUB DATE Dec 81
NOTE 49p.; For related document, see UD 022 648.
PUB TYPE Reports - General (140)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Basic Skills; Elementary Education; Mathematics Skills; *Parent Attitudes; Program Attitudes; *Program Effectiveness; Program Evaluation; Program Implementation; Reading Skills; *Remedial Instruction; Standardized Tests; Student Behavior; Student Characteristics; Summer Programs; Teaching Methods; Vocabulary Skills; Writing Skills
IDENTIFIERS *Montgomery County Public Schools MD.

ABSTRACT

This report presents both formative and summative data regarding the implementation and effectiveness of the Basic Skills Program carried out in the Montgomery County, Maryland, public schools in 1981. The program provides intensive remedial instruction in the basic skills areas of reading, writing, and mathematics to elementary (through grade 8) students who scored very low on standardized achievement tests. The report begins by providing background information, briefly describing the evaluation design and methodology, and outlining pupil characteristics (grade, level, race, sex, and achievement test scores). The following section deals with program organization and implementation, detailing instructional strategies, teacher expectations, pupil behavior, course objectives, content, materials, and planning. The final section of the report discusses parent perceptions of pupils' basic skills needs and program benefits. Appended are pupil descriptive data by summer school center and a 1981 Basic Skills Program calendar and workshop description. (WAM)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

**MONTGOMERY COUNTY
PUBLIC SCHOOLS**

ROCKVILLE, MARYLAND

**Evaluation of the
1981 Basic Skills
Summer School Program**

December, 1981

EDWARD ANDREWS
Superintendent of Schools

Prepared by the Department of Educational Accountability

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

LeRoy J. Tompkins
Montgomery County
Public Schools

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

**U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)**

- This document has been reproduced as received from the person or organization originating it
- Minor changes have been made to improve reproduction quality
- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy

ED226083

UD 022 649

EVALUATION OF THE
1981 BASIC SKILLS SUMMER SCHOOL PROGRAM

Mr. Leroy J. Tompkins

Dr. Steven M. Frankel
Director, Department of
Educational Accountability

Dr. Joy A. Frechtling
Director, Division of
Instructional Evaluation
and Testing

MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

EVALUATION OF THE
1981 BASIC SKILLS SUMMER SCHOOL PROGRAM

December, 1981

Edward Andrews
Superintendent of Schools

PROJECT STAFF

Project Director:

Mr. Leroy J. Tompkins

Data Collection:

Mrs. Jean N. Gilliam
Ms. Jan Bowman
Ms. Wendy Hoben
Mrs. June Bogushefsky
Mrs. Sophie Berger

Secretarial and Clerical Staff:

Ms. Patricia Chambers
Mrs. Jo Ann Leigh
Mrs. Sue Isle

The author is especially grateful to Mrs. Jean N. Gilliam for her attention to detail in collecting and retaining information pertinent to this report.

EVALUATION OF THE 1981 BASIC SKILLS SUMMER SCHOOL PROGRAM

EXECUTIVE SUMMARY

BACKGROUND

In May, 1980, the Board of Education of the Montgomery County Public Schools adopted a resolution establishing a Basic Skills Summer School Program. The purpose of the program was to provide intensive remedial instruction in the basic skills areas of reading, writing, and mathematics to pupils who scored very low on national standardized tests. According to the resolution, the program would be offered in the elementary schools which were identified as being in the bottom 10 percent of ITBS achievement in third and/or fifth grades and in secondary schools whose scores were below the national norm in Grade 7 and/or 9.

Year one (summer, 1980) of the program provided services to 245 pupils (Grades K-8) in four schools. While maintaining the same general emphasis and purpose, the second year (1981) Basic Skills Summer Program was much more comprehensive in scope and development with greater emphasis on serving upper elementary and intermediate students. Preliminary indications suggest that significantly more preprogram planning, coordination, and preparation occurred than in 1980.

The 1981 evaluation of this program was designed to obtain both formative and summative data regarding program implementation and efficacy. The intent of this evaluation is to provide program developers and decision makers with information which would be useful in planning and revising the existing program. Specifically, the questions which this evaluation was designed to answer are the following:

1. What were the characteristics of the pupils served by the program in terms of race, sex, grade level, and academic achievement and what criteria were used in selecting them?
2. How was the program organized and staffed to provide services to pupils who elected to participate?
3. To what extent was the in-service training effective? Were the strategies, objectives, and content emphasized during in-service training implemented by teachers?
4. What were the perceptions of parents regarding the basic skill needs of their children and the effectiveness of the program in meeting those needs? Also, what were the primary reasons cited by parents for choosing not to take advantage of the program?
5. What were the short-term and long-term effects of the program on pupil achievement in reading and mathematics?

This report, the first of three, presents data which provide answers to Question 1-4 of this study. Answers to Question 5 will be presented in two subsequent reports scheduled for winter (1981) and spring (1982).

OVERALL FINDINGS

The data analyzed thus far suggest that, overall, the 1981 Basic Skills Program was very successful in retaining the positive and exemplary features of the 1980 program and in correcting many of the deficiencies of the 1980 pilot program in terms of program planning, coordination, and implementation. However, there are several areas identified by this investigation which require additional attention in planning for the 1982 Basic Skills Summer Program.

1. The program was largely successful in identifying a substantial number of pupils meeting the standardized test score criterion of having at least one achievement test score at or below the second stanine and in providing the program to a population in need of those services. However, approximately 24 percent of the pupils in the program for whom data were available did not satisfy the standardized test score criterion. Further, inconsistencies in implementation of the student selection procedures resulted in pupils in Grade 8 being underrepresented in the program. If one of the objectives of the program was to help pupils prepare for the Maryland Functional Reading Test, this discrepancy represents a very serious omission.
 - o Overall, 75 percent of the students participating had been in Grades 6, 7, and 8 during the 1980-81 school year. This represents an increase of 15 percent over the 1980 summer program. However, the proportion of eighth grade pupils in the program decreased from 24 percent (1980) to 5 percent (1981). This is largely because some of the middle/junior high schools did not consider eighth graders to be eligible for participation.
 - o Overall, 76 percent of the pupils in the program for whom data were available had a stanine of 2 or less on at least one of the subtests on the California Achievement Test or the Iowa Tests of Basic Skills; 74 percent scored at or below the second stanine on one of the reading or mathematics subtests; and 25 percent scored at or below the second stanine on both a reading and a mathematics subtest.¹

¹These percentages are based on the number of students for whom these data were available (379 pupils) on the five subtests reviewed.

²The number of schools does not include schools in the Title I Program or schools which were unable to identify pupils meeting the program's criteria for selection.

- o The number of pupils participating in the program increased by 115 percent from 245 in 1980 to 526 in 1981; the number of schools sending students increased from 4 to 32²; the number of staff members (teachers and coordinators) increased from 16 to 49.
 - o The racial composition of program participants shifted from 67 percent minority (1980) to 50 percent minority (1981).
2. Classrooms in the Basic Skills Program provided an instructional atmosphere consistent with the program as designed.
- o Overall staff allocations to the program produced a pupil:teacher ratio of 13 to 1 and a pupil:total staff ratio of less than 8 to 1.
 - o More than 50 percent of the teachers in the program reported that they used direct instruction (defined as teacher directed, academically focused instruction) more than 60 percent of the time.
 - o Instruction was generally provided to pupils in small or large groups with individual instruction being found about 30 percent of the time.
 - o The skill areas taught closely matched the skill areas the program was designed to teach. Reading teachers emphasized comprehension and functional reading skills. Mathematics teachers emphasized computational skills and solving word problems.
3. Teachers reported frequent use of all of the teaching strategies presented in in-service training. However, the results from classroom observations suggested that few of the teaching and planning strategies were used with any great frequency. Further, centers varied significantly from each other in the observed use of those strategies.
- o Classroom observations indicated that, with the exception of the thematic approach, the teaching strategies presented in in-service training were observed in use in less than 40 percent of the observations performed. The thematic approach was observed in use in 82 percent of the observations.
 - o Teachers (88 percent) reported frequent use of high expectations behaviors to promote positive pupil self-concepts. Observer ratings generally confirmed this report. However, analysis of results from classroom observations showed significant variations among centers ($p < .01$) in terms of the extent to which teachers used these behaviors.

- o The majority of pupils observed in class exhibited positive on-task behavior. Analyses revealed a significant positive correlation between the extent to which teachers exhibited positive high expectation behaviors and the percentage of pupils in the class who exhibited positive on-task behaviors.
 - o Planning strategies suggested by program developers were utilized by teachers to a relatively high degree.
4. The perceptions of parents concerning the basic skills needs of their children closely match the subject areas emphasized by the program. Also, parents are optimistic that the program will be beneficial to their children.
- o The majority of the parents of participants and nonparticipants agreed with the school system's perception that their children needed special help in reading (80 percent) and mathematics (67 percent).
 - o Seventy-nine percent of the parents felt the program was beneficial in reading and 69 percent felt that it was beneficial in mathematics. These figures represent a 7-18 percent increase over the 1980 responses.
 - o The primary reason given for nonparticipation by parents was that their children did not need the program (24 percent) and the fact that the children were on vacation (21 percent).

Table of Contents

	Page
Background.....	1
Evaluation Design and Methodology.....	2
Pupil Characteristics.....	4
Grade Level, Race, Sex.....	5
Achievement on National Standardized Tests.....	6
Program Organization and Implementation.....	8
Program Organization.....	8
Program Implementation.....	9
Instructional Strategies.....	10
Teacher Expectations Behavior.....	13
Pupil Behavior.....	15
Course Objectives.....	16
Content.....	17
Materials.....	18
Planning.....	19
Parent Perceptions of Pupil Basic Skill Needs and Program Benefits.....	19
Parent Perceptions of Basic Skill Needs.....	19
Other Means of Intervention to Enhance	
Pupil Basic Skills Achievement.....	21
Parent Perceptions About Program Impact.....	22
Nonparticipation.....	23
Participation in Next Year's Program.....	23

Appendices

- Appendix A: Pupil Descriptive Data by Summer School Center
- Appendix B: 1981 Basic Skills Program Calendar and Workshop Content

EVALUATION OF THE 1981 BASIC SKILLS SUMMER SCHOOL PROGRAM

BACKGROUND

In May, 1980, the Board of Education of Montgomery County Public Schools adopted a resolution establishing a Basic Skills Summer School Program. The establishment of this program resulted from the Board's concern about the low achievement by some of its pupils on national standardized tests. Consequently, the purpose of the program was to provide intensive instruction in reading, writing, and mathematics to those pupils during the summer.

Year 1 of the implementation of this program (summer 1980) provided these services to 245 pupils in four schools. An evaluation of that program was conducted to provide school system decision makers with information regarding program organization, emphasis, implementation, and effectiveness. Among the findings from that investigation are the following:

1. There was a lack of coordination and consistency across schools, with respect to eligibility and selection criteria, diagnostic instrumentation, instructional procedures, and assessments of student growth. Because there existed only minimal external guidance, each school developed its own guidelines and procedures in these areas with varying degrees of success.
2. The programs suffered from a lack of sufficient time for preprogram planning and staff/parent/student notification.
3. Staff members identified insufficient preservice training and a lack of systemwide coordination as two of the major program weaknesses.
4. The schools succeeded in identifying and recruiting students with substantial basic skills needs.
5. Extra resources were available to provide a situation conducive to learning.
6. The program's emphasis on reading, writing, and mathematics matched those areas perceived by parents as being those in which pupils needed the most help.
7. Program participants made significant gains ($p < .05$) on 13 (62 percent) of the 21 pre/post tests administered by various schools in the program to measure short-term program efficacy. However, due to a lack of controls on many variables relevant to internal/external validity, the findings were questionable.

OVERVIEW 1981 BASIC SKILLS SUMMER SCHOOL PROGRAM

While maintaining the same general emphasis and purpose, the 1981 Basic Skills Summer School Program was much more comprehensive in scope and development than the 1980 program. Preliminary indications also suggest that considerably more preprogram planning, coordination, and preparation occurred than in 1980. Among the major changes were the following:

- o The number of schools selected to participate increased from 4 to 32.
- o The number of pupils participating increased by more than 200 percent from 245 to 526.
- o The number of staff increased from 16 to 49.¹
- o Summer school staff (teachers, coordinators, support personnel) were provided with training and preprogram planning time to coordinate program implementation, emphases, and organization.

1981 EVALUATION DESIGN AND METHODOLOGY

The 1981 evaluation of the Basic Skills Summer Program obtained data on overall program implementation and effectiveness. This report provides information on implementation for use by program developers and decision makers in planning and revising the program. Specifically, this report, the first of three on the program, presents data which address the following questions:

1. What were the characteristics of the pupils in the program in terms of race, sex, grade level, and academic achievement? Also, how consistently were the program eligibility criteria applied?
2. How was the program organized and staffed to provide services to pupils who elected to participate?
3. To what extent was the preservice training effective? Were the instructional and behavioral strategies, objectives, and content emphasized during training implemented by teachers?
4. What were the perceptions of parents regarding the basic skills needs of their children and the effectiveness of the program in meeting those needs? Also, what were the major reasons cited by parents for choosing not to participate in the program?

¹Staff includes teachers and coordinators (1981 Summer Program: 42 teachers, 7 coordinators).

Subsequent reports on the program will provide information on the short-term and long-term effects of the program on pupil achievement in reading and mathematics. These reports are scheduled for winter (1981) and spring (1982), respectively.

Data for this report were collected from several sources: classroom observations, teacher survey, parent-telephone interviews, and pupil record reviews.

Classroom observations were conducted each day, with each center being visited on at least two different occasions during the course of the summer program². The observations were performed by experienced professional staff, trained in supervision and instruction. The observers also attended all in-service training and planning activities.

The protocol used in the observations was designed to obtain data on general classroom organization, pupil behavior and activities, and extent of teacher use of the behavioral and instructional activities suggested in in-service training. One section of the observation protocol assessed whether or not any of the high expectations behaviors shown in the Appendix were observed. A scale was devised which, for each of the two classroom observation intervals, would yield a score of 0 or 1. Using this scale, a teacher would have a score of 0, 1, or 2 on each behavior for each complete classroom observation performed³. With 11 specific behaviors included in the protocol, each teacher would have a total "high expectations behavior score" ranging from 0, if none of the behaviors was observed during an observation, to 22, if each behavior was observed at least once during each time interval of the observation. Work samples and other anecdotal information were also collected/recorded during each observation.

Teachers were surveyed using a questionnaire which gathered information on a) descriptions of their classroom organization for instruction, b) their perceptions of the appropriateness of the objectives/strategies presented in in-service training to the needs of their pupils, c) the frequency with which they used information presented in in-service training, and d) their suggestions concerning preparation of teachers for future basic skills programs.

²Observations taken the last day of the program were not included in the analysis because the activities were not generally related to instruction in the center observed.

³Zero indicates the behavior was not observed. One indicates the behavior was observed.

Telephone interviews were conducted with a 14 percent random sample of parents of children invited to attend the program, stratified by participation/nonparticipation. The interview was designed to obtain parents' perceptions about a) the basic skills needs of their children, b) the effectiveness of the program in meeting those needs, c) other means of intervention by MCPS or themselves to improve their children's basic skills, d) whether they would attend a similar program next year, and e) why those who chose not to participate made that decision.

FINDINGS

PUPIL CHARACTERISTICS

The primary purpose of the Basic Skills Summer School Program was to provide additional instruction in reading and mathematics to pupils who scored very low on national standardized tests, with the intent of improving their skills in those areas.

Approximately 1200 pupils across 32 schools were identified as eligible for the summer school program and therefore invited to attend. Five hundred twenty-six pupils (approximately 44 percent) accepted those invitations and attended one of the seven summer school centers located throughout the county. This section of the report presents findings related to the criteria used to invite pupils to participate in the 1981 Basic Skills Program and also which describe the pupils who elected to participate.⁴ These findings suggest that the criteria for selection were not implemented uniformly among the schools participating in the program. As a result, many students who might otherwise have been eligible to participate in the program were not provided the opportunity to participate. Descriptions of those pupils will be presented in the following areas:

- o Grade Level (1980-81), Race, Sex
- o Achievement on the California Achievement Test (Grades 5 and 8) or the Iowa Tests of Basic Skills (Grades 4, 6, 7)⁵

A complete breakdown of these characteristics is included in Appendix A.

⁴For this section of the report, students who participated in the program are defined as any student who attended at least one day.

⁵The use of the two tests is due to changes in the national standardized test used in the county last year.

Grade Level (1980-81), Race, Sex

Original plans called for including only pupils in Grades 4, 6, and 8 in the program. However, some of the elementary schools invited pupils in Grades K-6; some others invited pupils in Grades 3-5 only. Similarly, in some middle and junior high schools, pupils in Grades 6 and 7 were invited to participate, while in others only pupils in Grades 7 and 8 were considered as eligible. As a result, the grade levels of pupils who participated in the basic skills summer school program ranged from Kindergarten through Grade 8. A distribution showing the number of pupils in each grade is shown in Table 1.

TABLE 1
Program Participants By Grade (Percentage)

	Grade										
	K	1	2	3	4	5	6	7	8	Special	Total
Number	8	9	18	24	41	23	176	196	28	3	526
Percentage	(2)	(2)	(3)	(5)	(8)	(4)	(33)	(37)	(5)	(1)	(100)

As shown in the table, the majority of pupils (70 percent) participating in the program were in Grades 6 and 7. Note that only 5 percent of the participants in the program were 8th graders. It should also be noted that 8th graders accounted for less than 8 percent of all pupils invited to attend the program. This disproportionately low percentage of 8th grade pupils, both those who were invited and those who consequently participated in the program, is a direct result of the inconsistencies in implementation of the eligibility criteria. If one of the objectives of the program was to help pupils prepare for the Maryland Functional Reading Test (administered to 9th grade pupils), this discrepancy represents a very serious omission.

In comparison to the 1980 basic skills program, the percentage of 6th graders in the program increased dramatically from 5 to 33 percent. Conversely, the percentage of 8th graders declined from 24 to 5 percent.

Large changes were also detected in the racial composition of participants in the 1981 basic skills program when compared to the 1980 program although it is not at all clear why such a change occurred. A breakdown of the 1981 summer school participants by race is presented in Table 2.

TABLE 2

1981 Summer School Participants By Race (Percentage)

	Black	Hispanic	White	Other*
N	190	35	270	35
(Percentage)	(36)	(7)	(51)	(6)

*Other races, nationalities, and pupils for whom data were not available. See Appendix A for a complete breakdown of race by center.

These data show that program participants consisted of 49 percent minority and 51 percent white. These figures represent a shift in the racial composition of this population from that of last year's program (1980) in which minorities comprised 67 percent and whites 33 percent. This rate of decline was evenly spread across all minority groups including Hispanics and Asians.

A breakdown of participants by sex showed that 298 (57 percent) were male and 228 (43 percent) were female. These results are very similar to those of the 1980 program with only a 4 percent decrease in the percentage of males.

Pupil Achievement on National Standardized Tests

The major criteria for eligibility to participate in the program was a stanine of 1 or 2 on either of the math or reading subtests on the Iowa Tests of Basic Skills (ITBS) or the California Achievement Test (CAT). Pupil test records were reviewed to determine the extent to which the program was successful in recruiting pupils meeting these criteria. Several inconsistencies were noted. At least one of the administrative areas included pupils in the third stanine, as well as pupils scoring in stanines 1 and 2. According to the analysis of pupil test scores, 76 percent of the pupils served by the program for whom test scores were available had a stanine score of two or below on one or more of the subtests contained in the California Achievement Test or the Iowa Tests of Basic Skills. The following table presents the results of the analysis for reading and mathematics subtests.

TABLE 3

The Percentage of 1981 Program Participants
With Stanines of 2 or less on CAT^a or ITBS^b Subtests

Grade	One or More Subtest Scores of Stanine 1 or 2	Reading or Mathematics Subtests Subtest Score of Stanine 1 or 2	Both a Reading and Mathematics Subtest Score of Stanine 1 or 2
4	78	72	19
5	50	38	13
6	74	74	27
7	80	77	26
8	83	83	26
Overall	76	74	25

Test results for pupils in Grades 5 and 8 are from the CAT.

Test results for pupils in Grades 4, 6, and 7 are from the ITBS.

^aCAT - California Achievement Test Subtests analyzed include: Reading Vocabulary, Reading Comprehension, Mathematics Computation, Mathematics Concepts and Application, and Reference Skills.

^bITBS - Iowa Tests of Basic Skills Subtests analyzed include: Vocabulary, Reading Comprehension, Mathematics Concepts, Problem Solving, and Reference Materials.

These data show that, with the exception of pupils in Grade 5, the vast majority of pupils in the program had stanines of 1 or 2 on at least 1 of the subtests in reading or mathematics. It should be noted, however, that 24 percent of these pupils did not have scores at or below the second stanine on any of the 5 subtests reviewed.

PROGRAM ORGANIZATION AND IMPLEMENTATION

Program Organization

Staffing

The 1981 Basic Skills Summer School Program was provided to 526 pupils in 7 centers (2 elementary/5 secondary). Each center was staffed with 2 to 11 teachers, 1 to 4 aides, and a program coordinator. Table 4 shows a complete breakdown of the distribution of pupils and staff among the seven basic skills centers.

TABLE 4

Basic Skills Summer School Staff Allocations and Pupil Distributions by Center

Centers	Number of Pupils	Grade Levels	Number of Teachers	Number of Aides	Pupil/Teacher Ratio
Strathmore	35	2 - 5	2	1	18
Weller Road	89	K - 5	7	4	13
E. Brooke Lee	126	6 - 8	11	4	12
Newport	58	6 - 8	4	2	15
Ridgeview	32	6 - 8	3	1	11
Takoma Park	115	6 - 8	9	4	13
Julius West	71	6 - 8	6	2	12
Overall	526	K - 8	42	18	13

These data show that staff allocations to each of the centers produced pupil:teacher ratios ranging from 12:1 to 18:1. Overall the pupil/teacher ratio was 13 which is substantially less than for the regular school program. The overall pupil:staff ratio of 8 for the program is less than half the pupil:staff ratio of 17 for the regular school program.⁶

Age/grade Grouping

Classroom observations revealed that instruction was generally provided in cross-graded classes containing, on the average, 14 pupils. The extent of the use of cross-grade grouping was relatively high in that over 70 percent of the classes observed contained two or more grades. In five of the seven centers, it was the only mode of class grouping used. In the two remaining centers, both cross-graded grouping and single grade grouping were used.

Classroom observations also show that the most prevalent mode of grouping used in providing instruction was large group (88 percent) followed by small group (39 percent) and individual (29 percent) respectively.⁷ It should be noted that the observed use of each of these grouping strategies varied significantly ($p < .05$) among the seven summer school centers. For purposes of this investigation, large group instruction was defined as 6 or more pupils, small group as 2-5 pupils, and individual instruction as 1 to 1.

Program Implementation

Unlike the 1980 Basic Skills Program, teachers in the 1981 Basic Skills Summer School Program were provided with in-service training workshops prior to the start of the program. The purpose of these workshops was to acquaint teachers with the purpose and focus of the summer school program and to provide them with program goals, specific teaching strategies, instructional objectives, and teacher behaviors to meet the educational and self-concept needs of low-achieving students. (See Appendix B for the Basic Skills Summer School Program calendar, workshop content, and goals.) Thirty-seven (88 percent) of the teachers selected to teach in the program attended the workshop.

The instructional focus of the Basic Skills Summer School Program was on the use of the problem-solving process and the experience-based thematic approach in teaching reading and mathematics. The specific teaching strategies suggested for use included the following:⁸

- o Problem-Solving Process
- o Thematic Approaches in Problem Solving and Functional Reading
- o Webbing
- o Multimode Teaching
- o Group Language Experience

⁶Staff includes teachers, aides, and center coordinators.

⁷It should be noted that the sum of the percentages exceed 100 percent. This is due to the fact that in 71 percent of the observations performed teachers utilized more than one mode for grouping during the class period.

⁸See Appendix B for a description of each of these strategies.

In addition to program goals and teaching strategies, teachers were made aware of the implications that their own verbal and nonverbal high expectations behaviors have on the self-concept and achievement of low-achieving students. Teachers were provided with a list of behaviors which contained examples of teacher behaviors that convey to students feelings of either high or low expectations (see Appendix B, p. B-10).

Instructional Strategies

Teacher responses in the survey indicate that the majority of them spent most of their time providing "direct instruction" to pupils.⁹ The distribution of those responses are shown in Table 5 below.

TABLE 5
Percentage of Time Spent Providing Direct Instruction

	Percentage of Time				
	0-20	21-40	51-60	61-80	81-100
Percentage of Teachers	10	21	17	26	26

These data show that 69 percent of the teachers surveyed spent over 40 percent of their time providing "direct instruction" to pupils.¹⁰ However, these responses varied significantly among the seven summer school centers independent of school level or subject taught. This suggests that while teachers generally spent a major portion of their time engaged in direct instruction, teachers in some centers spent a greater portion of their time engaged in these activities than teachers in other centers.

When teachers were asked to what extent they felt the teaching strategies suggested for use in in-service training were effective, over 97 percent of them responded they were "somewhat effective" or "very effective." While not varying significantly, 89 percent of the elementary school teachers perceived the strategies as "very effective" compared to only 48 percent of the secondary school teachers.

To determine the extent to which the suggested teaching strategies were used, teachers were asked to indicate how frequently they used each of them. Their responses are shown in Table 6.

⁹Direct instruction is defined to mean academically focused, teacher-directed instruction toward specific goals.

¹⁰We do not know how this figure might compare with teaching practices in other settings or at other times as appropriate comparison data are not available. The figure obtained in this study can be used as a baseline against which to assess practices in the future.

TABLE 6
Percentage of Teachers Reporting Use of Each
of the Suggested Teaching Strategies

Teaching Strategies	Frequency of Use		
	Used Frequently	Used Sometimes	Did Not Use
Problem Solving as an Organizing Vehicle	61	29	10
Problem Solving as a Teaching Strategy	71	22	7
Multimode as a Teaching Strategy	56	32	12
Group Language Experience	37	32	32
Thematic Units	93	7	0
Webbing To Plan Instruction	54	32	15
Webbing To Teach Pupils	44	37	20

More than 68 percent of the teachers surveyed reported that the strategies provided during in-service training were used at least sometimes.

For five of the seven strategies surveyed, the majority of teachers reported that they used them frequently. It is especially notable that all teachers reported using the thematic approach in teaching at least sometimes, with 93 percent indicating that it was used frequently.

According to the data the least used strategy was the "Group Language Experience" approach to teaching. However, this is an approach designed specifically for the teaching of reading in the lower elementary grades. When analyzed by school level, 89 percent of the teachers in the elementary centers reported that they used it at least sometimes.

Classroom observations of instructional strategies tended to confirm only partially the findings obtained from the teacher survey. The results of those observations are shown below.

TABLE 7
Observed Use of Instructional Strategies Suggested in
In-Service Training Workshops

Strategies	Observed in Both Time Intervals	Observed in Only One Time Interval	Not Observed
Problem Solving	12	23	65
Multimode	18	18	63
Webbing	6	18	76
Group Language Experience	13	24	62
Thematic Approach	59	23	18

Figures represent percentage of total observations (82).

As previously indicated in teacher responses, the "Thematic Approach" in teaching was also the strategy most frequently observed in use by teachers in the summer school program. However, with the above exception, these data suggest that overall the extent to which each of the other strategies was observed in use was far lower than the frequency of use reported by the teacher survey.

Several hypotheses may account for the apparent incongruence between the reported use and the observed use of each of the teaching strategies. They are as follows:

- o Many of the teachers did not, in fact, make extensive use of the strategies presented in preservice training.
- o Limited observations may have led to underestimates of the use of various strategies.
- o Teacher reports, which were made retrospectively, may reflect an intent or a preference for each of the strategies rather than actual use.

Finally, analysis of the observation data revealed that the use of many of these strategies varied significantly among centers, subjects, and/or school levels (see Table 8).

TABLE 8

Results From Chi-Square Analysis of the Observed Use of Specific Teaching Strategies by Center, Subject, and School Level

	Category of Analysis		
	Center	Subject	School Level
Problem Solving	22.9*	6.6	1.3
Multimode	35.0***	2.4	5.4
Webbing	14.7	9.5*	7.6*
Group Lang. Exp.	12.9	15.0***	0.3
Thematic Approach	14.9	2.0	5.1

Figures shown are Chi-Square Values.

Levels of Significance.

* $p < .05$

** $p < .01$

*** $p < .001$

Specifically, these results suggest the following conclusions:

- o The extent to which teachers in each of the summer school centers were observed using problem solving and multimode as teaching strategies varied significantly ($p < .05$ and $< .001$, respectively) between centers.
- o Teachers in reading classes were more frequently observed using Webbing and the Group Language Experience Approach than teachers in mathematic classes. The difference obtained between subjects in the case of the Group Language Experience Approach was expected because it is an approach germane to reading/language.
- o Teachers in elementary centers were observed using Webbing as a teaching strategy more frequently than teachers in secondary centers.

Teacher Expectations Behavior

According to teacher responses in the Basic Skills Summer School Workshop Evaluation conducted by program developers and also in the teacher survey, one of the most valuable and most frequently used topics presented in the in-service training workshop was the list of behaviors which conveyed high or low teacher expectations (see Appendix B). This section of the report presents data which identify the extent to which those behaviors were exhibited by teachers and their relationship to observed pupil behaviors.¹¹

When asked how frequently they used techniques for promoting positive, high expectations of pupils, 88 percent of the teachers answered "frequently"; the remaining 12 percent answered "sometimes." Results from classroom observations tend to support these responses. When total high expectations scores were computed for each classroom observation and analyzed, the scores ranged from 1 (minimum of 0) to 22 (maximum). The mean score for the distribution was 14.2 (S.D. 4.7) and the median score was 15.1. This suggests that, to a relatively high degree, the majority of teachers in the program exhibited the high expectations behaviors presented to them in the in-service training. However, it should also be noted that almost one quarter of the teachers obtained scores of 11 or less. This indicates that these teachers did not display these behaviors extensively during the observations.¹²

¹¹Subsequent to the completion of posttesting, this evaluation will examine the relationship between teacher/pupil behaviors and pupil academic achievement.

¹²In interpreting these scores, the reader is cautioned that due to the uniqueness of this scale to this evaluation there is no external benchmark against which to compare these scores. However, these scores may serve as a benchmark for future studies of this program.

Total scores were analyzed by centers, subject, school level, and over time. The following table displays the mean "teacher high expectations behaviors score" computed for each of the summer school centers.

TABLE 9

Mean Teacher High Expectations Scores
By Center

	A	B	C	D	Center E	F	G	Overall
Mean Score	17.3	13.7	15.0	15.4	15.3	7.4	14.0	14.2
S.D.	(2.8)	(4.9)	(3.4)	(5.8)	(3.9)	(5.2)	(3.3)	(4.7)

Total scores were found to vary significantly between centers beyond the .01 level of significance when analyzed using Analysis of Variance. This is an indication that centers differed significantly in terms of the extent to which the teachers in those centers exhibited high expectations behaviors. No significant variation was detected among total scores when analyzed by subject, school level, or time intervals.

Pupil Behavior

Concurrent with the observations of teacher behaviors, behaviors of pupils in those classes were also observed and recorded. The design of the observation protocol was such that separate scales representing positive and negative behavior could be computed for each observation. This scale represents the proportion of pupils in a class who were observed exhibiting behaviors which could clearly be categorized as positive or negative. The distribution of total positive and negative behavior scores obtained are displayed in Table 10.

TABLE 10

Distribution of Mean Total, Positive, and Negative Behavior Scores
By Center for Pupils

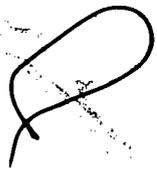
	Center							Overall
	A	B	C	D	E	F	G	
Positive	3.5	3.0	3.0	2.9	3.0	2.1	2.6	2.9
Negative	1.0	1.1	1.3	1.2	1.1	1.6	1.1	1.2

Scale

- 1
- 2
- 3
- 4

Interpretation

- 0-25 percent of the class
- 26-50 percent of the class
- 51-75 percent of the class
- 76-100 percent of the class



The data displayed in the table above suggests that, overall and within each center, the proportion of pupils exhibiting positive behaviors is more than double that of pupils exhibiting negative behaviors. This suggests that, from an overall perspective, the classroom atmosphere was one in which the majority of pupils were actively involved in productive positive activities.¹³

When these scores were analyzed by center, school level, subject, and time significant variation was found to exist between centers and between school levels. Variations between centers were significant beyond the .001 level of significance and between school levels beyond the .05 level of significance using Analysis of Variance.

Further analysis of the data reveals a high positive correlation (significant $p < .001$) between teacher high expectation scores and pupil positive behavior scores). These analyses also revealed a high negative correlation (significant $p < .001$) between teacher high expectation scores and pupil negative behavior scores. These findings suggest that when teachers exhibited high expectations behaviors pupils behaved better in class.

Course Objectives

Teachers in the Basic Skills Summer School Program were provided with a very specific set of objectives in reading and mathematics (see Appendix B). They were also provided with lists of various materials which could be used to enhance the teaching of those objectives. This section of the report contains teacher survey responses and classroom observation results pertinent a) to the appropriateness of the objectives, b) the extent to which both the objectives (content) and materials were emphasized or otherwise used, and c) the adequacy of materials.

Teacher responses to the question concerning the appropriateness of the mathematics and/or reading objectives for the needs of pupils in their classes suggest a good match between those objectives and the teacher's perceptions of the needs of their pupils. The results of those responses are shown below in Table 11.

TABLE 11

Percentage of Teachers Who Perceived the Mathematics and Reading Objectives as Appropriate to Pupil Learning Needs by Subject Area

	Mathematics	Reading
Very Appropriate	66	70
Somewhat Appropriate	34	30
Not Appropriate At All	0	0

¹³As stated earlier with regard to high expectations behavior, this interpretation is subjective based on the author's experience and will be used as a benchmark against which to evaluate data collected in the future.

No significant relationships were observed with regard to these items between centers, school levels, or subjects.

Content

The results from classroom observations of content emphasized by teachers were analyzed by the major subject areas presented in the program.¹⁴ Tables 12 a. and 12 b. present data from the observations of reading and mathematics instruction.

TABLE 12.a

Content Emphasized in Basic Skills Reading/Language Arts Classes

Content Areas	Percentage of Observations	
	Observed	Not Observed
o Functional Reading ^a	74	26
Following Directions	51	49
Locating References	23	77
Gaining Information	49	51
Understanding Forms	10	90
o Comprehension Skills ^b	85	15
Vocabulary	74	26
Main Idea	49	51
Sequence of Events	33	67
Prediction	38	62
o Context Clues	59	41
o Written Language	28	72

^aThe figures shown for Functional Reading reflect the percentage of times at least one of the four specific areas immediately following it was observed being taught.

^bThe figures shown for Comprehension Skills reflect the percentage of times at least one of the four specific areas immediately following it was observed being taught.

¹⁴Analysis of classroom observations show that of the 82 observations made, 39 (48 percent) were of reading classes; 32 (39 percent) were of mathematics classes; and 12 (13 percent) were of reading and mathematics classes combined.

These data show that functional reading and comprehension skills were highly emphasized in the Basic Skills Summer School Program reading/language arts classes, followed by the use of context clues and written language. In terms of the specific areas within Functional Reading, considerable emphasis was placed on following directions and gaining information with less attention to locating references and understanding forms. Instruction in comprehension skills emphasized vocabulary more so than either main ideas, sequence of events, or predictions.

TABLE 12.b

Content Emphasized in Basic Skills Mathematics Classes

Content Areas	Percentage of Observations	
	Observed	Not Observed
Addition	78	22
Subtraction	69	31
Multiplication	59	41
Division	50	50
Money	28	72
Time/Temperature	3	97
Area and Volume	12	88
Statistical Graphs	22	78
Fractions	22	78
Problem Solving (word problems)	59	41
Length/Weight/Mass	6	94

As shown in the table, teachers in mathematics classes emphasized computational skills in addition, subtraction, multiplication, and division. It is also noted that considerable emphasis was placed on solving word problems. Very little emphasis appears to have been placed on measurement in terms of time/temperature or length/weight/mass.

Materials

Analysis of teacher responses to adequacy of instructional materials shows that 60 percent of the teachers perceived them as "adequate," 29 percent as "somewhat adequate," and 12 percent as "not adequate at all." When asked to indicate the frequency with which they used the materials suggested in the workshop, 34 percent responded "frequently," 44 percent responded "sometimes," and 22 percent responded "never."

Data resulting from classroom observations reveal that teachers relied heavily on the use of dittos, charts, games, manipulations, and visual materials with very little use of basic textbooks, basal books, or workbooks (14% combined). Results also show that over 66 percent of all materials observed in use were either teacher-made or pupil-made. This finding suggests that, to a considerable degree, commercial materials either were not available/obtainable or were not satisfactory.

Planning

One of the program goals presented to teachers in in-service training was that teachers plan for student needs in pairs or in teams to integrate mathematics and reading/language skills within thematic units. To assess the extent to which this goal was attained, teachers were observed during their planning time for instruction. In 94 percent of the sessions observed, teachers planned in teams or in pairs; in only 6 percent (1 session) of the sessions observed, individual teachers planned alone. Teachers were observed in 80 percent of the sessions to be using weekly thematic units to plan math and reading instruction. These findings suggest that to a relatively high degree the planning strategies proposed by program developers were used.

PARENT PERCEPTIONS OF PUPIL BASIC SKILL NEEDS AND PROGRAM BENEFITS

Parents of children who participated in the 1981 Basic Skills Summer School Program and parents of children who were invited to attend the program but chose not to do so were surveyed to obtain their perceptions in the following areas:

- o The basic skills subjects in which they perceived their children as needing additional help
- o Other means of intervention which they or MCPS had used previously to increase their children's basic skills achievement
- o The impact of the summer school program on their children's reading and mathematics achievement, as well as the children's feelings about the programs (participants only)
- o Their interest in having their children participate in a similar program in the future
- o The reasons for not participating in the Basic Skills Summer School Program (nonparticipants only)

Parent Perceptions of Basic Skills Needs

Parents were asked if they felt their children as needing help in reading or mathematics. The responses to that question are shown in Table 13.

TABLE 13

The Percentage of Parents Perceiving Their Children as
Needing Special Help in Reading or Mathematics

	Parents of Participants	Parents of Nonparticipants	Overall
Reading	89	70	80
Mathematics	76	58	67

As shown in the table, 89 percent of the parents of participants felt their children needed help in reading, compared to 70 percent of the parents of nonparticipants. While the percentage of parents responding to the same question in mathematics was not as high as for reading, the trend remained the same, with 76 percent of the parents of participants responding that their children needed special help, compared to 58 percent of the parents of nonparticipants. Analysis (chi-square) revealed that the difference between parents of participants and parents of nonparticipants were statistically significant ($p < .01$ in reading, $p < .05$ in mathematics).

Other Means of Intervention Used To Enhance Pupil Basic Skills Achievement

Parents were also surveyed regarding additional assistance that their children might have received in basic skills. Included were questions regarding additional or other regularly scheduled activities this summer related to school work, previous tutorial assistance, and previous help from the school system.

Parents of participants were asked if their children participated in any regularly scheduled activities related to school work other than the basic skills program. Only 2 percent of the parents surveyed indicated that their children did participate in additional activities related to school work. This additional work was identified as assistance from a relative, field trips, or tutorial help.

Parents of nonparticipants were asked whether their children received any help in reading or mathematics during the summer. Less than 4 percent of them responded affirmatively. The most commonly listed response was help in reading from parents.

When asked whether or not their children had received prior help from the school system in reading and in mathematics, the majority answered "yes" to the reading question but "no" to the question of mathematics. In each case the differences between parents of participants and nonparticipants were statistically significant ($p < .05$ in mathematics and $p < .01$ in reading). Parents of nonparticipants more frequently acknowledged that their children had received special help from the school system in both reading and mathematics than parents of participants. The percentage of parents responding "yes" to these questions is shown in Table 14.

TABLE 14

Percentage of Parents Saying That Their Children Had Received Special Help in Reading and Mathematics

	Participants	Nonparticipants	Overall
Reading	57	81	68
Mathematics	27	51	37

Reading Chi Square $p < .01$

Mathematics Chi Square $p < .05$

In reading, parents in both groups named the reading resource teacher or a special program as the primary form of special help for their children. The resource teacher, special classes, and the classroom teacher were the primary sources for special help in mathematics identified by both groups of parents.

When these data were analyzed separately for parents who felt that their children needed special help, some additional differences emerged between participants and nonparticipants. A larger proportion of the parents of nonparticipants reported that special help had previously been received. Specifically, in reading 95 percent of the parents of nonparticipants acknowledged that the MCPS had previously provided special help in reading compared to only 63 percent of the parents of participants. In mathematics, 71 percent of the parents of nonparticipants said they had received previous help compared to only 33 percent of the parents of participants. The form in which the special help was provided was the same as for the overall sample.

In terms of previous participation in summer school programs, 39 percent of the parents of participants indicated that their children had attended summer school before this year. Approximately 53 percent of those said their children had previously attended the regular summer school program, and 30 percent said their children attended last year's Basic Skills Summer School Program. Forty-five percent of the parents of nonparticipants stated that their children had previously attended summer school; 64 percent, regular summer school; and 22 percent, last year's Basic Skills Summer School Program. In the case of both the program participants and the program nonparticipants who had previously attended summer school, over 80 percent had done so within the past 3 years.

In response to whether or not their children had ever been tutored outside of school, only 13 percent of all parents responded affirmatively. While not differing significantly, the majority of those who had received outside tutorial assistance were nonparticipants in the program.

Parent Perceptions About Program Impact

Parents of participants in the summer school program were asked whether or not the program helped their children in reading and mathematics. Seventy-nine percent responded that the program helped in reading, and 69 percent responded that the program helped in mathematics. Thirteen percent and 19 percent felt that the program did not help in reading and mathematics, respectively. Six to 8 percent responded that they did not know at this time.

In terms of the parents' perceptions of how their children felt about the Basic Skills Summer School Program, 80 percent responded that their children had positive feelings about the program, 7 percent responded that the children expressed no feelings about the program, and 12 percent indicated that their children had negative feelings about the program. However, when asked if their feelings were better or worse than their feelings about the regular school program, 39 percent indicated "better" and 48 percent indicated "worse." The primary reasons given by parents whose children felt better about the summer program than the regular school program were they enjoyed the classwork (23 percent), they liked the smaller classes (16 percent), and the program was more fun and more relaxed (16 percent). The primary reasons given by the parents of those who felt worse about the summer program were the program was too easy (12 percent) and they resented having to attend (9 percent).

Nonparticipation

More than 50 percent of the pupils who were invited to attend the Basic Skills Summer School Program chose not to do so. Parents of those children were queried as to why they chose not to send them. The reasons most frequently cited by parents as to why their children did not attend are shown in Table 15.

TABLE 15
Reasons for Nonparticipation

Reasons Cited	Percentage of Parents
Pupil on vacation	21
Pupil did not want to attend	12
Pupil did not need the program	24
Pupil scheduled for other nonacademic activities	7
Pupil had private tutor/attended another program	7
Family moving out of the area	7
Sent the acceptance form back too late	8
Other	14

These data suggest that the primary reasons for nonparticipation were pupils were on vacation (21 percent); pupils did not want to attend the program (12 percent); and parents did not think pupils needed a program of this type (24 percent). The reasons cited by parents as to why they felt their children did not need the program included pupils' scoring high on the pretest instruments, pupils' grades in class were good, pupils' lack of motivation, and pupils' poor test-taking skills. It is also interesting to note that 8 percent of these parents indicated that their children did not attend because the acceptance forms were returned to the schools too late. This figure translates to an additional 54 pupils who might have participated in the program.

Participation in Next Year's Program

Parents of both participants and nonparticipants were asked whether they would send their children to the Basic Skills Summer School Program if a similar program were offered next summer (1982). The responses to that question are shown in Table 16.

TABLE 16

Percentage of Parents Indicating That They Would Allow
Their Children To Attend
A Similar Program Next Summer (1982)

Responses	Parents of Participants	Parents of Nonparticipants	Overall
Yes	81	53	67
No	19	47	33

Chi Square Analysis $p < .0001$

Differences in responses by participants and nonparticipants were significant ($p < .001$), with a greater proportion of the parents of participants in the program indicating that they would want their children to participate in a similar program next year. Overall, 67 percent of the parents indicated that they would send the children next year. This percentage is slightly less than the percentage of parents in the 1981 Basic Skills Evaluation who said that they would send their children to this year's program.

6203A

34



APPENDICES

APPENDIX A

BREAKDOWN OF PUPIL DESCRIPTIVE DATA BY SUMMER SCHOOL CENTER

TABLE A-1

Summer School Participants by Grade

Grade	CENTER							Total
	Strathmore Elementary	Weller Road Elementary	Newport Middle	Julius West Middle	E. Brooke Lee Junior	Ridgeview Junior	Takoma Park Junior	
K	-	8	-	-	-	-	-	8
1	-	9	-	-	-	-	-	9
2	6	12	-	-	-	-	-	18
3	5	9	-	-	-	-	-	4
4	10	31	-	-	-	-	-	41
5	4	19	-	-	-	-	-	23
6	-	-	38	27	40	16	55	76
7	-	-	12	44	82	16	42	196
8	-	-	8	-	4	-	16	28
Special/ Missing	-	1	-	-	-	-	2	3
Total	35	89	58	71	126	32	115	526

TABLE A-2

Number of Summer School Participants, by Race

Race	Center							Total
	Strathmore Elementary	Weller Road Elementary	Newport Middle	Julius West Middle	E. Brooke Lee Junior	Ridgeview Junior	Takoma Park Junior	
Black	17	16	14	22	34	10	77	190
Hispanic	1	7	10	3	3	0	11	35
White	15	54	30	45	83	22	20	269
Other/ Missing Data	2	2	4	1	6	0	6	22
Total	35	89	58	71	126	32	114	526

TABLE A-3

Number of Summer School Participants by Sex

Sex	Center							Total
	Strathmore Elementary	Weller Road Elementary	Newport Middle	Julius West Middle	E. Brooke Lee Junior	Ridgeview Junior	Takoma Park Junior	
Male	27	54	30	44	58	19	63	298
Female	8	35	28	27	68	13	51	228
Total	35	90	58	71	126	32	114	526

APPENDIX B

1981 BASIC SKILLS SUMMER SCHOOL CALENDAR AND WORKSHOP CONTENT

Summer Basic Skills Program
CALENDAR

May 19-20 Two-Day Workshop for Teachers, Area Staff, and Summer School Administrators (Tuckerman Center)

July 1 Planning - Individual
Summer School Centers

July 2 Planning - Group
Richard Montgomery High School

July 6 Planning - Individual
Summer School Centers

July 7 - August 3 Summer School
20 4-hour days (a.m.)

July 7, 9, 13, 14, 16, 20, 21, 23, 27, 28, 30 4-hour Planning and Evaluation (p.m.)

August 3 4-hour Planning and Evaluation (p.m.)

August 4 Final Wrap-up (a.m.)
4 hours

-----BASIC SKILLS SUMMER SCHOOL 1981-----

K-5, 6-8

PROGRAM GOALS-----

1. Students will be able to apply problem-solving processes to demonstrate the application of specifically identified basic skills in reading/language arts and mathematics.
2. Students will participate in experiences which will enhance their self-concepts for learning through demonstrated success with the application of basic skills.
3. Teachers will reflect positive expectations to support achievement for low-achieving students.
4. Teachers will use problem solving as an organizing vehicle for the direct teaching of basic skills in mathematics and reading/language arts.
5. Teachers will use specific teaching strategies to maximize student involvement and success.
6. Teachers will plan for specific student needs in pairs and teams to integrate mathematics and reading/language skills within weekly thematic units.

INSTRUCTIONAL FOCUS-----

PROBLEM-SOLVING PROCESS

An Experience-Based Thematic Approach Matched to Students Needs

READING/LANGUAGE ARTS

Oral Language/Vocabulary Development
Functional Reading
Comprehension and Decoding

MATHEMATICS

Place Value: DF, ARITH, CF
Estimation and Rounding
Statistical Graphs/Time/Temp.

Assessments

Functional Reading
Oral Vocabulary

Math Objectives Above
and Money

-----Instructional Strategies-----

1. Problem-solving Process

The problem-solving process is an organized method used to find solutions to a variety of problem types. The process includes for major steps: (1) understanding the problem, (2) planning the solution, (3) solving the problem, and (4) reviewing the plan and the solution. This strategy not only provides for specific instruction at each step of the process but also, at the same time, emphasizes relationships among the steps.

A Problem-solving Process

Example

A Sample Lesson Plan Showing How Work on a Specific Skill
Can Be Incorporated into the Holistic Approach

Lesson Objective: Work on the skill, determining what is being asked in problems

Grouping: Each math group

Materials: Chart paper, marker, worksheets

Procedure: Work through the problem-solving process as an entire group

I. Understanding the Problem

TASK: Share problems with the group. Discuss the language used to ask the questions in the problems. What kinds of words ask questions? What do these question words want us to do?

II. Planning the Solution

TASK: Group work together on worksheets to find the part of each problem that is asking the question.

III. Solving the Problem

TASK: Underline the part of each problem that is asking the question on the worksheet.

IV. Reviewing the Plan and Solution

TASK: Discuss the specific language that was used to ask questions on the worksheet. Generate some group problems and record them on the chart paper. Underline the questions. Use some of the underlined questions to develop new problems. Record these on chart paper.

L. Tannhauser
MCPS 1981

2. Thematic Approach

A thematic approach to instruction unifies the content and objectives of segments of work through an ongoing, overall theme, e.g., sports, animals, or nutrition. Topics such as these are used as a pivotal center around which the needed skills, concepts, and content are organized.

Example

Theme: Sports
Specific Activity: Bowling

1. Vocabulary Development
 - a. Bowling Terms
 - b. Map Terms
2. Functional Reading
 - a. Gaining Information (Bowling rules)
 - b. Using References (Graphs)
 - c. Following Directions (How to Bowl; Route to Bowling Alley)
3. Mathematics
 - a. Scope & Sequence
AD, SU, MU, DI, ER,
TT, SG, PS
4. Problem Solving
 - a. Team Formation
 - b. Organization for Bowling Trip

3. Webbing

Webbing is a strategy used for organizing/presenting ideas to show relationships. The webbing process provides a variety of diagrammed designs which can be adapted to various subject areas and concepts.

Example

Strategy: Webbing

Purpose: To show relationships of ideas
To show a way of organizing ideas

Initiators: Reading or listening to discourse, viewing films and filmstrips, personal experience or knowledge

- Procedure:
1. Begin with idea or topic.
 2. Write concept associated with idea or topic on a spoke.
 3. Give example of the relationship of the topic and concept in an outer circle.
 4. Continue process until relationships are exhausted.

4. Multimode

Multimode is a teaching strategy which fosters group interaction. This approach requires students to listen, think, share, and do. As can be seen in the example cited below, multimode and problem-solving strategies dovetail extremely well and complement each other.

Example

Group Instruction Technique
Multimode Approach

ORGANIZATION: Group and Buddies
MATERIALS: None
PURPOSE: When working on the problem process, students need to listen, think, share, and do. This is called a Multimode Approach to group interaction.
PROCEDURE: Divide the instructional group into buddies. Work through each step of the problem-solving process using the suggested routine and sequence.

Problem-Solving Process Steps 1 and 2: Understanding the Problem and Planning the Solution

LISTEN: (individuals) Listen to the problem being asked.
THINK: (individuals) Think over the problem to yourself. Ask yourself the kinds of questions that better help you to understand the problem. Take time to really get an understanding of the question in your mind.
PAIR AND COMPARE: (buddies) Share your thoughts about the problem with your buddy. Help one another get a good handle on understanding the problem.
PLAN: (buddies) Plan a solution for the problem with your buddy. Develop a solution plan and sequence that is reasonable and comfortable.
SHARE: (group) Buddies share their thinking and planning with the group. A recorder should keep track of the different plans.

Problem Solving Process Step 3: Solving the Problem

WORK TOGETHER: (buddies) Buddies should follow through their solution plan and sequence together. Keep track of the progress. Correctly label your solution. Check your work.

Problem Solving Process Step 4: Reviewing the Plan and the Solution

REVIEW: (buddies) Review the strategies and steps taken during the solution step. Be ready to share these with the group.
EVALUATE: (buddies) Evaluate the accurateness and reasonableness of the solution. Did you check your work?
SHARE: (group) Buddies share their solutions and introspections. Discuss the results.
EXTEND: (group) Extend the problem to create variations, applications, or new problems.

L. Tannhauser
MCPS 1981

5. Group Language Experience

Group language experience is used to improve students' oral language skills. The focus is on expanding and enriching these skills through the use of dictation, word recognition/ word analysis, comprehension, and word bank activities. The example below is a lesson plan involving dictation.

Example:

MCPS: ISR/LA
DRAFT
Sample Instruction:
Plan
10/27/78
Language Experience

General Five-Day Experience Story Lesson Plan

DAY I - EXPERIENCE/DICTATION

- A. Preparation for dictation
 1. Teacher may use one of the following:
 - a. Student's individual experience (the place student visited, the activity in which student participated, etc.)
 - b. Group experience (class project, field trip, assembly program, etc.)
 - c. Picture stimulus.
 - d. Teacher - read material (trade book or content material).
 2. Discussion of experience focusing on expanding and enriching oral language skills.
- B. Recording of dictation.
 1. Teacher accepts student's contributions as given.
 2. Teacher asks prompting questions if necessary.
- C. Oral reading of story by teacher.
- D. Oral rereading of story by group with teacher assistance if necessary.
- E. Individual's rereading
(Individual student's contribution or entire story).
- F. Word finding activity
Teacher asks students to identify individual words in story.
Example:
 1. Can you find the word window?
 2. Can you find it somewhere else in the story? Show us.
 3. What is this word? (Teacher points to word in story.)
- G. Group stories can be duplicated for each student and put in a composition book. Individual words can be written or typed on a worksheet in scrambled order to be duplicated and used later in the week.
Individual stories can be recorded directly in composition book. Word cards for word bank can be made individually by teacher of student later in the week.

-----OBJECTIVES FOR READING/LANGUAGE ARTS-----

Basic Skills Summer School 1981

COMPREHENSION

Resource

1. Students will indicate setting, characteristics, dialogue, conflict, and resolution in literature selections. Students' indications will be displayed using webs.
2. Student will use locate skills to support accurate recall of information and a rationale for their question response.
3. Students will identify important ideas and the sequence of events and predict outcomes. Student identification will utilize data display techniques.

MCPS: ISRLA 3/79
Draft Strands
of Objectives
in Narr. Forms

Minipage on
Recall/Locate

- o Minipage on important ideas
- o Webs/ on sequence
- o R/LA objective in predictions

CONTEXT CLUES

4. Students will state a word that fits the context given an uncommon word or phrase with content clues to its meaning.
5. Students will compare their word to the work in the text.
6. Students will indicate the context clues of a word or phrase.
7. Students will indicate the context in which the student has heard an important content word.

FUNCTIONAL READING

Students will be able to apply functional reading skills for:

8. Following directions
9. Locating references
10. Gaining information
11. Understanding forms

MSDE Project
Basic: Basic
Skills: Func-
tional Reading
Functional
Reading
Notebook, 1981

ORAL LANGUAGE/VOCABULARY DEVELOPMENT

12. Students will use adaptations of the language experience techniques to support the manipulation of words, into phrases, into sentences, and into paragraphs
13. Students will be able to identify and use the vocabulary within each thematic unit in the problem-solving process.

Adapt K-2 R/LA
Objectives in
LEA

SUMMER SCHOOL - BASIC SKILLS - MATH

1. Math categories to be emphasized during summer school:

Problem Solving
Estimation and Rounding
Statistical Graphs

Place Value		Time
decimal fractions	metric system	whole numbers
money	length weight/mass capacity temperature	*subtraction *division *multiplication

ARITH

2. Suggested resources:

- ARITH
- ISM computer assessment/aide
- hand calculators
- functional math print materials (NO tests)
(i.e., Handy Math series from Creative Publications - menus
catalogs
daily papers, etc.)
- math manipulatives
(i.e., metric tools, money, clocks, decimal models, etc.)
- multiple choice response sheets for test-wiseness practice
- math games
- folders for each student

TEACHER BEHAVIORS WHICH CONVEY HIGH AND
LOW EXPECTATIONS

	TEACHER BEHAVIORS THAT CONVEY HIGH EXPECTATIONS	TEACHER BEHAVIORS THAT CONVEY LOW EXPECTATIONS
USE OF TIME	-Start on Time -Few interruptions -Demand that students be on task -Specific, challenging time limits	-Start late, and early -Many interruptions -Allow students to be off tasks -Open-ended time limits
GOAL-STATING, SUMMARIZING	Goal-statements: frequent clear specific challenging Summaries: frequent	Goal-statements: infrequent unclear general unenthusiastic Summaries: infrequent
INPUT	Lots of input High proportion of new material Challenging work	Little input Little new material; much review Easy work
TYPE OF QUESTIONS	More questions More higher-order questions	Few questions Rote questions
WAIT TIME, PURSUING QUESTIONS	Wait 3-6 seconds after a question Pursue if answer is wrong or incomplete	Wait under 1 second Move on if answer is wrong or incomplete
ENCOURAGING STUDENTS TO EXPRESS CONFUSION	Set climate where students aren't afraid to ask Give students a clear sense of what they are supposed to be learning	Climate where students are afraid of looking stupid No clear sense of what they are supposed to be learning
FEEDBACK	Frequent Immediate Differentiated Specific	Infrequent Delayed Undifferentiated Vague
NONVERBALS	Facial expression Eye contact Use of names	Dull or negative expression Little eye contact Limited action zone

6203A

10