

## DOCUMENT RESUME

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TITLE "Flex-Ed" Reading Readiness Program for First Grade Students.

INSTITUTION Central Arkansas Education Center, Little Rock.

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IDENTIFIERS Flex Ed Reading Readiness Program

## ABSTRACT

This project evaluated the effectiveness of the "Flex-Ed" Reading Readiness Program with nineteen first grade students. Most of the nineteen students had scored below or near the tenth percentile of the MacMillan Readiness Test. Four behavioral objectives were written for the students in the areas of space, quantity, time, and basic concepts. The teacher worked daily with the students in groups of four using the "Flex-Ed" program. Following formal instruction in the group, individual students practiced at their own pace with the "Flex-Ed" materials. The Boehm Test of Basic Concepts, Form A, was administered in October and again in May to obtain pre- and post-test measures. The results indicated that the experimental group of nineteen students performed better than the control group. The experimental group's growth, however, was far short of expectations when the mean gain score of 8.6 was considered. It was recommended that fundamental concepts could be better developed with the use of resources such as the "Flex-Ed" curricular materials. (WR)

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ED 079710

"Flex-Ed" Reading  
Readiness Program

CENTRAL ARK EDUCATION CENTER

CS 000 469

ED 079710

REGION VI

CENTRAL ARKANSAS EDUCATION CENTER  
Markham and Izard Streets  
Little Rock, Arkansas 72201

MINI-GRANT PROJECT

TITLE: "FLEX-ED" READING READINESS PROGRAM FOR FIRST GRADE STUDENTS

DATE: 1970-1971

- A. Miss Cleola Boles  
Mini-Grant Recipient(s)
- B. Mr. James Zeigler  
Name of Principal
- C. Woodson Elementary School  
Name of School
- D. North Little Rock School District  
Name of School District
- E. Dr. Leon Wilson, Dr. Jim Fain, Mr. Otis Preslar  
C.A.E.C. Consultants

I. TITLE: "Flex-Ed" Reading Readiness Program

II. READING PROBLEM

A. The Students: The student population included nineteen first grade students. Except for one white student, all other students were black.

B. The Problem: Most of the students scored below or near the tenth percentile on the MacMillan Readiness Test. It has been well established that children who score at this level are seriously handicapped when they begin reading instruction. Even by the end of the third year, similar student populations tend to have difficulty reading on the first grade level. (See Appendix A for research of related literature.)

III. PROGRAM FOR INSTRUCTION

A. Behavioral Objectives:

1. First grade students using the Flex-ed Reading Readiness Program will be able to demonstrate a greater gain in basic concepts for space than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.
2. First grade students using the Flex-ed Reading Readiness Program will be able to demonstrate a greater gain in basic concepts for quantity than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.
3. First grade students using the Flex-ed Reading Readiness Program will be able to demonstrate a greater gain in basic concepts for

time than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.

4. First grade students using the Flex-ed Reading Readiness Program will be able to demonstrate a greater gain in miscellaneous basic concepts than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.

B. Teaching Strategies:

In addition to the MacMillan Readiness Program, the teacher worked daily with the nineteen students in groups of four using a Flex-ed program. The "Flex-ed" program was used for approximately fifteen minutes by each group. Following formal instruction in the group, individual students practiced at their own pace with the "Flex-ed" materials. While learning independently, the student was provided with an immediate reward--a green light--upon successful selection. The students were involved both physically and mentally while working with the twenty tasks which constitute the Flex-ed program.

The twenty tasks are:

- |                                 |                                       |
|---------------------------------|---------------------------------------|
| 1. Color Matching               | 11. Rhyming Picture Matching          |
| 2. Shape Matching               | 12. Missing Parts Matching            |
| 3. Design Matching              | 13. Cross Likeness Matching           |
| 4. Picture Matching             | 14. Cross Difference Matching         |
| 5. Picture to Word Matching     | 15. Size Matching                     |
| 6. Picture to Sentence Matching | 16. Lower Case Letter Matching        |
| 7. Symbol Matching              | 17. Upper Case Letter Matching        |
| 8. Symbol to Picture Matching   | 18. Lower Case to Upper Case Matching |
| 9. Symbol to Word Matching      | 19. Numbers to Objects Matching       |
| 10. Similar Picture Matching    | 20. Numbers to coins matching         |

(See Appendix B for list of materials.)

A control group was designated from a class in another school where the student population was thought to be similar.

#### IV. EVALUATION

A. Measurement: The Boehm Test of Basic Concepts, Form A, was administered in October and again in May to obtain pre- and post-test data. A Calendar of Events was made to schedule measuring and reporting. (See Appendix C.)

B. Analysis: Table A, which follows, shows the mean scores for miscellaneous, space, quantity, and time concepts as they were scored by both the experimental and control groups. Unfortunately, the experimental group was not well matched with the control group.

The control group scored higher (38.5 to 23.6), on the test of fifty items, than the experimental group. The experimental group, however, made gains that were nearly three times greater (8.6 to 2.9), than the control group.

TABLE A  
BOEHM TEST OF BASIC CONCEPTS

Mean of Actual Scores

<u>Pre</u>	<u>Number of Items</u>	<u>Control Group</u>	<u>Woodson Elementary Group</u>	<u>Difference</u>
Mean Score	50	38.5	23.6	-14.9
Miscellaneous	5	3.7	1.9	-1.8
Space	23	19.2	12.1	-7.1
Quantity	18	11.5	8.5	-3.0
Time	4	3.0	1.0	-2.0
 <u>Post</u>				
Mean Score	50	41.4	32.2	-9.2
Miscellaneous	5	4.2	2.6	-1.6
Space	23	19.8	15.8	-4.0
Quantity	18	13.7	11.5	-2.2
Time	4	3.7	2.4	-1.3
 <u>Change in each Group's Pre and Post Mean</u>				
Mean Score		+2.9	+8.6	+5.7
Miscellaneous		+0.5	+0.7	+0.2
Space		+0.6	+3.7	+3.1
Quantity		+2.2	+3.0	+0.8
Time		+0.7	+1.4	+0.7

Table B shows an analysis of ten of the most frequently missed concepts by students on the Boehm Test. This table of analysis provides more insight into answering the objectives as to whether or not the experimental group performed better than the control group. For example, between the pre- and post-testing, the experimental group realized a total net gain of 162 percentage points as compared to the control group's total net gain of only 56 percentage points.

Table C is a bar graph which shows the distribution of students by percentage and test-score intervals for both the control and the experimental (Woodson) groups. For example 31% of the students in the experimental group scored at or between the 21-35 interval on the pre-test. On the post-test, this percentage shrank to 12% which indicated that the students improved enough to score either at the 21-35 or 36-50 interval. Actually, none of the students in the experimental group scored in the 36-50 interval on the pretest; but 35% of them scored in this interval on the post-test. Following Table C, an analysis is given to answer each of the behaviorally stated objectives.



TABLE B

## BOEHM TEST OF BASIC CONCEPTS

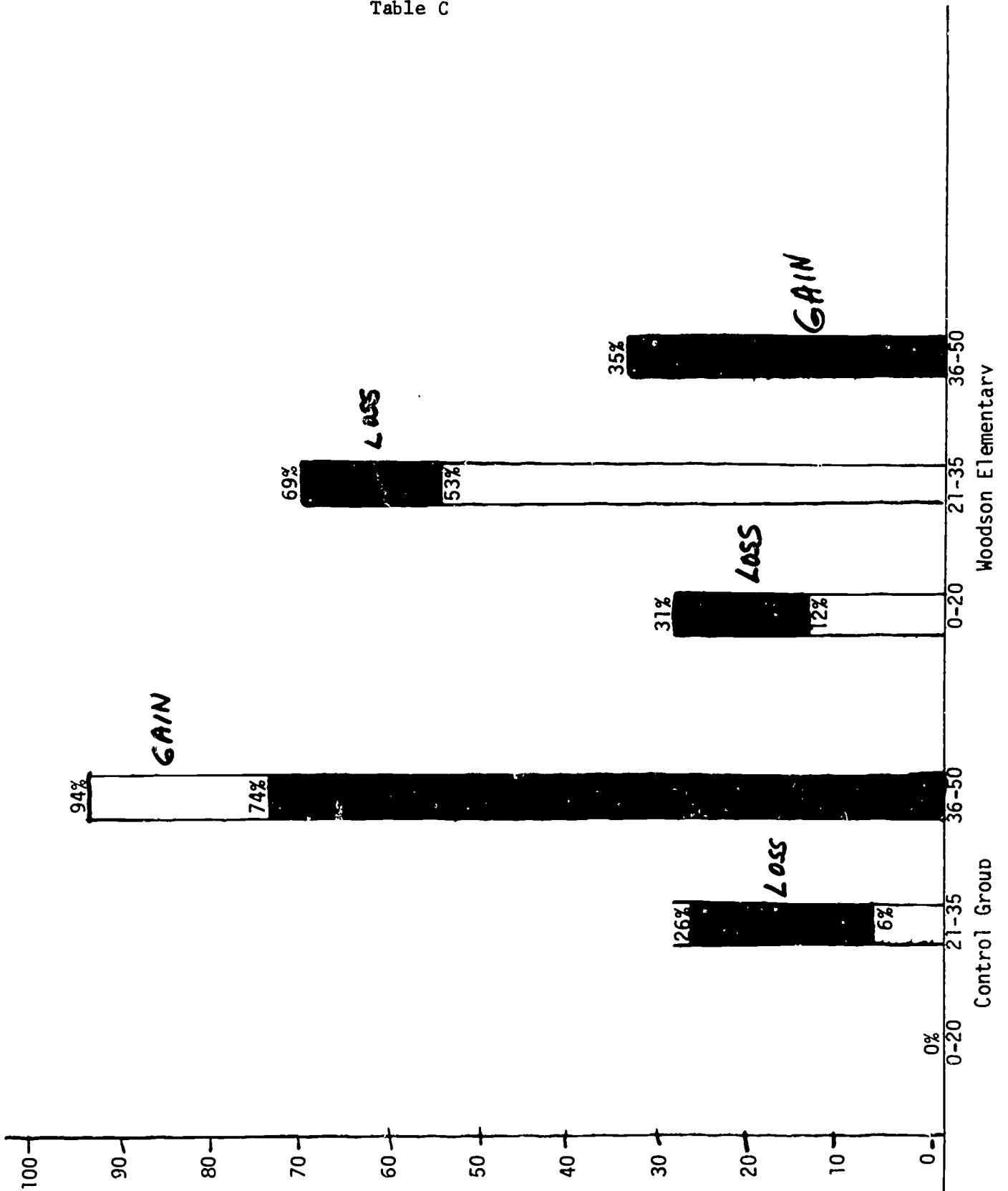
Percentage of Students Who  
Correctly Answered Item\*

<u>CONCEPT-Pre</u>	<u>Control</u> <u>Group</u>	<u>Woodson</u> <u>Elementary</u> <u>Group</u>	<u>Difference</u>
Pair	16	25	+9
Skip	26	25	-1
In Order	32	19	-13
Third	37	6	-31
Least	42	13	-29
Below	95	13	-82
Not First or Last	79	31	-48
Other	79	31	-48
Medium-sized	26	31	+5
Left	63	31	-32
<u>CONCEPT-Post</u>			
Pair	35	24	-11
Skip	82	47	-35
In Order	65	6	-59
Third	59	29	-30
Least	18	35	+17
Below	94	29	-65
Not First or Last	76	53	-23
Other	75	41	-35
Medium-sized	53	47	-6
Left	41	76	+35
<u>Change in each Group's</u> <u>Pre and Post Percentages</u>			
Pair	19	-1	-20
Skip	56	22	-34
In Order	35	-13	-48
Third	22	23	+1
Least	-24	22	+46
Below	-1	16	+17
Not First or Last	-3	22	+25
Other	-3	10	+13
Medium-sized	27	16	-11
Left	-22	45	+67
Net Gain (Percen. Points)	56	162	

\*The above 10 items were chosen by Mrs. Jeanne LaGrossa of the North Little Rock School District as the most frequently missed.

BOEHM TEST OF BASIC CONCEPTS

Pre and Post Percentages of Students  
in Test Score Intervals



## ANALYSIS OF THE OBJECTIVES

OBJECTIVE NO. 1. First year students in the experimental group will be able to demonstrate a greater gain in basic concepts for space than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.

ANALYSIS: The experimental group scored a mean of 12.1 on the pre-test and 15.8 on the post-test. The control group scored a mean of 19.2 on the pre-test and 19.8 on the post-test. The experimental students gained 3.7 in the mean score, but the control group gained only 0.6. Thus, the objective was achieved.

OBJECTIVE NO. 2: First year students in the experimental group will be able to demonstrate a greater gain in basic concepts for quantity than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.

ANALYSIS: The experimental group scored a mean of 8.5 on the pre-test and 11.5 on the post-test. The control group scored a mean of 11.5 on the pre-test and 11.7 on the post-test. The experimental group increased the mean 3.0, but the control group increased the mean only 2.2. Thus, the objective was achieved.

OBJECTIVE NO. 3: First year students in the experimental group will be able to demonstrate a greater gain in basic concepts for time than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.

ANALYSIS: The experimental group scored a mean of 1.0 on the pre-test and 2.4 on the post-test. The control group scored a mean of 3.0 on the pre-test and 3.7 on the post-test. The mean gain for the experimental group was 1.4, but the mean gain for the control group was only 0.7. Thus, the objective was achieved.

OBJECTIVE NO. 4: First year students using Flex-ed Readiness materials will be able to demonstrate a greater gain in miscellaneous basic concepts than students in a control group as measured by pre- and post-tests with the Boehm Test of Basic Concepts.

ANALYSIS: The experimental group scored a mean of 1.9 on the pre-test and a mean of 2.6 on the post-test. The control group scored a mean of 3.7 on the pre-test and a mean of 4.2 on the post-test. The mean gain for the experimental group between pre- and post-testing was 0.7; the mean gain for the control group was 0.5. While the difference was not significant, the experimental group did show a greater gain (0.2) than the control group.

C. Conclusions and Recommendations:

According to the outcomes, the experimental group performed better than the control group. The experimental group's growth, however, was far short of expectations when it is considered that the mean score for the fifty items gained only 8.6 points (23.6 to 32.2). Moreover, the mean on the post-test of 32.2 for the experimental group was still 6.3 points below the mean (38.5) of the selected control group on the pre-test.

While the Flex-ed curricular materials indicate some merit, it would not be advisable to be dependent on them alone to teach basic concepts. Another experimental project which utilized different curricular materials with one class approximated the results of this project. The other experimental project, however, included a second experimental group which gained 14.7 mean points between pre- and post-testing.\* The greater gain was attributed to field trips that were well organized and correlated with the curriculum.

In conclusion, the teacher who is concerned with the development of fundamental concepts could do a better job with the availability of resources such as the "Flex-ed" curricular materials. The same teacher could do an even better job by supplementing those materials with well organized and correlated field trips.

\*This experimental project is entitled "The Detection and Remediation of Deficiencies in Verbal Understanding." It was developed and carried out by Mrs. Jeanne LaGrossa of the North Little Rock Public Schools. A copy of this project and evaluation is bound with these reports.

## APPENDIX A

### REVIEW OF RELATED LITERATURE

Jeanne Chall in Learning to Read, the Great Debate (McGraw-Hill, 1967), acknowledges a great difference in opinion among "experts" in the reading field on the subject of what constitutes reading readiness. The March 1965 and October, 1970 issues of The Reading Teacher both substantiate findings in Chall's book. It is pointed out that reading for disadvantaged youngsters requires some special techniques and deviates from instruction even for the average middle class student.

APPENDIX B

INSTRUCTIONAL MATERIALS FOR MINI-GRANT

NORTH LITTLE ROCK - WOODSON

Arkansas Visual Aids Company  
P. O. Box 932  
Little Rock, Arkansas 72203

<u>Quantity</u>	<u>Description</u>
6	FLEX ED UNITS
1	FLEX ED PROGRAM (1 thru 20)
1	FLEX ED READING READINESS PROGRAM

Lavender Electronics, Inc.  
1122 Center Street  
Little Rock, Arkansas 72202

<u>Quantity</u>	<u>Description</u>
12	#216 Eveready batteries

Appendix C

CALENDAR OF EVENTS: North Little Rock (Redwood Elementary School)

Miss Cleola Boies: "Flex-Ed" Reading Readiness Program"

Target Date	Events: Activities, Materials, & Facilities	Person(s) Responsible	Completion Date
10/70	Pre-test: Administer <u>Boehm Test of Basic Concepts, Form A</u>	Jeanne LaGrossa	10/14/70
5/71	Post-test: Administer <u>Boehm Test of Basic Concepts, Form B</u>	Jeanne LaGrossa	-6/02/71
6/01/71	FINAL REPORT: Revise the strategies, answer the objectives, state conclusions and recommendations	Boles	6/15/72