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ABSTRACT

To investigate the effects of the Southwest Regional Laboratories (SWRL) Kindergarten Program on readiness for first grade as measured by the Metropolitan Readiness Test and the Gates-MacGinitie Readiness Skills Test was the purpose of this study. The subjects for the experiment were 52 kindergarten students who were randomly assigned either to a SWRL program or to a control group. The subjects in the SWRL program used the SWRL materials approximately 25 minutes a day, and the control group concentrated on the kindergarten program used by the kindergarten teacher, including perceptual skills training and a structured mathematics program. The results indicated that there was no particular advantage to participation in the SWRL program. (WR)

A Study of the Effectiveness of the SWRL Kindergarten Program

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1. Grateful appreciation is extended to Dr. Pietro J. Pascale for his help and suggestions.

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ABSTRACT

To investigate the effects of the SWRL KINDERGARTEN PROGRAM on readiness for first grade, two readiness tests were administered to students participating in the SWRL program and to students participating in a traditional kindergarten program. Performance on the tests was then compared by using a *t* test with a .05 probability level. It was expected that the test scores would indicate an advantage resulting from the use of the SWRL program, but the results were not significant. Further large scale testing should be carried out.

CHAPTER I

INTRODUCTION

The Problem

The purpose of the study was to investigate the effects of the Southwest Regional Laboratories (SWRL) Kindergarten Program on readiness for first grade as measured by the Metropolitan Readiness Test (MRT) and the Gates-MacGinitie Readiness Skills Test (GMRST).

The SWRL program developed by Southwest Regional Laboratory for Educational Research and Development, is a relatively new program. Since this is a first year experience with the program, the investigator was interested in measuring the skills learned in preparation for first grade as a result of SWRL training.

Statement of Hypotheses

The object of this investigation was to compare kindergarten students who have had the SWRL program with kindergarten students who have not experienced the SWRL program with respect to readiness for first grade. Hypotheses three and four were used to determine to what extent the two tests measure similar skills.

The four research hypotheses were:

1. The SWRL group would have a significantly higher mean

than the non-SWRL group on the MRT.

2. The SWRL group would have a significantly higher mean than the non-SWRL group on the GMRST.

3. There is no significant difference between the MRT performance and the GMRST performance for SWRL students.

4. There is no significant difference between the MRT performance and the GMRST performance for non-SWRL students.

CHAPTER II

REVIEW OF RELATED LITERATURE

Since this study is experimental and the SWRL Kindergarten Program is a relatively new development in education, there currently is very little literature available pertaining to the program. At present, the bulk of the materials available is the work of the agency which developed the program, and the company which is currently publishing and selling it. There really exists no body of objective material to draw on in preparing an experimental study of this type.

In the mid-1960's, there was a growing concern for development technology in education which eventually led to the development of the SWRL program (Schutz, 1970). This program was largely in the developmental stage for the five year period from 1966 to 1970, and the only research studies available deal with the limited implementation of the program in some schools during the 1970-71 school year. This material does offer insight into the concepts involved in the development of the program, but have little relationship to the findings encountered in this study.

In the promotional materials of Ginn Publishers, the publisher of the program, were the results of tests conducted by different school systems which have implemented the program. One of these

systems was the Sacramento City Unified School District who compared the test results of pupils in the SWRL and traditional kindergarten programs on a test which was built into the SWRL program. The findings were as follows:

1. The pupils in the SWRL and the regular kindergarten programs both achieved comparable mean scores and percentage scores on the two tests regarding instructional concepts.

2. The pupils in the SWRL program obtained mean scores on the two group tests on communication skills which were considerably higher than those obtained by the pupils in regular kindergarten programs.

3. The pupils in the SWRL program also obtained mean scores and percentage scores on the individual oral reading test which were considerably higher than those obtained by pupils in regular kindergarten programs.

The limitation of these findings is, of course, the fact that the tests for this study were developed from the content taught in the Southwest Regional Laboratory Programs. The study was specifically designed to measure attainment of objectives of the programs, and does not measure other outcomes which may have been taught in control schools.

The MRT was given to the student participating in the SWRL program in the Springfield Public School System in Illinois in the 1970-71 school year. Five schools participated in the program. The mean of the raw score data was computed. The results are in the following table.

MRT $\bar{M}$ RESULTS [2]

Schools	1	2	3	4	5
Total Students	62	57	46	33	46
Total Test Mean:	79.5	75.4	76.5	57.1	71.3

Of all the subtests, the alphabet subtest of the MRT is the most highly correlated with reading achievement. In the same school system, an attempt was made to evaluate the effects of the SWRL reading program. A comparative analysis of alphabet subtest scores was made using the 1969-70 kindergarten students who were in the traditional program and the 1970-71 students who completed the SWRL program. The results are in the following table.

AN ANALYSIS OF DIFFERENCES BETWEEN MEAN ALPHABET SUBTEST SCORES FOR TRADITIONAL AND SWRL READING PROGRAMS[3]

Program	n	Mean	SD	t
SWRL	243	14.58	4.02	5.27*
Traditional	262	13.16	13.87	

*p. .05

The results of this analysis indicated that the SWRL students scored significantly higher on the alphabet subtest than would be expected by chance. The implication clearly is that the SWRL program offers definite advantages to the students. Both of the tables listed

above give the reader some basis for comparison with the findings of this study.

CHAPTER III

MATERIALS AND PROCEDURES

Apparatus

The SWRL Kindergarten Program was developed to help kindergarten children learn conceptual skills fundamental to academic achievement and to master beginning reading skills. It is divided into the Instructional Concepts Program (ICP) and the Beginning Reading Program (BRP). The ICP consists of a 12-week program which enables each child to utilize 96 concept terms. The concepts taught pertain to colors, sizes, shapes, amounts, positions, and comparisons. The materials used during this portion of the program include stories, story posters, concept books, games, practice exercises, flashcards, concept cards, and criterion exercises.

The goals of the BRP are: (1) to read the 100 words taught directly in the program, (2) to sound out and read new words composed of word elements taught in the program (3) to demonstrate comprehension of the material the students read. The materials include storybooks, flashcards, comprehension sheets, games, criterion exercises, and practice exercises (Southwest Regional Laboratory for Educational Research and Development, 1972).

The Metropolitan Readiness Test was developed by Gertrude H. Hildreth, Nellie L. Griffiths, and Mary E. McGauvran (1969).

The test consists of six subtests: word meaning, listening, matching, alphabet, numbers, and copying. Each subtest yields a raw score. These scores are then totaled and converted into percentile ranks.

The Gates-MacGinitie Readiness Skills Test was developed by Arthur I. Gates and Walter H. MacGinitie (1968). It consists of eight subtests: listening comprehension, auditory discrimination, visual discrimination, following directions, letter recognition, visual-motor coordination, auditory blending, and word recognition. The score on the latter subtest is not included in the total weighted score. Each subtest yields a raw score. These raw scores are then totaled and converted into percentile ranks.

Sample

The subjects for the experiment were fifty-two kindergarten students enrolled in the Springfield Local School District during the 1972-73 academic year. These fifty-two students were assigned at random to one of two kindergarten classes, a morning class of twenty-five students, and an afternoon class of twenty-seven students. The morning class was designated to use the SWRL program.

Variables

The dependent variable was the tests that were used; MRT and GMRST. The independent variable was the SWRL Kindergarten Program. The levels of the independent variable were the SWRL and the non-SWRL treatment.

Procedure

The morning kindergarten class was designated to use the SWRL program approximately twenty-five minutes per day. The remaining time from the two and one-half hour day was filled with other readiness learning typical of a traditional kindergarten.

The afternoon class did not participate in the SWRL program and concentrated on the kindergarten curriculum used by the kindergarten teacher. It should be noted that perceptual skills training and a structured mathematics program were used with this class only. The same teacher was assigned to both groups of students.

Academic ability was assumed to be normally distributed for each class. The general procedure involved classroom instruction of each of the two classes during the school year from September through April according to the above methods described. Achievement was assessed by two readiness tests given in May which were the same for both classes.

CHAPTER IV

ANALYSIS OF DATA

Results

Table 1 shows the results of a t test between the SWRL group MRT raw scores and the non-SWRL group MRT raw scores.

TABLE 1

$\bar{M}$ SCORES, VARIANCES AND RESULTS OF t TEST FOR MRT SWRL VS. NON-SWRL

	n	$\bar{M}$	σ	t	P
SWRL	25	65	8.7	1.40 <	.05
NON-SWRL	27	69	11.8		

Table 2 shows the results of a t test between the SWRL group GMRST raw scores and the non-SWRL group GMRST raw scores.

TABLE 2

$\bar{M}$ SCORES, VARIANCES AND RESULTS OF t TEST FOR MRT SWRL VS. NON-SWRL

	n	$\bar{M}$	σ	t	P
SWRL	25	43	7.0	1.91 <	.05
NON-SWRL	27	45	7.2		

Table 3 shows the results of a t test between the MRT percentile scores and the GMRST percentile scores for the SWRL group.

TABLE 3

$\bar{M}$ SCORES, VARIANCES AND RESULTS OF t TEST
FOR PERCENTILE SCORES OF SWRL
ON MRT AND GMRST
(n = 25)

TESTS	$\bar{M}$	σ	t		P
MRT	70.88	16.5	.311	<	.05
GMRST	72.56	21.4			

Table 4 shows the results of a t test between the MRT percentile scores and the GMRST percentile scores for the non-SWRL group.

TABLE 4

$\bar{M}$ SCORES, VARIANCES AND RESULTS OF t TEST
FOR PERCENTILE SCORES OF NON-SWRL
ON MRT AND GMRST
(n = 27)

TESTS	$\bar{M}$	σ	t		P
MRT	76.85	20.0	.254	<	.05
GMRST	75.48	20.2			

Table 5 lists the mean scores of the alphabet subtest of both the MRT ans GMRST.

TABLE 5

$\bar{M}$ SCORES OF THE ALPHABET SUBTEST
OF THE MRT AND GMRST

	SWRL M	NON-SWRL M
MRT	14.5	14.8
GMRST	7.08	7.33

Discussion

The differences in scores between the two test groups are simply too small to be significant in making any positive judgements concerning the SWRL program. It was expected that the test scores would point to a significant advantage resulting from use of the SWRL program. However, the results of this study failed to substantiate that expectation, rather the implication seems to be that there is no particular advantage to participation in the SWRL program.

As with any study there are certain factors which may have an influence on the overall accuracy of the study. In this particular study, there were several conditions which to one degree or another may have made their influence felt on the final results. One such condition was the fact that the two tests were given within one week of each other. The possibility exists that this lack of time between testing periods may have had an influence on the results. A second condition was the time placement of the children; morning or afternoon. It is not known what effect this would have on the childs ability to learn. A third condition was the structured mathematics program and the perceptual skills training program that were used only with the non-SWRL group. Both areas are included in the subtests of the instruments used, and also may have had an influence on the results of the study.

While it probably is not fair to base any definite conclusions concerning the SWRL program on such a limited

test sampling, the implication here is clearly that this study, at least, indicates that SWRL does not always offer the large gains its publishers seem to expect of it. The conclusions of this study must be that even if such results do not warrant actual questioning of the validity of the SWRL program, they do indicate that further larger scale testing should be carried out.

FOOTNOTES

[1] Local Education Agency Case Studies Evaluating the SWRL Kindergarten Program and SWRL Kindergarten Program Documentation (Ginn and Company, 1972) p. 36.

[2] Ibid., p.44.

[3] Ibid., p.50.

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