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ABSTRACT

IDENTIFIERS

Intended to improve language and reading skills of selected underachieving students, the 1987-88 Compensatory Language Experiences and Reading Program (CLEAR) of the Columbus, Ohio, public schools served 4109 pupils in grades 1-8 in 94 schools. The program featured individual and small group instruction arranged according to pupil needs, as well as projects utilizing computer-assisted instruction (CAI). The program was evaluated through administration of the Comprehensive Tests of Basic Skills as pretest and posttest. Test results indicated that of 2,349 pupils with good attendance records who were native speakers of English, average test score gain was 6.3 Normal Curve Equivalent (NCE) points for the 6.2 months of instruction, which met the program objective of 1.0 NCE per month of instruction. Analysis by grade revealed that the objective was met in grades 3, 4, 6, and 7. Average NCE gains for students using CAI were higher than those for the regular group in grades 1-5, and lower than those for the regular group at the middle school level. Recommendations include a review of selection procedures, instructional methods, class size, and test content to determine why pupils at some grade levels did not show desired growth. (Fourteen tables of data are included; appendixes include tables of data, and survey and evaluation instruments.) (SR)

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Education Consolidation and Improvement Act - Chapter 1

FINAL EVALUATION REPORT LANGUAGE DEVELOPMENT COMPONENT COMPENS/ TORY LANGUAGE EXPERIENCES AND READING PROGRAM

July 1988

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Education Consolidation and Improvement Act - Chapter 1

FINAL EVALUATION REPORT LANGUAGE DEVELOPMENT COMPONENT COMPENSATORY LANGUAGE EXPERIENCES AND READING PROGRAM 1987-88

ABSTRACT

<u>Program Description:</u> The Compensatory Language Experiences and Reading (CLEAR) program served 4109 pupils. Fu ing of the component was made available through the Education Consolidation and Improvement Act - Chapter 1 of 1983.

The purpose of the Compensatory Language Experiences and Reading program (CLEAR) was to provide assistance to selected underachieving pupils in grades one through eight in order that they might attain more fully their potential for and improvement of language and reading skills. The program featured individual and small group instruction arranged according to pupil needs, as determined by continued cooperation between the program teacher and the classroom teacher. Various subgroups of program teachers were provided with a total of 24 inservice sessions.

Within the CLEAR program there were two projects utilizing Computer Assisted Instruction/Computer Management System (CAI/CMS). At the elementary level, 22 elementary labs participated in a project which used Apple microcomputers. These labs received services under a contract with the Prescription Learning (PL) Company of Springfield, Illinois. Other computer systems were used in an additional five elementary CAI/CMS labs. Six middle schools were served by a project using Dolphin minicomputers and software licensed from the Educational Software Division of the Houghton Mifflin Company. One additional middle school used the Sperry Network System under an agreement with Wasatch Company.

Time Interval: For evaluation purposes, the CLEAR program started on September 28, 1987 and continued through April 15, 1988. This interval of time gave 123 possible days of program instruction. Pupils included in the final pretest-posttest analysis must have attended at least 98 days (80%) during the time period stated above.

Activities: Implementation of the program was accomplished through daily instructional activities to strengthen and extend regular classroom instruction without pursuing the basic reading textbooks. Instructional techniques and macerials based on skill-centered objectives were applied to fit individual needs.

Achievement Objective: The average language/reading growth for the pupils who attended the program for at least 80% of the instructional period will be 1.0 Normal Curve Equivalent (NCE) point for each month of instruction. Growth will be measured by a nationally standardized achievement test of language/reading.

Evaluation Design: The major evaluation effort was accomplished through the administration of the Comprehensive Tests of Basic Skills. Analyses of the pretest to posttest data were primarily in terms of NCEs.



Major Findings/Recommendations: The information collected on the Pupil Census Forms indicated the program served 4109 pupils for an average of 3.7 hours of instruction per week. The average daily membership in the program was 3471.1 pupils. The average days of enrollment per pupil was 103.9 days and the average attendance per pupil was 94.4 days. The average number of pupils served per teacher was 44.4.

The attendance criterion was met by 2732 pupils, which was 66.5% of the 4109 pupils served. The evaluation sample consisted of 2349 pupils who met the attendance criterion, took the pretest and posttest, and were English-speaking.

Analysis of pretest-posttest achievement data indicated an average gain of 6.3 NCE points for the 6.2 month treatment period, or 1.0 NCE point per month of measurable instruction. The program attained the 1.0 NCE point per month criterion score for the program's performance objective. When data were analyzed by grade, it was noted that the evaluation criterion was met or exceeded in grade 3 (2.1 NCE's per month), grade 4 (1.2 NCE per month), grade 7 (1.2 NCE per month), and grade 6 (1.1 NCE per month). The evaluation criterion score was not met at grades 1, 2, 5, or 8. Comparisons of achievement test data were also made between pupils in the CAI/CMS projects and pupils in the same grade levels of the regular treatment group. At the primary level (grades 1-3), the average NCE ¿ ins for the year were 9.9 for the CAI/CMS group and 5.3 At the intermediate level (grades 4-5) the average for the regular group. gains for the year were 8.7 for the regular group and 4.0 for the CAI/CMS group. At the middle school level the average NCE gains for the year were 7.7 for the regular group and 3.8 for the CAI/CMS group. Additional comparisons of NCE scores were made among three treatment groups in grade 2. Gains in NCE scores for the year in the three second grade treatment groups were as follows: CAI/CMS treatment group 2.3, regular treatment group 1.9, and whole language pilot group 1.3.

Process evaluation focused mainly on implementation of the CLEAR-Primary pilot whole language subset of the CLEAR-Elementary program. Data from an observer instrument used in on-site observations indicated strong evidence that the program was being implemented at the time of the visits. Teachers in the pilot program expressed appreciation for the 12 inservice sessions held this year dealing with whole language techniques, management, and environment. One concern expressed by teachers in the pilot group involved maintaining and using results of Running Records, the major diagnostic technique used in the whole language approach. The teachers indicated they did not know how to use the Running Records for instruction.

A questionnaire distributed to teachers in CAI/CMS labs indicated that a variety of computer systems was used in the CAI/CMS portion of the program. The most prevalent computer systems were Prescription Learning at the elementary level and Dolphin at the middle school level. For the most part, pupils worked at a computer station between 40 and 50 percent of their program instructional time. The percent of pupil computer time was considerably higher in the two CCC labs (83.3%, elementary level) and in the two Wasatch labs (69.2% in elementary and 75.0% in middle school).

Program recommendations were: (a) try to determine cause for less growth at certain grade levels; (b) continue the whole language treatment group with recognition that another year may be needed to build on 'wly acquired teaching techniques; (c) review the need for daily Running Records; and (d) provide further assistance to whole language group teachers in using the results of Running Records to plan instruction.



Education Consolidation and Improvement Act - Chapter 1

FINAL EVALUATION REPORT

LANGUAGE DEVELOPMENT COMPONENT

COMPENSATORY LANGUAGE EXPERIENCES AND READING PROGRAM

July 1988

Program Description

The purpose of the Compensatory Language Experiences and Reading program (CLEAR) was to provide assistance to selected underachieving pupils in grades one through eight in order that they might attain more fully their potential for and improvement of language and reading skills. To accomplish this purpose the program featured individual and small group instruction arranged according to pupil needs. as determined by continued cooperation between the program teacher and the classroom teacher. Instructional techniques and materials based on skill-centered objectives were applied to fit individual needs. Inservice was provided for program teachers.

The CLEAR program first operated in 1978-79 when previous Primary and Intermediate Language Development Programs were combined to achieve greater continuity and consistency of service for elementary school pupils. The first CAI/CMS unit in the CLEAR program was piloted in the second semester of the 1981-82 school year in one elementary school. In 1987-88 the CLEAR program was comprised of 108 teachers serving 89 public and five non-public Chapter 1 eligible schools. Of the 89 public schools, 24 were middle schools. 108 teachers in the program, 34 utilized computers in their instruction, and 31 primary teachers participated in a new pilot group utilizing a whole language Thirty-one of the 34 CAI/CMS teachers served in both the CLEAR approach. program and the Mathematics Improvement Component. Evaluation of Mathematics Improvement Component is dealt with in a separate report (Thomas, 1988). In terms of full-time equivalency (FTE) the CLEAR program was staffed with 92.5 teachers. Each teacher provided services to a maximum of 35 elementary pupils or to a maximum of 56 middle school pupils at any given time, with the exception of the CAI/CMS units. Since the use of microcomputers was intended to expand the number of pupils served, elementary and middle school CAI/CMS teachers served a maximum of 60 pupils. Those serving both reading pupils and mathematics pupils served a maximum of 30 pupils in each program.

Within the CLEAR program two projects utilizing Computer Assisted Instruction/Computer Management System (CAI/CMS) operated at the elementary and middle school levels. The elementary CAI/CMS project, serving grades 1-5, operated with 27 teachers in 25 schools, and the middle school CAI/CMS project operated with seven teachers in seven schools. Twenty-two elementary labs utilized Apple microcomputers serviced by the Prescription Learning (PL) Company, along with other teaching machines, educational and management software and the services of an educational and a technical consultant. Two elementary labs had Tandy TRS-80 color microcomputers and were served by B&B Computer Services. In two elementary labs Apple microcomputers and Atari



microcomputers were linked to a CCC Microhost and serviced by Computer Curriculum Corporation (CCC). One elementary lab and one middle school lab utilized the Sperry Network System, and were served by Wasatch. The remaining six middle school CAI/CMS labs utilized Dolphin minicomputers and terminals which are now owned by the school system, but still contract services with the Houghton Mifflin Company. The Dolphin minicomputers are hard-programmed with educational and management routines. In addition to providing a technique to reading and language instruction, the use of CAI/CMS was also intended to enable participating teachers to serve more pupils than would be possible in a regular CLEAR program unit. The use of CAI/CMS was also intended to be a cost-effective alternative to replacing badly worn conventional equipment.

The CLEAR program served a total of 4109 public and non-public school This number included the two kinds of program treatment - regular and pupils. Of the 4109 total, 2871 were in the regular public school CLEAR CAI/CMS. treatment program (grades 1-8), 108 were in the regular CLEAR non-public treatment program (grades 1-4), and 1130 were in the CAI/CMS treatment program At the primary level (grades 1-3), a total of 1735 pupils (grades 1-8). received regular CLEAR treatment (1640 public school and 95 non-public school pupils) while 302 received CAI/CMS treatment for a total of 2037 primary grade At the intermediate level (grades 4-5), 376 public school and 13 non-public school pupils received regular CLEAR treatment while 641 received CAI/CMS treatment for a total of 1030 intermediate grade pupils. school (grades 6-8) a total of 1042 pupils was served, which included 855 pupils in the regular CLEAR program treatment group and 187 pupils in the CAI/CMS treatment group. The totals served by treatment group were 2979 pupils in the regular program and 1130 pupils in the CAI/CMS program.

Evaluation Objective

The evaluation objective for the CLEAR program was as follows:

The average language/reading growth for the pupils who attended the program at least 80% of the instructional period will be 1.0 normal curve equivalent (NCE) point for each month of instruction. Growth will be measured by a nationally standardized achievement test of language/reading.

The program time period established for evaluation purposes was 123 days beginning September 28, 1987, and ending April 15, 1988. This time period (123 days divided by an average of 20 school days per month) is equal to 6.2 possible months of instruction. Analysis of pretest-posttest performance was contingent on pupil attendance for 98 days (80%) of the 123 day period.

Evaluation Design

The evaluation design provided for the collection of data in five areas of operation for the overall program. The instruments used to collect the data are found in Appendix $B_{\mathfrak{p}}$ with the exception of the standardized achievement tests.



1. ECIA Chapter 1 Pupil Census Information

A Pupil Census Form (locally developed) was completed by program teachers for each pupil served, to provide the following information: days of program enrollment, days of program attendance, and hours of instruction per week. The form also included information regarding the pupil's grade and sex, provided for identifying those pupils who were non-English speaking, provided for identifying any pupil who left the ECIA program because he or she qualified for a special education program, and included a question regarding a pupil's progress which required a subjective response from the program teacher. Collection of these forms was completed in May 1988.

2. Standardized Achievement Test Information

Program pupils were administered the <u>Comprehensive Tests of Basic Skills</u> (CTBS, 1981). This test series, which is published by <u>CTB/McGraw-Hill</u>, has empirical norms for fall and spring, established October 6-10, 1980, and April 27 to May 1, 1981. The form, subtest, and test levels used for each grade level are listed below:

		Pre	etest		Posttest					
Grade	Test	Form	Level	Subtest	Form	Level	Subtest			
1	CTBS	U	В	Total Keading	ប	C	Total Reading			
2	CTBS	Ü	D	Comprehension	V	D	Comprehension*			
3	CTBS	u	E	Comprehension	V	E	Comprehension			
4	CTBS	U	F	Comprehension	V	F	Comprehension*			
5	CTBS	Ū	G	Comprehension	v	G	Comprehension			
6	CTBS	Ū	G	Comprehension	V	G	Comprehension			
7	CTBS	Ŭ	H	Comprehension	V	H	Comprehension*			
8	CTBS	U	H	Comprehension	v	H	Comprehension			

^{*}Estimated by administration of customized Form V

All testing was done on level. At posttest time, grades 2, 4, and 7 were administered customized tests that provided norm-referenced as well as criterion-referenced scores. The customized tests were developed by Columbus Public Schools personnel in cooperation with CTB/McGraw Hill to match the Columbus Public Schools Graded Course of Study.

The achievement tests were administered as follows: Program teachers in grades 1-8 normally administered the pretest except in schools where schoolwide testing occurred. Posttests for grades 2-8 were administered as part of Districtwide Testing. Pretests and posttests for CLEAR grade 1 pupils were administered by the classroom teacher along with other grade 1 compensatory education pupils. Program teachers in the five non-public schools (grades 1-4) had to



administer their own pretests and posttests. During schoolwide or Districtwide Testing, tests were administered by classroom teachers with program teachers serving as proctors. Pretesting occurred during the week of September 21 - September 25, 1987; posttesting occurred April 18-22, 1988.

3. ECIA Chapter 1 Teacher Census Information

The locally developed Teacher Census Form was designed to provide information regarding characteristics of program personnel. Information collected included total years of teaching experience, years of Chapter 1 teaching experience, college degree level attained, and certificate in reading. The form was completed by Chapter 1 program teachers in September 1987.

4. Parent Involvement Information

The Parent Involvement Form was constructed locally to collect data on the level and nature of parental involvement in Chapter 1 programs. Data were reported by program teachers on a monthly basis, September 1987 through June 1988. Monthly data included number of parents and number of hours involved in five categories of parent involvement, including a monthly unduplicated count of parents involved. In addition, a yearly unduplicated count of parents was collected at the end of the school year.

5. Inservice Evaluation Information

The locally developed General Inservice Evaluation Form was designed to obtain teacher perceptions regarding each inservice session. The form was administered to participants at the close of inservice sessions held for Chapter 1 staffs. A modified version of the form was used for the orientation meeting of September 8, 1987. Dates and topics of inservice meetings conducted by Chapter 1 in which CLEAR teachers participated are shown in Table 1. Teachers completed inservice evaluation forms for all of the 24 inservice meetings except for one Dolphin meeting on September 3, 1987.



Table 1

Dates and Topics of the 24 Inservice Meetings Conducted by Chapter 1

for School Year 1987-88

	•	*	CLEAR-E1	ementary	7		CLEAR-M	iddle
Date	Title of Inservice	Regular Grades 1-	Pilot Primary	CAI Grades		CAI Aides		-
September 2	Whole Language Concept		Х*					,
September 2	Coordinator's Orientation - Reading (New Guidelines)	x						
September 3	Running Reading Records		х*					
September 3	Dolphin Computer Training							X
September 4	Whole Language Concept		Х*					
September 4	Prescription Learning Computer Training			x				
September 8	Opening Conference	x	X	x			x	x
September 10-11	Dolphin Computer Training							x
September 21	Running Reading Records and Lesson Planning		x .					
October 5	Holt Impressions	x	x					
October 23	Instructional Guidelines		Х*					
October 28	Creativity in the Classroom			x		x		
November 4	Positive Communication					x		
November 4	Beginning Individualized Instruction		X*					
November 5	Creating a Literate Environment and State Certification	x						

Table 1 (Continued)

Dates and Topics of the 24 Inservice Meetings Conducted by Chapter 1

for School Year 1987-88

			CLEAR-E	lementar	y		CLEAR-M	iddle
Date	Title of Inservice	Regular Grades l	Pilot -5 Primar		1-5	CAI Aides	سنين به اكسياد	
November 20	Teaching Thematic Units		X					
December 10	The Writing Process		x					
February 19	Reading Comprehension		x					
March 14	Behind-the-Glass Observation, Pop-up Books, and Sharing	. Х						
April 20	End-of-Year Record Collection		X					
April 22	Prescription Learning Spring Workshop: Teacher Burnout			х		x		
April 29	Reading and Language Arts Workshop						x	x
May 18	The Reading-Writing Connection (AM) and Sharing (PM)			х				
May 16	Potpourri of Children's Literature	x						
	Total Number of Inservice Sessions Provided for Each Group of Program Personnel	6	12	 5		3	2	

SRVCS/P502/RPTFCLE88

In addition to the types of data specified in the evaluation design, two types of process evaluation were obtained. Observations were conducted in 16 (51.6%) of the 31 units that piloted the whole language approach in primary grades. The purpose of these observations was to determine the extent to which guidelines for the whole language approach were implemented. The observations were conducted by a program evaluator using a locally constructed instrument, the Evaluator's Visitation Log. Another locally constructed instrument, informally referred to as a computer census form, was used as a justicinaire in the CAI/CMS portions of the CLEAR program. This instrument had two purposes: to delineate and describe the various computer systems used in CAI/CMS labs, and to determine the percent of program time pupils worked at the computer in the different computer systems.

Both instruments are found in Appendix B. Findings from the collection of data from these instruments are summarized in this report under the heading Process Evaluation Information. The full interim reports are on file at the Department of Evaluation Services, Columbus (Ohio) Public Schools (Chamberlain, 1988; Lore, 1988).

Major Findings

Pupils were selected for the program on the basis of previous achievement test scores which indicated they were achieving at or below the 36th percentile in reading skills. Selection testing occurred prior to the program pretest.

Pupil Census Information

A total of 4109 pupils, including 4001 pupils in public schools (grades 1-8) and 108 in non-public schools (grades 1-4), was served by the ECIA Chapter 1 CLEAR program during the 1987-88 school year for an average of 3.7 hours of instruction per week. Of the public school pupils, 2959 were in grades 1 through 5 and 1042 attended middle schools. Of the 4001 public school pupils, 2016 elementary and 855 middle school pupils received regular CLEAR instruction, and 943 elementary pupils (grades 1 and 5) and 187 middle school pupils (grades 6-8) received CAI/CMS instruction. The 108 non-public elementary school pupils were all served in the regular CLEAR program.

The average daily membership in the overall program was 3471.1 pupils. The average days of enrollment per pupil was 103.9 days, and the average attendance per pupil was 94.4 days. The average number of pupils served per teacher during the school year by the 92.5 FTE teachers was 44.4, though the average number of pupils enrolled per teacher at any given time was 37.5 (Average Daily Membership divided by number of FTE teachers). The attendance criterion was met by 2732 pupils, or 66.5% of all program enrollees. Data pertaining to enrollment and attendance are presented in Table 2.

The evaluation sample was limited to pupils who had both pretest and posttest administrations of the standardized achievement test, were English-speaking, and who met the attendance criterion of at least 80% of the 123 program days (98 or more program days).



Table 2 Number of Public and Non-public Pupils Served; Averages for Days of Enrollment, Days of Attendance, Daily Membership and Hours of Instruction Per Week; and Pupils Attending 80% of Days Reported by Grade Level 1987-88

Grade	Pupils Served	Girls	Boys	Days of Enrollment	Days of Attendance	Average Daily Membership	Hours of Instruction per Pupil per Week	Pupils Attending 80% of Days
1	54`	21	33	93.6	86.5	41.1	3.7	34
2	1216	· 511	705	103.9	95.4	1026.7	3.8	820
3	767	310	457	102.5	94.7	639.5	3.8	517
4	614	285	329	103.0	94.1	514.3	3.7	410
5	416	206	210	102.3	92.6	346.1	3.7	269
6	818	372	446	106.2	93.7	706.4	3.5	531
7	182	92	90	107.9	96.8	159.7	3.6	122
8	42	15	27	109.1	96.2	37.3	3.7	29
Total	4109	1812	2297	103.9	94.4	3471.1	3.7	2732

Of the 4109 pupils served, 17 (0.4%) were non-English speaking. An additional 1743 were excluded from the evaluation sample due to incomplete test data and/or non-attainment of the attendance criterion. The evaluation sample was comprised of the remaining 2349 pupils, which was 57.2% of the 4109 pupils served. Data from testing are presented in Tables 3 and 4.

Pupil census information also included the teacher's rating of individual pupil progress. Of the 4109 pupils served in the program 1286 (31.3%) were rated by their program teachers as making much progress, 2044 (49.7%) as making some progress, 646 (15.7%) as making little progress, and 133 (3.2%) as making no progress.

Standardized Achievement Test Information

Normal curve equivalents (NCEs) are generally considered to provide the truest indication of pupil growth in achievement, since they provide comparative information in equal units of measurement. Data for normal curve equivalents are presented in Table 3. The overall average NCE change for the program was 6.3. The average NCE gain per month in the 6.2 month period between pretest and posttest was 1.0 NCE point per month, which met the evaluation criterion of 1.0 NCE point for each month of instruction. The evaluation criterion was met or exceeded at grades 3, 4, 6, and 7. The NCE gain in grade 3 was 12.9 overall, or 2.1 NCEs per month; the gain in grade 4 was 7.6 overall, or 1.2 NCE per month; the gain in grade 6 was 7.1 overall, or 1.1 NCE per month; and the gain in grade 7 was 7.6 overall, or 1.2 NCE per month. Smaller NCE gains were made at grade 8 (4.2 overall, 0.7 per month); grade 5 (3.1 overall, 0.5 per month); grade 2 (1.3 overall, 0.2 per month; and in grade 1 (-3.7 overall, -0.6 per month).

It should be kept in mind that NCEs are based on percentiles, which compare the pupil's performance in relation to the general population. For a pupil's NCE score to remain the same at posttest as at pretest does not denote a lack of absolute progress; on the contrary it means that the pupil has maintained the same relative position in terms of the general population. Even a small gain in NCEs indicates an advancement from the pupil's original level of achievement. For readers interested in percentile and grade equivalent statistics, see Tables 15-18 in Appendix A.

Table 4 contains data related to the changes in NCE scores for the three ranges: (a) No improvement in NCE scores (0.0 or less), (b) some improvement in NCE scores (0.1 to 6.9), and (c) substantial improvement in NCE scores (7.0 or more). The data indicate that 1567 (66.7%) pupils made gains in NCE scores. This means that 66.7% of the pupils in the evaluation sample progressed at a rate that was greater than normal for them. More specifically, 1113 (47.4%) made substantial improvement and 454 (19.3%) made some improvement in NCE scores, while 782 pupils (33.3%) of the evaluation sample made no improvement, as evidenced by a gain of 0.0 or decrease in NCE score.

Tables 5-9 present comparisons between the components receiving computer assisted instruction/computer management system (CAI/CMS) in reading and those groups receiving the regular program instruction. For the purpose of these comparisons "regular" refers to all pupils not in the CAI/CMS group.



Table 3

Minimum, Maximum, Average, and Standard Deviation of the Pretest and Posttest Normal Curve Equivalents (NCE)
Reported by Grade Level
1987-88

			P	retést			Po	sttest		
Grade	Number of Pupils	Min.	Max.	Average NCE	Standard Deviation	Min.	Max.	Average NCE	Standard Deviation	Average Change
1	24	18.0	94.0	47.2	18.4	6.0	67.0	43.5	14.0	-3.7
2	612	23.0	61.0	32.9	9.6	1.0	91.0	34.2	16.6	1.3
3	462	1.0	78.0	26.9	13.8	1.0	79.0	39.7	11.4	12.9
4	375	14.0	88.0	31.8	13.9	3.0	71.0	39.5	12.3	7.6
5	258	18.0	66.0	33.4	11.1	10.0	66.0	36.5	10.2	3.1
6	479	1.0	65.0	28.7	14.0	2.0	79.0	35.9	10.3	7.1
7	112	15.0	54.0	31.7	10.9	11.0	64.0	39.2	11.4	7.6
8	27	11.0	50.0	30.5	12.3	16.0	55.0	34.7	9.2	4.2
otal	2349			30.8	12.8			37.1	13.0	6.3

Table 4
Change Categories for NCE Scores for Total CLEAR
Program by Grade Level
1987-88

	Pupils in Sample	No Improvement (0.0 or less)	Some Improvement	Substantial Improvement
Service Control of the Control of th	III Sambie	(U.U or less)	(0.1 to 6.9)	(7.0 or more)
Gradê l				
Number of Pupils	· 24	12	6	6
% of Pupils	1.0%	50.0%	25.0%	25.0%
				, t
Grade 2	(10	001		
Number of Pupils	612	284	87	241
% of Pupils	26.1%	46.4%	14.2%	39.4%
Grade 3				
Number of Pupils	462	76	87	299
% % of Pupils	19.7%	16.5%	18.8%	64.7%
				· · · · · · · · · · · · · · · · · · ·
Grade 4				
Number of Pupils	375	116	71	188
% of Pupils	16.0%	30.9%	18.9%	50.1%
Grade 5				-
Number of Pupils	258	102	59	97
% of Pupils	11.0%	39.5%	22.9%	37.6%
·				3, 80%
∬Grade 6				
Number of Pupils	479	156	111	212
% of Pupils	20.4%	32.6%	23.2%	44.3%
"Grade 7				
Number of Pupils	112	25	26	61
% of Pupils	4.8%	22.3%	23.2%	54.5%
•			-00 470	3463%
∍Ĝŕađe 8				,
Number of Pupils	27	11	7	9
7 of Pupils	1.1%	40.7%	25.9%	33.3%
Total Group	·			**************************************
Number of Pupils	2349	782	454	1113
% of Pupils	100.0%	33.3%	19.3%	47.4%

As indicated in Table 5, 1130 pupils received treatment in a CAI/CMS component (943 pupils in the elementary project and 187 pupils in the middle school project). The total number of public and non-public school pupils in grades 1-8 who received regular program instruction was 2979, which included 2029 pupils in grades 1-5, and 855 pupils in grades 6-8. The average daily membership totaled 946.0 in the CAI/CMS groups (788.2 pupils in grades 1-5 and 157.8 pupils in the middle school project). Average daily membership in the regular group totaled 2525.1 (1779.6 pupils in grades 1-5 and 745.7 pupils in middle school).

Evaluation samples at the elementary (grades 1-5) level were comprised of 576 pupils who received CAI/CMS treatment and 1155 pupils in the regular program group. Middle school samples consisted of 103 pupils in the CAI/CMS treatment group, and 515 pupils in the regular instruction group. The total number of public and non-public school pupils in grades 1-8 in the evaluation sample was 2349.

Achievement data comparisons of Normal Curve Equivalents are presented in Table 6. In the regular CLEAR program, grade 3 which was 19.3% of the 1670 pupils in the sample had the greatest positive change of 13.0 NCE points. the CAI/CMS program, grade 3 which was 20.5% of the 679 pupils in the sample had the greatest positive change with an average change of 12.6% NCE points. Program criterion was met with 1.0 or more NCEs gained pag month of instruction by the regular CLEAR grades 3,4,6, and 7 or 57.7% of the regular CLEAR sample. Grades 1,2,5, and 8, 42.2% of the regular CLEAR sample, did not meet the criterion. In the CAI/CMS program grade 3 (20.5%) met criterion while grades 2,4,5,6, and 7 (79.5%) did not. Comparisons can not be made between the regular CLEAR program and the CAI/CMS program in grades 1 and 8 because there were no pupils in the sample for those grades in the CAI/CMS program. average NCE change for the CAI/CMS group was 5.6 overall or 0.9 NCE per month of instruction and the average change for the regular CLEAR groups was 6.5 overall or 1.0 NCE per month. The program's criterion that there be 1.0 or more NCEs gained je: month of instruction was met in the regular CLEAR program which had an overall average change of 6.5 NCE points for the 6.2 months of instruction and was almost met by the CAI/CMS program with an average of 0.9NCE point per month.

Further comparisons between CAI/CMS and regular CLEAR in other grades indicate that the CAI/CMS grade 2 group made a 2.3 NCE point change in comparison to 1.2 for regular CLEAR. The regular CLEAR grade 4 group made an 11.4 NCE point change in comparison to 5.0 for the CAI/CMS group. The regular grade 5 group made a 4.1 NCE point change in comparison to 2.6 for the CAI/CMS group. The regular grade 6 group made a 7.9 NCE point change compared to 3.8 in the CAI/CMS, and finally the regular grade 7 group made an 8.2 NCE point change compared to 4.1 in the CAI/CMS group.

As indicated earlier, NCE scores are generally considered to provide the most comparative information in equal units of measurement. Nevertheless, additional statistics (Percentile and Grade Equivalent Tables) are included in Appendix A for those readers wanting more statistical data. Data in terms of NCE scores for the CAI/CMS groups and the regular instruction groups are presented by grade in Table 6, and were included in the discussion above. A further indication of overall program effect is possible by examining average NCE growth by group across grade level, as presented in Table 7. At the primary level (grades 1-3) the average NCE change across grade levels was 9.9 NCEs for the CAI/CMS group and 5.3 for the regular group. Grade 1 of the regular CLEAR group is included in these data. At the intermediate level



Table 5
Number of Pupils Served, Averages for Days of Enrollment, Days of Attendance,
Daily Membership and Hours of Instruction Per Week, and
Pupils Attending 80% of Days Reported by Grade Level
for Pupils Receiving Reading Instruction with Computers (CAI/CMS Groups)
and Pupils Receiving Reading Instruction without Computers (Regular Group)
1987-88

						verage		Pupils
Grade	Pupils Served	Girls	Boys	Days of Enrollment	Days of Attendance	Daily Membership	Hrs. of Inst. Per Pupil Per Week	Attending 80% of Days
AI/CMS								
1	1	0	1	95.0	95,0	0.8	3.8	. 0
2	71	29	42	106.7	100.0	61.6	3.9	54
3	230	84	146	101.7	93.0	190.1	3.8	156
4	366	. 165	201	102.6	93.1	305.3	3.7	237
5	275	137	138	103.0	92.6	230.4	3.6	174
6 .	156	80	76	103.6	91.8	131.4	3.6	99
7	29	13	16	108.8	95.1	25.6	3.6	18
8	2	0	2	47.0	33.5	0.8	3.7	0
Cotal	1130	508	622	103.0	93.2	946.0	3,7	738
Regular Gr	oup						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
1	53	21	32	93.6	86.4	40.3	3.6	34
2	1145	482	663	103.7	95.1	965.1	3.8	766
3	537	226	311	102.9	95.4	449.4	3.8	361
4	248	120	128	103.6	95.6	209.0	3.8	173
5	141	69	72	101.0	92.7	115.8	3.7	95
6	662	292	370	106.8	94.2	575.1	3.5	432
7	153	79	74	107.8	97.2	134.1	3.6	104
8	40	15	25	112.3	99.4	36.5	3.7	29
Cotal	2979	1304	1675	104.3	94.9	2525,1	3,7	1994

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Table 6
Minimum, Maximum, Average, and Standard Deviation of the Pretest
and Posttest Normal Curve Equivalents (NCE) Reported by Grade Level
for Pupils Receiving Reading Instruction with Computers (CAI/CMS Groups)
and Pupils Receiving Reading Instruction without Computers (Regular Group)
1987-88

			Pret	est			Post	test		
· Grade	Number of Pupil's	Min.	Max.	Average NCE	Standard Deviation	Min:	′ Max.	Average NCE	Standard Deviation	Average Change
CAI/CMS										
1	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	48	23.0	48.0	27.8	7.3	1.0	72.0	30.1	16.8	2.3
3	139	1.0	54.0	25.8	12.4	1.0	75.0	38.4	11.5	12.6
4	221 ·	14.0	88.0	33.6	14.0	3.0	64.0	38.6	12.9	5.0
5	168	18.0	66.0	33.0	11.3	10.0	66.0	35.6	9.7	2.6
6	85	1.0	58.0	28.5	12.3	2.0	59.0	32.3	9.4	3.8
7	18	15.0	54.0	35.3	11.8	11.0	62.0	39.4	15.0	4.1
8 ′	0	NA	· NA	' NA	NA	NA	NA	NA	NA	NA.
rotal	·679· · · ·		x x	30.9	12.8			36.5	12.2	5.6
Regular Gr	oup									
1	24	18.0	94.0	47.2	18.4	6.0	67.0	43.5	14.0	- 3.7
2	564	23.0	61.0	33.3	9.7	1.0	91.0	34.5	16.6	1.2
3	323	1.0	78.0	27.3	14.3	1.0	79.0	40.3	11.4	13.0
4	154	14.0	64.0	29.2	13.3	3.0	71.0	40.6	11.2	11.4
5	50	18.0	65.0	34.2	10.6	10.0	66.0	38.3	10.8	4.1
6	394	1.0	65.0	28.8	14.4	2.0	79.0	36.6	10.3	7.9
7	94	15.0	52.0	31.0	10.7	11.0	64.0	39.2	10.6	8.2
8	27	11.0	50.0	30.5	12.3	16.0	55.0	34.7	9.2	4.2
lotal	1670			30.8	12.9			37.3	13.3	6.5

E 6-Q

Table 7

Minimum, Maximum, and Average of the Pretest and Posttest Normal Curve Equivalents (NCE) Reported Across Primary, Intermediate, and Middle School Grade Levels for Pupils in CAI/CMS Projects and Pupils in Regular Instruction Groups 1987-88

Grade and	,		Pretest			Postte	st	
Treatment Group	Rumber of Pupils	Min.	Max.	Average NCE	Min.	Max.	Average NCE	, Average Change
rimary (Grades 1-3)								
CAI/CMS .	187	1.0	54.0	26.3	1.0	75.0	36.2	9.9
Regular Group	911	1.0	94.0	31.5	1.0	91.0	36.8	5.3
Totals	1098			30.7			36,7	· 6.1
ntermediate (Grades 4	<u>-5)</u>							
CAI/CMS	389	14.0	88.0	33.4	3.0	66.0	37.3	4.0
Regular Group	244	14.0	65.0	31.0	3.0	71.0	39.8	8.7
Totals	633			32.5		-	38.3	5.8
iddle Grades (6-8)								
CAI/CMS	103	1.0	58.0	29.7	2.0	62.0	33.5	3.8
Regular Group	515	1.0	65.0	29.3	2.0	79.0	37.0	7.7
Totals	618			29,3			36.4	7.1

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Table 8

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Normal Curve Equivalent (NCE) Score Improvement Categories By Grade for Pupils Receiving Reading Instruction with Computers (CAI/CMS Group) and Pupils Receiving Instruction Without Computers (Regular Group) 1987-88

Property of the control of the contr	Pupils	No Improvement	Some Improvement	Substantial Improvement
	in Sample	(0.0 or less)	(0.1 to 6.9)	(7.0 or more)
CAI/CMS Group				•
Grade 1				
Number of Pupils	0	NA	NA	NA.
% of Pupils	U	MU	IVA	NA .
				,
Grade 2				•
Number of Pupils	48	19	9	20
Z of Pupils	7.1%	39.6%	18.8%	41.7%
Grade 3	139	21	07	
Number of Pupils 7 of Pupils	20.5%	21 15.1%	26 18.7%	92 66•2%
or rabits	20.5%	13.1%	10.76	00.2%
Grade 4				
Number of Pupils	221	77	45	99
% of Pupils	32.5%	34.8%	20.4%	44.8%
Grade 5				
Number of Pupils	168	64	43	61
% of Pupils	24.7%	38.1%	25.6%	36.3%
² Grade 6				
Number of Pupils	8 5	31	25	29
% of Pupils	12.5%	36.5%	29.4%	34.1%
•				
Grade 7				
Number of Pupils	18	6	3	9
% of Pupils	2.7%	33.3%	16.7%	50.0%
Grade 8				•
Number of Pupils	0	NA	NA	NA
% of Pupils	· ·	WA	W	WA
CAI/CMS Group Totals			والمريان وبراغيان أحارا الأساء الماعظة الماعظة الماعظة	
Number of Pupils	679	218	151	310
% of Pupils	100%	32.1%	22.2%	45.7%
CDIC'			A W	
ERIC CS/P502/RPTFCLE88		٠	27	,

Table 8 (Continued)

Normal Curve Equivalent (NCE) Score Improvement Categories By Grade for Pupils Receiving Reading Instruction with Computers (CAI/CMS Group) and Pupils Receiving Instruction Without Computers (Regular Group) 1987-88

Table 4	Pupils in Sample	No Improvement (0.0 or less)		Substantial Improvemen (7.0 or more)
Regular Group	III DUMPIC	(0.0 01 1089)	(0.1 20 0.7)	(7.0 or more)
95-06 (A. A. C.				
Grade 1		10	•	_
Number of Pupils	24 1.4%	. 12	6	6
% of Pupils	1.4%	50.0%	25.0%	25.0%
Grade 2				•
Number of Pupils	564	265	78	221
% of Pupils	33.8%	47.0%	13.8%	39.2%
Grade 3				• ,
Number of Pupils	323	55	61	207
% of Pupils	19.3%	17.0%	18.9%	64.1%
Grade 4				
Number of Pupils	154	39	26	89
% of Pupils	9.2%	25.3%	16.9%	57.8%
Grade 5				
Number of Pupils	90	38	16	36
% of Pupils	5.4%	42.2%	17.8%	40.0%
Grade 6				,
Number of Pupils	394	125	86	183
% of Pupils	23.6%	31.7%	21.8%	46.4%
Grade 7				•
Number of Pupils	94	19	23	52
% of Pupils	5.6%	20.2%	24.5%	55.3%
Grade 8				X s
Number of Pupils	27	11	7	9 .
% of Pupils	1.6%	40.7%	25.9%	33.3%
<u></u>				
Regular Group Totals				
Number of Pupils	1670	564	303	803
% of Pupils	100%	33.8%	18.1%	48.1%
ERIC CS/P502/RPTFCLE88		. 28.		

Táble 9

Normal Curve Equivalent (NCE) Score Improvement Categories Across Primary, Intermediate, and Middle School Grade Levels for Pupils Receiving Reading Instruction with Computers (CAI/CMS Group) and Pupils Receiving Instruction Without Computers (Regular Group) 1987-88

Primary (Grades 1-3) 1098 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Intermediate (Grades 4-5) 633 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Z of Pupils Middle (Grades 6-8) 618 CAI/CMS Number of Pupils Z of Pupils Middle (Grades 6-8) 618 CAI/CMS Number of Pupils Z of Pupils Regular Group	Sample 187 17.0% 911 83.0% 389 61.5%	40 21.4% 332 36.4%	(0.1 to 6.9) 35 18.7% 145 15.9%	112 59.9% 434 47.6%
CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Intermediate (Grades 4-5) 633 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils A of Pupils CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Regular Group Number of Pupils Regular Group Number of Pupils	17.0% 911 83.0% 389 61.5%	21.4% 332 36.4%	18.7% 145 15.9%	59.9% 434 47.6%
Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Intermediate (Grades 4-5) 633 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils A of Pupils Z of Pupils A of Pupils Regular Group Number of Pupils Z of Pupils Regular Group Number of Pupils Regular Group Number of Pupils	17.0% 911 83.0% 389 61.5%	21.4% 332 36.4%	18.7% 145 15.9%	59.9% 434 47.6%
Regular Group Number of Pupils Z of Pupils Intermediate (Grades 4-5) 633 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Middle (Grades 6-8) 618 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Regular Group Number of Pupils	911 83.0% 389 61.5%	332 36.4%	18.7% 145 15.9%	59•9% 434 47•6%
Number of Pupils Z of Pupils Z of Pupils Intermediate (Grades 4-5) 633 CAI/CMS Number of Pupils Z of Pupils Z of Pupils Z of Pupils Z of Pupils Middle (Grades 6-8) 618 CAI/CMS Number of Pupils Z of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils	83.0% 389 61.5%	36.4% 141	15•9% 88	47.6%
Number of Pupils Z of Pupils Intermediate (Grades 4-5) 633 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Middle (Grades 6-8) 618 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils	83.0% 389 61.5%	36.4% 141	15•9% 88	47.6% 160
Intermediate (Grades 4-5) 633 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Hiddle (Grades 6-8) 618 CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils	389 61.5% 244	36.4% 141	15•9% 88	47.6% 160
CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Middle (Grades 6-8) CAI/CMS Number of Pupils Z of Pupils Z of Pupils Regular Group Number of Pupils	61.5% 244			
Number of Pupils Z of Pupils Regular Group Number of Pupils Z of Pupils Middle (Grades 6-8) CAI/CMS Number of Pupils Z of Pupils Z of Pupils Regular Group Number of Pupils	61.5% 244			
Z of Pupils Regular Group Number of Pupils Z of Pupils Middle (Grades 6-8) CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils	61.5% 244			
Number of Pupils Z of Pupils Middle (Grades 6-8) CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils				
Number of Pupils Z of Pupils Middle (Grades 6-8) CAI/CMS Number of Pupils Z of Pupils Regular Group Number of Pupils				
Niddle (Grades 6-8) 618 CAI/CMS Number of Pupils 1 Z of Pupils Regular Group Number of Pupils	20 59	77	42	125
CAI/CMS Number of Pupils I of Pupils Regular Group Number of Pupils	JO. JA	31.6%	17.2%	51.2%
Number of Pupils Z of Pupils Regular Group Number of Pupils				
Regular Group Number of Pupils	103	37	28	38
Number of Pupils 5	16.7%	35.9%	27.2%	36.9%
% of Pupils	515	155	116	244
	83.3%	30.1%	22.5%	47.4%
Totals for Grades 1-8 2349				
CAI/CMS				•
· • · · ·	679	218	151	310
% of Pupils	28.9%	32.1%	22.2%	45.7%
Regular Group				
, , ,	670	564	303	803
Pupils	71.1%	33.8%	18.1%	48.1%
LKIC CS/P502/RPTFCLE88		29		

(grades 4-5), the average NCE change across grade level was 8.7 NCEs for the regular group and 4.0 for the CAI/CMS group. At the middle school level the average NCE change was 7.7 for the regular group and 3.8 for the CAI/CMS group.

Tables 8 and 9 compare the CAI/CMS and regular groups in regard to numbers and percents of pupils who evidenced no improvement, some improvement, and substantial improvement, as previously defined. The data indicate that 66.2% of the regular group pupils made positive gains in NCE scores, while 67.9% of CAI/CMS groups did so. Positive gains in the regular group included 48.1% who made substantial improvement and 18.1% who made some improvement. Positive gains in the CAI/CMS group included 45.7% making substantial improvement, and 22.2% making some improvement.

The piloting of the CLEAR-Primary whole language approach made a further comparison of NCEs by treatment group desirable. This comparison focused on grade 2 because it was the one grade served by all 31 of the teachers in the pilot group. Three distinct treatments were possible at grade 2: regular treatment, pilot whole language treatment, and CAI/CMS treatment. Comparisons of average NCE scores for the three treatment groups are presented in Table 10.

Table 10

Average and Average Change of the Pretest and Posttest
Normal Curve Equivalents (NCE) in Second Grade
for Pupils Receiving Reading Instruction in the CLEAR
Regular Treatment Group, The Whole Language Approach
Pilot Treatment Group, and the Computer Assisted Instruction/
Computer Management System (CAI/CMS) Treatment Group
1987-88

Treatment		Number	Average NCE					
Group	Grade	of Pupils	Pretest	Posttest	Change			
Regular	2	156	32.8	34.7	1.9			
Whole Language	2	408	33.5	3,4.4	0.9			
CAI/CMS	2	48	27.8	30.1	2.3			
Total		612	32.9	34.2	1.3			

As can be seen in Table 10, the CAI/CMS group had the largest average NCE change at second grade with 2.3 NCEs (0.4 average NCE per month), the regular treatment group had an average change of 1.9 NCEs (0.3 average NCE per month), and the whole language group had the lowest overall NCE change with 0.9 NCE (0.1 average NCE per month). The total NCE change for second grade was 1.3 (0.2 NCE per month).

A comparison was also made using teachers' ratings of individual progress of second grade pupils in the evaluation sample as they exited the program. The percent of sample pupils rated in the highest of four progress categories was as follows for each of the treatment groups: CAI/CMS treatment 68.8%, regular treatment 56.4%, and whole language treatment 40.4%. It is notable that the direction of the comparison using subjective teacher ratings parallels the comparison derived from standardized test scores.



ECIA-Chapter 1 Teacher Census Information

Teacher Census Forms were completed in September 1987 by the 108 teacher assigned to ECIA Chapter 1 CLEAR units. In terms of full-time equivalence (FTE) the program was staffed with 92.5 teachers. The following statistics are based on FTE. All teachers had at least a bachelor's degree and 49 teachers (53.0%) had a master's degree. The number of teachers having certification in reading as a subject area was 48, or 51.9% of the program's teachers. The average number of years of teaching experience was 21.4 overall, and 9.7 in Title I/Chapter 1 teaching experience. Of the 92.5 program teachers, 87.5 had assignments in public schools, and five in non-public units. Eighteen and one-half full-time equivalency teachers in public schools were assigned to CAI/CMS units and 69 were assigned to the regular program. All 108 program teachers were full-time employees of the Columbus Public Schools with 31 serving two projects (CAI/CMS reading and CAI/CMS mathematics).

Parent Involvement Information

The Parent Involvement Form provided information from teachers at the end of each month (September 1987 through June 1988) concerning program activities involving parents who had children in the program. These data are presented by month in Table 11. Because teachers in the CAI/CMS projects served part time in the CLEAR program and part time in the MIC program, parent involvement data from this subset of CLEAR teachers had to be prorated between their two programs. This accounts for the statistical oddity of half a parent occasionally encountered in Table 11. The month showing the most parent involvement was October with a total of 1385 contacts in 879.0 parent hours. Individual parent conferences accounted for more parent contacts (3637.5) than any other activity. Yearly totals for the other activities were: group meetings with parents, 1645 contacts in 1806.9 parent hours; parent classroom visits or field trips, 884.5 contacts in 573.7 parent hours; planning, operation, and/or evaluation, 285 contacts in 186.0 parent hours; and visits by teacher to parents' homes, 23 contacts in 17.3 parent hours. The yearly totals for all five types of parent activity were 6475 parent contacts in 3981.5 parent hours. Since a parent could have involvement in more than one contact, a yearly unduplicated count was also obtained from program teachers in June. This count indicated a total of 2492 parents of program pupils had one or more contacts with the program during the school year.

A separate end-of-the year teacher survey was used to determine program involvement by non-program parents. This survey indicated that an additional 852.5 parents who did not have children in the program were involved in 1246.5 contacts with the program in 933.0 parent hours over the school year.



Table 11 Number of Parents Involved and Total Parent Hours Reported by Month 1987-88

• .		Months							Totals			
Items	cems	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	for Year
	cents involved in the											
	anning, operation and/											•
or uni	evaluation of your									•		
	Number of Parents	134.0	20.0	8.5	10.0	33.0	14.5	5.5	9.0	23.5	27.0	285.0
	Cotal Parent Hours	11.8	9.5	9.7	15.8	26.0	24.7	15.5	9.0	21.8	42.2	186.0
	oup meetings for						•					
•	Number of Parents	260.0	506.0	208.5	83.0	69.0	93.5	177.5	17.5	155.5	74.5	1645.0
I	Cotal Parent Hours	283.8	555.0	219.7	117.5	56.3	73.3	222.0	21.3	192.5	65.5	1806
• Ind	lividual parent											
	nferences.											
	lumber of Parents	308.0	494.5	827.5	181.0	222.0	576.5	252.5	237.0	267.0	271.5	3637。
1	Cotal Parent Hours	98.7	153.2	334.3	77.8	81.2	245.7	100.7	93.5	103.5	109.0	1397.
	ental classroom											
	sits or field trips		242.2					_				
	Number of Parents	57.0	363.0	42.5	76.5	26.5	33.0	97.0	33.0	65.5	90.5	884.
1	Cotal Parent Hours	16.5	160.0	30.5	51.2	19.0	26.3	72.7	16.8	64.2	116.5	573.
	its by teacher											
	parents homes	_										
	lumber of Parents	.5	1.5	1.0	1.0	3.0	1.5	1.5	6.0	3.0	4.0	23.
1	Cotal Parent Hours	0.0	1.3	0.5	1.0	3.5	0.7	8.0	4.2	2.0	3.3	17.3
Tot	al Parent Contacts	759.5	1385.0	1088.0	351.5	353.5	719.0	534.0	302.5	514.5	467.5	6475.0
Tot	al Parent Hours	410.8	879.0	594.7	263.3	186.0	370.7	411.7	144.8	384.0	336.5	3981

Inservice Evaluation Information

The General Inservice Evaluation Form was completed by program teachers for 23 of the 24 inservice sessions which occurred from September 1987 through May 1988. Participants were asked after each session to rate four statements about the inservice on a scale of one to five:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Undecided
- 4 = Agree
- 5 = Strongly Agree

Generally, workshop participants rated Chapter ! inservice meetings positively. Overall ratings by participants are summarized in Table 12.

Table 12
Average Response and Percent of Response
For Reactions to Inservice Statements

						Perc	ent	
	Statements	Number Responding	Average Response	SA (5)	A (4)	U (3)	D (2)	SD (1)
1.	I think this was a very worthwhile meeting.	711	4•6	62.7	32.8	2.7	1.0	0.8
2.	The information presented in the meeting will assist me in my program.	711	°. °•6	64.3	31.5	3.1	0.4	0.7
3.	There was time to ask questions pertaining to the presentation.	707	4.5	58.7	33.9	4.1	2.0	1.3
4.	Questions were answered adequately.	695	4.5	58.4	35.4	2.9	2.2	1.2

Open-ended comments on the General Inservice Evaluation Form asked participants to comment about the most and least valuable parts of the meetings, and about information they would like to have covered in future meetings. Only those open-ended comments which were made by five or more participants at any single session will be summarized here. However, the evaluation reports on individual sessions have been forwarded to the Department of Federal and State Programs and are available on request.

In regard to the most valuable parts of the inservice meetings, the following items were notable from the regular CLEAR teachers' comments: publishers and vendors' displays and the Chapter 1 mini-session (coordinator's meeting) at the Opening Conference. Among the CLEAR-Primary pilot teachers, items receiving five or more comments were the following: David Booth's presentation and demonstration of Holt materials; lesson demonstrations; the sessions dealing with analysis, interpreting, and sharing of Running Records; Mary Fried's presentation; information about planning thematic units; looking at Big Books; information, demonstrations, and ideas about the writing process; and information to close the school year.

The regular CLEAR-Elementary teachers frequently mentioned the following items as being the most valuable parts of the meetings: David Booth's presentation; certification information about new changes in law, rules and regulations; slide presentation about reading in New Zealand; observation of lesson behind-the-glass; pop-up book demonstration; and the book review session.

Among the CAI/CMS middle school teachers and the CAI/CMS elementary teachers and aides the following items received five or more comments regarding most valuable parts of the meetings: information given during the Prescription Learning Computer Training session; mini-sessions (Chapter 1 and Evaluation) at the Opening Conference session; Barbara Tootle's presentation on creativity; sharing process in the Positive Communication session; all, everything, content, the presenter and presentation at the Teacher Burnout session; and the sharing of ideas at the Reading and Writing Connection session.

The question regarding the least valuable parts of meetings elicited five or more comments about the keynote speaker from the regular CLEAR and the CLEAR-CAI/CMS teachers. An example follows: The value of this opening session is measured by the information and inspiration given in the keynote address - this topic and presentation was neither. Non-answers given by CLEAR-CAI/CMS elementary teachers and aides of "none, nothing, all was valuable or liked it all" were frequently cited.

The question dealing with suggestions for future meetings had no items with five or more comments.

Process Evaluation Information

In addition to the types of data specified in the evaluation design, process evaluation data were obtained in a series of on-site visits to CLEAR-Primary units and by means of a mailed questionnaire to the CAI/CMS projects. Of the 57 (52 public and five non-public) teaching units in the regular 1987-88 elementary CLEAR-program, 31 primary units piloted a whole language approach to reading. Of these, 16 (51.6%) were randomly selected to be visited. This year visits were an outgrowth of the Compensatory Program Review study made last year which reviewed how "effectively we are using state and federal dollars designated specifically to help disadvantaged children." In addition, the process evaluation served to increase the program evaluator's familiarity with the operation of the program by on-site observation. visits were conducted by the program evaluator during the period from March 14 to March 23, 1988. The purpose of the visits was to determine to what degree guidelines for whole-language techniques, management, and environment were implemented in these units.



For these visits, a locally developed instrument, Evaluator's Visitation Log, was constructed to gather information about 30 artifacts which were indicative of an implemented program. These items were categorized into the following seven major facets: Literate Environment for Pupils, Administrative Procedures and/or Record Keeping, Materials and Facilities, Lesson Management, Instructional Efficiency and Monitoring, Classroom Climate, and Parent Involvement.

The evaluator was to look at each item listed under each major facet of implementation and rate it on a scale where the descriptor "No Evidence" was rated as 0, "Some Evidence" was rated as 1, and "Compelling Evidence" was rated as 2. To determine which response choice to make, the observer was to look for a predetermined kind of evidence which was indicated in parentheses next to the item. If the preselected evidence were not found, then the observer was instructed to look for one of the other kinds of evidence. Evidence was of three kinds: Physical Evidence (PE), Observational Evidence (OE), and Testimonial Evidence (TE).

As can be seen from Table 13 below, it is apparent that implementation was being accomplished at the time of the visits. The lowest Overall Average Rating was 1.9 which approached the maximum rating of 2.0.

Table 13
Overall Average Ratings for the Facets
of the Primary Whole Language Subset
of the Regular CLEAR Program

Facets	Overall Average Rating Across Units/Across Items
Literate Environment for Pupils Administrative Procedures and/	1.9
or Record Keeping	1.9
Materials and Facilities	*
Lesson Management	*
Instructional Efficiency and	
Monitoring	2.0
Classroom Climate	1.9
Parent Involvement	2.0

^{*}It should be noted that all items in the facets, "Materials and Facilities" and "Lesson Management," may not have been rated; therefore, an Overall Average Rating could not be given those facets.



The only facets not having an Overall Average Rating were "Materials and Facilities" and "Lesson Management" because some items were discretionary and dependent upon the program teacher's lesson plans. Consequently, all items under these facets were not rated. To meet the set criterion for "Lesson Management," units had to display at least two of the eight activities listed. The actual number the observer rated was 2-6 items in every unit. The average number for the 16 units was 4. Therefore, all units met criterion. For two of the items under the facet, "Materials and Facilities," teachers could use either Holt materials and/or supplemental materials. There was no Overall Average Rating given this facet because all three items were not always rated.

A specific concern of teachers involved Item 5 of the "Administration Procedures and/or Record Keeping" facet. This item dealt with Running Records which were to be used as a major diagnostic tool of the whole language approach. To assist teachers in making the transition to the whole language approach, Department of Federal and State Programs personnel organized and facilitated 12 inservice meetings. Many of these meetings presented the opportunity for program teachers to discuss and to practice the administration of Running Records. Although teachers indicated satisfaction with the pilot program and with the inservice sessions, they expressed uncertainty about how to use the information gleaned from the Running Records in terms of instruction.

All teachers in the CAI/CMS portions of the CLEAR program completed a questionnaire which was distributed in February 1988. The instrument was informally referred to as a computer census form. It had two purposes: to delineate and describe the various computer systems used in elementary and middle school CAI/CMS labs, and to determine the percent of program time pupils worked at the computer in the different computer systems.

Twenty-two elementary labs had Apple microcomputers, and were served by Prescription Learning Company. Prescription Learning (PL) elementary labs are equipped with six Apple microcomputers, one of which is used for the teacher's in-lab management system and for hands-on testing. The PL elementary labs are all used a half day in the CLEAR program, and a half day in the Mathematics Improvement Component (MIC).

Two elementary labs had Tandy TRS-80 color microcomputers, serviced by the B&B Company. Each of these labs was equipped with four computers for pupil use but did not have a command module/teacher management system. These labs served pupils in the CLEAR program only.

Two labs in one elementary school were served by Computer Curriculum Corporation (CCC). A central CCC microhost was hooked up to the individual microcomuputers in the two labs. Each lab had a total of eight microcomputers for pupil use: four Apple and four Atari. In addition, each lab had a fifth Atari which was used as a teacher management system. Pupils in both the CLEAR program and the MIC program were served in these labs.

One elementary lab used the Sperry Network System, and was serviced by Wasatch. The Wasatch lab networked four Sperry microcomputers and one AT&T microcomputer as student stations, plus a fifth Sperry microcomputer which was limited to teacher use as a command module. The elementary Wasatch lab served pupils in the CLEAR program only.



The middle school CAI/CMS labs consisted of six Dolphin labs and one Wasatch lab. Dolphin labs were serviced by Houghton-Mifflin Company. A Dolphin lab consisted of a Dolphin minicomputer with seven student terminals, plus a command module terminal which can also be used as another student station. The one Wasatch lab networked four Sperry microcomputers and one AT&T microcomputer as student stations, plus an additional Sperry microcomputer which was limited to teacher use as a command module. All seven middle school CAI/CMS labs served pupils in both the CLEAR program and the MIC program.

The average time pupils worked at a computer station, compared with average pupil time in a program, is summarized in Table 14 by computer system and program. Time is reported as average minutes per week.

Table 14

Average Pupil Time at Computer Compared to Average Pupil Program Time in Chapter 1 CLEAR Labs Using Computer-Assisted Instruction

	•	Avérage Min Per Weel			
Type of Lab	Number of Labs	At Computer	In Program	Percent Computer Time	
Elementary					
PL	22	90.8	220.2	41.2	
TRS-80	2	100.0	237.5	42.1	
CCC	2	187.5	225.0	83.3	
Wasatch	1	150.0	216.7	69.2	
Total Elem.	27	100.8	221.7	45.5	
Middle School					
Dolphin	6	97.1	211.7	45.9	
Wasatch	1	150.0	200.0	75.0	
Total.				فطيرته والبادرا الموطا الكاسات	
Middle School	7	104.6	210.0	49.8	
Program					
Totals	34	101.6	219.3	46.3	

Table 14 indicates that, overall, pupils in CLEAR CAI/CMS labs received a bit less than half (between 40 and 50 percent) of their instruction at the computer stations. Previous observations and interviews indicate that a variety of individual and group teacher directed activities would account for the remaining program time. It is notable, however, that average pupil computer time was considerably greater in two of the computer systems: CCC and Wasatch. The average percent computer time in the two CCC labs ws 83.3%. The average percent computer time in the Wasatch labs was 69.2% in the one elementary lab, and 75.0% in the one middle school lab.

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Summary

A total of 4109 pupils was served by the CLEAR program during the 1987-88 school year. Average daily membership in the overall program was 3471.1.

The evaluation sample consisted of 2349 pupils who met the program attendance criterion, were English-speaking and received both the pretest and posttest. Analysis of pretest-posttest achievement data indicated an overall average gain of 6.3 NCE points for the 6.2 month treatment period, or 1.0 NCE point per month of measurable instruction. This met the performance objective of an average growth of 1.0 NCE point per month for the overall program. When data were analyzed by grade, it was noted that the evaluation criterion was met or exceeded in grade 3 (2.1 NCEs per month), grades 4 and 7 (each 1.2 NCE per month), and in grade 6 (1.1 NCE per month). The smallest NCE gains per month occurred at grades 2, 5, and 8 where the gain was less than or equal to one-half NCE point. Grade 1 regressed -3.7 NCE points. It was evident that there were some problems meeting the program's objective of 1.0 NCE average gain per month at specific grade levels, which depressed the NCE point change for the overall program.

The 1987-88 CLEAR program included two projects utilizing Computer Assisted Instruction/Computer Management System (CAI/CMS). In 25 elementary schools 943 pupils were served in CAI/CMS labs by a full-time equivalency of 15 teachers. In middle school CAI/CMS labs 187 pupils in seven schools were served by a full-time equivalency of 3.5 teachers. Evaluation sample sizes were 576 in elementary school and 103 in middle school.

Comparing the data from the CAI/CMS component and from the regular CLEAR component, the regular CLEAR component met the program objective of an average of 1.0 NCE for every month of instruction while the CAI/CMS component had an average of 0.9 NCE point for every month of instruction. Grade 3 in both components had the greatest positive change in NCEs: regular 13.0 NCEs overall or 2.1 per month, and CAI/CMS 12.6 NCEs overall or 2.0 per month. Other grades which met criterion in the regular CLEAR component were grade 4 (11.4 NCEs overall, 1.9 per month), grade 6 (7.9 NCEs overall, 1.3 per month), and grade 7 (8.2 NCEs overall, 1.3 per month). In the CAI/CMS program only grade 3 met criterion. The overall average change for grades 2-7 in the CAI/CMS program was 5.6 NCE points (grades 1 and 8 were not in the sample); in regular CLEAR (grades 1-8) the overall average change was 6.5 NCE points.

An additional comparison of treatment groups was made at second grade, where three distinct treatments were possible. The average changes in NCE scores for the three treatment groups were as follows: CAI/CMS group 2.3 NCEs (0.4 NCE per month), regular treatment group 1.9 NCEs (0.3 NCE per month), and whole language pilot group 0.9 NCEs (0.1 NCE per month). The overall NCE change for second grade was 1.3 NCEs (0.2 NCE per month).

As already noted, however, NCE scores are based on percentiles, which compare the pupil's performance in relation to the general population. Even a small gain in percentile or NCE score indicates that a pupil has progressed over the school year at a somewhat greater rate than would be expected from the pupil's original position in terms of the general population.



The total number of program teachers was 108.0. The total number of full-time equivalency teachers (FTE) was 92.5. Statistics were based on FTE The number of teachers having master's degrees was 49, or 53.0% of the teaching staff. The number of teachers having reading certification was 48, or 51.9% of the program teachers. CLEAR teachers reported an average of 9.7 years of Title I/Chapter 1 teaching experience, and an average of 21.4 years of overall teaching experience.

.CLEAR teachers reported a total of 6475 contacts with 2492 parents of program pupils involving 3981.5 parent hours. An additional 1246.5 contacts were made with 852.5 parents who did not have children in the program involving 933.0 parent hours.

Positive ratings were given by CLEAR teachers to the Chapter I inservice sessions in which they participated. Inservice features receiving positive comments by program teachers included receiving information, sharing with peers, displays of new materials, presenters' presentations, demonstrations of how to use materials, and observations of lessons behind-the-glass. The only session with an item receiving five or more negative comments was the Opening Conference.

Process evaluation was conducted in a series of on-site observations to the CLEAR-Primary pilot whole language subset of the regular CLEAR-Elementary program. On-site observations indicated strong evidence that the program was being implemented at the time of the visits. Program teachers expressed appreciation for the 12 inservice sessions held this year dealing with whole language techniques, management, and environment. However, one aspect of their record-keeping responsibilities concerned them — maintaining and using the results from their reading Running Records (the major pilot program diagnostic technique). Of the five facets of program implementation that could be given an overall average rating, three had an average rating of 1.9 and two had an average rating of 2.0 on a scale where the highest possible rating was 2.0. Several relatively minor problems were reported to the appropriate Department of Federal and State Programs (DFSP) personnel.

A survey of CLEAR CAI/CMS teachers indicated that a variety of computer systems was used in the CAI/CMS segments of the program. The most prevalent computer systems were Prescription Learning (at the elementary level) and Dolphin (at middle school level). For the most part, pupils worked at a computer station between 40 and 50 percent of their program instructonal time. The percent of pupil computer time was considerably higher in CCC labs (83.3%), and in Wasatch labs (69.2% in elementary and 75.0% in middle school).

The findings above indicate that the 1987-88 CLEAR program attained the program performance objective in terms of NCE points. The overall average change (Table 3) was 6.3 NCE points or 1.0 NCE point per month. Grades making the most progress in terms of NCE points were grades 3, 4, 6, and 7. Grades making the least progress in terms of NCE points were grades 1, 2, 5, and 8. Comparisons were also made in regard to treatment group (Table 6). The overall gain for the regular group was 6.5 NCE points (1.0 per month), hile the overall gain in the CAI/CMS group 5.6 NCE points (0.9 per month). Additional comparisons were made among three treatment groups in grade 2. Gains in NCE scores for the three second grade treatment groups for the year were as follows: CAI/CMS treatment group 2.3, regular treatment group 1.9, and whole larguage pilot group 0.9.



Given the overall findings for the program it is interesting to note how teachers rated their pupils progress as students exited the program. When teachers were asked their opinion about whether their pupils had progressed while in the CLEAR program, program teachers felt that 81.0% of their pupils had made much or some progress. Only 19.0% of their pupils were rated as having made little or no progress in CLEAR.

Recommendations

It is recommended that the CLEAR Program be continued during the 1988-89 school year, with special consideration given to the following:

- Selection procedures, instructional methods, class size, and test content should be reviewed to determine why pupils at some grade levels are not showing desired growth.
- 2. Despite poor test results in the first year for the group using a whole language approach, another year may be needed to build on the foundation of newly acquired teaching techniques. Process evaluation indicated that teachers were in fact trying to implement techniques learned from extensive inservice. It is hoped that familiarity with the techniques will strengthen the whole language approach in another year.
- 3. Extensive inservice training was given to pilot teachers during the 1987-88 school year on how to administer and maintain Running Records, which were envisioned to be the major diagnostic process for the whole language approach. Further work is needed to assist teachers in implementing the second half of the Running Records process -- how to use the results to plan instruction. Consideration should be given to reviewing the need for daily Running Records in light of the time involved in completing them and the actual instructional use of the information obtained from them.



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Appendix A
Additional Tables



Table 15 Minimum, Maximum, Median, and Standard Deviation of the Pretest and Posttest Percentiles Reported by Grade Level 1987-88

Pretest				Posttest				
Number of Pupils	Min.	Max.	Median Percentile	Standard Déviation	Min.	Max.	Median Percentile	Standard Deviation
24	7.0	98.0	45.0	26.9	2.0	79.0	41.0	19.7
612	10.0	71.0	23.0	14.0	1.0	97.0	22.0	21.8
462	1,0	91.0	16.0	13.3	1.0	92.0	31.0	16.2
375	4.0	96.0	21.0	18.2	1.0	84.0	32.0	16.4
258	7.0	78.0	22.5	15.3	3.0	78.0	26.0	14.6
479	1.0	77,0	18.0	14.3	1.0	91.0	23.0	14.7
112	5.0	57.0	22.0	13.6	3.0	74.0	31.5	16.8
27	3.0	50.0	21.0	14.G	5.0	60.0	22.0	13.7
	24 612 462 375 258 479	of Pubils Mine 24 7.0 612 10.0 462 1.0 375 4.0 258 7.0 479 1.0 112 5.0	of Pupils Min. Max. 24 7.0 98.0 612 10.0 71.0 462 1.0 91.0 375 4.0 96.0 258 7.0 78.0 479 1.0 77.0 112 5.0 57.0	Number of Pupils Min. Max. Median Percentile 24 7.0 98.0 45.0 612 10.0 71.0 23.0 462 1.0 91.0 16.0 375 4.0 96.0 21.0 258 7.0 78.0 22.5 479 1.0 77.0 18.0 112 5.0 57.0 22.0	Number of Puvils Min. Max. Median Percentile Standard Deviation 24 7.0 98.0 45.0 26.9 612 10.0 71.0 23.0 14.0 462 1.0 91.0 16.0 13.3 375 4.0 96.0 21.0 18.2 258 7.0 78.0 22.5 15.3 479 1.0 77.0 18.0 14.3 112 5.0 57.0 22.0 13.6	Number of Pupils Min. Max. Median Percentile Standard Deviation Min. 24 7.0 98.0 45.0 26.9 2.0 612 10.0 71.0 23.0 14.0 1.0 462 1.0 91.0 16.0 13.3 1.0 375 4.0 96.0 21.0 18.2 1.0 258 7.0 78.0 22.5 15.3 3.0 479 1.0 77.0 18.0 14.3 1.0 112 5.0 57.0 22.0 13.6 3.0	Number of Puvils Min. Max. Median Percentile Standard Deviation Min. Max. 24 7.0 98.0 45.0 26.9 2.0 79.0 612 10.0 71.0 23.0 14.0 1.0 97.0 462 1.0 91.0 16.0 13.3 1.0 92.0 375 4.0 96.0 21.0 18.2 1.0 84.0 258 7.0 78.0 22.5 15.3 3.0 78.0 479 1.0 77.0 18.0 14.3 1.0 91.0 112 5.0 57.0 22.0 13.6 3.0 74.0	Number of Pubils Min. Max. Median Percentile Standard Deviation Min. Max. Median Percentile 24 7.0 98.0 45.0 26.9 2.0 79.0 41.0 612 10.0 71.0 23.0 14.0 1.0 97.0 22.0 462 1.0 91.0 16.0 13.3 1.0 92.0 31.0 375 4.0 96.0 21.0 18.2 1.0 84.0 32.0 258 7.0 78.0 22.5 15.3 3.0 78.0 26.0 479 1.0 77.0 18.0 14.3 1.0 91.0 23.0 112 5.0 57.0 22.0 13.6 3.0 74.0 31.5

Table 16 Minimim, Maximum, Median, and Standard Deviation of the Pretest and Posttest Grade Equivalents Reported by Grade Level 1987-88

			· ·	Pretest			Posttest			
Grade	Number of Pupils	Min.	Max.	Median Grade Equivalent	Standard Deviation	Min.	Max.	Median Grade Equivalent	·Standard Deviation	
1	24	0.0	3.0	1.0	0.8	0.9	2.4	1.6	0.3	
2	612	1.4	2.6	1.6	0.2	1.3	5.7	2.0	0.7	
3	462	1.5	4.8	2.0	0.4	1.5	5.7	3.0	0.7	
4	375	2.0	8.7	2.7	0.9	1.7	7.8	4.0	0.9	
5	258	2.1	7.9	3.7	1.1	2.1	9.1	4.4	1.2	
6	479	2.1	9.3	4.1	1.3	2.1	10.6	4.8	1.3	
7	112	4.0	8.1	4.9	0.9	2.5	9.5	5.8	1.6	
8	27	4.0	8.1	5.3	1.2	4.0	9.3	6.1	1.3	

Table 17
Minimum, Maximum, Median, and Standard Deviation
of the Pretest and Posttest Percentiles Reported by Grade Level
for Pupils Receiving Reading Instruction with Computers (CAI/CMS Groups)
and Pupils Receiving Reading Instruction without Computers (Regular Group)
1987-88

•			Pretest			Posttest				
Grade	Number of Pupils	Min.	Max.	Median Percentile	Standard Deviation	Min.	Max.	Median Percentile	Standard Deviation	
AI/CMS									, ,	
1	0	NA	NA	NA	NA	NA	NA	NA	NA	
2	48	10.0	45.0	10.5	9.9	1.0	85.0	19.0	20.7	
3	139	1.0	58.0	13.0	11.3	1.0	88.0	27.0	16.0	
4	221	4.0	96.0	21.0	18.7	1.0	75.0	32.0	16.7	
5	168	7.0	78.0	24.0	15.4	3.0	78.0	26.0	13.5	
6	85	1.0	65.0	17.0	12.0	1.0	66.0	20.0	11.3	
7	18	5.0	57.0	25.5	15.9	3.0	71.0	38.5	20.9	
8	0	NA	NA	NA	NA	NA	NA	NA	NA	
Regular G	roup									
1	24	7.0	98.0	45.0	26.9	2.0	79.0	41.0	19.7	
2	564	10.0	71.0	23.0	14.1	1.0	97.0	22.0	21.9	
3	323	1.0	91.0	16.0	14.1	1.0	92.0	31.0	16.3	
4	154	4.0	75.0	18.0	16.9	1.0	84.0	33.0	15.9	
5	90	7.∙0	76.0	21.0	15.2	3.0	78.0	29.0	16.1	
6	394	1.0	77.0	18.0	14.7	1.0	91.0	25.0	15.1	
7	94	5.0	54.0	22.0	13.0	3.0	74.0	31.0	16.0	
8	27	3.0	50.0	21.0	14.0	5.0	60.0	22.0	13.7	



Table 18

Minimum, Maximum, Median, and Standard Deviation
of the Pretest and Posttest Grade Equivalents Reported by Grade Level
for Pupils Receiving Reading Instruction with Computers (CAI/CMS Groups)
and Pupils Receiving Reading Instruction without Computers (Regular Group)
1987-88

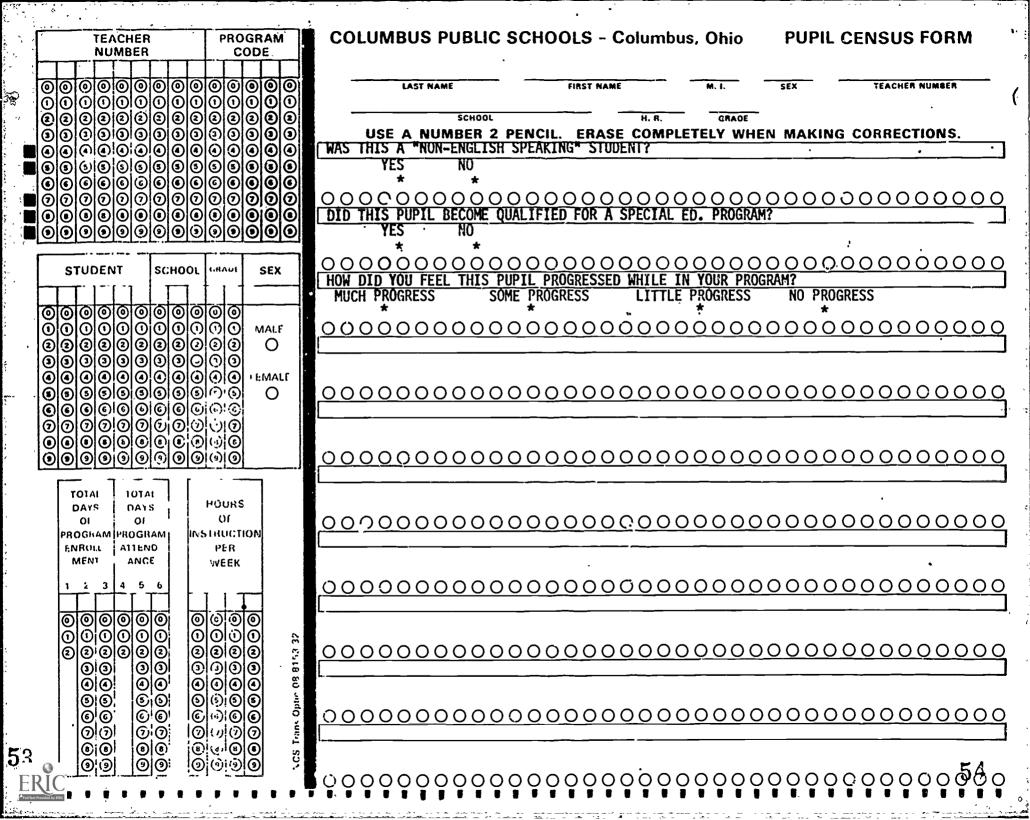
		Pretest						Posttest	البادة بالمالية
Grade	Number of Pupils	Min.	Max.	Median Grade Equivalents	Standard Deviation	Min.	Max.	Median Grade Equivalent	Standard Deviation
CAI/CMS									
1	0	NA	NA	NA	NA	NA	NA	NA	NA
2	48	1.4	2.0	1.4	0.2	1.3	4.1	2.0	0.6
3	139	1.5	3.3	1.9	0.4	1.5	5.4	2.8	0.7
4	221	2.0	8.7	2.7	0.9	1.7	6.0	3.9	1.0
5	168	2.1	7.9	3.8	1.1	2.1	9.1	4.4	1.1
6	85	2,1	8.3	4.0	1.1	2.1	8.7	4.6	1.0
7	18	4.0	8.1	5.1	1.2	2.5	9.3	6.3	2.0
8	0	NA	NA	NA	NA	NA	NA	NA	NA
Rogular G	roup						•		
1	24	0.0	3.C	1.0	0.8	0.9	2.4	1.6	0.3
2	364	1.4	2.6	1.6	0.2	1.3	5.7	2.0	0.7
3	323	1.5	4.3	2.0	0.5	1.5	5.7	3.0	0.7
4	154	2.0	5.0	2.5	0.8	1.7	7.8	4.0	0.9
5	90	2.1	7.4	3.6	1.1	2.1	9.1	4.6	1.3
6	394	2.1	9.3	4-1	1.3	2.1	10.9	4.9	1.3
7 .	94	4.0	7.7	4.9	0.8	2.5	9.5	5.7	1.5
8	2.7	4.0	5.1	5.3	1.2	4.0	9.3	6.1	1.3

Appendix B

Instruments



Ö



1987-88 Teacher Census Form

Name	Program Code
School Assignment	Cost Center
Circle only the program you are in:	
ECIA Chapter 1 Programs: (1) ADK (2) CLEAR-Elementary (1-5) (3) CLEAR-Elementary-CAI (4-5) (4) CLEAR-Middle School (6-8) (5) CLEAR-Middle-CAI (6-8) (6) MIC-Elementary-CAI (7) Pilot Math Program-Middle School anumber of Years of Teaching Experience	DPPF Programs: (6) SDR (9-10) (7) SDR-CAI (9-10) (8) HSCA Other (Specify)
bNumber of Years of Title I/Chapter 1 Teaching	Experience
^C I am certified in reading as indicated by the certificate.	subject area on my teaching
Yes No	
Highest College Degree Received	
Full-Time Employee or Part-Time Employee	• •

aTotal all years of experience, including those which may have occurred outside of the City of Columbus. Please include present school year.

- bl. For every full year taught in Title I/Chapter 1 give yourself 10 months experience. Please include the present school year.
 - 2. For every summer term you taught in Title I give yourself two months experience.
 - 3. Add in any miscellaneous experience, a part-year perhaps.
 - 4. Add the totals for 1, 2, and 3 and divide by 10. Place the resulting quotient in the blank for question b above.

Certification is defined as having one of the following:

- 1. reading specified on Bachelor degree.
- reading specialist certificate.
- 3. M.A. in reading as a subject.



CHAPTER 1 EVALUATION PARENT INVOLVEMENT SURVEY

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Name					
School			-		
For the mont	th of	SEPTEMBER, 1987		(A) Number of Parents	(B) Total Number of Hourg
		in the planning, op of your unit	eration,		
2. Group Mee	tings fo	or Parents			•
3. Individua	l Parent	Conferences			······································
4. Parental	Classro	om Visits or Field 1	rips .		-
5. Visits by	you co	Parent Homes			•
6. Totals					***************************************
7. Estimated	l Undupli	lcated Count of Pare	ents		
DIRECTIONS:		plete all information	•		s showing,
•	2. Plac	ce a parent in only	one activi	ty for any o	ne meeting.
	hour 3 ho (Co.	al hours equals the rs spent, e.g., a grours would result in lumn B), 15 parent out in 15 parents ar	roup meetin n 10 parent conferences	g for 10 pars s (Column A) each for 30	ents which lasts and 30.0 hours minutes would

4. Item 7 - This is the number of different parents seen, not the total in 6A. If you had 16 parent conferences but 10 conferences were with the same parent, the unduplicated count is 7 parents - you saw 7 parents but had 16 conferences. Do not count a parent more than once. The figure in Item 7A can never exceed the figure for Item 6A.

in Column B to the nearest half hour. Enter half hours as

.5, no fractions please.

Please return by Friday, October 9, 1987.



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CHAPTER 1 EVALUATION PARENT INVOLVEMENT SURVEY

 	 	-	

ANNUAL UNDUPLICATED COUNT

 IMPORTANT Enter on the line to the left the annual unduplicated count of parents you had involved in any of the Activities 1-5 below. COUNT EACH PARENT ONLY ONCE FOR THE YEAR. If you have questions regarding this count, please call Sharon Bermel at 222-3011 or bring your question(s) to the end-of-the-year inservice meeting.

COMPLETE THE REST OF THIS REPORT FOR JUNE ONLY

•	(A) Number of Parents	(B) Total Number of Hours
Activities		Hember or Hodro
 Parents involved in the planning, operation, and/or evaluation of your unit 		
2. Group Meetings for Parents		-
3. Individual Parent Conferences		-
4. Parental Classroom Visits or Field Trips		-
5. Visits by you to Parent Homes		•
6. Totals		
7. Estimated Unduplicated Count of Parents		

- DIRECTIONS: 1. Complete all information, fold over so back is showing, staple, and place in school mail.
 - Place a parent in only one activity for any one meeting.
 - 3. Total hours equals the number of parents times the number of hours spent, e.g., a group meeting for 10 parents which lasts 3 hours would result in 10 parents (Column A) and 30.0 hours (Column B), 15 parent conferences each for 30 minutes would result in 15 parents and 7.5 hours. Please round all figures in Column B to the nearest half hour. Enter half hours as .5, no fractions please.
 - 4. Item 7 This is the number of different parents seen, not the total in 6A. If you had 16 parent conferences but 10 conferences were with the same parent, the unduplicated count is 7 parents you saw 7 parents but had 16 conferences. Do not count a parent more than once. The figure in Item 7A can never exceed the figure in Item 6A.

RETURN RIGHT AWAY BUT NO LATER THAN FRIDAY, JUNE 3, 1988



CHAPTER 1 EVALUATION PARENT INVOLVEMENT SURVEY

SCHOOL YEAR ESTIMATE OF PARENTS

NON-CHAPTER 1 STUDENTS

Na	me		
Sc	hool	•	
	Activities	(A) Number of Parents	(B) Number of Parent Hours
1.	Parents involved in the planning, operation, and/or evaluation of your unit (do not include Parent Advisory Council members).		,
2.	Group Meetings for Parents (do not include Parent Advisory Council meetings).		•
3.	Individual Parent Conferences		
4.	Parental Classroom Visits or Field Trips		
5.	Visits by you to Parent Homes		
	Estimated Unduplicated Count of Parents		

<u>DIRECTIONS</u>: Please complete all information. Indicate a 0 if the number of parents or hours is actually zero--otherwise enter the number.

Column A (Number of Parents) lines 1-5: Please place a parent in only one activity for any one meeting.

Column B (Number of Parent Hours) lines 1-5: Indicate the sum of the hours each parent spent in an activity. For example, a group meeting with 10 parents which lasted 3 hours should result in a 10 on line 2, Column A and a 30.0 on line 2, Column B (each parent met with the teacher 3 hours and there were 10 parents). Please round all figures in Column B to the nearest half-hour. Enter half hours as .5, no fractions please.

For the Estimated Unduplicated Count of Parents do not count a parent more than once (even if a parent is listed in more than one activity).

After completing all the information on this survey, fold it so the back is visible, staple, and place it in the school mail.

Thank you.



ECIA CHAPTER 1 ORIENTATION INSERVICE EVALUATION FORM September 8, 1987

Circle only the program you are in:

ECIA	Chapter 1 Programs:	DPPF Programs:
(1)	ADK .	(6) SDR (9-10)
(2)	CLEAR-Elementary (1-5)	(7) SDR-CAI (9-10)
	CLEAR-Elementary-CAI (4-5)	(8) HSCA
(4)	CLEAR-Middle School (6-8)	Other (Specify)
(5)	CLEAR-Middle-CAI (6-8)	
(6)	MIC-Elementary-CAI	

(7) Pilot Math Program-Middle School

Circle the number that indicates the extent to which you agree with statements 1-4, in rating the <u>overall</u> day of inservice.

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
ı.	I think this was a very worthwhile inservice.	5	4	3	2	1
2.	The information presented in this inservice will assist me in my program.	5	4	3	2	1
3.	There was time to ask questions pertaining to the presentations.	5	4	3	2	1
4.	Questions were answered adequately.	5	4	3	2	1

Circle the number that indicates how you would rate each of the following portions of today's inservice in regard to interest and usefulness of presentations.

,		Superior	Excellent	Good	Fair	Poor	
5,	Large Group Session a. Interest	5	4	3	2	1	
	b. Usefulness.	5	4	3	2	1	
6.	Commercial Exhibits a. Interest	5	4	3	2	1	
	b. Usefulness	5	4	3	2	1	
7.	Mini-session with main speaker a. Interest	5	4	3	2	1	
	b. Usefulness	5	4	3	2	1	

		Superior	Excellent	Good	Fair	Peor
	Chapter 1 mini-session					
	a. Interest	5	4	3	2	1
	b. Usefulness	5	4	3	2	1
	c. Clarity of instructions	. 5	4	3	2	1
	Evaluation Presentation					
	a. Interest	5	4	3	2	1
	b. Usefulness	5	4	3	2	1
	c. Clarity of instructions	5	4	3	2	1
	What was the most valuable par	rt of this me	eting?	• •	*	
	What was the least valuable pa	art of this m	eecing?			
						*.
				•		
•	What additional information or meetings?	topics woul	d you like to	see cov	ered in	future
		topics woul	d you like to	see cov	ered in	future
		topics woul	d you like to	see cov	ered in	future

GENEF'L INSERVICE EVALUATION FORM

Ins	ervice Topic:					
Pre	senter(s):					
Dat	e:(e.g., 03/05/88	3)				
Ses	sion:a.m. and/orp.m.	•				
Cir	cle only the program you are in:					
	ECIA Chapter 1 Programs: (1) ADK (2) CLEAR-Reading Recovery (3) CLEAR-Primary (Special Treatment) (4) CLEAR-Elementary (1-5) (5) CLEAR-Elementary-CAI (6) CLEAR-Middle (6-8) (7) CLEAR-Middle-CAI (8) MIC-Elementary-CAI (9) Math-Middle-Pilot (10) MIC-Middle-CAI Other (Specify)			PF Programs (11) SDR (9 (12) SDR-CA (13) HSCA	-10)	
Cir	cle the number that indicates the exte	ent to whic	h you ag	gree with s	tatements	1-4.
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	I think this was a very worthwhile meeting.	5	4	3	2	1
2.	The informat_on presented in this meeting will assist me in my program.	5	4	3	2	1
3.	There was time to ask questions pertaining to the presentation.	5	4	3	2	1
4.	Questions were answered adequately.	5	4	3	2	1
5.	What was the most valuable part of ti	is meeting	?			
		• • • • • • • • • • • • • • • • • • • •				
6.	What was the <u>least</u> valuable part of t	his meetin	g?			
7.	What additional information or topics meetings?	would you	like to	see cover	ed in futu	re

Columbus Public Schools Department of Evaluation Services

EVALUATOR'S VISITATION LOG

Instructions for Using the Pating Scale and for Determining Kind of Evidence

There are three response choices for rating the items on the instrument: "2" = Compelling Evidence, "1" = Some Evidence, and "0" = No Evidence. Evidence is of three kinds:

- (PE)=Physical Evidence Examples of physical evidence are lesson plans, instructional materials, pictures of pupils on field trips, and a schedule of intramural activities.
- (OE)=Observational Evidence This is evidence obtained from observing the interactions among and between people and people, and people and things.

 Examples of these interactions are teachers with pupils, teachers with teachers, and pupils with instructional materials.
- (TE)=Testimonial Evidence Examples of testimonial evidence are teachers' and pupils' verbal and/or written comments regarding instructional activities that have been carried out.

When you read each item on the Evaluator's Visitation Log, please note the letters in parentheses which follow each item. These letters represent the most compelling kind of evidence available to the evaluator for that item. The designated evidence accompanying each item will help the evaluator determine the degree of evidence available for that item.

If the designated compelling evidence is found, circle number "2." If compelling evidence is not found, look for one of the other kinds of evidence. If one of the other kinds is found, circle number "1." If no evidence is found, circle "0."

The following description of response choices is designed to provide some uniformity to the rating process.

2 = Compelling
 Evidence

The evidence found is the designated one in parentheses following the item. It is substantial and conclusive. The evidence indicates that the item was being fully implemented during the visit.

1 = Some
 Evidence

Evidence is found, but it is not the designated evidence that is considered compelling. The evidence indicates that the item was being partially implemented during the visit.

0 = No Ev lence

No physical, observational, or testimonial evidence is found. The evidence indicates that the item was not being implemented during the visit.



Columbus Public Schools Department of Evaluation Services ECIA-Chapter 1 Primary Program

EVALUATOR'S VISITATION LOG

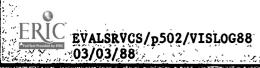
School: Program Teacher:	-			
Observer: Date:	Time:	fromt	:0	
Directions: Read each item. Notice which evidence in parer compelling. If Compelling Evidence is found, circle "2. Evidence is not found, look for one of the other kinds you find other evidence, circle the "1." Circle "0," if	found, circle "2." If Compelling f the other kinds of evidence. If			
To what opening to take he had been to the contract of	Compelling		No	
To what extent is there evidence that:	Evidence	Evidence	Evidence	
Literate Environment for Pupils				
1. Pupil writings are displayed (PE).	2	1	0 .	
2. Other reading materials - charts,				
experience stories, etc are placed where children can read them (PE).	2	1	0	
	2	1	0	
3. Room arrangement facilitates many reading options (PE).	2	1	0	
4. Reading materials - books, etc are accessible to pupils (PE).	2	1	0	
Comments:				
Administrative Procedures and/or Record Keeping				
5. Running records are maintained for at least one class and are available for inspection (PE).	2	1	0	
6. Pupil personal data and attendance are recorded on the DFSP Student Data Form and are available for inspection (PE).	2	1	0	
7. Data from program selection tests are recorded and are available for inspection (PE).	2	1	0	
8. Class schedules are available and are up-to-date (PE)). 2	1	0 .	
Comments:				



		Compelling	Some	No
To w	hat extent is there evidence that:	Evidence	Evidence	Evidenc
Materials	and Facilities			
9. Holt	materials are used for reading experiences (PE).	2	1	0
	lity can accommodate flexible grouping for struction (PE).	2	1	, 0
	ing experiences are provided through the use supplemental materials (PE).	2	1	0
Commen	ts:			
,				
Lésson Man Techniques	agement (Activities, Variety, Direct Teaching			
of the fol	ussion or questioning of pupils relates to	ncludes at :	least two	•
	ncepts, development of new information, or ior knowledge (OE).	2	1	0
13. Teach	her reads story to pupils (OE).	2	1	0
	ed reading includes questioning for reading tegies (OE).	2	1	0
	ner and pupils are involved in group writing tivity (OE).	2	1	0
16. Teacl	ner administers a Running Record (OE).	2	1	.0
17. Teacl	ner and pupils read together (OE).	2	1	0
	ls are involved in independent writing tivities (OE).	2	1	0
	ls are involved in independent reading tivities with a partner or alone (OE).	2	1	0
Comment	:8:			



To what extent is there evidence that:	Compelling Evidence	Some Evidence	No Evidence
Instructional Efficiency and Monitoring			
20. Lesson plans are avaiíable (PE).	2	1	0
21. Instruction begins within three minutes after pupils are in room (OE).	2	1	0
22. Routines are established so pupils do not waste time waiting (OE).	2	1	0
23. Positive feedback (verbal or written) is task specific (OE).	2	1	0
24. Instruction is coordinated with at least one class- room teacher as indicated by lesson plans (PE).	2	1	0
25. A system is used for monitoring pupil progress of daily lessons such as writing samples, running records, anecdotal notes, etc. (PE).	2	1	0
Comments:			
Classroom Climate			
26. Verbal interactions are respected by teacher and pupils (OE).	2	1	0
27. In general pupils are attentive to the task (OE).	2	1	0
28. All pupils are given the opportunity to respond (OE).	2	1	0
Comments:			
Parent Involvement			
29. Reading materials are sent home for the student to practice reading (TE).	2	1	0
30. A system is used for communicating with parents, on a regular basis, about their child's motivation and achievement: notation(s) on Student Data Form,			
newsletters, notes, etc. (PE).	2	1	0
Comments:			



MEMO

TO:

CLEAR, MIC, and SDR Teachers Using Computer-Assisted

instruct on (CAI)

FROM:

Ed Chamberlain (CLEAR-CAI and SDR-CAI evaluations)

Phyl Thomas (Mathematics program evaluations)

SUBJECT:

Computer Systems Used in CAI Classrooms

DATE:

February 12, 1988

Since there is a variety of different computer systems used in program classrooms, it becomes necessary for us to take a sort of census from time to time to determine the distribution of these computer systems. Please take a few minutes to complete the form below, fold and staple with the return mailing label showing, and return it in the school mail.

Geacher	School
Number of Computers or Terminals, by Type	Company Servicing Computers (please check)
Apple TRS-80 Miciphost Sperry	Prescription Learning B&B CCC Wasatch
Dolphin PET Other	Houghton-Mifflin None Other
Does your computer system include system?	a command module/teacher management
How many computers (or terminals) counting the Command Module?	are available for student work, not
Average number of minutes per week	a pupil is served in the program
(Reading program	pupils) (Math program pupils)
Average number of minutes per week	a pupil works at a computer
(Reading program	pupil) (Math program pupil)
Space for optional comments:	

cc: Dick Amorose

Sharon Bermel

Rose Carbol John Hilliard Par Huggard Fick Snide Dorothy Wilson

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