

COLLEGE OF THE VIRGIN ISLANDS
THE INFLUENCE OF THE METHODS OF TEACHING
READING ON STUDENTS' READING ACHIEVEMENT

6581

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Abstract

The purpose of this experimental study was to investigate the influence of the methods of teaching reading on students' reading achievement. It was conducted during a thirteen-week period in a regular classroom at the Alfredo Andrews Elementary School in St. Croix. The sample included twenty four students, fifteen boys and nine girls between the ages of five years two months and seven years eight months. All the students were from the same first grade class. The students were randomly assigned to the two experimental groups and were taught reading by the analytic and synthetic approaches. Both groups were taught by the researcher. A Pretest - Posttest Control Group Design was used in the experiment. The students were first pretested using the Metropolitan Achievement Test - Primer (Form F, Part 2). After the thirteen-week period, they were posttested using an equivalent form of the same test (Form H, Part 2). The data obtained were statistically analyzed by the analysis of covariance (ANCOVA). Significant differences were found at the .05 level. Further significant differences between the posttest adjusted means were also found by Tukey's T-method at .05 level. Hence it was

concluded that first grade students at the Alfredo Andrews Elementary School achieved significantly higher scores when taught reading by the synthetic method rather than the analytic approach.

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CHAPTER I

THE PROBLEM

Introduction

Today, 7000 years after man first began to record his ideas in writing, the ability to read has become an absolute necessity for everyone. Goodman and Niles (1970) define reading as "a complex process by which a reader reconstructs, to some degree, a message encoded by a writer in graphic language" (p. 5). Readers not only receive messages from print but also bring to it a knowledge of the world that enhances their understanding of what the writer intends. Thus, reading involves both search for meaning and the integration of past experiences which "people can use to recreate and modify their concept of the world" (Bransford and Nancy, 1975, p. 207).

Since reading is one of the most complicated processes which must be mastered by pupils in the elementary school, the teaching of reading has been the subject of thousands of expositions. Each one has attempted to discover some magic formula which will reduce the numerous complexities involved in the reading process to some simplified essence from which our children may acquire the skill.

Time, trial and experience have shown us that seldom is there ever any one way of accomplishing a given task. We have further learned that because of the limitless variations among human beings, even the best of methods employed in reaching a stated goal usually fail to meet the needs of every individual.

Due to the consistent pattern of poor reading performance of Virgin Islands students, it would seem appropriate to investigate different methods of introducing reading instruction, in order to identify those that are more suitable to the local setting. Consequently, these can be used to improve both reading instruction in our schools and the level of reading performance of our students.

Background Of The Problem

The 1960's witnessed a marked increase in the amount of research done in reading throughout America. This was part of a renewed effort for excellence, spurred on by the Russian launching of the "Sputnik", and by critics who blamed reading failure on the way children were taught to read (Rudolph Flesch, 1955; Terman and Walcutt, 1958). Additionally, many professionals and classroom educators who were not

satisfied with reading performance in general, experimented with different types of reading materials, approaches and methodologies to identify those that provide the optimum results.

The U.S. Office of Education sponsored a series of independent studies to find out if there was a superior method or approach of teaching reading in the first grade (Bond and Dykstra, 1967). Many investigations involved the use of basal readers (which stress basic reading skills), phonic and linguistic programs, special alphabets (i.t.a.), individualized reading, and language experience programs, both individually and in combination (Karlin, 1980). The results were mixed and inconclusive with inconsistent results among similar studies.

Another large-scale study was conducted by Jeanne S. Chall (1967) who surveyed more than fifty years of research on beginning reading. She concluded that programs that stress phonics early, that is, those that stress letter-sound relationships, helped average and below-average students. She also stressed that no one system for teaching phonics was superior and that no program with decoding emphasis ensures success in learning to read.

To compound the problem further, reading methods texts also differ on recommendations as to what skills should be emphasized in the introduction of reading instructions. While some advocate an analytic approach using word configuration and context, others recommend a synthetic approach stressing letter sound relationships and structural analysis (Witty, Freeland, and Grotberg, 1968). Direct instruction in structural analysis, however, is recommended by many reading experts (Farr and Roser, 1979; Johnson and Pearson, 1978; Karlin, 1980; Smith and Johnson, 1976; Spache, 1963; Stauffer, 1969) and practice in structural analysis is included in most basal reading series Ginn 720 (Clymer et al., 1976); Houghton-Mifflin, 1971 (Dur et al., 1971 - 1974); American Book Company, 1968 (Johnson et al., 1968 - 1972).

Until there is some consensus among the experts and more conclusive results obtained from research, further work has to be done using the knowledge gained to develop sounder reading programs. More controlled classroom experiments have to be implemented using different combinations of methodologies, programs and grouping techniques in order to cater for individual differences and, at the same time, improve the reading skills of our students.

Summary

Chapter I gives a short historical background of the problems and difficulties involved in identifying a single method of introducing reading to first grade students. It outlines some of the major long term studies done in this area and the inconsistency of their results. It also points out the differing opinions of reading experts and basal reading texts on what method should be used to introduce reading instruction. Finally, it justifies the need for continuing research in this area in order to develop sounder reading programs that utilize the best techniques.

CHAPTER II

THEORETICAL FRAMEWORK OF THE STUDY

Statement Of The Problem

The problem under investigation is: Will ^{V-T} first grade students' reading achievement improve at a faster rate when taught by the synthetic method or the analytic method of reading instruction?

Purpose Of The Study

This research study will be concerned with the effects of instructional methods on the reading achievement of ^{V-T} first grade students. More specifically, it will seek to find out the effects of the synthetic and analytic methods of teaching reading when a first grade class of the Alfredo Andrews Elementary School is randomly assigned to the two treatment groups.

The researcher is taking a non-directional position in terms of which approach is better. The researcher is interested in finding out which one of these two approaches, the synthetic or analytic, improves the rate of students' performance in reading achievement. It is hoped that this neutral position will prevent undue emphasis on the researcher being

biased on any one of the two approaches.

Hypothesis

The following null hypothesis will be tested:
There will be no significant differences (at the .05 level) between the scores in reading achievement by students taught using the analytic approach, and those using the synthetic approach.

Definition Of Terms

Analytic Method - technique that emphasizes "wholes" rather than "parts". This technique comprises the word method, the phrase method, and the sentence method. It normally begins with a word, a phrase, or a sentence, and then these larger units are broken into their basic elements.

Synthetic Method - technique that emphasizes "parts" rather than "wholes". This technique includes the alphabetic, syllabic, and phonic methods. It usually begins with letters, syllables, or sounds, and then these elements are synthesized to form words.

Remedial Reading - is concerned with the identification of deficiencies in reading and the use

of relevant corrective procedures in an effort to improve reading abilities and skills.

Experimental Group One - comprises of twelve first grade students who were randomly assigned. These students will be taught reading by the analytic method.

Experimental Group Two - comprises of twelve first grade students who were randomly assigned. These students will be taught reading using the synthetic method.

Reading Achievement - will be measured by students' performance on the Metropolitan Achievement Test: Primer - Forms F and G.

Theoretical Rationale

Certain theoretical aspects of teaching and learning reading among beginning readers and the related research were reviewed in order to identify factors associated with pupils, teachers, materials, and methodology in reading performance. An analysis of this review seems to suggest that desirable performances can be achieved when specific teaching methods are used with particular individuals or class groupings.

Most authors agree that learning to read is a

complex task requiring an integration of several abilities and skills (Goodman and Niles, 1970). When children fail to read normally, the underlying causes vary in different cases. This phenomenon seems to explain the difficulties teachers experience in locating the causes of failure in slow readers. Vernon (1971) asserted that a thorough understanding of the nature of reading can be obtained only through a detailed investigation of the complex psychological processes involved. Moyle (1972) and Schonell (1974) agreed that the underlying processes include intellectual, visual, auditory, linguistic, environmental, motivational and emotional factors, and the defective functioning of any of these can lead to problems in reading.

Most methods of teaching reading can be placed under two categories on the basis of the psychological process involved. The categories are what Dechant (1964) referred to as the analytic method - (look and say) and the synthetic method - (phonic). Some researchers, such as Schonell and Goodacre (1974), suggested that children should commence their instruction in reading with the analytic approach in order to build their pre-requisite sight vocabulary.

Others, including Orton (1964) and Tansley (1967) argued in favor of the synthetic approach as being more efficient in developing pre-requisite word-recognition skills.

Since no single method of teaching reading seems to be equally effective with all students, Bell (1970) and Kemp (1962) advocated the use of a combination of methods. They argued that this strategy would facilitate teachers in catering for the individual needs of slow readers, since all of them may not have the same deficiency, learning styles, and experiences.

"Until more conclusive research is done, we must use what knowledge we do have to help develop sounder reading programs. We know that no single method or approach is best, no one kind of program is singularly superior to another; that no one packaged program contains all the necessary elements of a good reading program; that teacher effectiveness can change the outcome of any program, regardless of its merits; that there are programs that are more suitable for some children than others. Perhaps we ought to consider the possibility of adapting our procedures so that the best elements of each practice known to have real potential become part of a total strategy for teaching reading" (Karlin, 1980, p. 19).

The theoretical rationale for this study incorporates the supposition that there is no single method or approach for teaching reading to all children. It is hoped that by experimenting with the different techniques, the researcher can identify

those that produce higher levels of reading achievement for first grade students at the Alfredo Andrews Elementary School in St. Croix.

Review Of Literature

In an experiment, Gill (1912) investigated the effects of the look-and-say (analytic), phonic, and the 'Dale' method of phonic instruction on the achievement of first and second grade pupils from three different schools. Both phonic methods were taught for a period of two years, while the look-and-say method was employed for only sixteen months. Despite the difference in duration, those pupils using the look-and-say method were found to be superior in both oral reading and comprehension. The researcher concluded that the word or sentence method of teaching reading has greater practical value than either of the phonic methods.

Valentine (1913) criticized the experimental design used by Gill. In a carefully planned study with improved experimental procedures, he investigated the effects of the look-and-say and phonic methods on the reading achievement of first and second grade pupils. He found that pupils taught by the phonic method were superior both in reading words previously seen and

words previously unseen. However, he also found that for very slow readers, the look-and-say method was more efficient.

Hassel and Varley (1914) administered an oral reading test to 145 children selected from two schools in which phonic and look-and-say methods were used. It was found that the look-and-say readers finished the task in less time. Further, Currier and Duguid (1916) experimented with look-and-say and phonic methods on first and second grade pupils. They reported that while the phonic pupils were superior in word recognition, the look-and-say pupils were less careful with pronunciation of words but were more interested in the task. They read faster, enjoyed reading and performed better in comprehension.

Several other experiments were conducted with look-and-say and phonic methods. For example, Tate (1937) reported that phonic instruction was superior in word recognition, but the look-and-say was superior in vocabulary and comprehension. In a three-year experiment, Garrison and Heard (1931) concluded that phonic training made children more independent in word pronunciation, while non-phonetic training produced better oral readers in the lower grades.

In addition, Gates (1927) reported two studies, one conducted at the Horace Mann School and the other at four groups of Public Schools in New York. Both studies were concerned with the effects of look-and-say and phonic methods. The results indicated that both groups were equally competent in rate and accuracy of pronunciation in oral reading, but in general efficiency in silent-reading comprehension, the non-phonic (look-and-say) pupils demonstrated superior attainments.

In another controlled experiment, Sexton and Herron (1937) selected pupils from eight schools in New Jersey and divided them into phonic and non-phonic (look-and-say) instructional groups. Four hundred and twenty-six pupils were tested on a number of reading tests. The researchers found that with beginners, phonic training was not functional during the first five months. However, its value was observed later. They also observed that the results were related to teacher competence, e.g. good results were secured in both phonic and non-phonic groups taught by the same teacher, and vice-versa.

In an experimental study, Marchbanks and Levin (1965) investigated the process by which non-readers and beginning readers recognized words. A sample of

50 kindergarten and 50 first grade pupils were given tasks in which they had to select from a set of pseudowords, one similar to a word they had just seen. The researchers found that in both long and short words, the first letter was the one most used by both non-readers and beginning readers. The last letter was the second most utilized cue for all pupils excepting first-grade girls who compared the words letter by letter. They concluded that for beginning readers and non-readers word recognition is based on individual letters and not on the shapes of whole words.

Wilson et al., (1938) investigated the effects of knowledge of letters and their sound values on the reading achievement of kindergarten, first, second and third grade pupils. They administered several reading tests, analyzed the results and found a significant relationship between reading ability and proficiency with letter forms and words. They concluded that ability with letter symbols is a casual factor in the ability to read words and sentences.

In another study, Morris (1959) provided additional evidence in favor of initial emphasis on letter and their sound values. In an extensive study

involving over seven thousand children from seven to eleven years of age, she correlated various school characteristics with achievement in reading. After adjusting for intelligence, she found a significant correlation ($r = .47$, $F = .001$) between phonics as the beginning method and reading achievement.

After reviewing the main research findings on teaching methods between 1910 and 1965, Chall (1967) suggested that in the primary grades letter and / or phonics knowledge seem to have greater influence on reading achievement than mental ability. Beyond the third grade, poor reading achievement seems to be consistently related to a low level of phonics knowledge. She also noted that letter and phonics knowledge seem to be more highly related to word recognition and oral reading than to reading comprehension.

The Co-ordinating Center of the University of Minnesota, under the direction of Bond (1966), analyzed the results of 27 independent classroom experiments done between 1910 and 1965. These studies were all similar in terms of research design, measuring instruments and information collected. Most of them investigated the efficiency of a variety of approaches

including linguistic, language experience, phonic, and conventional methods. Under Bond's supervision, the data from the individual studies were treated as one large study. Bond (1966) reported that no one method was distinctly superior in all situations. He noted, however, that approaches which emphasized phonic techniques in teaching word-study skills were generally better.

In a longitudinal study, Bear (1964) compared the synthetic and analytic methods of teaching reading. A total of fourteen classes were included in this study. Seven classes used the synthetic method and seven used the analytic method of instruction. The results were compiled and analyzed at the end of the first and sixth years. The mean scores on the Gates Primary Reading Test at the end of the first year were almost identical. However, the group taught by the synthetic method, achieved higher scores on the Durrel Test for hearing sounds.

In another study, five programs that taught reading synthetically were compared with five programs that taught reading analytically. In the synthetic approach, teachers first introduced letters and their related sounds. These were later combined to form

words, for example, c-a-t = cat. In the analytic approach, letter-sound relationships were taught from words, for instance, "cat" and "car", start with the same sound. Predictably, the results were mixed. While Bliesmer and Yarborough (1965) and Margaret Henderson (1959) obtained results favoring the synthetic approach, Sparks and Fay (1957) reported no significant results. Vandever and Neville (1967) found best results with an atypical group of children when words were analyzed synthetically.

"A combination of case study observation and mini-experimentation techniques were used to examine a number of issues of relevance in the study of the acquisition of beginning reading skills. Six children were divided equally among three instructional modes: phonics, whole word, and mixed. They were asked to decode and encode words, and their abilities to assimilate content, process information, and transfer their knowledge to new situations were tested. Each child showed considerable improvement in both decoding and encoding over the six-month period of the study, although the rate of improvement varied as did the relative accuracy of the two tasks. The children were consistently more accurate with consonants than they were with vowels. Context does not enhance reading for all the children, and individual differences in strategy occurred even between children in the same instructional mode" (Goldwater - Rozensher and Hebard, 1978, p. 1).

Guillemette (1979) used twelve kindergarten children with auditory learning disability in an experiment to test the effectiveness of sight-reading

versus phonetic instruction on reading achievement and self-concept. After placing the children in two groups, they were pretested to ensure the absence of sample bias with regard to age, reading achievement, intelligence, and self-concept. The experimental group initially used a language experience approach which eventually becomes a sight reading program with supplementary comprehension lessons from a basal reader. The control group used a phonetic reading program in kindergarten, followed by a basal reader series in grades one and two. Guillemette found no significant differences in reading achievement or self-concept regardless of the treatment.

A study of 158 children from seven kindergarten classes showed that the method of instruction that focused the learner's attention on structural characteristics of the words alone accelerated the rate at which words were learned. However, the ability to read words in text did not appear to be guaranteed by this method (Ceprano, 1980).

Mosher and Newhall (1930) used a sample of seven first grade classes over a two-year period to compare the phonic (synthetic) approach and the whole word (analytic) approach to teaching reading. At the end of

the two-year period, the students were administered silent reading tests to determine word recognition. An analysis of the data indicated essentially no significant differences between the two methods under comparison.

Summary

A review of the literature provided inconclusive results on which of the two methods, analytic or synthetic, is better for introducing reading instructions to beginning readers. While some of the experimental results favored the analytic approach, others found positive results using the synthetic approach. To complicate the situation further, other experiments found no significant differences or sometimes mixed results. However, the findings seem to suggest that while the synthetic method facilitates skills in word recognition, pronunciation, and oral reading, the analytic or whole word method appears to be positively related to reading comprehension.

CHAPTER III

PROCEDURES

Outline

This chapter deals with the following:

1. Sample - deals with the two experimental groups and how they were chosen.
2. Methodology (Design of the Study) - describes the design and the two teaching techniques used.
3. Findings - shows the statistical procedures used and the result.
4. Control of Extraneous Variances - lists the various controls used in the study.

This study is concerned with the influence of the methods of teaching reading on students' reading achievement. The two types of methods compared were the analytic and synthetic methods of teaching reading.

Sampling

The twenty four students involved in the experiment were from the same first grade class at the Alfredo Andrews Elementary School. However, these students were randomly assigned to the two treatment groups.

Experimental Group One consisted of twelve students - nine boys and three girls, with a chronological age range of five years and two months to seven years and three months, and with a mean of five years and eleven months. Experimental Group Two also consisted of twelve students - six boys and six girls, with a chronological age range of five years and seven months to seven years and eight months, and with a mean of six years and five months.

TABLE 1

Number and Age Range of Experimental Groups.

Group	Number of Students	Number of Boys	Number of Girls	Age Range	Mean Age
Experimental Group 1	12	9	3	5 - 2 to 7 - 3	5 - 11
Experimental Group 2	12	6	6	5 - 7 to 7 - 8	6 - 5

Methodology

This study was based on a Pretest - Posttest Control Group Design (Campbell and Stanley, 1963). Since both groups - Experimental Group One and Experimental Group Two - were involved in the experiment, each one acted as the control of the other.

Both groups were made statistically 'equivalent' through random assignment to the two types of treatments, adjusting the posttest scores by using the pretest scores as a covariate, and by statistical analysis of covariance (Campbell and Stanley, 1963).

The Metropolitan Achievement Test - Primer Forms - (F and H) Part 2 (See Appendices A and B) - was used because it had both content validity and high reliability. A Kuder-Richardson Formula 20 reliability of 0.93 was computed with a 1.9 standard error of measurement.

All subjects were pretested on September 12, 1985 using the Metropolitan Achievement Test - Primer Form F - Part 2. Following this step, Experimental Group One received treatment in the teaching of reading using the analytic approach, for thirteen weeks, from September 17, 1985 to December 13, 1985. During this same period of time, Experimental Group Two received treatment in the

teaching of reading using the synthetic method. Each group received treatment for twenty-five minutes a day - from 9:00 to 9:25 and 9:30 to 9:55. The groups alternated each week so both had instructions at the stated times.

The lessons based on the analytic method (See Appendix C) were so organized that emphasis was placed on "wholes" rather than "parts". Initially, words, phrases and sentences were presented and the students were encouraged to use word forms, picture clues and context clues to help them identify these words. After the students recognized a few sight words that begin with the same phoneme or sound, for example, bat, bag, boy, bug - all begin with the same phoneme /b/, their attention was directed to the fact that all the words begin with the same grapheme or letter symbol - b, and also sound alike at the beginning. In this manner, the students could make generalizations that would help them identify this sound at the beginning of other words. Because of the critical importance of this method of building an association between the appearance or configuration of the printed word and its spoken equivalent, it was often referred to as the "look-and-say" or "whole-word" method (Harris and Sipay, 1975).

The synthetic lessons (See Appendix D) were organized according to the guidelines used by the Ginn Basal Reader. Ginn suggested that phonic skills can be usefully taught by focusing first on initial consonants, vowels, final consonants, consonant blends then consonant digraphs. The lessons in the experiment followed the same sequence. First the students were taught the phoneme - grapheme relationship of the initial consonants, vowels, and final consonants, etc. These were later combined by sliding to form morphemes, for example, b-a-t, r-a-t. To teach initial consonant, the phonogram -at, for example, was held constant and students were encouraged to form mono-syllabic words by varying the initial consonants.

Later two and three syllabic words were formed by blending or synthesizing separate syllables. For example, after learning the phoneme - grapheme association of symbols a, b, n, the students were encouraged to combine them to form syllables as ba, na; these were then synthesized to form the word ba-na-na.

The typical lesson included a variety of activities such as listening, reading, writing, answering questions and playing games, so as to cater for the short attention span of the students. This strategy is

consistent with the multi-sensory approach advocated by Orton (1964) who argued that the auditory, visual and kinesthetic patterns reinforce each other and at the same time provide for individual differences among the students. The materials utilized were also carefully chosen to develop high interest and to motivate students.

For the first two weeks the initial consonants and the short vowels a, e, i, were introduced to form mono-syllabic words like m-a-n, p-i-n, b-i-b, b-a-r, p-e-t.

During weeks three and four there was review and reinforcement of initial consonants and vowels practiced in weeks one and two. Instruction then continued with short vowels a, e, i, o, u, to form mono-syllabic words like r-ub, b-at, p-en.

During the fifth and sixth weeks a diagnostic test was administered to identify the initial consonants and short vowels that were not fully grasped. Further practice was given to reinforce these skills. Final consonants were then introduced. For example, ca-t, pe-n, pi-g.

Final consonants were continued in weeks seven and eight. Long vowels were introduced in words such as cake, ride, and in one syllable words such as go, me,

be, etc.

During weeks nine and ten there was review and testing in the final consonants and long vowels. Since it was found that students were a bit confused with the long and short vowels, there was further reinforcement in these skills. Consonant blends were introduced in words such as stop, frog, class, grass, etc.

During the eleventh and twelfth weeks there was continued work in the blends and then the consonant digraphs were introduced. This was done in words such as the, this, when, ship, chair.

At the end of the thirteen-week period, the students were post-tested using the Metropolitan Achievement Test - Primer Form H, Part 2. The data obtained were then statistically analyzed to test the hypothesis.

Findings

The data obtained from the Metropolitan Achievement Tests - Primer (Forms F and H) Part 2, (See Appendices E and F) were statistically analyzed by using the analysis of covariance (ANCOVA) as recommended by Campbell and Stanley (1963). Then the means were

adjusted by using the regression coefficient, and these were used to find a more accurate F-value at the .05 level of significance (Winer, 1971). By using Tukey's T - method (Glass and Stanley, 1970), confidence interval was established around the differences between the adjusted means at the .05 level to test for significance.

The results of the analysis of covariance (ANCOVA) were summarized in Table 2.

TABLE 2

Summary Of The Analysis Of Covariance For Data
Obtained From The Metropolitan Achievement Test

Source	SS	df	Ms	F
1. Total	Syy = 291.30	22		
2. Error	E'yy = 196.34	21	9.35	
3. Treatments	TyyR = 94.96	1	94.96	*10.16

The critical value for a .05 level test in this case was .95 $F(1, 21) = 4.33$. Since the observed $F > 4.33$ (See Table 2), the experimental data indicated significant differences.

Next the pretest and posttest means were adjusted by using the regression coefficient (See Table 3).

TABLE 3

Observed And Adjusted Means For Scores
On The Metropolitan Achievement Test

Source	Pretest Unadjusted	Posttest Unadjusted	Posttest Adjusted
Experimental			
Group 1 (Analytic)	11.33	17.69	17.56
Experimental			
Group 2 (Synthetic)	11.08	21.42	21.54

The adjusted means were used to find a new observed F-ratio of 10.13 (Winer, 1971). Again this observed $F > 4.33$, indicating significant differences between the two approaches at the .05 level. Incidentally, the observed F was also significant at the .01 level ($F > 8.03$).

Finally, by using Tukey's T-method (Glass and Stanley, 1970), confidence interval was established around the adjusted means at the .05 level (See Table 4).

TABLE 4

Confidence Interval Between The Adjusted Means
For The Metropolitan Achievement Test

Difference	Confidence Interval	P
$\bar{Y}_{.1} - \bar{Y}_{.2}$	-6.56 to -1.40	.05

All three of the above tests showed significant differences at the .05 level, therefore the null hypothesis must be rejected.

Control Of Extraneous Variances

Through randomization, both experimental groups were statistically equal at the beginning of the experiment (Kerlinger, 1973). Further, the use of the Analysis of Covariance (ANCOVA) allowed for the adjustment and reduction of the initial influences of the covariate and provided more precise information on the treatment effects (Campbell and Stanley, 1963).

The two groups were taught by the researcher herself. This provided control for teacher competence and the influence of teacher personality on the dependent

variables. The experiment was conducted in the same classroom and at the same time of the day. This controlled for both time and place, and also reduced the Hawthorne effect since everyone in the classroom was involved in the experiment. Finally, a non-directional position was taken in order to reduce any bias in favor of a particular approach.

Summary

This chapter gives a description of the sample chosen and its random assignment to the two experimental groups. A Pretest - Posttest Control Group Design was used in this experimental study. After a pretest (Metropolitan Achievement Test - Primer - Form F, Part 2) was administered, the two groups were taught reading by the analytic and synthetic approaches for a thirteen-week period. Then they were posttested using an equivalent form of the pretest (Form H).

The data obtained from the tests were statistically analyzed using the Analysis of Covariance (ANCOVA). Then the means were adjusted and further tested at the .05 level. Finally, Tukey's T-method was used to establish confidence intervals to test for significance. All three tests showed significant differences, therefore the null hypothesis was rejected.

CHAPTER IVCONCLUSION, LIMITATIONS
AND SIGNIFICANCE OF THE STUDYSummary

This study was concerned with the influence of the methods of teaching reading on students' reading achievement. The two types of methods compared were the analytic and synthetic approaches in teaching reading. The analytic method emphasized "wholes" rather than "parts". The synthetic method emphasized "parts" rather than "wholes".

The experiment was conducted at the Alfredo Andrews Elementary School in St. Croix during a thirteen-week period. The sample included twenty four students between the ages of five years and two months and seven years and eight months from the same first grade class. The subjects were randomly assigned to the two treatment groups which were taught by the researcher. A Pretest - Posttest Control Group Design was used in the experiment.

Achievement in reading was measured by students' performance on the Metropolitan Achievement Test - Primer (Forms F and H) Part 2. The scores obtained

were analyzed by the Analysis of Covariance (ANCOVA) using the pretest scores as the covariate. Significant differences between the adjusted posttest means were found (at the .05 level), by the analysis of covariance (ANCOVA) and by Tukey's T- method. Thus it was concluded that first grade students at the Alfredo Andrews Elementary School achieved significantly higher scores when taught reading by the synthetic method rather than by the analytic method.

These results are in accordance with the findings of Valentine (1913), Currier and Duguid (1916), Sexton and Herron (1937), Morris (1959), Chall (1967), Bond (1966), Bear (1964), Margaret Henderson (1959), and Bliesmar and Yarborough (1965) showing significant differences in reading achievement favoring the synthetic approach.

Limitations Of The Study

This study was concerned with the outcomes of two methods of teaching reading on students' reading achievement at the first grade level. Both the sample size and the time for the experiment must be increased in order to make more accurate predictions.

As the sample was drawn entirely from the Alfredo Andrews Elementary School, the findings of the study can be appropriately interpreted only in relation to Alfredo Andrews Elementary School. These findings can be generalized to other Elementary Schools only in limited ways. Research findings from similar investigations in other Elementary Schools in the Virgin Islands are necessary in order to determine the extent to which the present findings can be generalized.

Significance Of The Study

The study is significant to Elementary Schools in the Virgin Islands in the following ways.

Knowledge of possible outcomes of the two methods should help teachers to plan better programs and to improve reading instruction.

Teachers and curriculum developers can use the results to reassess the efficiency of the learning experiences in the reading curriculum.







Slow readers might benefit from the project. As a result of better planning by teachers and curriculum developers, some slow readers may eventually learn to read well. This ability to read should make their lives

more useful and rewarding.

Finally, if slow readers improve their reading ability, they are likely to perform better in other subject areas.



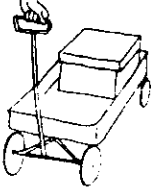



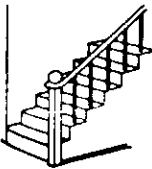
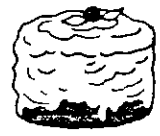


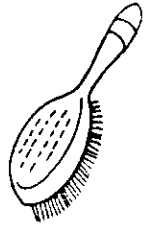
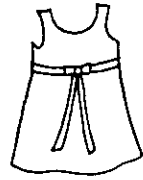



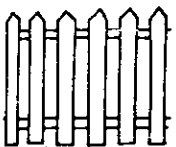


PART 2: Reading -- METROPOLITAN ACHIEVEMENT TEST - FORM F

P-F

<p>SAMPLE:</p>  <p>O A S T ?</p>	<p>1</p> <p>R D B O ?</p>
<p>2</p>  <p>E H X L ?</p>	<p>3</p> <p>S C Z G ?</p>
<p>4</p>  <p>I J F T ?</p>	<p>5</p> <p>V W Y K ?</p>
<p>6</p>  <p>a n o l ?</p>	<p>7</p> <p>k c d h ?</p>
<p>8</p>  <p>f s e r ?</p>	<p>9</p> <p>y j u i ?</p>
<p>10</p>  <p>m r w v ?</p>	<p>11</p> <p>b g p q ?</p>

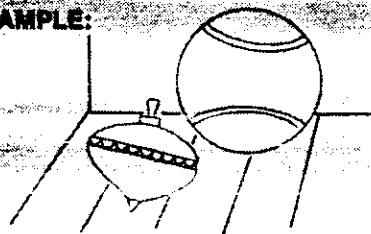
PART 2: Reading (continued)

P-F

<p>SAMPLE: <input type="radio"/> pocket <input type="radio"/> pie <input type="radio"/> apple <input type="radio"/> arrow <input type="radio"/> ?</p> 	<p>12 <input type="radio"/> sleep <input type="radio"/> bottle <input type="radio"/> baby <input type="radio"/> mother <input type="radio"/> ?</p> 	<p>13 <input type="radio"/> drive <input type="radio"/> wagon <input type="radio"/> glove <input type="radio"/> going <input type="radio"/> ?</p> 
<p>14 <input type="radio"/> bead <input type="radio"/> house <input type="radio"/> friend <input type="radio"/> tree <input type="radio"/> ?</p> 	<p>15 <input type="radio"/> ten <input type="radio"/> corner <input type="radio"/> hand <input type="radio"/> foot <input type="radio"/> ?</p> 	<p>16 <input type="radio"/> fast <input type="radio"/> fish <input type="radio"/> water <input type="radio"/> lake <input type="radio"/> ?</p> 
<p>17 <input type="radio"/> bare <input type="radio"/> stairs <input type="radio"/> door <input type="radio"/> hello <input type="radio"/> ?</p> 	<p>18 <input type="radio"/> candy <input type="radio"/> cream <input type="radio"/> cake <input type="radio"/> pan <input type="radio"/> ?</p> 	<p>19 <input type="radio"/> family <input type="radio"/> color <input type="radio"/> work <input type="radio"/> drink <input type="radio"/> ?</p> 
<p>20 <input type="radio"/> leg <input type="radio"/> ear <input type="radio"/> see <input type="radio"/> egg <input type="radio"/> ?</p> 	<p>21 <input type="radio"/> hair <input type="radio"/> comb <input type="radio"/> brush <input type="radio"/> blue <input type="radio"/> ?</p> 	<p>22 <input type="radio"/> button <input type="radio"/> dress <input type="radio"/> find <input type="radio"/> draw <input type="radio"/> ?</p> 
<p>23 <input type="radio"/> tent <input type="radio"/> clothes <input type="radio"/> hill <input type="radio"/> bear <input type="radio"/> ?</p> 	<p>24 <input type="radio"/> butterfly <input type="radio"/> bird <input type="radio"/> on <input type="radio"/> bright <input type="radio"/> ?</p> 	<p>25 <input type="radio"/> doctor <input type="radio"/> dinner <input type="radio"/> nurse <input type="radio"/> court <input type="radio"/> ?</p> 
<p>26 <input type="radio"/> fence <input type="radio"/> back <input type="radio"/> ladder</p> 	<p>27 <input type="radio"/> green <input type="radio"/> leaf <input type="radio"/> fall</p> 	<p>28 <input type="radio"/> outside <input type="radio"/> cold <input type="radio"/> shoes</p> 

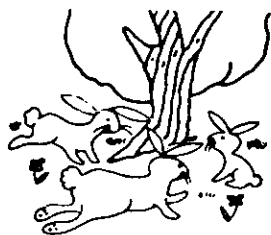
PART 2: Reading (continued)

SAMPLE:



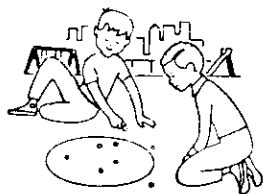
- The toys are on the table.
- There are two toys.
- The top is bigger than the ball.
- ?

29



- The girls walk in the woods.
- A dog is chasing the rabbits.
- Rabbits run near the tree.
- ?

30



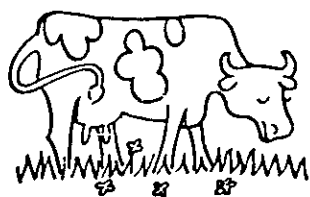
- One boy is running.
- The two boys are playing a game.
- The boys are playing in the house.
- ?

31



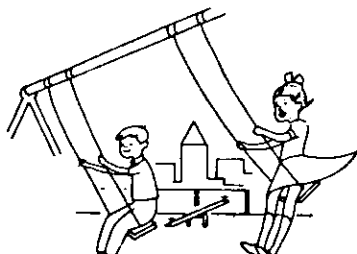
- The boy with the kitten is getting wet.
- The children are hopping in the rain.
- The children are looking at a red light.
- ?

32



- The cow stands and eats grass.
- The spotted cow is in the barn.
- The big dog is in the yard.
- ?

33



- The boys like the slide.
- The children play on the swings.
- There is no one at the playground.

PART 2: Reading METROPOLITAN ACHIEVEMENT TEST - FORM H

P-1

SAMPLE:



O A S T ?

1

R B D J ?

2



H G K P ?

3

J F I T ?

4



V U M N ?

5

Z Q O S ?

6



f e d p ?

7

h k c q ?

8



r a o i ?

9

g s u v ?

10




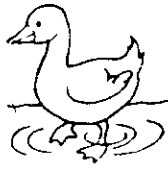
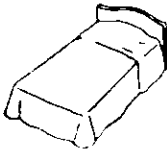







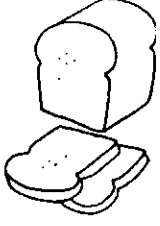



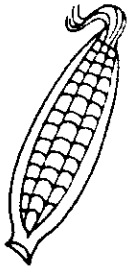

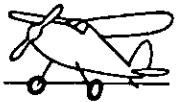
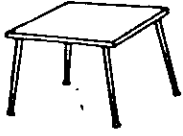
w m b l ?

11

z x t n ?

PART 2: Reading (continued)

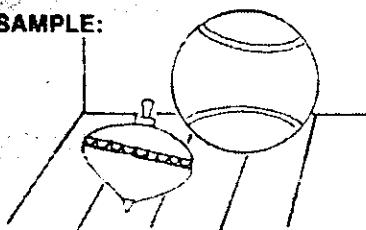
P-H

<p>SAMPLE: <input type="radio"/> pocket</p>  <p><input type="radio"/> pie <input type="radio"/> apple <input type="radio"/> arrow <input type="radio"/> ?</p>	<p>12 <input type="radio"/> mark <input type="radio"/> clock <input type="radio"/> duck <input type="radio"/> two <input type="radio"/> ?</p> 	<p>13 <input type="radio"/> jump <input type="radio"/> bed <input type="radio"/> we <input type="radio"/> fed <input type="radio"/> ?</p> 
<p>14 <input type="radio"/> parade <input type="radio"/> balloon <input type="radio"/> button <input type="radio"/> red <input type="radio"/> ?</p> 	<p>15 <input type="radio"/> play <input type="radio"/> box <input type="radio"/> boy <input type="radio"/> work <input type="radio"/> ?</p> 	<p>16 <input type="radio"/> silly <input type="radio"/> fall <input type="radio"/> family <input type="radio"/> did <input type="radio"/> ?</p> 
<p>17 <input type="radio"/> pull <input type="radio"/> hand <input type="radio"/> who <input type="radio"/> all <input type="radio"/> ?</p> 	<p>18 <input type="radio"/> rose <input type="radio"/> when <input type="radio"/> birthday <input type="radio"/> toy <input type="radio"/> ?</p> 	<p>19 <input type="radio"/> everyone <input type="radio"/> elephant <input type="radio"/> cow <input type="radio"/> plant <input type="radio"/> ?</p> 
<p>20 <input type="radio"/> store <input type="radio"/> bank <input type="radio"/> policeman <input type="radio"/> number <input type="radio"/> ?</p> 	<p>21 <input type="radio"/> butter <input type="radio"/> knife <input type="radio"/> supper <input type="radio"/> bread <input type="radio"/> ?</p> 	<p>22 <input type="radio"/> water <input type="radio"/> towel <input type="radio"/> soap <input type="radio"/> cut <input type="radio"/> ?</p> 
<p>23 <input type="radio"/> us <input type="radio"/> circus <input type="radio"/> clown <input type="radio"/> colors <input type="radio"/> ?</p> 	<p>24 <input type="radio"/> stem <input type="radio"/> banana <input type="radio"/> burn <input type="radio"/> grow <input type="radio"/> ?</p> 	<p>25 <input type="radio"/> corn <input type="radio"/> row <input type="radio"/> came <input type="radio"/> field <input type="radio"/> ?</p> 
<p>26 <input type="radio"/> raining <input type="radio"/> fold <input type="radio"/> umbrella <input type="radio"/> under</p> 	<p>27 <input type="radio"/> airplane <input type="radio"/> place <input type="radio"/> high <input type="radio"/> army</p> 	<p>28 <input type="radio"/> chair <input type="radio"/> table <input type="radio"/> cloth <input type="radio"/> dinner</p> 

PART 2: Reading (continued)

P-H

SAMPLE:



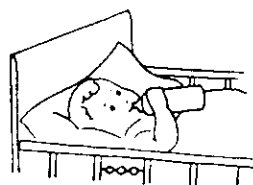
- The toys are on the table.
- There are two toys.
- The top is bigger than the ball.
- ?

29



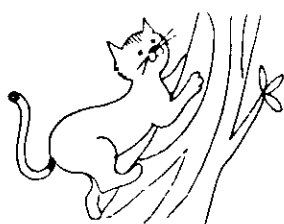
- Mother is cleaning the kitchen.
- Mother is baking a cake.
- Betty is watching Mother bake.
- ?

30



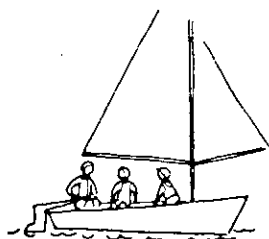
- Baby likes to drink milk from her bottle.
- The dress on Baby's doll has ribbons on it.
- Baby dropped her bottle and cannot find it.
- ?

31



- This cat is jumping to another tree.
- The cat is climbing the tree.
- The cat is falling out of the tree.
- ?

32



- The boat is under the water.
- The boys are fishing from a boat.
- The boys are sailing a boat.
- ?

33



- This boy must be happy about something.
- This boy has one eye closed.
- The boy is smiling because he is angry.

APPENDIX C

Analytic Lesson

- OBJECTIVE : Students will be able to identify and pronounce one-syllable words beginning with the phoneme b.
- MATERIALS : Pictures, flash cards, worksheet.
- MOTIVATION : Present pictures of: bird, bat, ball, bell, boy - one at a time. Ask students to identify the pictures and tell of their experiences with these pictures.
- PROCEDURE : 1. Present pictures on the board.
2. As students give their experiences, teacher will repeat the sentences and emphasize the word - e.g.
 My pet is a bird.
3. Teacher will place the flash card with the word - bird - under the picture of the bird.
4. Teacher will continue in a similar manner with the other words.
5. Students will use picture clues to identify and pronounce the words, as the teacher points to them in random order.

6. Teacher will then remove the picture clues and students will identify and pronounce words as the teacher points to them in random order.
7. Direct their attention to the beginning sound b in all the words.
8. Ask students to give two other words which begin with the phoneme b. Write the words on the board.
9. Students will now pronounce all the words in unison.
10. Teacher will add the following words - bed, bib, bag - and students will try to pronounce them without picture clues.

- EVALUATION :
1. Present the above words in simple sentences and students will try to identify the underlined words. For example -
The bib is on the bed.
The boy has a bat and ball.
The bell is in the bag.
 2. Students will then complete the worksheet.

Worksheet

Identify the words and write them under the pictures they represent.

Words:

ball

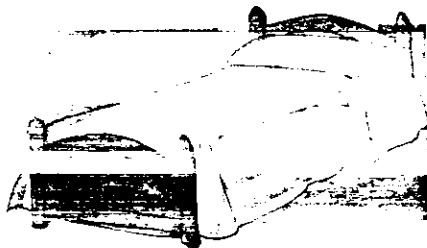
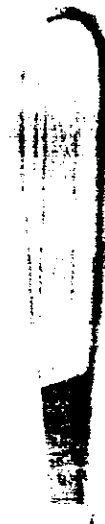
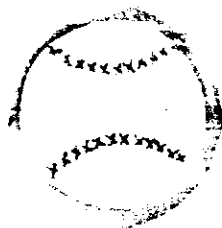
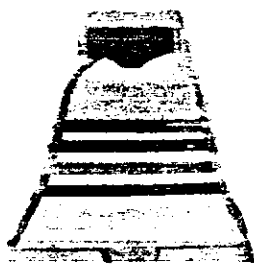
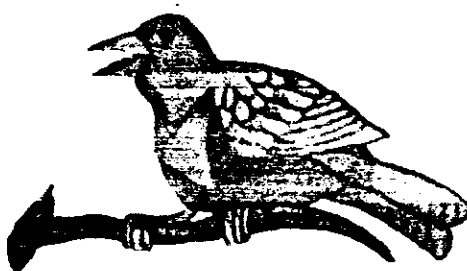
bell

boy

bird

bed

bat



APPENDIX D

Synthetic Lesson

- OBJECTIVE : The students will be able to visually recognize the final letter forms d and t, and associate these with the sounds they represent in words.
- MATERIALS : Game cards; Charts with stimulus words; Worksheet; Crayons.
- MOTIVATION : Play card game. Picture cards whose name words end with d and t. Shuffle cards. Each player draws two cards. First player draws a card hoping to match a final sound he has in hand. When he matches a pair he places the cards face up. The player with the most cards face up, wins the game.
- PROCEDURE : 1. Select letter sound to be taught - t.
2. Place stimulus words on chart e.g. at, hat, cut, sit, not.
3. Call students' attention to the final letter.
4. Pronounce each word carefully so that the students can hear the sound at the end of each word.

5. Have students pronounce the words and supply others which end with the sound.

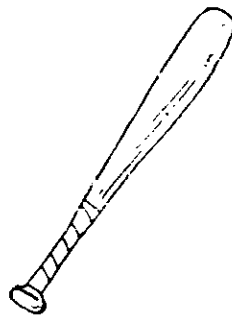
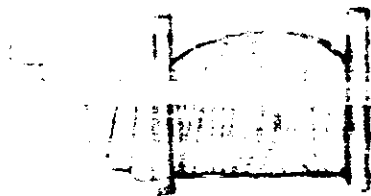
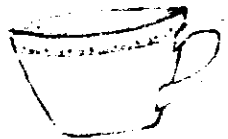
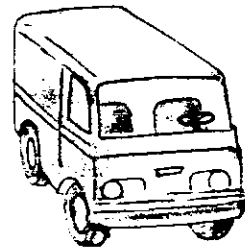
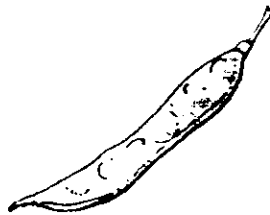
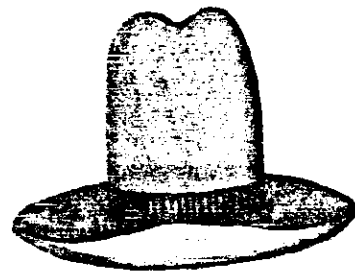
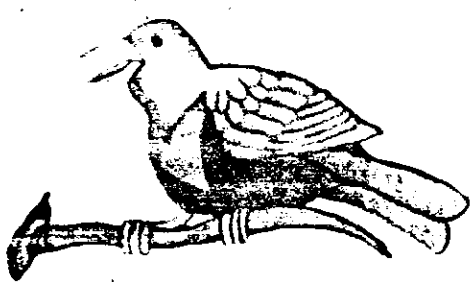
6. Prepare another column of easy words all of which end with d. Delete the final letter e.g. dad - d sa_, mu_, etc.

7. Let students add the letter indicated and pronounce the word.

EVALUATION : Students will complete the worksheet after the directions have been read and discussed.

Worksheet

Color each picture red whose name ends with the sound ot, and each picture blue whose name ends with the sound ad.



APPENDIX E

Raw Scores Obtained From The Metropolitan
Achievement Test - Primer (Forms F and H) Part 2

Experimental Group 1(Analytic)

Student	Pretest	Posttest
1	12	21
2	16	20
3	6	15
4	10	14
5	9	14
6	13	17
7	12	20
8	9	12
9	7	17
10	15	21
11	14	23
12	13	18

APPENDIX F

Raw Scores Obtained From The Metropolitan
Achievement Test - Primer (Forms F and H) Part 2

Experimental Group 2(Synthetic)

Student	Pretest	Posttest
1	14	23
2	8	20
3	12	19
4	10	23
5	13	26
6	16	30
7	7	15
8	12	25
9	10	14
10	10	18
11	8	23
12	13	21

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