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ABSTRACT

This report evaluates the Writing to Read (WTR) program instituted in 1988 in 13 West Virginia elementary schools as the result of a partnership between the IBM Corporation and the federal Appalachian Regional Commission. The WTR labs, also installed in 42 Kentucky and Virginia schools, use a computer-based instructional system to develop the writing and reading skills of kindergarten and first-grade students. Under the program, students and teacher spend 1 hour each day in the lab, organized around five learning stations where students are taught how to write anything they can say and to read anything they can write. The West Virginia labs were placed in rural areas that were economically distressed and that had declining populations. More than 50 administrators, teachers, and aides from 5 school districts attended a 3-day training session. They also were given access to training materials and inservice activities throughout the school year. WTR students' writing and spelling test results were compared with those of students who did not participate. In all sites, the WTR students did significantly better than their counterparts. T-tests were used to verify the results. Similarly, a survey of teachers rates the program as positive. The report concludes that successful implementation of the WTR system requires ongoing inservice training and that the WTR labs had a positive impact on students, teachers, administrators, and parents. The report recommends that the program be improved, monitored, and expanded to include other West Virginia schools. (TES)

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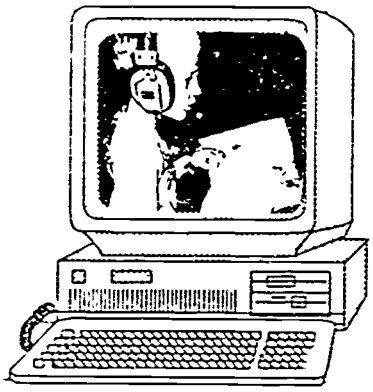

Implementation of the Writing to Read Instructional System in 13 Rural Elementary Schools in Southern West Virginia

1988-89 Annual Report

Appalachia Educational Laboratory
P.O. Box 1348 • Charleston, West Virginia 25325

August 28, 1989

U.S. DEPARTMENT OF EDUCATION

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IMPLEMENTATION OF THE WRITING TO READ INSTRUCTIONAL SYSTEM IN 13 RURAL ELEMENTARY SCHOOLS IN SOUTHERN WEST VIRGINIA

1988-89 ANNUAL REPORT

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TABLE OF CONTENTS

Section	Page
ACKNOWLEDGMENT	v
INTRODUCTION	1
IMPLEMENTATION	4
Project Sites	4
Writing to Read Lab Aides	6
Training	7
Equipment and Materials	8
STUDENT ACHIEVEMENT ASSESSMENT	10
Assessment of Student Writing	11
Assessment of Student Spelling	15
Summary	19
TEACHERS' SURVEY	20
CONCLUSIONS AND RECOMMENDATIONS	29
Conclusions	29
Recommendations	34
REFERENCES	37
APPENDICES	38
A: Instructions to Teachers for Collecting Writing Samples	
B: Student Writing Samples and Scores	
C: Teacher Questionnaires	

LIST OF TABLES

Table		Page
1	Number of Classrooms and Students Enrolled in the Writing to Read Program and Non-Writing to Read Program in 1988-89 by Sites	5
2	Percentage of Writing to Read Scores Awarded to Writing to Read Kindergartners and Non-Writing to Read Kindergartners	12
3	Comparison of Writing Sample of Writing to Read Kindergartners and Non-Writing to Read Kindergartners	14
4	Comparison of Writing Sample of Writing to Read Kindergartners and Non-Writing to Read Kindergartners by Sites	14
5	Comparison of Spelling Scores of Writing to Read Kindergartners and Non-Writing to Read Kindergartners	18
6	Comparison of Spelling Scores of Writing to Read Kindergartners and Non-Writing to Read Kindergartners by Sites	18
7	Selected Responses from Teacher Questionnaire: Kindergarten Writing to Read Teachers and Kindergarten Non-Writing to Read Teachers	21
8	Selected Responses from Teacher Questionnaire: Writing to Read Kindergarten Teachers and Writing to Read First-Grade Teachers	24
9	Selected Responses from Teacher Questionnaire: West Virginia Writing to Read Teachers and Writing to Read Teachers in Educational Testing Service National Study	26

LIST OF FIGURES

Figure		Page
1	Kindergarten Writing Samples by Sites.	13
2	Kindergarten Spelling Test by Sites.	17

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Ivadenne Hatfield, Mingo County coordinator
Larry Lane, McDowell County coordinator
Danny Plumley, Lincoln County coordinator
Loretta Rose, Wyoming County co-coordinator

- Robert D. Childers

INTRODUCTION

The ARC/IBM Writing to Read project is the result of a new public/private partnership between the Appalachian Regional Commission (ARC) and the International Business Machine (IBM) Corporation. A total of 55 Writing to Read labs were installed in elementary schools in Kentucky, Virginia, and West Virginia during the 1988-89 school year. The computer hardware for the labs was donated by IBM, while ARC contributed the software and auxiliary materials. The Appalachia Educational Laboratory (AEL), under contract with ARC, was responsible for assisting with the site selection and implementation of the Writing to Read project in 13 elementary schools in southern West Virginia.

Writing to Read (WTR) is a computer-based instructional system designed to develop the writing and reading skills of kindergarten and first-grade students. It was developed by IBM and Dr. John Henry Martin and is designed to teach the students how to write anything they can say and read anything they can write.

According to program developers, the Writing the Read system helps students:

- understand how letters form words and words form sentences that express thoughts and ideas;
- recognize and create the letters of the alphabet through a variety of multisensory experiences;
- learn to use a consistent phonemic spelling system;
- discover the joy of language;
- develop their ability to express ideas and to manipulate the English language;

- learn to use the computer as a surrogate guide and tutor; and
- learn to use the computer as a word processor, thereby enabling them to apply concepts they learn more quickly and easily.

The program is provided in a separate room called the Writing to Read center or lab. It is recommended that the center be staffed by a fulltime aide. Students and teacher move from their classroom to the center for one hour each day. Each center is organized around five required learning stations as outlined in the teacher's manual (Martin, 1986).

The Computer Station is one of the major learning stations in the WTR center. The lab aide directs the students' activities at this station. The students proceed through a series of ten instructional cycles that teach some basic vocabulary words using a phonemic spelling system. The computer "voice" introduces students to the skills being taught in the instructional cycles. There is a good deal of repetition in the computer activities.

A second learning station is the Work Journal Station. The work journals are designed to provide the students with additional opportunities to learn the material presented in the ten instructional cycles. Some of the pages in the work journal are designed to be completed in conjunction with an audiotape. The major activity is to practice writing the cycle words in a variety of formats.

A third learning station is the Writing/Typing Station. In one area of this station, the students write their stories by hand, using pencils, markers, crayons, chalk, etc. In the other area of the station, students type their stories on a computer using a word processing program. Students are encouraged to read what they have written.

The Listening Library Station is the fourth required learning station. Here the students listen to stories recorded at a slow pace while following the written text in a corresponding book. This provides the students the opportunity to match speech with written language.

The fifth station is the Make Words Station. A variety of activities is arranged to have children practice making letters, words, and sentences. They also match letters and sounds using manipulatives and appropriate alphabet materials.

IMPLEMENTATION

Thirteen elementary schools from five school districts in southern West Virginia were identified and recommended to receive a Writing to Read lab. All sites were approved by the ARC project coordinator and a representative from the West Virginia governor's office. The school districts were selected on the basis of need and willingness of the superintendent to participate.

A letter of agreement was required from each school superintendent expressing a desire to participate in the project and their willingness to:

- continue the project for a minimum of three years;
- utilize the computers only for the writing to Read project;
- provide maintenance for the WTR lab equipment;
- replace all consumable materials for years two and three,
- appoint a district WTR coordinator;
- make administrators, teachers, and aides available for training; and
- submit an annual report.

Project Sites

The ARC/IBM Writing to Read project in West Virginia involved Lincoln, McDowell, Mingo, Summers, and Wyoming counties. All five counties may be characterized as predominantly rural, economically distressed, and declining in population. During the past ten years, the decline in student population in these school districts has ranged between 8.2 percent and 31.5 percent. At the same time, the number of applications for a free or reduced lunch has steadily grown. In these

districts during the 1988-89 school year, the percentage of the student population that made application for free or reduced lunches ranged from 46 to 81 percent.

A total of 920 students from 13 elementary schools in these districts participated in the Writing to Read program. Table 1 lists the number of classrooms and the number of students enrolled in the Writing to Read program by schools and sites (districts). The data indicate that 565 of the students were in kindergarten and 355 were in first grade. These students comprised 32 kindergarten classrooms and 18 first-grade classrooms.

Table 1

Number of Classrooms and Students Enrolled in the Writing to Read Program and Non-Writing to Read Program in 1988-89 by Sites

Sites/Schools	Kindergarten Classes		First-Grade Classes		Kindergarten Students		First-Grade Students	
	WTR	Non-WTR	WTR	Non-WTR	WTR	Non-WTR	WTR	Non-WTR
Lincoln County								
Atenville	2	0	2	0	44	0	33	0
Hamlin	3	0	0	3	55	0	0	74
McDowell County								
Bartley	2	0	1	0	30	0	24	0
Panther	2	0	2	0	38	0	47	0
War	3	0	3	0	56	0	61	0
Mingo County								
Delbarton	3	0	3	0	55	0	53	0
Gilbert	3	0	3	0	49	0	60	0
Lenore	2	0	2	0	34	0	39	0
Summers County								
Bellepoint	2	0	1	0	27	0	20	0
Jumping Branch	2	0	1	0	25	0	18	0

Table 1 (cont'd.)

Sites/Schools	Kindergarten Classes		First-Grade Classes		Kindergarten Students		First-Grade Students	
	WTR	Non-WTR	WTR	Non-WTR	WTR	Non-WTR	WTR	Non-WTR
Wyoming County								
Berlin McKinney	3	0	0	4	63	0	0	77
Huff	3	0	0	2	50	0	0	47
Mullens	2	0	0	2	39	0	0	61
TOTAL	32	0	18	11	565	0	355	259

An examination of the data presented in Table 1 reveals that while all participating schools implemented the Writing to Read program at the kindergarten level, four schools--representing a total of 11 classrooms--chose not to implement the program at the first-grade level during the first year.

Writing to Read Lab Aides

The Writing to Read program was designed to utilize a fulltime lab aide who would be responsible for the lab or center and would assist each teacher as they brought their class into the lab. The school superintendents were under the assumption that the kindergarten aide could serve in this role. Since first-grade teachers did not have classroom aides, schools needed to employ an aide or train volunteers in order to implement the Writing to Read program at the first-grade level.

To assist in the implementation at the first-grade level, a proposal was prepared by the Appalachia Educational Laboratory and funded by ARC

to provide six lab aides to the school systems on an 80/20 percent matching basis. Mingo County agreed to employ a lab aide for three participating schools. The other school districts chose not to take advantage of this opportunity for two reasons. First, by the time the proposal was funded, they had already trained parent volunteers or had decided to implement the Writing to Read program only at the kindergarten level for the first year. Second, the superintendents knew the number of service personnel already exceeded the state allotment.

In summary, three schools employed fulltime lab aides and plan to continue their services during 1989-90 on their own. Six schools recruited and trained parent volunteers to assist in the implementation at the kindergarten and first-grade levels. Four schools chose to limit the implementation of the Writing to Read program to kindergarten classrooms during 1988-89. All four plan to expand the program to their first graders during the second year by utilizing trained volunteers.

Training

More than 50 administrators, teachers, and aides from the five districts attended the initial three-day training sessions conducted in August and September by IBM in Lexington, Kentucky. Each district coordinator, upon completion of training, received a complete set of video training tapes and teacher manuals. The coordinators were then responsible for training those administrators, teachers, and aides who were unable to attend the initial training in Lexington. Parent volunteers were trained at the individual schools.

In addition, several other types of inservice training activities were offered throughout the school year. These included:

- Several district coordinators arranged for some of their personnel to visit other operating Writing to Read programs.
- District coordinators met regularly with AEL's project director for planning and sharing.
- District coordinators were available to assist individual teachers or aides.
- Some WTR district coordinators prepared and distributed special newsletters to all program personnel.
- AEL's project director conducted on-site visits to each of the 13 Writing to Read centers.

During the second semester, a one-day Writing to Read refresher course was provided for all program personnel. The training session was held on a Saturday and more than 60 administrators, teachers, and aides attended. Participant responses to the session were very positive. One of the IBM coordinators commented that the group was the most enthusiastic of any she had ever seen.

Equipment and Materials

Each center received the following equipment and materials:

- 9 IBM PC Jr computers,
- 1 IBM printer,
- 6 cassette players,
- 18 headsets with adapters,
- set of listening library books and accompanying cassette tapes, and
- set of work journals for each kindergarten and first-grade student in the school.

The school districts were responsible for individual story diskettes and the paper for the printer. Some schools did purchase additional printers, cassette players, and computer games.

Equipment problems. Two major equipment problems were encountered during implementation.

First, a number of the computers and printers did not function properly when received. It should be noted that the computers and printers donated by IBM were used equipment. Several schools reported that the equipment had not been boxed properly for shipment. Therefore, a number of the computers had to be repaired or replaced. IBM did repair or replace all equipment that did not function properly upon arrival. Problems that arose later became the responsibility of the school system.

The second problem was related to the headsets. The headsets provided were new but were not designed to withstand the abuse of kindergarten and first-grade students. The old headsets were replaced with new Califone Headsets 2924-C, which proved to be very satisfactory.

Equipment maintenance. The school superintendents chose not to purchase IBM service contracts since their Regional Education Service Agencies (RESAs) already employed computer technicians who could service the equipment. This seems to have worked very well. Availability of parts for the PC Jr computers has created some delays.

STUDENT ACHIEVEMENT ASSESSMENT

Although this was the first year of implementation and a number of the classes had not participated in the program the suggested minimum of 18 weeks, it was the consensus of the district coordinators that some preliminary assessment of the students' achievement in writing and spelling should be conducted. The inclusion of a standardized reading test, while desirable, was not seriously considered for two reasons: (1) standardized testing at this level was not planned in four of the five school districts, and (2) the project did not include funds for testing of this type.

A decision was made to limit the initial student assessment to the kindergarten level since four of the elementary schools chose not to implement the Writing to Read program at the first-grade level during the first year. As indicated earlier, all schools plan to expand to the first grade in 1989-90.

To establish a comparison group, the district coordinators were asked to identify district schools not utilizing the Writing to Read program but "similar" to those that were. The coordinators were asked to consider the following variables in making their selections:

- socioeconomic status as determined by the percent of free and reduced-lunch applications,
- past standardized achievement test scores,
- certification of classroom teachers, and
- ratio of boys and girls.

Using these criteria, the district coordinators selected 13 elementary schools with a total of 27 kindergarten classrooms.

While all of the Writing to Read students participated in the assessment process, a 20-percent sample was drawn for statistical analysis. In the non-Writing to Read classrooms, the district coordinator identified every fifth student to take the same tests as the Writing to Read students. This systematic method uses a set interval from a population list--in this case, the classroom register of students. This procedure is acceptable since the population list itself is essentially randomized (Lutz, 1983). This same systematic method (every fifth student on the classroom register) was used with the Writing to Read classes.

Assessment of Student Writing

The writing assessment was conducted by the classroom teacher under the supervision of the WTR district coordinator. A uniform standard procedure developed by Educational Testing Service (Murphy & Appel, 1984) for assessing writing skills of kindergarten children was used. (See Appendix A for a copy of the teacher's instructions, directions, and criteria.) The teachers followed a printed scenario and each child wrote on a common topic--"One day I found a magic hat." The stories were not edited by the children or teacher. They were collected by the district coordinator and submitted "as is" for scoring.

All writing samples were scored by a single reading supervisor skilled in utilizing the six-point scale developed by Educational Testing Service. The criteria for judging the writing emphasized the ideas presented and the development and expression of those ideas. Penmanship, spelling, and punctuation were not considered. Some examples of the students' writing and their scores are included in Appendix B.

Papers that were blank (BL) or undecipherable (UN) were given a score of 0. As can be seen in Table 2, the percent of such papers was approximately the same for Writing to Read and non-Writing to Read kindergartners. However, the Writing to Read students did receive more high scores than the non-Writing to Read students. For example, nearly one-half (48.6%) of the Writing to Read group received a score of 2 or higher, compared to only 13 percent for the non-Writing to Read group.

Table 2

Percentage of Writing to Read Scores Awarded to Writing to Read Kindergartners and Non-Writing to Read Kindergartners

	Actual Scores						
	0	1	2	3	4	5	6
Writing to Read (N = 485)	11.5	39.8	24.1	16.3	6.8	1.2	0.2
Non-Writing to Read (N = 107)	10.3	76.6	8.4	3.7	0.9	0.0	0.0

Figure 1 presents graphically the mean writing scores for the Writing to Read students and the non-Writing to Read students by school districts. In all sites, the Writing to Read students did better than their counterparts.

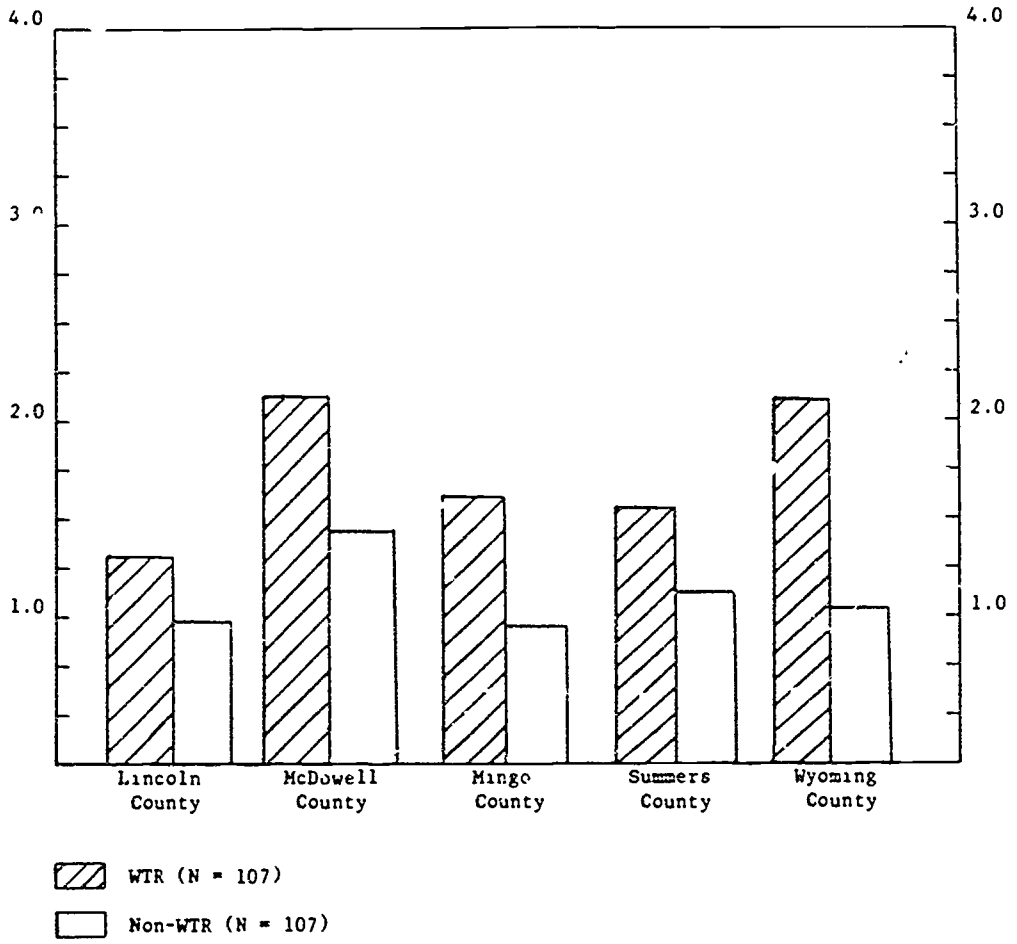

Figure 1

Kindergarten Writing Samples by Sites

A t-test was calculated to determine the probability that the difference between the grand mean of the Writing to Read students and that of the non-Writing to Read students was a real difference rather than a "chance" difference. As shown in Table 3, the difference between the groups was significant at the .001 level, indicating that such a difference could occur only once in a thousand by chance.

Table 3

Comparison of Writing Sample of Writing to Read Kindergartners and Non-Writing to Read Kindergartners

	N	M	SD	t	Sig. Level
Writing to Read	107	1.73	1.20		
Non-Writing to Read	107	1.07	0.65	5.00	.001

To see if the differences between the Writing to Read students and the non-Writing to Read students were significant at the school district level, a two-tail t-test for small independent samples was calculated. The results are presented in Table 4. The difference was found to be significant at four of the five sites. The level of significance was .01 at Wyoming County and at the .05 level at Lincoln, McDowell, and Mingo counties. The difference at Summers County, while favoring the Writing to Read students, was not significant.

Table 4

Comparison of Writing Sample of Writing to Read Kindergartners and Non-Writing to Read Kindergartners by Sites

	N	M	SD	t	Sig. Level
Lincoln County					
WTR	20	1.30	0.65		
Non-WTR	20	0.95	0.22	2.29	0.05
McDowell County					
WTR	22	2.09	1.44		
Non-WTR	22	1.36	0.79	2.08	0.05

Table 4 (cont'd.)

	N	M	SD	t	Sig. Level
Mingo County					
WTR	27	1.59	0.97		
Non-WTR	27	0.93	0.38	2.43	0.05
Summers County					
WTR	8	1.50	1.41		
Non-WTR	8	1.13	1.55	0.50	NS
Wyoming County					
WTR	30	1.93	1.36		
Non-WTR	30	1.03	0.49	3.41	0.01

Assessment of Student Spelling

As part of the student achievement assessment, a short spelling test was administered to kindergarten students in the Writing to Read program and kindergarten students in the non-Writing to Read comparison group. The spelling test consisted of the same ten words used by Educational Testing Service in their national evaluation of the Writing to Read instructional system (Murphy & Appel, 1984).

Since no textbook spelling series was available for the kindergarten level, the staff at Educational Testing Service reviewed the basic words for first graders in four spelling series. The ten spelling words were selected from a list of 45 words common across the series and the Dolch list.

The spelling test was administered by the classroom teachers under the supervision of the WTR district coordinator. Teachers were asked to read the words to their students and have the students write the words on paper.

The teachers were instructed to read each of ten sentences slowly, twice, like this: "He is six feet tall. Write the word feet. I'll say it again. He is six feet tall. Write the word feet." The words and sentences used were:

1. He is six feet tall.
2. We took a ride on the bus.
3. She made sandwiches for lunch.
4. The girl was tired.
5. I cut my finger.
6. Going to the circus was fun.
7. We saw a big dog.
8. I have a bike at home.
9. The boy said "yes."
10. I can write my name.

The spelling tests were scored by either the classroom teacher or the district coordinator. A child's score was the number of words spelled correctly (0-10). For scoring purposes, only "book" spelling was considered correct. No credit was given for phonemic spelling.

The spelling test was difficult for Writing to Read and non-Writing to Read kindergartners alike. Children enrolled in the Writing to Read program averaged spelling three of the ten words correctly, while non-Writing to Read children averaged spelling only one word correctly. Figure 2 provides a graphic comparison of the mean spelling scores of the Writing to Read students and the non-Writing to Read students in the individual sites. In each site, the Writing to Read students did better than the non-Writing to Read students in spelling.

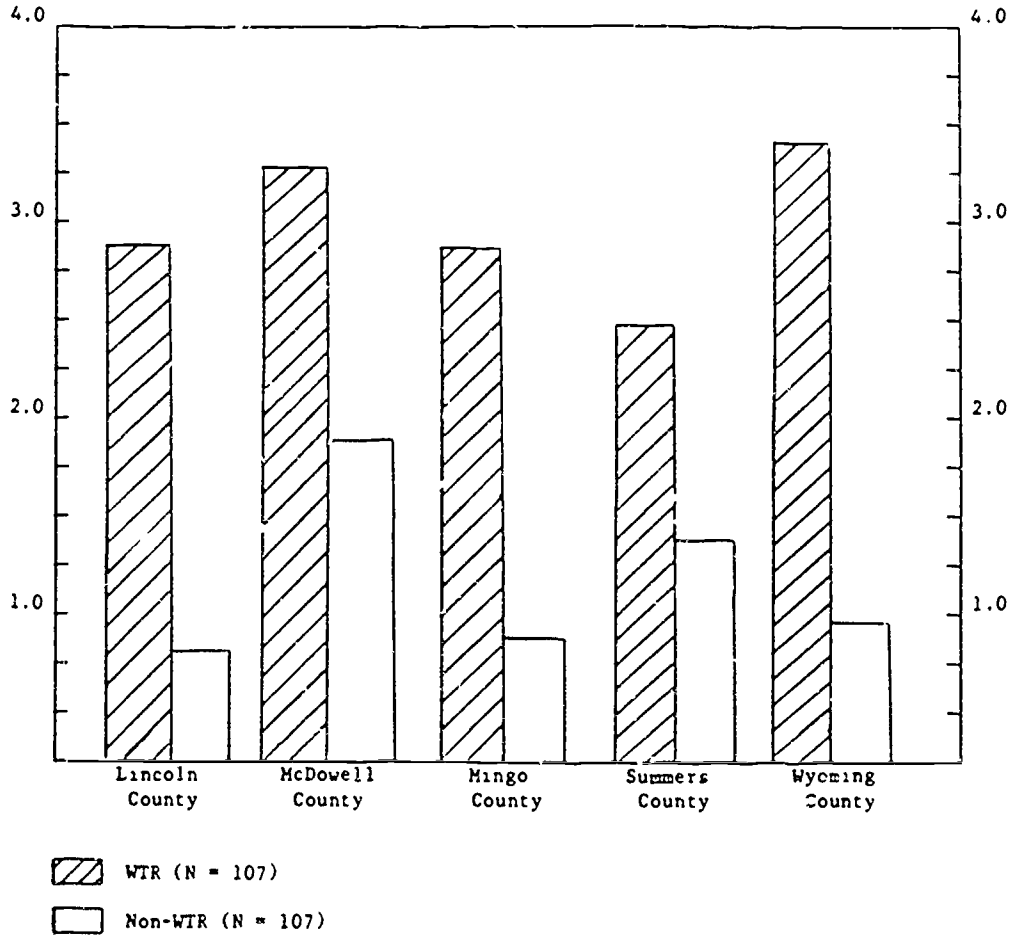

Figure 2

Kindergarten Spelling Test by Sites

A two-tail t-test was calculated to ascertain if the grand spelling mean of the Writing to Read group was significantly different from the grand spelling mean of the non-Writing to Read group. The results are presented in Table 5. An examination of Table 5 reveals a t-value of 3.56, which is significant at the .001 level.

Table 5

Comparison of Spelling Scores of Writing to Read Kindergartners and Non-Writing to Read Kindergartners

	N	M	SD	t	Sig. Level
Writing to Read	107	3.10	2.50		
Non-Writing to Read	107	1.06	1.46	3.56	.001

To determine if the differences between the spelling scores of the Writing to Read students and non-Writing to Read students were significant at the individual sites, a t-test for small independent samples was calculated for each site. These data are presented in Table 6. The differences were significant at the .001 level in three sites (Lincoln, Mingo, and Wyoming counties) and significant at the .05 level at one other site (McDowell County). The difference at Summers County favors the Writing to Read students but was not significant.

Table 6

Comparison of Spelling Scores of Writing to Read Kindergartners and Non-Writing to Read Kindergartners by Sites

	N	M	SD	t	Sig. Level
Lincoln County					
WTR	20	2.85	1.98		
Non-WTR	20	0.65	1.08	4.36	0.001
McDowell County					
WTR	22	3.32	2.93		
Non-WTR	22	1.73	1.98	2.11	0.05

Table 6 (cont'd.)

	N	M	SD	t	Sig. Level
Mingo County					
WTR	27	2.85	1.81		
Non-WTR	27	0.89	1.22	4.67	0.001
Summers County					
WTR	8	2.38	1.69		
Non-WTR	8	1.38	1.60	1.22	NS
Wyoming County					
WTR	30	3.53	3.14		
Non-WTR	30	0.90	1.30	4.24	0.001

Summary

While the design for this initial assessment of students' achievement in writing and spelling was not as strong as one would like, the fact that the Writing to Read students did significantly better than the non-Writing to Read students in both writing and spelling strongly suggests that the Writing to Read program is making a difference in the students' learning. Further evidence to support this conclusion is the fact that the Writing to Read students did better than non-Writing to Read students at all five sites in both writing and spelling. These differences were significant in eight of ten cases.

TEACHERS' SURVEY

A critical component in the evaluation of any innovative instructional program is the attitude of the teachers who are expected to implement the program. In May 1989, questionnaires were distributed to a total of 74 teachers in the five sites*: 30 kindergarten teachers in the Writing to Read program, 26 kindergarten teachers in the non-Writing to Read schools, and 18 first-grade teachers in the Writing to Read program. Responses were received from all 74 teachers. This 100-percent response rate is indicative of the commitment and support of the teachers and the district coordinators for the ARC/IBM project in West Virginia.

The teacher questionnaires were developed by Educational Testing Service for use in their 1984 national evaluation of the Writing to Read program. Copies of the teacher questionnaires are found in Appendix C. The questionnaires asked identical questions of Writing to Read teachers and non-Writing to Read teachers, adapting phrases referring to "Writing to Read" to "your reading program" so that comparisons could be made.

Table 7 presents a comparison of selected responses of kindergarten Writing to Read teachers and kindergarten non-Writing to Read teachers. Both groups liked their reading programs and judged them to be effective. Approximately three-fourths of the Writing to Read teachers (77%) thought their students were reading and writing "better" than students in previous years, while most of non-Writing to Read kindergarten teachers

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*The discrepancy between the number of classrooms reported earlier and the number of teachers is due to the fact that three kindergarten teachers (two WTR and one non-WTR) teach two classes each (MWF and TTh).

teachers thought their students were reading (63%) and writing (91%) about the "same" as students in previous years. This may be the result of Writing to Read teachers spending "more" time in reading (85%) and writing (100%) than in previous years, whereas the non-Writing to Read kindergarten teachers said they were spending about the "same" amount of time in reading (83%) and writing (81%) as in previous years. Eighty-nine percent of the Writing to Read teachers reported positive feedback from parents concerning their child's reading program, compared to 55 percent of non-Writing to Read teachers.

Table 7

Selected Responses from Teacher Questionnaire:
Kindergarten Writing to Read Teachers and
Kindergarten Non-Writing to Read Teachers

	Writing to Read	Non-Writing to Read
How do you feel about Writing to Read/your reading program?		
Like it very much	60%	8%
Like it	30%	80%
Not sure	10%	4%
Dislike it	0%	8%
Dislike it very much	0%	0%
How would you rate its overall effectiveness?		
Very effective	50%	12%
Effective	40%	88%
Not sure	10%	0%
Ineffective	0%	0%
Very Ineffective	0%	0%

Table 7 (cont'd.)

	Writing to Read	Non-Writing to Read
How do you think the progress in READING of MOST of your students compares to the progress in READING of your students in previous years?		
Are reading better than students in previous classes	77%	8%
Are reading about the same as students in previous classes	19%	63%
Are not reading as well as students in previous classes	4%	25%
Have no opinion	0%	4%
How do you think the progress in WRITING of MOST of your students compares to the progress in WRITING of your students in previous years?		
Are writing better than students in previous classes	77%	0%
Are writing about the same as students in previous classes	14%	91%
Are not writing as well as students in previous classes	0%	9%
Have no opinion	9%	0%
How does the amount of time you spend on reading compare with the amount you spent in previous years?		
Am spending more time on reading than in previous years	85%	17%
Am spending about the same amount of time as in previous years	15%	83%
Am spending less time on reading than in previous years	0%	0%
How does the amount of time you spend on writing compare with the amount you spent in previous years? (Original rather than handwriting)		
Am spending more time on writing than in previous years	100%	14%
Am spending about the same amount of time as in previous years	0%	81%
Am spending less time on writing than in previous years	0%	5%

Table 7 (cont'd.)

	Writing to Read	Non-Writing to Read
What kind of feedback have you had from parents about Writing to Read/your reading program?		
Very positive	39%	17%
Positive	50%	38%
Have had no feedback	11%	42%
Negative	0%	3%
Very negative	0%	0%
Activities at which "a typical child in your classroom spends a great deal of time."		
Reading aloud	27%	24%
Reading silently	10%	8%
Creative writing	17%	4%
Developing a sight vocabulary	57%	48%
Learning word meanings	23%	36%
Phonic/structural analysis	83%	72%
Penmanship	77%	64%

In Table 8, a comparison of the responses of Writing to Read kindergarten teachers and Writing to Read first-grade teachers is provided. While both groups were positive toward the Writing to Read program, the kindergarten teachers were more positive than the first-grade teachers. This may be the result of the Writing to Read program matching the kindergarten curriculum more closely than the first-grade curriculum.

Table 8

Selected Responses from Teacher Questionnaire:
Writing to Read Kindergarten Teachers and
Writing to Read First-Grade Teachers

	Kindergarten Teachers	1st Grade Teachers
How do you feel about Writing to Read/your reading program?		
Like it very much	60%	39%
Like it	30%	39%
Not sure	10%	11%
Dislike it	0%	11%
Dislike it very much	0%	0%
How would you rate its overall effectiveness?		
Very effective	50%	17%
Effective	40%	61%
Not sure	10%	11%
Ineffective	0%	11%
Very Ineffective	0%	0%
How do you think the progress in READING of MOST of your students compares to the progress in READING of your students in previous years?		
Are reading better than students in previous classes	77%	33%
Are reading about the same as students in previous classes	19%	60%
Are not reading as well as students in previous classes	4%	0%
Have no opinion	0%	7%
How do you think the progress in WRITING of MOST of your students compares to the progress in WRITING of your students in previous years?		
Are writing better than students in previous classes	77%	53%
Are writing about the same as students in previous classes	14%	40%
Are not writing as well as students in previous classes	0%	0%
Have no opinion	9%	7%

Table 8 (cont'd.)

	Kindergarten Teachers	1st Grade Teachers
How does the amount of time you spend on reading compare with the amount you spent in previous years?		
Am spending more time on reading than in previous years	85%	47%
Am spending about the same amount of time as in previous years	15%	53%
Am spending less time on reading than in previous years	0%	0%
How does the amount of time you spend on writing compare with the amount you spent in previous years? (Original rather than handwriting)		
Am spending more time on writing than in previous years	100%	87%
Am spending about the same amount of time as in previous years	0%	13%
Am spending less time on writing than in previous years	0%	0%
What kind of feedback have you had from parents about Writing to Read/your reading program?		
Very positive	39%	18%
Positive	50%	47%
Have had no feedback	11%	35%
Negative	0%	0%
Very negative	0%	0%
Activities at which "a typical child in your classroom spends a great deal of time."		
Reading aloud	27%	67%
Reading silently	10%	22%
Creative writing	17%	11%
Developing a sight vocabulary	57%	61%
Learning word meanings	23%	50%
Phonic/structural analysis	83%	61%
Penmanship	77%	44%

Table 9 presents the selected responses of Writing to Read teachers in the ARC/IBM project in West Virginia and the Writing to Read teachers in the national survey conducted by Educational Testing Service (Murphy & Appel, 1984). When a comparison is made, one is struck by the uncanny similarities of the two groups' responses.

Table 9

Selected Responses from Teacher Questionnaire:
West Virginia Writing to Read Teachers and
Writing to Read Teachers in
Educational Testing Service National Study

	WV Writing to Read	ETS Writing to Read
How do you feel about Writing to Read/your reading program?		
Like it very much	52%	34%
Like it	33%	44%
Not sure	10%	10%
Dislike it	4%	11%
Dislike it very much	0%	2%
How would you rate its overall effectiveness?		
Very effective	38%	28%
Effective	48%	54%
Not sure	10%	13%
Ineffective	4%	6%
Very Ineffective	0%	0%
How do you think the progress in READING of MOST of your students compares to the progress in READING of your students in previous years?		
Are reading better than students in previous classes	61%	57%
Are reading about the same as students in previous classes	34%	36%
Are not reading as well as students in previous classes	2%	5%
Have no opinion	2%	2%

Table 9 (cont'd.)

	WV Writing to Read	ETS Writing to Read
How do you think the progress in WRITING of MOST of your students compares to the progress in WRITING of your students in previous years?		
Are writing better than students in previous classes	68%	83%
Are writing about the same as students in previous classes	24%	13%
Are not writing as well as students in previous classes	0%	3%
Have no opinion	8%	2%
How does the amount of time you spend on reading compare with the amount you spent in previous years?		
Am spending more time on reading than in previous years	71%	61%
Am spending about the same amount of time as in previous years	29%	37%
Am spending less time on reading than in previous years	0%	4%
How does the amount of time you spend on writing compare with the amount you spent in previous years? (Original rather than handwriting)		
Am spending more time on writing than in previous years	95%	88%
Am spending about the same amount of time as in previous years	5%	13%
Am spending less time on writing than in previous years	0%	0%
What kind of feedback have you had from parents about Writing to Read/your reading program?		
Very positive	31%	26%
Positive	49%	62%
Have had no feedback	20%	9%
Negative	0%	3%
Very negative	0%	0%

Table 9 (cont'd.)

	WV Writ ıg to Read	ETS Writing to Read
Activities at which "a typical child in your classroom spends a great deal of time."		
Reading aloud	36%	17%
Reading silently	13%	24%
Creative writing	13%	45%
Developing a sight vocabulary	51%	37%
Learning word meanings	29%	33%
Phonic/structural analysis	65%	59%
Penmanship	44%	29%

CONCLUSIONS AND RECOMMENDATIONS

Although there were some minor problems during implementation, one must conclude that the first year of the ARC/IBM Writing to Read project was a success in the participating sites in southern West Virginia. The following conclusions and recommendations are based on the data presented, plus the author's on-site observations and interactions with district coordinators, administrators, teachers, parents, and students during the last 12 months.

Conclusions

Conclusion #1: Successful implementation of the Writing to Read instructional system requires an ongoing inservice program.

The three-day training session provided by IBM in Lexington, Kentucky, received high marks from the teachers in West Virginia. There was some concern about the time gap that elapsed between training and implementation, which resulted from late shipment of equipment and materials. In general, teachers who received initial training in Lexington appeared to be more confident in implementing the program than those teachers trained at the local school level.

Regardless how effective the initial training may be, there is a need for additional assistance in the implementation process. During the one-day Writing to Read refresher session conducted in the spring, a teacher commented, "I really appreciate this inservice--I was beginning to feel bogged down, so this was definitely a battery charger." Another teacher suggested that "we need a Write to Read seminar before the school year begins and at least twice during the school year."

Conclusion #2: Several schools were able to implement the Writing to Read program successfully by utilizing volunteers in place of the paid lab aide.

The key is identifying and recruiting dependable volunteers. Several of the schools had very dependable volunteers. Some worked all day, every day. Other schools reported problems in getting dependable volunteers. There is no doubt that it would be better if every school had a fulltime, paid lab aide. However, only three of the 13 schools were able to provide these services. Care must be exercised in these schools that teachers don't delegate their responsibilities to the lab aide. The lab aide is present to assist the teacher, not to replace him/her.

Conclusion #3: Most of the Writing to Read labs provided an attractive and pleasant learning environment.

Most of the teachers had done an excellent job in setting up their labs. Walls had been painted, displays made, and, in some cases, floors had even been carpeted. All labs had the basic five learning stations, with each clearly identified. A variety of materials and supplies were present in most labs.

Conclusion #4: Teachers made a real effort to follow the prescribed Writing to Read model.

The ten vital practices of the Writing to Read model are:

1. Teacher prepares daily assignment sheet.
2. Students participate daily at these stations:
   - computer,
   - work journal, and
   - typing/writing.
3. Students listen to stories every day.
4. Students record progress daily.
5. Teacher completes class profile sheet weekly.

6. Students work with a partner.

7. Students compose words or stories every day.

8. Management plan must allow independent movement from station to station.

9. Students operate and care for equipment and materials.

10. Students take completed work journals home to parents.

In reviewing these vital practices in the refresher session, the one that generated the most discussion among teachers was item 6--students work with a partner. The teachers found that some students had real difficulty in working with others.

Conclusion #5: Students enjoyed the Writing to Read lab and had little difficulty in utilizing the equipment and materials at the various stations.

A number of teachers reported situations where a child did not feel well enough to attend class but parents would bring them to school for the Writing to Read class. When the children were asked what they liked best about the lab, the most common response was "everything."

The stories the children wrote covered a host of topics: dad's new truck, the pet store, a baseball game, my baby brother, my pet monster, a fishing trip, and, of course, the always-popular dinosaurs. The children loved to read their stories to the teachers and their classmates. One child, when asked by the district coordinator if he would read the story he was writing on the computer, replied, "You can't read?"

Conclusion #6: The Writing to Read program had a positive impact on students' achievement in writing and spelling.

Kindergarten students in the Writing to Read program achieved significantly higher scores on a writing sample and spelling test than kindergarten students in non-Writing to Read classes. Although the

assessment was based on posttest data only, the fact that the differences in the writing and spelling scores were significant at the .001 level lends support to the above conclusion.

Conclusion #7: Parents' reactions to the Writing to Read program were positive.

The evaluation plan did not include a survey of parents' attitudes concerning the Writing to Read program. However, 89 percent of the teachers in the Writing to Read schools reported receiving positive responses from the parents of their students. A number of parents expressed surprise at how well their children could sound out words. They also thought their children's experiences with the computer would better prepare them for the future.

The degree of parental involvement in the Writing to Read program varied from school to school and from classroom to classroom within a school. More involvement appeared on the part of parents in those classrooms where the teacher felt comfortable with the new program.

Conclusion #8: Teachers' responses to the Writing to Read program were positive.

Approximately 85 percent of kindergarten and first-grade teachers implementing the Writing to Read program said they liked the program and judged it to be effective (see Table 9). Over three-fourths of the Writing to Read kindergarten teachers thought their students were reading and writing better than students in previous classes, while less than 10 percent of the non-Writing to Read kindergarten teachers thought their students were reading and writing better than previous classes (see Table 7). Further evidence for the above conclusion is the fact that Writing

to Read teachers in West Virginia responded very much like the teachers in Educational Testing Service's national evaluation.

Conclusion #9: The principals of the participating elementary schools responded positively to the Writing to Read program.

Some typical responses from the principals, when asked about the Writing to Read program, were:

- "I would rate the program Very Good! The teachers have done an excellent job. The program inspires creative writing at an early age."
- "Our students have achieved higher grades in their phonics by learning the sounds on the computer."
- "The program has been very successful and a welcome asset to our school's educational capacity."
- "On a scale from one to ten, I would give the program a nine."
- "It is probably the best program I have seen introduced to kindergarten and first-grade students."
- "Due to a turnover of a number of key personnel in our school, the program was not as successful as it could have been."
- "The program has made a positive impact on the curriculum at our school."
- "Writing to Read is very effective in bridging the gap between home and school."
- "The program has helped our children to work together while learning to become more independent."

One principal proposed the following list of outcomes of the Writing to Read program:

- improves attendance,
- reduces discipline problems,
- encourages teachers to become more organized,
- improves curriculum,
- promotes positive school/community relations,
- encourages creative writing and
- enhances school/classroom atmosphere.

Conclusion #10: Many of the participating schools and school systems utilized the Writing to Read program to develop better school-community relations.

Every school reported conducting some type of orientation activity for the parents of their students. Sometimes this was a special program for the parents organization and, in some schools a special open house. Newsletters and newspaper articles with pictures and children's stories were published throughout the five counties.

In addition to displaying the students' stories in the classroom and hallways, students' stories were displayed in numerous locations in the community. In one community, a local restaurant displayed the students' stories under the glass on their dining tables. Another school displayed their children's work in a nearby shopping mall, while another made a display at the local banks, each with an appropriate explanation. Television coverage and presentations to civic and community organizations were utilized by some schools. These activities resulted in some businesses and organizations making special contributions to the schools for the Writing to Read program and/or for purchasing additional equipment for the labs.

Recommendations

The following recommendations are based upon a year's experience of working with the ARC/IBM Writing to Read project in West Virginia:

Recommendation #1: That a Writing to Read training program be provided for "new" personnel involved with the project.

There are four schools that will be expanding the Writing to Read program to first-grade level this fall, and all of these teachers need to be trained. Additional teachers will need to be trained due to retirements

and transfers. Also, there are five new principals and one new district coordinator.

Recommendation #2: That additional inservice activities be made available to all program personnel.

Experience during the first year has shown that to successfully implement the Writing to Read program, teachers need assistance beyond the initial training.

Recommendation #3: That superintendents be encouraged to explore all possible avenues for funding a Writing to Read aide for each lab.

While it is possible to implement the Writing to Read program with volunteers, no one doubts the advisability of utilizing paid lab aides.

Recommendation #4: That school principals monitor the Writing to Read program to provide the needed support and to ensure the model is being followed.

In order for principals to assume this responsibility, it is imperative that they become familiar with all aspects of the program. It is impossible for district coordinators, who have numerous other district-wide responsibilities, to provide the assistance that teachers may need.

Recommendation #5: That the Appalachian Regional Commission give serious consideration to funding a systematic evaluation of the ARC/IBM Writing to Read project.

No funds for evaluation activities were budgeted in the Writing to Read project. The limited evaluation conducted in the West Virginia schools was accomplished primarily through the extra efforts of the district coordinators and the donated time and services of Donna Adkins, a doctoral student at West Virginia University.

Recommendation #6: That the Writing to Read program be expanded to additional schools in West Virginia when the resources become available.

The success of the Writing to Read project in the five districts has created a desire on the part of teachers and parents alike to have the program implemented in their schools.

Recommendation #7: That new instructional materials and procedures be developed to maintain the gains made in the Writing to Read program.

Instructional programs specifically designed to build upon the skills learned in the Writing to Read lab are not available. At the same time, Writing to Read labs in small schools sit empty several hours each day. This is a luxury no one can afford. An instructional program coordinated with the Writing to Read labs needs to be developed for grades two and three; otherwise, the gains made will soon be lost.

REFERENCES

Lutz, G. (1983). Understanding Social Statistics. New York: Macmillan Publishing Company, Inc.

Martin, John H. (1986, revised). Writing to Read Teacher's Manual. International Business Machines, Inc.

Murphy, Richard T., and Appel, Lola R. (1984). Evaluation of the Writing to Read Instructional System--Second Year Report. Princeton, NJ: Educational Testing Service.

APPENDICES

APPENDIX A

Instructions to Teachers for Collecting
Writing Samples

Appendix A. Instructions, Directions, and Criteria

Instructions to Teachers for Collecting Writing Samples

- ***Date of assessment.*** Writing samples should be collected near the end of the term and after at least 18 weeks of instruction in WTR and any non-WTR classes.
- ***Materials.*** Pupils should use the pencils that they normally use for writing.
- ***Length of time.*** After you have given the directions and answered questions, the children are to be given 30 minutes to write one copy of their story.
- ***Teacher assistance.*** Once you have read all the directions for writing the story and answered any questions, please do not assist the pupils in writing their stories, spelling words, and so on.
- ***Directions.*** After you have distributed pencils and paper, please tell the children to write their names at the top of their papers. Then read:

  Today you will be writing a story all by yourself. I can't help you but I know you will do the best you can. I'm going to read a little story first. Listen.

  Once upon a time when a little boy and a little girl were walking home from school, they found two magic hats. Because the hats were magic, when they put the hats on they could do anything they wished. They could fly up in the sky; they could be clowns in the circus, they could go to the moon. They could even eat all the ice cream in the world. They had a wonderful time.

  Now...just think what YOU could do if YOU found a magic hat. Let's write a make-believe story about what you would do if you found a magic hat. Remember, you can do or be anything you wish. Start your story like this: One day I found a magic hat.

  [Print the following sentence on the board:]

  One day I found a magic hat.

  [The children should now begin. The children should be encouraged to write and to do the best they can. At the end of 30 minutes, ask the children to turn in their stories.]

APPENDIX B

Student Writing Samples and Scores

THE SIX WRITING STAGES

PRE-WRITING

- "PRETEND WRITING"
- MOCK LETTERS

STAGE 1: CYCLE WORD WRITING
- WHOLE WORD UNITS
- BEGINNING PHONEMIC UNDERSTANDING

STAGE 2: NEW WORD WRITING
- PHONEMIC UNDERSTANDING
- APPLICATION

STAGE 3: PHRASE/SENTENCE WRITING
- UNRELATED PHRASES
- PICTURES WITH CAPTIONS
- "SENTENCE STARTERS"
- SIMPLE SENTENCES

STAGE 4: SIMPLE STORY WRITING
- SIMPLE RELATED SENTENCES WITH/WITHOUT PICTURES
- ASSISTED SELF-EDITING

STAGE 5: INTERMEDIATE STORY WRITING
- COMPOUND/COMPLEX SENTENCES SIMILAR TO STUDENTS' SPEECH
- DEVELOPED STORY DETAILS
- ASSISTED SELF-EDITING

STAGE 6: ADVANCED STORY WRITING
- COMPLEX CONTENT AND LENGTH
- SELF-EDITING WITH MINIMAL ASSISTANCE

Amanda

One day I found

a magic hat. I wd wivR

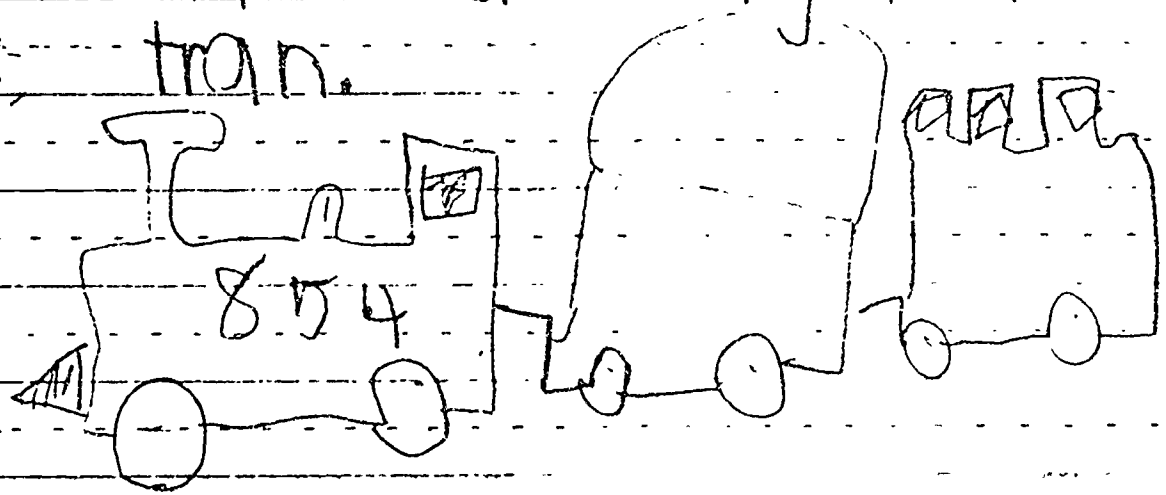
Vat i.Tonhpt on up

Paul

One day I found a magic hat and I tin to a cat.

Matthew

One doy I found a magic
nat the hat is black I wish
I am a injner I wood driv
d tran.



Christopher

One day I found a

magic hat I would go

up to heven I would

se god stres I wil se

Jesus

Brandi

5

One day I found a magic

hat and I made my mom

some magic flowers and I

would make a rabbit for m

(continued on next page)

me to play with and I would fly like a bird and then I would give my magic hat to my mom and I would let

(continued on next page)

her do something that she

wants to do

Ashley 6

One day I found a magic hat and it gave me good luck and it gives me any thing!

(continued on next page)

it takes me to a carnaval

my magic hat boys me

pop corn to and I

went back home

(continued on next page)

and I said I am

sleepy I went to bed

and I put my hat up

on my hat rack

(continued on next page)

60

and I woke up the

next morning and I was

a queen

APPENDIX C

ETS Teacher Questionnaires

Writing to Read Teacher Questionnaire

Name _____ School _____

1. How many students are in your class? K ____ 1 ____ 2 ____ Other ____

2. How many years of teaching experience have you had, including this year?

1 year or less	____
2 – 4 years	____
5 – 9 years	____
10 – 14 years	____
15 – 19 years	____
20 years or more	____

3. What reading program(s) do you use with Writing to Read? (may list more than one)

_____

_____

_____

4. How long have you been using Writing to Read?

This is the first year	____
This is the second year	____
Used for more than 2 years	____

5. How do you feel about Writing to Read?

Like it very much	____
Like it	____
Not sure	____
Dislike it	____
Dislike it very much	____

6. How would you rate its overall effectiveness?

Very effective	____
Effective	____
Not sure	____
Ineffective	____
Very ineffective	____

7. How do you think the progress in *reading* of *most* of your students compares to the progress in *reading* of your students in previous years?

Are reading better than students in previous classes	____
Are reading about the same as students in previous classes	____
Are not reading as well as students in previous classes	____
This is my first year teaching at this grade level	____
Have no opinion	____

8. How do you think the progress in *writing* of *most* of your students compares to the progress in *writing* of your students in previous years?

Are writing better than students in previous classes	____
Are writing about the same as students in previous classes	____
Are not writing as well as students in previous classes	____
This is my first year teaching at this grade level	____
Have no opinion	____

9. How does the amount of time you spend on reading compare with the amount you spent in previous years?

Am spending more time on reading than in previous years	____
Am spending about the same amount of time as in previous years	____
Am spending less time on reading than in previous years	____
Not applicable (not taught at this grade level)	____
Not applicable (my first year teaching at this grade level)	____

10. How does the amount of time you spend on writing compare with the amount you spent in previous years? (Original rather than handwriting)

Am spending more time on writing than in previous years	____
Am spending about the same amount of time as in previous years	____
Am spending less time on writing than in previous years	____
Not applicable (not taught at this grade level)	____
Not applicable (my first year teaching at this grade level)	____

11. How would you rate the effectiveness of Writing to Read for the following groups of children? (Please check one in each column)

Above Average		Average		Below Average	
Very effective	____	Very effective	____	Very effective	____
Effective	____	Effective	____	Effective	____
Not sure	____	Not sure	____	Not sure	____
Ineffective	____	Ineffective	____	Ineffective	____
Very ineffective	____	Very ineffective	____	Very ineffective	____

12. What kind of feedback have you had from parents about Writing to Read?

Very positive	____
Positive	____
Have had no feedback	____
Negative	____
Very negative	____

How much time does a typical child in your class spend in each of the following types of activities? (in the regular classroom)

Note: Enter 1 if a *great deal* of time
Enter 2 if *some* time
Enter 3 if *little* or *no* time
Enter 4 if not applicable

13. Reading aloud ____
14. Reading silently ____
15. Creative writing ____
16. Developing a sight vocabulary ____
17. Learning word meanings ____
18. Phonic and/or structural analysis ____
19. Penmanship ____

We are interested in your thoughts about the reading and writing skills of the children and the use of computers in education. Please check whether you agree or disagree with the following statements.

	Agree	*Disagree*
20. It is important today that children learn about computers and how to use them.	____	____
21. The children are progressing as well as expected.	____	____
22. Money being spent on computers should be spent on other things.	____	____
23. Too much time is spent on Writing to Read.	____	____
24. Children this age are too young to learn by computers	____	____
25. I hope our school will continue to use Writing to Read next year.	____	____
26. Our school should emphasize reading skills more than they do at present.	____	____
27. Our school should emphasize writing skills more than they do at present.	____	____

Teacher Questionnaire (non-WTR)

Name _____ School _____

1. How many students are in your class? K ____ 1 ____ 2 ____ Other ____

2. How many years of teaching experience have you had, including this year?
   - 1 year or less ____
   - 2 – 4 years ____
   - 5 – 9 years ____
   - 10 – 14 years ____
   - 15 – 19 years ____
   - 20 years or more ____

3. What reading program(s) do you use? (More than one may be listed)

   _____

   _____

   _____

4. How long have you been using the(se) reading program(s)?
   - This is the first year ____
   - This is the second year ____
   - Used for more than 2 years ____

5. How do you feel about your overall reading program?
   - Like it very much ____
   - Like it ____
   - Not sure ____
   - Dislike it ____
   - Dislike it very much ____

6. How would you rate its overall effectiveness?
   - Very effective ____
   - Effective ____
   - Not sure ____
   - Ineffective ____
   - Very ineffective ____

7. How do you think the progress in *reading* of *most* of your students compares to the progress in *reading* of your students in previous years?
   - Are reading better than students in previous classes ____
   - Are reading about the same as students in previous classes ____
   - Are not reading as well as students in previous classes ____
   - This is my first year teaching at this grade level ____
   - Have no opinion ____

8. How do you think the progress in *writing* of *most* of your students compares to the progress in *writing* of your students in previous years?
   - Are writing better than students in previous classes ____
   - Are writing about the same as students in previous classes ____
   - Are not writing as well as students in previous classes ____
   - This is my first year teaching at this grade level ____
   - Have no opinion ____

9. How does the amount of time you spend on readin, ompare with the amount you spent in previous years?

Am spending more time on reading than in previous years	____
Am spending about the same amount of time as in previous years	____
Am spending less time on reading than in previous years	____
Not applicable (not taught at this grade level)	____
Not applicable (my first year teaching at this grade level)	____

10. How does the amount of time you spend on writing compare with the amount you spent in previous years? (Original rather than handwriting)

Am spending more time on writing than in previous years	____
Am spending about the same amount of time as in previous years	____
Am spending less time on writing than in previous years	____
Not applicable (not taught at this grade level)	____
Not applicable (my first year teaching at this grade level)	____

11. How would you rate the effectiveness of your overall reading program for the following groups of children? (Please check one in each column)

Above Average		Average		Below Average	
Very effective	____	Very effective	____	Very effective	____
Effective	____	Effective	____	Effective	____
Not sure	____	Not sure	____	Not sure	____
Ineffective	____	Ineffective	____	Ineffective	____
Very ineffective	____	Very ineffective	____	Very ineffective	____

12. What kind of feedback have you had from parents about your reading program?

Very positive	____
Positive	____
Have had no feedback	____
Negative	____
Very negative	____

How much time does a typical child in your class spend in each of the following types of activities?

Note: Enter 1 if a *great deal* of time
Enter 2 if *some* time
Enter 3 if *little* or *no* time
Enter 4 if not applicable

13. Reading aloud	____
14. Reading silently	____
15. Creative writing	____
16. Developing a sight vocabulary	____
17. Learning word meanings	____
18. Phonic and/or structural analysis	____
19. Penmanship	____

We are interested in your thoughts about the reading and writing skills of the children and the use of computers in education. Please check whether you agree or disagree with the following statements.

	Agree	*Disagree*
20. It is important today that children learn about computers and how to use them.	____	____
21. The children are progressing as well as expected.	____	____
22. Money being spent on computers should be spent on other things.	____	____
23. Too much time is spent on our reading program.	____	____
24. Children this age are too young to learn by computers.	____	____
25. I hope our school will continue to use the reading program we are using this year.	____	____
26. Our school should emphasize reading skills more than they do at present.	____	____
27. Our school should emphasize writing skills more than they do at present.	____	____