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ABSTRACT

This paper presents a description and evaluation of the Skills Remediation in Reading Program, designed to improve the reading skills of high school students who are two or more years behind in reading skills. Program participants were educationally and economically disadvantaged students. The number of students who participated was approximately 23,000. These students were distributed among 48 high schools with 336 teachers and 272 educational assistants. Classes were limited to fifteen students per classroom. Students were chosen if their reading ability was a minimum of two years below grade level based on the Metropolitan Achievement Tests or other standardized achievement tests. They were chosen by guidance personnel. Individualized diagnostic and prescriptive technigues were used by program teachers, but some small group work was also incorporated into the program. The evaluation consisted of a comparison of pre test and post test scores on the Metropolitan Achievement Test. Test data indicated that program participants from grades nine through tweleve gained more than expected in sections of the Metropolitan Achievement Test. Those participants who attended classes at a rate of 75% or more for the year, gained even more above their expected level than participants who attended 75% or more for one semester, as well as those who attended less than 75% for whatever period of time that they were in the program. (Author/AM)

EVALUATION REPORT

Function #09-59613
09-58965

SKILLS REMEDIATION IN READING

School Year 1974 - 75

Prepared by

Harry J. Clawar, Ph.D.

July 15, 1975

An evaluation of a New York City School District educational project funded under Title 1 of the Elementary and Secondary Education Act of 1965 (Pl 89-10) performed for the Board of Education of the City of New York for the 1974-75 school year.

Dr. Anthony J. Polemeni, Director

BOARD OF EDUCATION OF THE CITY OF NEW YORK
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Chapter I: The Program

The Skills Remediation in Reading Program for high school students is designed to help students who are two or more years retarded in reading improve their reading skills.

The program participants are educationally and economically disadvantaged students who attend Title I high schools. Their reading ability is a minimum of two years below grade level based on Metropolitan Achievement Tests or other standardized achievement tests. The students are selected by guidance personnel.

The program began in September 1974 and ended in June 1975. The number of students participating was slightly in excess of 23,000. These students were distributed among 48 high schools with 336 teachers and 272 educational assistants. Classes were limited to fifteen students per classroom.

Mainly individualized diagnostic and prescriptive techniques were used by program teachers, but some small group work was also incorporated into the program.

Two objective areas were stated for the evaluation of this program. First, there is a cognitive objective which focuses on the differeneces between predicted-post and actual post scores. Second, there is a process objective which focuses upon the discrepancy of the program from its stated training, instruction, remediation, and motivational activity goals.

Although the second objective area is covered in a report prepared by Dr. James D. Weiss, this evaluator will have some observations and recommendations based upon a small sample of observations (i.e., beginning and end of year school visits.)

Chapter II: Evaluation Procedures

Evaluation Objective # 1: To determine whether, as a result of participation in the Skills Remediation in Reading program, the student will show a statistically significant difference between the anticipated posttest and the real posttest scores in the Metropolitan Achievement Test.

The above mentioned " anticipated " posttest scores are derived according to the historical regression method,

$$\text{predicted posttest G.E.} = \text{pretest G.E.} + \left(\frac{\text{prettest G.E.}}{\text{No. Months in School}} \times \begin{array}{c}\text{No. Months of} \\ \text{Title I Treatment}\end{array}\right)$$

During the school year, by using three testing periods, pre-post measures were gathered for:

1) Students who entered in September 1974 and left in January 1975

2) Students who entered in February 1975 and remained until the end of May 1975

3) Students who entered in September 1974 and remained until the end of May 1975

In early June the evaluator received 22,815 student records. A total of 18,389 records were usable in the analysis. Data loss occurred due to missing pre or post information and missing or inaccurate grade information.

Data were analyzed in a repeated measures ANOVA design so that we examine, not only the anticipated-post vs. actual-post differences, but also examine anticipated-post vs. actual-post as a function of program attendance. Scheffé post hoc tests were made whenever significant interaction F Ratios occurred. The tests allowed for the accurate location of mean differences in the 2 X 3 table of means for each of the test-per-grade level tables.

Evaluation Objective # 2: To determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal.

The major findings concerning this objective are presented in the report by

Dr. James Weiss. In addition, this evaluator will make some recommendations based upon his own small sampling of observations and interviews. This sample consisted of observations and interviews at four schools at both the beginning and end of year.

Chapter III: Findings

Evaluation Objective # 1: To determine whether, as a result of participation in the Skills Remediation in Reading program, the student will show a statistically significant difference between the anticipated posttest and the real posttest scores in the Metropolitan Achievement Test.

As tables 4-15 indicate for all three Metropolitan Reading test scores (i.e., Word knowledge, Comprehensive, and Average), at all four grade levels (9-12), the actual (real) mean performance significantly exceeds ($p < .001$) the predicted (anticipated) mean performance.

These actual-predicted mean differences range from two months on the grade 9 Word Knowledge test to about eight months on the grade 12 Comprehension test.

In addition, all interaction tests are significant at $p < .05$ with most exceeding $p < .001$. Examining table 15 yields the typical pattern of these interactions. That is, using the Scheffe value of .164 (at $p < .001$) to probe mean differences we find:

1) no difference between predicted means for "less than 75% attendance" and "75% 1 semester" attendance groups

2) predicted means for "less than 75% and "75% 1 semester" groups are significantly higher than the "75% both semesters" group.

3) actual posttest means do not differ among the three attendance groupings.

Of great interest is the type of deduction that is possible based on the data in tables 3 and 15. The predicted-actual difference exceeds eight months for students attending 75% for both semesters (table 15). This is slightly in excess of 1 month gain over predicted for each month of program attendance. The actual gain for this grade 12 attendance grouping is about

a year and four months for the measured eight months of program attendance. This value can be computed by a little algebraic manipulation of the historical regression formula. Assuming that the mean months in school equals about 110, mean months in program equals about 8, and using the predicted post of about 6.0 we can solve for the pretest mean. This pretest mean is about 5.44. The group of students in the program for about 8 months, attending 75% or more of the classes, gained about 1.4 years (i.e., 6.86-5.44). Using the same procedure for grades 9, 10 and 11 Average Reading Scores we find respectively lesser pre-post gains of .9, 1.0, and 1.2 years.

Evaluation Objective #2: To determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal.

A large number of the program personnel in the schools that this evaluator visited appeared highly motivated and involved in the program. Some behaviors exemplifying this motivation are:

1) a teacher making tape recordings of the N.Y. Driver's Manual with an attendant vocabulary list because he felt that it would have intrinsic interest.

2) vocational vocabulary and comprehensive materials developed around relevant curriculum in one of the vocational high schools.

3) teachers volunteering their preparation periods to tutor the extremely poor individual student.

Some observations about program operation and content are:

1) the four sampled schools had available and were using most materials provided.

2) all four schools were making use of the graphing techniques by which the student tracks his own progress.

3) students do not remain with the same teacher for the school year. While this observation is generally true some schools do program pupils to one teacher for the year.

4) many teachers are not satisfied with the quantity or quality of vocabulary manterials.

5) very few teachers are doing adequate small group work.

6) very few teachers allot a significant portion of time to work on the speed of reading. It would seem for retarded readers that comprehension activities occupy the bulk of a teacher's time.

7) students request books that teachers are unable to obtain.

TABLE 1

Pre, Predicted, and Post Means for Grades 9 - 12

on the Metropolitan Word Knowledge Test (complete case data only)

	Grade 9	Grade 10	Grade 11	Grade 12
pre	4.912	5.381	5.737	6.038
pred	5.181	5.649	5.986	6.320
post	5.383	5.887	6.350	6.750

TABLE 2

Pre, Predicted, and Post Means for Grades 9 - 12

on the Metropolitan Comprehension Test (complete case data only)

	Grade 9	Grade 10	Grade 11	Grade 12
pre	4.894	5.315	5.673	5.882
pred	5.151	5.578	5.922	6.116
post	5.527	6.013	6.480	6.908

TABLE 3

Pre, Predicted and Post Means for Grades 9 - 12

on the Metropolitan Reading Test (complete case data only)

	Grade 9	Grade 10	Grade 11	Grade 12
pre	4.898	5.311	5.693	6.019
pred	5.137	5.571	5.940	6.260
post	5.452	5.934	6.421	6.919

TABLE 4

Two-Way Statistics For Grade 9 Word Knowledge

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	5.060	5.306	5.100	5.155
Actual Post Mean	5.103	5.484	5.437	5.342
Column Marginals				
Mean	5.082	5.395	5.268	5.248
N	1079	2247	1896	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	156.81	2	78.40	17.54	$<.001$
*Unit	23324.73	5219	4.47	—	
Predicted-Actual	82.25	1	82.25	122.24	$<.001$
Attendance X Pred.-Act.	34.24	2	17.12	25.44	$<.001$
* Pred.-Act. X Units	3511.72	5219	.67		
Total	27109.73	10443	2.60		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 1579.57 (The Harmonic Mean of Cell N's)

Scheffé = .109 at $p < .001$

12

TABLE 5

Two-Way Statistics For Grade 10 Word Knowledge

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	5.602	5.710		635
Actual Post Mean	5.738	5.934	5.922	5.864
Column Marginals				
Mean	5.670	5.822	5.757	5.750
N	1428	3096	2435	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	48.69	2	24.34	5.22	< 0.006
*Unit	32435.20	6956	4.66		
Predicted-Actual	164.97	1	164.97	226.13	< 0.001
Attendance X Pred.-Act.	19.69	2	9.84	13.49	< 0.001
* Pred.-Act. X Units	5074.69	6956	0.73		
Total	37743.25	13917	2.71		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 2092.12 (The Harmonic Mean of Cell N's)

Scheffé = .098 at p < .001

TABLE 8

Two-Way Statistics For Grade 11 Word Knowledge

	Attendance			
	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	5.897	6.132	5.845	5.958
Actual Post Mean	6.083	6.444	6.372	6.
Column Marginals				
Mean	5.990	6.288	6.108	6.129
N	632	1626	1274	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	90.72	2	45.36	9.52	< 0.001
*Unit	16804.00	3529	4.76		
Predicted-Actual	176.26	1	176.26	212.82	< 0.001
Attendance X Pred.-Act.	29.93	2	14.96	18.07	< 0.001
* Pred.-Act. X Units	2922.79	3529	0.82		
Total	20023.71	7063	2.83		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 1005.96 (The Harmonic Mean of Cell N's)

Scheffé = .151 at $p < .001$

TABLE 7

Two-Way Statistics For Grade 12 Word Knowledge

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	6.264	6.468	6.127	6.286
Actual Post Mean	6.585	6.784	6.796	6.722
Column Marginals Mean	6.425	[illegible]	6.461	6.504
N	491	1243	822	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	34.00	2	17.00	3.75	<0.024
*Unit	11561.50	2553	4.52		
Predicted-Actual	210.33	1	210.33	216.05	<0.001
Attendance X Pred.-Act.	30.48	2	15.24	15.65	<0.001
* Pred.-Act. X Units	2485.29	2553	0.97		
Total	14321.60	5111	2.80		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 739.33 (The Harmonic Mean of Cell N's)

Scheffé = .191 at p < .001

TABLE 8

Two-Way Statistics For Grade 9 Comprehension

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	4.922	5.321	5.080	5.108
Actual Post Mean	5.172	5.649	5.589	5.470
Column Marginals Mean	5.047	5.485	5.335	5.289
N	1039	2156	1839	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	301.67	2	150.83	36.20	< 0.001
*Unit	20959.00	5031	4.16		
Predicted-Actual	299.92	1	299.92	337.38	< 0.001
Attendance X Pred.-Act.	26.66	2	13.33	14.99	< 0.001
* Pred.-Act. X Units	4472.47	5031	0.88		
Total	26059.74	10067	2.58		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 1522.80
(The Harmonic Mean of Cell N's)

Scheffé = .127 at p < .001

TABLE 9

Two-Way Statistics For Grade 10 Comprehension

	Attendance			
	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	5.475	5.642	5.553	5.557
Actual Post Mean	5.816	6.087	6.041	5.981
Column Marginals				
Mean	5.646	5.865	5.797	5.769
N	1401	3020	2381	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	102.95	2	51.47	11.84	<0.001
*Unit	29931.94	6799	4.34		
Predicted-Actual	553.77	1	553.77	620.12	<0.001
Attendance X Pred.-Act.	11.61	2	5.81	6.50	<0.002
* Pred.-Act. X Units	6071.59	6799	0.89		
Total	36271.85	13603	2.668		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 2047.93 (The Harmonic Mean of Cell N's)

Scheffé = .110 at p< .001

TABLE 10

Two-Way Statistics For Grade 11 Comprehension

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	5.851	6.068	5.772	5.897
Actual Post Mean	6.189	6.611	6.469	6.423
Column Marginals Mean	6.020	6.340	6.121	6.160
N	621	1586	1259	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	105.43	2	52.71	11.47	<0.001
*Unit	15906.25	3463	4.59		
Predicted-Actual	410.07	1	410.07	433.66	<0.001
Attendance X Pred.-Act.	32.09	2	16.04	16.96	<0.001
* Pred.-Act. X Units	3274.63	3463	0.94		
Total	19728.46	6931	2.84		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 988.43
(The Harmonic Mean of Cell N's)

Scheffé = .163 at p< .001

TABLE 11

Two-Way Statistics For Grade 12 Comprehension

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	6.120	6.203	5.981	6.101
Actual Post Mean	6.843	6.952	6.886	6.894
Column Marginals				
Mean	6.482	6.578	6.433	6.498
N	475	1228	817	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	15.59	2	7.79	1.77	< 0.170
*Unit	11051.19	2517	4.39		
Predicted-Actual	681.80	1	681.80	607.27	< 0.001
Attendance X Pred.-Act.	6.93	2	3.46	3.08	< 0.046
* Pred.-Act. X Units	2825.93	2517	1.12		
Total	14581.45	5039	2.89		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 724.01 (The Harmonic Mean of Cell N's)

Scheffé = .135 at $p < .05$

TABLE 12

Two-Way Statistics For Grade 9 Total Reading

	Attendance			
	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	4.998	5.287	5.032	5.106
Actual Post Mean	5.144	5.580	5.474	5.399
Column Marginals				
Mean	5.071	5.433	5.253	5.252
N	1094	2290	1884	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	208.93	2	104.46	25.51	< 0.001
*Unit	21559.89	5265	4.09		
Predicted-Actual	205.96	1	205.96	407.60	< 0.001
Attendance X Pred.-Act.	34.90	2	17.45	34.53	< 0.001
* Pred.-Act. X Units	2660.44	5265	0.50		
Total	24670.13	10535	2.34		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 1594.44 (The Harmonic Mean of Cell N's)

Scheffé = .094 at p < .001

TABLE 13

Two-Way Statistics For Grade 10 Total Reading

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	5.514	5.646	5.505	5.555
Actual Post Mean	5.756	5.999	5.952	5.902
Column Marginals				
Mean	5.635	5.822	5.729	5.729
N	1437	3117	2422	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	73.79	2	36.89	8.78	< 0.001
*Unit	29279.07	6973	4.19		
Predicted-Actual	379.96	1	379.96	750.22	<0.001
Attendance X Pred.-Act.	21.96	2	10.98	21.68	<0.001
* Pred.-Act. X Units	3531.56	6973	0.50		
Total	33286.34	13951	2.38		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 2098.49 (The Harmonic Mean of Cell N's)

Scheffé =.082 at p < .001

TABLE 14

Two-Way Statistics For Grade 11 Total Reading

Attendance

	Less Than 75 %	1 Semester	Both Semesters	Row Marginals
Predicted Post Mean	5.829	6.108	5.777	5.905
Actual Post Mean	6.109	6.552	6.407	6.356
Column Marginals				
Mean	5.969	6.330	6.092	6.130
N	645	1638	1280	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	137.53	2	68.76	15.85	< 0.001
*Unit	15439.37	3560	4.33		
Predicted-Actual	311.22	1	311.22	525.88	< 0.001
Attendance X Pred.-Act.	31.37	2	15.68	26.51	< 0.001
* Pred.-Act. X Units	2106.87	3560	0.59		
Total	18026.37	7125	2.530		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 1019.67 (The Harmonic Mean of Cell N's)

Scheffé = .127 at $p < .001$

TABLE 15

Two-Way Statistics For Grade 12 Total Reading

Attendance

	Less Than 75 %	75 % 1 Semester	75 % Both Semesters	Row Marginals
Predicted Post Mean	6.409	6.353	6.027	6.263
Actual Post Mean	6.977	6.933	6.860	6.923
Column Marginals				
Mean	6.693	6.643	6.444	6.593
N	490	1262	830	

Row Marginals and Grand Mean are Unweighted Averages of Cell Means.

Unweighted Means Analysis of Variance

Classifying Factors

Attendance

Predicted-Actual

Subjects or Units

Source	SS	df	MS	F-Test	p value
Attendance	51.64	2	25.82	6.55	< 0.002
*Unit	10157.41	2579	3.93		
Predicted-Actual	486.01	1	486.01	672.57	< 0.001
Attendance X Pred.-Act.	16.46	2	8.23	11.39	< 0.001
* Pred.-Act. X Units	1863.64	2579	0.72		
Total	12575.17	5163	2.43		

An asterisk (*) marks the effect used in testing the preceding effect.

Note: The sums of squares are calculated assuming all cell counts equal 742.94 (The Harmonic Mean of Cell N's)

Scheffé = .164 at $p < .001$

Chapter IV: Summary of Major Findings, Conclusions and Recommendations

Test data analyses indicate that program participants at grades 9-12 tend to gain more than expected in Word Knowledge, Comprehension, and Average Reading as measured by the Metropolitan Achievement Test. In addition, those participants who attend classes at a rate of 75% or more for the year, tend to gain even more above their expected level than participants who attend 75% or more for one semester, as well as those who attend less than %75 for whatever period of time that they were in the program. Finally, those same 75% or more attenders grow more than one month for each of the 8 months in the pre-post measurement period.

Due to the above cognitive measurement outcomes, and observations of well motivated and organized administrators and teachers, the Skills Remediation in Reading Program is recommended for refunding.

Several process and instruction recommendations are:

1) place more emphasis on the value of small group work and its use in drawing out students as they interact with their peers.

2) encourage the participating schools to refrain from rotating experienced teachers out of the program.

3) try and develop scheduling procedures which will keep participating students with the same teachers for the full program year.

4) during training emphasize a little more the techniques of speed reading and the connection of time awareness with test taking proficiency.

5) set aside some small amount of discretionary funds for teachers to purchase student requested books.

6) locate or develop additional vocabulary materials.

Use Table 30A. for Historical Regression Design (6-Step Formula) for Reading (English); Math (English); Reading (Non-English); Math (Non-English).

30A. Standardized Test Results.

In the Table below, enter the requested information about the tests used to evaluate the effectiveness of major project components/activities in achieving desired objectives. This form requires means obtained from scores in the form of grade equivalent units as processed by the 6 step formula (see District Evaluator's Handbook of Selected Evaluation Procedures, p. 45-49). Before completing this table, read all footnotes. Attach additional sheets if necessary.

Component Code	Activity Code	Test Used 1/	(1) Form Pre	(1) Form Post	(2) Level Pre	(2) Level Post	Total N 2/	Group I.D. 3/	Number Tested 4/	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Statistical Data Obtained Value * of F	Statistical Data Level 5/ of significance
6 0 8 1 5	7 2 0	MAT-70	F G H	F G H	I,A	I,A	7289	9	5268	9/74 or 2/75	4.893	5.137	2/75 or 5/75	5.494	25.51	< .001
6 0 8 1 6	7 2 0	"	"	"	"	"	9204	10	6976	"	5.311	5.571	"	5.934	8.74	< .001
6 0 8 1 6	7 2 0	"	"	"	"	"	4355	11	3563	"	5.693	5.940	"	6.421	15.86	< .001
6 0 8 1 6	7 2 0	"	"	"	"	"	3047	12	2582	"	6.019	6.260	"	6.919	6.56	.002
(1) Varied-Data includes only those students with different pre and post																
(2) Varied depending on student's beginning reading score-Harcourt Brace indicates. Can go from int. to advanced level on forms, F, G, H.																

*repeated measures

1/ Identify the test used and year of publication (MAT-58, CAT-70, etc.).

2/ Total number of participants in the activity.

3/ Identify the participants by specific grade level (e.g., grade 3, grade 5). Where several grades are combined, enter the last two digits of the component code.

4/ Total number of participants included in the pre and posttest calculations.

5/ Specify level of statistical significance obtained (e.g., $p \leq .05$; $p \leq .01$).

OFFICE OF EDUCATIONAL EVALUATION - DATA LOSS FORM
(attach to MIR, item #30) Function # 09-59613

In this table enter all Data Loss information. Between MIR, item #30 and this form, all participants in each activity must be accounted for. The component and activity codes used in completion of item #30 should be used here so that the two tables match. See definitions below table for further instructions.

Component Code	Activity Code	(1) Group I.D.	(2) Test Used	(3) Total N	(4) Number Tested/ Analyzed	(5) Participants Not Tested/ Analyzed		(6) Reasons why students were not tested, or if tested, were not analyzed	
						N	%		Number/ Reason
6 0 9 1 5	7[illegible] 2 0	9	MAT-70	7289	5268	2021	27.72	Missing pre, post, or both tests and incorrectly recorded test data	2021
6 0 8 1 6	7 2 0	10	"	9204	5976	3228	35.21	"	3228
" " " " "	" " "	11	"	4335	3563	792	18.18	"	792
" " " " "	" " "	12	"	3047	2582	465	15.26	"	465

(1) Identify the participants by specific grade level (e.g., grade 3, grade 9). Where several grades are combined, enter the last two digits of the component code.
(2) Identify the test used and year of publication (MAT-70, SMAT-74, etc.).
(3) Number of participants in the activity.
(4) Number of participants included in the pre and posttest calculations found on item#30.
(5) Number and percent of participants not tested and/or not analyzed on item#30.
(6) Specify all reasons why students were not tested and/or analyzed. For each reason specified, provide a separate number count. If any further documentation is available, please attach to this form. If further space is needed to specify and explain data loss, attach additional pages to this form.