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AN EVALUATION STUDY OF THE I/T/A READING PROGRAM IN THE
LAKEWOOD PUBLIC SCHOOLS.

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LAKEWOOD PUBLIC SCHOOLS, OHIO

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DESCRIPORS- #PROGRAM EVALUATION, #PROGRAM EFFECTIVENESS,
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GRADES, READING INSTRUCTION, READING PROGRAMS, READING
SKILLS, LANGUAGE ARTS, READING ACHIEVEMENT,

AN EVALUATION OF THE I/T/A READING PROGRAM AT THE
LAKEWOOD PUBLIC SCHOOLS CALLED FOR AN INVESTIGATION OF THE
IMMEDIATE AND LONG TERM EFFECTS OF I/T/A INSTRUCTION IN
READING AND VARIOUS AREAS OF LANGUAGE ARTS. AN EXPERIMENTAL
GROUP OF 93 PUPILS WAS DIVIDED INTO TWO GROUPS, DEPENDING ON
THE AMOUNT OF I/T/A INSTRUCTION GIVEN. ONE GROUP HAD 1 1/2
YEARS OF I/T/A INSTRUCTION, AND ANOTHER GROUP HAD 1 FULL
YEAR. TWO COMPARABLE GROUPS WITH TRADITIONAL READING
INSTRUCTION SERVED AS CONTROLS. MULTIPLE OBJECTIVE AND
SUBJECTIVE MEASURES WERE GIVEN TO ALL GROUPS AFTER A 2-YEAR
PERIOD OF I/T/A INSTRUCTION WITH THE EXPERIMENTAL GROUPS. A
SURVEY OF TEACHERS' OPINIONS WAS ALSO CONDUCTED. RESULTS
SHOWED THAT (1) WHILE I/T/A PUPILS SHOWED GREATER IMMEDIATE
GAINS IN TWO READING SKILLS AREAS, TRADITIONAL PUPILS
PERFORMED AT A HIGHER LEVEL AND MADE GREATER LONG TERM
PROGRESS IN THE VARIOUS AREAS OF LANGUAGE ARTS, (2) THAT
THERE WAS NO EVIDENCE THAT THE I/T/A PUPILS SHOWED MORE
FAVORABLE POST-I/T/A ATTITUDES TOWARD READING, SCHOOL, AND
SELF, AND (3) THAT THE DISADVANTAGES OF I/T/A CITED IN THE
TEACHER-OPINION SURVEY OUTWEIGHED THE ADVANTAGES. MOST
TEACHERS BELIEVED THAT A COMBINED TRADITIONAL-I/T/A READING
PROGRAM WOULD BE MORE EFFECTIVE. TABULATED RESULTS, A
BIBLIOGRAPHY, AND SAMPLES OF EVALUATIVE MEASURES USED ARE
INCLUDED. (NS)

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AN EVALUATION STUDY OF THE i/t/a READING PROGRAM
IN THE LAKEWOOD PUBLIC SCHOOLS

1967

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SRIS

RE001 112

**AN EVALUATION STUDY OF THE i/t/a READING PROGRAM
IN THE LAKEWOOD PUBLIC SCHOOLS**

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I

INTRODUCTION AND PURPOSE OF THE STUDY

Need of the Study

The Initial Teaching Alphabet (i/t/a), an introductory reading program, was first introduced to Lakewood pupils during the 1963-64 school year. We began i/t/a instruction at the kindergarten level in one elementary school. During 1964-65 the i/t/a program became more extensive and as a result involved eight kindergarten classes in three elementary schools and seven first grade classes in three elementary schools. At that time Franklin, Madison, McKinley and Harrison schools participated in the program. Today we have three kindergarten and two first grade i/t/a classes at Franklin and five kindergarten and four first grade i/t/a classes at Madison School. In addition, one kindergarten class and one first grade i/t/a class are in operation at Harrison School.

It was apparent from the beginning that a continuous program of evaluation of this new teaching medium was in order. As a result at the end of each school year, since 1964, a comparison has been made between pupils who received i/t/a instruction and pupils who received traditional reading instruction. In 1965 a rather comprehensive statistical study of the effects of i/t/a upon vocabulary, word reading, and paragraph meaning skills was conducted. In most cases our investigations* and other studies⁺ indicated that i/t/a instructions appeared to have a positive effect on children's reading at the end of the first year.

We had no difficulty demonstrating gains in reading immediately after i/t/a instruction. What is needed and also lacking in the literature are studies showing what happens to pupils' educational performance, two or three years after i/t/a instruction, in such areas as reading, writing, spelling, and pupil attitudes. The ultimate question is of course whether to continue or discontinue i/t/a programming in the Lakewood Schools. Some school systems have dropped the i/t/a program, while many others are waiting for objective research data from neutral sources which, from all indications, does not appear to be forthcoming. It was because of the preceding situation that Lakewood teachers and administrators were motivated to proceed with a comprehensive evaluation, showing more than immediate reading gains, of the i/t/a reading program in the Lakewood Schools.

*Pages 8-19, "Review of Previous Studies,"

⁺Page 23, "Immediate Post-First Grade i/t/a Gains."

Nature of the Program

Sir James Pitman, an English educator and publisher, developed the Initial Teaching Alphabet to enable young children to use a simple and reliable approach to reading which would bring about confidence and fluency on the part of the pupils. The children would then transfer their i/t/a skills and confidences to reading books that are printed in the traditional spelling.

The Initial Teaching Alphabet simplifies the task of learning to break the code of the printed word. It reduces the number of spellings for the 40 phonemes. There are no inconsistencies in the forty-four sound symbols because only lower case forms are used, the capitalization being accomplished by using a larger version of the same symbol. In i/t/a each sound is represented by one sound symbol and each sound has its own spelling. Beginning blends are represented by their own symbols instead of combining two or more letters to represent a sound which is quite different from that assigned to each individual letter. The left-to-right rule of reading is absolute in i/t/a because the sounds within a given word occur in correct sequence.

Readiness for reading through experiences in auditory and visual discrimination and development of the language skills is begun in i/t/a kindergarten classrooms. Kindergarten children who have completed this phase successfully begin with Downing Readers and i/t/a worksheets. In the first grade pupils read ten Downing Readers and six Early-To-Read books. The Early-To-Read series is accompanied by four comprehensive workbooks, including the transition. At the first grade level, both oral and written language activities are encouraged to aid children in approaching reading as a creative thinking process.

Identification and Definition of the Problem

This study is intended as an evaluation of the experimental i/t/a reading program in the Lakewood Schools. The main problem of the study is to provide evidence in terms of whether to continue, modify, or discontinue i/t/a programming in the Lakewood Schools. In order to accomplish this task it is necessary to obtain objective and subjective data and judgments, and in particular investigate the effects of i/t/a instruction upon Lakewood pupils in reading, writing, spelling, pupil attitudes, and in various other learning skills.

The selection of the problems is kept sufficiently delimited so that a satisfactory analysis is possible. Tests of statistical significance are employed whenever feasible. All hypotheses to be tested but one relate to the effects of i/t/a instruction approximately two years after the instructional period. The study is designed to test the following hypotheses:

1. Pupils who received i/t/a reading instruction will demonstrate greater immediate post-i/t/a reading gains than a similar control group.
2. Pupils who received i/t/a reading instruction will make greater long-term post-i/t/a educational progress in reading, writing, spelling, and other language arts than a similar control group.
3. Pupils who received i/t/a reading instruction will show more favorable long-term post-i/t/a attitudes toward reading, school, and "self" than a similar control group.
4. Teachers who were involved in i/t/a instruction, or the effects of i/t/a instruction upon pupils, will indicate more advantages and a preference for i/t/a instruction in terms of language arts skills and pupil attitudinal differences.

Plan and Scope of Presentation

Although the emphasis is on approaching the subject as scientifically as possible, and upon a reasonable research design, consideration is given to what is described in the teaching of reading as "dealing with human beings who cannot be reduced to a test tube level." Efforts are made to investigate systematically and analyze limited problems, rather than to examine a broad area superficially. It is not our purpose to use the "shotgun technique," but to reveal evidence for or against the stated hypotheses.

The i/t/a experimental sample consists of ninety-three pupils who were afforded one or one and one-half years of i/t/a instruction in one of four elementary schools. Sixty-five pupils of the i/t/a group (N=93) received one year of i/t/a instruction at the first grade level; twenty-eight pupils of the i/t/a group (N=93) received one and one-half years of i/t/a instruction involving both kindergarten and first grade i/t/a instruction. The control sample, a comparable group of ninety-three pupils, received a traditional instructional program in reading during the same period.

Three pre-first grade variables (intelligence quotients, chronological age, and sex) are used to show comparability of the i/t/a and non-i/t/a groups before the instructional period.

Standardized reading tests and teacher judgment are utilized (first hypothesis) to reveal immediate differences in reading performance of the groups at the end of the instructional period. The second hypothesis, the long-term effects of i/t/a instruction on reading and other language arts skills, is approached through multiple measures such as formal evaluative procedures (standardized tests and letter grades) and informal evaluative

procedures (informal writing, spelling tests, and teacher judgment).

All formal and informal measures were administered to the groups during the spring of 1967. This would mean that all pupils in the study are classified as third graders. i/t/a and non-i/t/a pupils who were retained at any time during the primary grades were not included in the study. The time lapse after i/t/a instruction (post-first grade) would be approximately two years (we indicate "approximately" because the evaluation procedures were administered during the spring of 1967). In other words, we define "long-term i/t/a effects" as the effects occurring upon pupils at approximately two years after i/t/a instruction.

The third hypothesis, long-term effects of i/t/a instruction on pupil attitudes toward reading, school and "self," is approached and based upon the results of an inventory* and teacher judgment. The last hypothesis, teacher judgment and opinion in terms of advantages and preferences for i/t/a instruction, is approached and based upon a teacher questionnaire.*

Selection, Description, and Comparability of i/t/a and T.O. Groups

Two groups of children, ninety-three in each group from different schools, were selected for the study. The i/t/a-experimental group of children received one or one and one-half years of i/t/a instruction (one year of i/t/a instruction during first grade or one semester of i/t/a instruction during kindergarten and one year of i/t/a instruction during first grade); and a second group of children (T.O.⁺-control), who did not receive i/t/a instruction, but were provided with traditional reading instruction during the same periods. The experimental group was afforded i/t/a instruction as described on page 3. It should be noted that i/t/a pupils were also involved with recognized transition practices (transition from i/t/a to T.O. alphabet).

In the primary grades of the Lakewood Public School System, a developmental reading program is utilized. This program is implemented through the use of basic reading series (Betts Basal Readers - American Book Company) and complemented by a variety of supplementary material. This program stresses phonics, comprehension, and thinking skills, growing out of children's interests with a particular emphasis on the individual differences of pupils.

In addition to the basal reading program (first through third grade), a reading readiness program (Houghton-Mifflin) is used by some teachers who believe their students are ready to begin reading.

* Constructed by members of the i/t/a study committee
+ Traditional orthography

Also various reading skills are carried over to the content areas in math, social science, science and the arts.

The i/t/a experimental sample was selected in a random manner from the records of the participating elementary schools. No intentional bias was introduced in the selection of the sample. The T.O.-control or non-i/t/a sample, however, was selected in a more arbitrary manner. In other words, the T.O. random selection was made from the permanent record files on non-participating schools with the intention of acquiring a non-i/t/a sample of children with similar pre-first grade characteristics (I.Q., chronological age, and sex). In any event, with the exception of non-i/t/a "judgment selections," no intentional bias was knowingly imposed.

It was necessary to divide the experimental group (N=93) into sub-groups (N=28 and N=65) because of the differences in the length of i/t/a instruction. We therefore define the i/t/a-KF group (N=28) as one who received one semester (half-days) of i/t/a instruction in kindergarten and one full year in first grade. The i/t/a-F group (N=65) received one year of first grade i/t/a instruction.

In equating the experimental (i/t/a) and control (T.O.) groups, it is necessary to show, prior to the first grade i/t/a instructional period, that the groups are as nearly comparable as possible. The basic characteristics of both groups, therefore, are presented in order to give the reader a clearer perspective of the groups. The results of Science Research Associates Primary Mental Abilities Test (Table 1-1) were used to determine the pre-first grade readiness for learning and intellectual levels of the paired subjects included in the study. In addition, chronological age and sex were used in the matching techniques.

TABLE 1-1

DATA ON INTELLIGENCE QUOTIENTS, CHRONOLOGICAL AGES, AND SEX OF THE i/t/a AND T.O. GROUPS PRIOR TO FIRST GRADE

Basis of Comparison	No.	P.M.A. Test ^a	Chronological	Sex	
		I.Q. Scores	Ages (Months)	Boys	Girls
		Mean	Mean		
i/t/a-KF	28	118. ^b	71.2	17	11
T.O.-KF	28	117. ^b	71.8	17	11
i/t/a-F	65	114.3 ^b	72.3	29	36
T.O.-F	65	114.9 ^b	71.2	27	38

i/t/a-KF Kindergarten and first grade i/t/a instruction

i/t/a-F First grade i/t/a instruction

T.O. Traditional orthography (traditional instruction)

^a S.R.A. Primary Mental Abilities Test administered during kindergarten, May 1964

^b Retained null hypothesis of no significant difference between the means as determined by the sign test at .05 level of significance

The results in Table 1-1 suggest that there is little difference between i/t/a and T.O. groups in at least three areas prior to the first grade instructional period. The sign test of the difference between the mean I.Q.'s indicates that there is no significant difference at the .05 level of significance between the i/t/a and T.O. groups prior to the first grade instructional period. Differences between the groups in terms of chronological age and number of boys and girls were not tested statistically for significance because of the nature of the data and because only minimal differences were reflected in the results. In short, the data in Table 1-1 imply that there is little or no difference between the groups, as determined by I.Q., age, and sex prior to the first grade instructional period.

Limitations of the Study

There are some limitations which had to be imposed upon the study. It is, for example, not the purpose of this investigation to exhaust and control all variables involving the problem presented. It is recognized that there are many factors which relate to children's success or failure in reading. There are a host of environmental experiences that influence children in the school setting; for example, the quality of teaching, classroom dynamics, teaching conditions, and type of educational program. It is virtually impossible to control all the factors that might influence growth in learning skills over a given period. In the study both the experimental and control groups were selected in a random manner from different schools, and no intentional control or bias was introduced in terms of the selections of pre- or post-first grade teachers for either group.

II

REVIEW OF LITERATURE

Introduction

The following review of literature pertaining to the Initial Teaching Alphabet medium is an attempt to sample recent opinions and studies.

The writer has attempted to review current literature within the following framework: the effects of i/t/a on reading, writing, spelling, self-concept or "self", and in terms of questions still to be answered about i/t/a.

The material was chosen by consulting the Educational Index for the years extending from 1963 to 1967. An attempt was made by the writer to sample a variety of opinions; however, it must be recognized that this review is limited in scope and limitations must be taken into consideration by the reader.

Definition of Terms

1. In this review the term "Hawthorne Effect" refers to the improvement in task performance or the behavior change accruing as the result of being an experimental subject.
2. The term "Reading Drive" in this review refers to a surge of enthusiasm felt by teachers and students when attempting something new in the school setting.
3. The abbreviation "i/t/a" stands for initial teaching alphabet.
4. The abbreviation "T.O." stands for traditional orthography.
5. The abbreviation "SF" stands for Scott Foresman.
6. The abbreviation "P.W.P." stands for phonics and word power.
7. The abbreviation "LIPP" stands for Lippincott.

Effects on Reading

John Downing reports the results of a study carried on at the University of London after two years of experimentation with i/t/a in which experimental and control groups were used. Results showed that 25 per cent of the i/t/a group, 413 children altogether, had gone beyond the basal reading series by the end of the first year. Only four per cent of the group using T.O., 687 children, had advanced beyond the basal reading series in the same amount of time. At the end of two years 76 per cent of the i/t/a group had advanced beyond the basal reading series compared to 36 per cent of the T.O. children. This study seemed to show that beginning reading for children using the i/t/a medium is much easier and that they readily transfer their skills from i/t/a to T.O. On tests thus far, in comprehension, word recognition and speed, children reading i/t/a were superior

to those using T.O.

Mazurkiewicz (10), in conjunction with Lehigh University and the Bethlehem Public Schools, conducted a study to check the results of Pitman's study in England. Materials used in this study were identical to those used in England. The teacher's approach could not be controlled. Control and experimental groups were set up.

Problem I: Is there a difference in reading achievement during the tenth week of school as reflected in instructional level of achievement when the same method is used but the medium is different?

Result I: Forty per cent more i/t/a students achieved reading status at ten weeks.

Problem II: Is there a difference in reading achievement of the i/t/a and T.O. sub-sample populations in the fifth month of school when the same method is used but the medium is different?

Result II: Almost 43 per cent of the i/t/a population was found at instructional levels of 2.0 as compared to three per cent of the T.O. readers.

The conclusions of this study were as follows:

1. The use of i/t/a medium with an eclectic methodology, that emphasizes unity of language arts, permits early developments of reading skill.
2. The use of an identical methodology with a traditional orthography is unable to overcome the inhibiting effects of the complexity of the phoneme-grapheme correspondence on early reading achievement.
3. i/t/a students were more advanced in word reading at all stages of measurement, but did not appear significantly different from T.O. in paragraph meaning, word study skills or vocabulary.

As a result of the Lehigh study, it is suggested that the use of i/t/a in a language arts oriented program has value in overcoming the inhibiting effects of the complex phoneme-grapheme relationships in T.O. i/t/a tends to avoid frustration and encourage pleasure in reading.

Robert Hayes (7) summarized a study done by the Pennsylvania Department of Public Instruction to determine which method of teaching reading is best for certain selected children. This program was evaluated in 1964-65. The following approaches to reading were evaluated: 1. The "whole word" ability grouping eclectic basal approach of Scott Foresman. 2. The preceding approach supplemented by a phonics workbook approach, Phonics and Word Power, American Education Publications. 3. The phonics filmstrip, whole class approach, Lippencott Company. 4. Early to Read ability grouping, i/t/a Publications.

The achievement results were divided at the end of the year into thirds, according to I.Q., for analysis. Refer to Tables 2-1, 2-2, and 2-3 for test results.

TABLE 2-1

SILENT AND ORAL READING ACHIEVEMENT: HIGH ABILITY LEVEL

	Mean Score			
	SF	PWP	LIPP	i/t/a
Stanford Word Reading	23.80	24.81	31.78	30.16
Stanford Paragraph Meaning	27.07	25.38	31.42	31.41
Stanford Spelling	13.97	16.63	17.64	17.81
Stanford Word Study Skills	42.90	42.00	47.58	48.06
Gilmore Accuracy	22.00	22.63	34.10	28.63
Gilmore Comprehension	20.23	16.13	21.20	20.75
Gilmore Rate	74.23	77.25	90.30	105.75
Fry List	6.69	6.63	25.40	23.38
Gates List	14.62	14.83	28.10	27.25

TABLE 2-2

SILENT AND ORAL READING ACHIEVEMENT: AVERAGE ABILITY LEVEL

	Mean Score			
	SF	PWP	LIPP	i/t/a
Stanford Word Reading	19.17	20.34	26.72	26.06
Stanford Paragraph Meaning	22.56	19.28	24.72	23.56
Stanford Spelling	10.44	10.10	13.47	15.56
Stanford Word Study Skills	34.28	34.54	40.31	41.33
Gilmore Accuracy	18.40	19.09	17.11	19.75
Gilmore Comprehension	19.20	16.36	13.67	16.00
Gilmore Rate	71.40	70.91	52.44	82.00
Fry List	4.00	5.18	15.33	18.08
Gates List	14.00	12.09	20.89	22.75

TABLE 2-3

SILENT AND ORAL READING ACHIEVEMENT: LOW ABILITY LEVEL

	Mean Score			
	SF	PWP	LIPP	i/t/a
Stanford Word Reading	15.53	14.33	16.35	19.28
Stanford Paragraph Meaning	14.16	14.54	13.29	13.36
Stanford Spelling	7.25	6.90	5.79	11.54
Stanford Word Study Skills	30.42	30.67	27.59	32.89
Gilmore Accuracy	13.83	9.27	10.18	15.90
Gilmore Comprehension	10.50	12.27	9.36	13.70
Gilmore Rate	66.00	40.09	44.00	51.00
Fry List	1.33	1.73	10.09	13.10
Gates List	9.17	5.82	13.18	16.70

For the higher I.Q. group, the i/t/a and LIPP programs generally produced higher silent and oral reading achievement than did the other approaches. i/t/a was significantly higher on the Stanford Word Reading, Paragraph Meaning, Word Study Skills, and in reading words from Gates and Fry lists. On the Gilmore Rate and Accuracy, the i/t/a mean was significantly higher than the mean of S.F. and P.W.P. On the Gilmore Accuracy, the LIPP was significantly ahead of the means of S.F. and P.W.P.

For the average third, i/t/a and LIPP showed higher gains in all silent reading tests. They were significantly higher in Word Reading, and Word Study Skills. i/t/a was usually highest in oral achievement for the average third. i/t/a and S.F. were significantly higher than LIPP on the Gilmore Oral Reading Rate. On the Fry word list, LIPP and i/t/a were significantly higher. On the Gates Word list i/t/a was significantly higher.

For the low I.Q. group, i/t/a was generally the highest in both silent and oral reading achievement. Results of these tests can be found on Table 2-3.

The Diacritical Marking System, i/t/a and a Basal Reading program were compared in a study by Fry (4). Seven different standardized tests were administered to measure achievement. These tests were based on traditional orthography and were given at the end of the first year. These tests showed that there were no significant differences among the approaches.

The results of an experimental project carried on by the University of Chicago Laboratory Schools in 1963 indicated the following outcomes:

1. Children readily learn i/t/a.
2. Transition from i/t/a to T.O. is smooth if children are ready.
3. i/t/a seems to encourage a freer expression of ideas.
4. Children are made aware of sound symbol relations with i/t/a.
5. Transfer in spelling occurs later than transfer in reading.
6. i/t/a seems to give children a sense of confidence so essential during early stages of reading. (18)

Effects of i/t/a on Writing

The regularity of spelling in i/t/a has made creative writing much easier and more enjoyable for children, especially those who are not academically inclined. These children seem to be less inhibited about attempting to spell words. (8) Generally, i/t/a enhances creative writing and many first graders are writing letters to each other and are writing stories by the team. (1)

An experiment on creative writing was conducted at Slippery Rock State College in Pennsylvania. The experimental sample consisted of twenty-four first graders, eight girls and sixteen boys. The I.Q. range was from 95-137. The pupils were divided into three groups according to reading ability.

Examination of creative writing results revealed a variety of rhythms and patterns. The use of verbs, particularly in the past tense, showed a grasp of the time concept and an understanding of singular and plural relationships. These children seemed to have a strikingly large vocabulary. (15)

Mazurkiewicz (11) sampled creative writing of children who had an i/t/a and T.O. background at the end of their second grade year. A standardized method of evaluating this writing was employed.

TABLE 2-4

i/t/a			T.O.			
	M	S.D.		M	S.D.	test
Punctuation	73.4	28.0	Punctuation	80.8	28.6	.64
Capitalization	74.0	25.6	Capitalization	84.7	21.9	3.60*
Number of Running Words	67.1	38.8	Number of Running Words	48.9	31.1	7.53*
Spelling	57.4	37.5	Spelling	45.3	30.6	12.84*
Number of Poly-syllabic Words	9.9	7.3	Number of Poly-syllabic Words	5.8	5.2	7.55*
N = 144			N = 144			

*Significant beyond 1 per cent level

T.O. children, when measured by traditional standards, demonstrated superior skill in capitalization. The i/t/a children showed prolific and free writing behavior as shown by significantly superior scores when the number of running words and poly-syllabic words were examined. It might be implied that i/t/a children write more freely and expressively than T.O. children.

Other studies have also consistently found significant results in favor of i/t/a children when creative writing is measured. Yet many of these studies find a decrease of quality and quantity of creative writing after transition. This could possibly be due to less or a different emphasis in spelling after i/t/a programming. (19)

Effect of i/t/a on Spelling

According to Willford (19), reading i/t/a seems to have little effect, positive or negative, on traditional spelling achievement. The majority of studies in England and the United States indicate that: 1. Before transition i/t/a pupils seem to do better in spelling if they are given credit for i/t/a spelling. 2. If i/t/a spellings are discounted, differences are either insignificant, or in favor of children in the traditional programs. 3. When both groups are measured six months after transition, there appears to be no significant difference.

Margaret Peters (19) did some research in analyzing the spelling errors of i/t/a children and T.O. groups. She found that the number of mistakes were comparable but were generally of different types. The i/t/a children tended to make phonic errors such as omitting silent letters. The traditional seemed to make non-phonic errors such as writing "rubot" for "rabbit".

Willford (19) states the advantages that i/t/a might have in increasing skill in spelling.

Most research on spelling seems to indicate rather definite requisites. These include study habits, acute visual and auditory perception, knowledge of structural analysis and phonic skills, and an interest in a positive attitude toward correct spelling. Typical i/t/a procedures emphasize many of these.

An experimental study was completed by Mazurkiewicz (11) to determine the residual effects i/t/a had on spelling once children had made the transition to T.O. Standardized tests were given to children at the end of the first and second grades.

TABLE 2-5

	i/t/a		T.O.			
	M.	S.D.	M.	S.D.	Z	
M. 1964	9.88	4.87	M. 1964	12.03	5.76	4.06
M. 1965	17.85	13.85	M. 1965	13.85	8.04	5.81

Means, Standard Deviations and Z Ratios of matched population on spelling achievement scores in the spring of 1964 and 1965.

Children who used i/t/a tended to spell less well than children who began with T.O. at the end of the first year. At the end of the second year scores were in favor of i/t/a children.

Effect of i/t/a on Self-Concept

No articles or studies were found that were devoted to measuring the effects of i/t/a on self-concept. However, the following are comments from various authors which may directly or indirectly be related to self-concept.

i/t/a tends to avoid many of the phoneme-grapheme relationships which make our traditional orthography so complex. This cuts down frustration for the child and encourages reading for pleasure. (10) The ability to learn to read and write gives the i/t/a student a certain "sureness." This independence and self-confidence seems to be a by-product of i/t/a. (1)

i/t/a children seem to be more willing than T.O. children to express their problems, concerns, joys and sorrows. There seems to also be a positive change in children's behavior because of i/t/a. (17)

Some authors have questioned the psychological effects of i/t/a on the children who have difficulty making the transition. Sheldon (14), for example, questions whether it is good psychology to teach a procedure and then abandon it in a short time.

Some Questions Need To Be Answered

Educators should suspend judgment on i/t/a until research can be completed and viewed from a number of points. Experiments in England are to continue until 1974. There are factors involved that make judgment at this time invalid.

At this time we cannot be sure of the long-range effects of i/t/a on spelling. It is impossible, although evidence at this time indicates otherwise, that certain residual effects may later act as deterrents to fluent reading and accurate spelling. (3) Downing, himself, states:

"It is conceivable that for some children the work (i/t/a)....will be seriously harmful in its after effects." (14)

The "Hawthorne Effect" cannot be completely controlled in educational experiments which may color studies in favor of i/t/a. (3) "Reading drive," a factor isolated by Southgate (16), might be a success factor in studies other than the new alphabet. "Reading drive" is a new surge of inspiration that can be created by new teachers, new schemes or methods, new books, re-grouping, lectures by the principal, etc. This differs from the "Hawthorne Effect" in that the variable factor is an intrinsic part of the process under consideration and not extraneous as in the "Hawthorne Effect." The results obtained by ordinary teachers in ordinary classrooms are likely to be less spectacular.

There are other new approaches to reading that are yielding good results. These approaches have not had the opportunities for research and publicity that i/t/a has had. (16) In a study by Hayes (7) the Lippencott approach (Tables

2-1, 2-2, 2-3) compared very favorably to the i/t/a approach. Although differences were not significant, in general Lippencott did as well as i/t/a.

The current concern for getting children off to an early start in reading may be misdirected. Research has shown that late starters tend to catch up and surpass children who have intensive reading instruction at an early age. This is especially true when delayed readers receive enrichment in reading readiness. (3)

Southgate (16) states that good evaluations of published i/t/a results are not possible because complete experimental designs have not been released.

Such details of the design as have been published suggest that it will prove impossible to separate gains due to powerful reading drive, backed by unprecedented publicity, from gain attributed to the alphabet itself.

Summary

The Initial Teaching Alphabet has been one of the most talked about and most publicized innovations of education in the past decade. It is being used in many local school districts around the country on an experimental basis.

Because of various different interpretations of literature, many misconceptions have arisen about this new alphabet. i/t/a is not a method of instruction but rather a medium of instruction. It is not a scheme for forcing precocious readers, nor a panacea for reading ills. The writer believes that we must be familiar with these misconceptions if we are to evaluate the available literature in this area.

Some advantages of i/t/a as compared to T.O. are as follows:

- There is only one character for each letter of the alphabet.
- There are fewer whole-word representations to be learned.
- There are fewer phonic print symbols to be learned.
- i/t/a is consistent in its direction of reading.

Effect on Reading

A review of studies revealed that i/t/a children attained greater reading status than did T.O. children in beginning reading when methodology was controlled and only the medium was allowed to vary. There is some indication that this superiority of achievement with i/t/a pupils is retained through the second year.

When i/t/a is compared to other commercial approaches to reading, it is found generally that there is no significant difference. These comparisons are generally in favor of i/t/a but the differences are not statistically significant. The writer believes that predictions on this basis are difficult due to

the fact that in these studies two factors were allowed to vary, the medium and the method.

Effect on Writing

Research of literature indicates that i/t/a has a favorable effect on creative writing in the first year of school. Children seem to be less inhibited because they have the tools with which to express themselves. A freeness and expressiveness seem to carry over into the second year for i/t/a children, however, T.O. children seem to have an advantage over i/t/a children in capitalization and punctuation in the second year.

Effect on Spelling

When groups are measured before transition on a T.O. standardized test, traditional children score better. When children are given credit for i/t/a spelling, i/t/a children generally score better. Immediately after transition, T.O. children spell better when measured with traditional standards. As months pass after transition, the differences in the two groups become less significant. Some authors feel that the i/t/a approach fosters those skills that are conducive to good spelling. The writer believes that more research needs to be done in this area before any predictions can be made.

Effect on Self-Concept

The writer was unable to locate any studies or evaluations of i/t/a in relation to self-concept. This may point to a need for concentrations along these lines. Comments by authors seem to indicate that i/t/a may have a favorable effect on children's self-concept, at least in the first year. Generally, authors agree that children seem to display more confidence in reading and writing in the first year which may infer that the general self-confidence of the child is boosted as a result.

Some Questions

Many educators feel that we must still watch i/t/a carefully. Although many studies have indicated the success of i/t/a, there are numerous factors that affect educational studies other than the factor being measured. For example, factors such as "Reading Drive" and the "Hawthorne Effect" cannot be completely controlled in educational studies. Furthermore, other new approaches to reading have compared well with i/t/a.

The conclusion exists that we must wait to see if i/t/a has any negative residual effects on children's success in reading and that we must wait and examine more carefully the research results connected with i/t/a.

CONCLUSIONS

A review of literature seems to indicate that i/t/a seems to have a positive effect on children's reading, writing, spelling, and self-concept during the first year and in some cases during the second year. There are indications, however, that much research needs to be done before any decisions can be made. From limited research the writer has found that much of the available literature is contributed by a few authors. This factor, in itself, limits the evaluation of i/t/a.

Survey of Educational Research Council Schools

Eleven school systems were interviewed by members of the Lakewood i/t/a committee to survey reactions to i/t/a programming. These systems included Bay Village, Bradford, Pennsylvania, Catholic Diocese, Laurel School, Orange, Rocky River, Shaker Heights, South Euclid-Lyndhurst, Westlake, and Fairview. All the systems interviewed were located in the Greater Cleveland area with the exception of the Bradford schools in Pennsylvania. A copy of the interview form can be found in the appendix.

Summary

After compiling the data from the eleven school systems interviewed, we found that ten are still experimenting with i/t/a and one system has discontinued the program. Most of the surveyed schools are in their third or fourth year of experimentation. Half of the school systems begin i/t/a in kindergarten while the rest wait until the first grade.

Teachers' reactions toward teaching i/t/a were favorable. Only two systems were undecided. Enthusiasm was highest among first grade teachers while second grade teachers tended to be apprehensive. This was probably because of the transition phase involved in second grade and the greater number of learning levels of pupils entering grade two.

All the parents and pupils in ten schools were in favor of i/t/a except Orange School District, which was undecided. Some parents even purchased extra i/t/a reading books and other parents felt that it was an honor for their child to be in the program. Often the parent's and child's reaction depended on the enthusiasm of the teacher.

The individuals interviewed felt i/t/a was a good medium; however, two were still undecided and one was unfavorable because she felt the phonetic approach is equal to i/t/a. The Rocky River School System believed that the color and word approach was superior to i/t/a.

Most of the interviewed schools have not made an i/t/a investigation and as a result, were undecided whether or not to continue the program. Bradford Schools produced a comprehensive report showing test results definitely favoring i/t/a. As a result of the Bradford findings, all twenty-four first grade classes will use i/t/a, budget permitting. Research accomplished by the Cleveland Catholic Diocese was in favor of a phonic approach to reading rather than i/t/a. Standardized test results completed by the Rocky River Schools showed that second grade classes using words in color received higher

mean scores in all language arts and content areas than i/t/a classes.

Conclusions

The survey indicates that teachers, parents, and supervisors viewed have a positive opinion toward i/t/a. It is interesting to note that first grade teachers were very enthusiastic about i/t/a as compared to a traditional approach. This enthusiasm appeared to be less apparent with second and third grade teachers. This indicates a need for a closer look at the residual effects of i/t/a on pupils after transition and a more in depth look at teacher apprehension.

Of the eleven systems surveyed three had completed i/t/a research with their pupils. The results of two of these studies supported approaches other than i/t/a. There is a need for more research to determine whether or not this trend will continue.

RESULTS OF SURVEY OF EDUCATIONAL RESEARCH COUNCIL SCHOOLS

TABLE 2-6

School	1/t/a Program	Teacher Reaction	Parent-Pupil Reaction	Interviewee's Reaction	Local Studies
Orange	1/t/a - 4 yrs. Kdg. 1 class 1st 1 class	Favorable	Undecided	Undecided	No research
Bay Village	1/t/a - 4 yrs. Kdg. 6 classes 1st 5 classes N = 150	Undecided Teachers apprehensive about using 1/t/a except 1st grade.	Favorable Parents buying 1/t/a books. Children intrigued.	Favorable Very enthusiastic. Easiest method. Increase of confidence and creative writing.	No research
Berea	1/t/a - 3 yrs. 1st 3 classes N = 75	Favorable Gr. 1 Undecided Gr. 2,3	Favorable	Favorable All approaches offer something. New approach stimulates teacher.	No research
Bradford Area Schools	1/t/a - 1½ yrs. 1st 4 classes N = 120	Favorable	Very favorable	Favorable	Favorable 1st yr. lengthy report Test results in favor of 1/t/a child. All 24 1st gr. classes included in 1/t/a
Catholic Board of Education	1/t/a - 3 yrs. 1st 11 classes N = 500	Undecided Skeptical	Favorable	Unfavorable Must have teacher enthusiasm. Helps above average. Phonics equal to 1/t/a.	Unfavorable Favorable to phonics approach.
Fairview	1/t/a - 2 yrs. 1st all classes N = 270	Favorable	Favorable	Undecided Looks good on surface. Wait and see attitude. May go back.	No research

TABLE 2-6
(continued)

RESULTS OF SURVEY OF EDUCATIONAL RESEARCH COUNCIL SCHOOLS

School	1/t/a Program	Teacher Reaction	Parent-Pupil Reaction	Interviewee's Reaction	Local Studies
Laurel	1/t/a - 3 yrs. Kdg. & 1st 2 classes N = 37	Favorable	Favorable Ready to make transition to 1/t/a.	Favorable Increase reading interest and creative writing. 2nd gr. teacher impressed.	No research Scores high on Stanford Tes: in 1/t/a.
Rocky River	1/t/a - 3 yrs. 1st 2 classes N = 52	Favorable for 1st grade teacher.	Favorable Parents eager due to national publicity.	Favorable (For top groups) Favors color and word method over 1/t/a. Undecided on permanency of 1/t/a.	Unfavorable Spelling easier through word and color than 1/t/a.
Shaker Heights	1/t/a - 4 yrs. Kdg., 1st, and 2nd 6 classes N = 150	Favorable	Favorable	Favorable	No research
South Euclid-Lyndhurst	1/t/a - 3 yrs. Kdg., 1st and 2nd 1st 5 classes N = 120	Favorable	Favorable	Favorable	No research
Westlake City Schools	1/t/a - 3 yrs. 1st 6 classes N = 160	Favorable Transition some problem	Favorable Dependent upon teacher's enthusiasm	Favorable Wants to make it basic now	No research
Summary		9 - Favorable 2 - Undecided	10 - Favorable 1 - Undecided	8 - Favorable 2 - Undecided 1 - Unfavorable	8 - No research 1 - Favorable 2 - Unfavorable

III

RESULTS OF FORMAL THIRD GRADE EVALUATIVE PROCEDURES

Introduction

In order to proceed with the analysis of long-term^a post-i/t/a results, it was first necessary to demonstrate, with the aid of statistical tests, that immediate^b post-i/t/a gains were forthcoming in terms of the first hypothesis presented in this study. Most i/t/a studies today throughout the nation have reported gains at the end of the first year. The results of the following appraisal instruments are reported in this chapter in order to show reading progress of the groups at the end of first grade:

1. Stanford Reading Test (vocabulary, word reading, and paragraph meaning)

Secondly, in keeping with the second hypothesis, it is the primary purpose of the study to determine whether there were long-term^a post-i/t/a language arts^c differences between a group of children who received i/t/a reading instruction and a group of children who received traditional reading instruction. In this chapter the results of the following formal appraisal procedures are reported in order to demonstrate and compare the long-term language arts^c progress of the groups:

1. Iowa Tests of Basic Skills (vocabulary, reading comprehension, spelling, capitalization, punctuation, and language usage)
2. Stanford Reading Tests (word meaning and paragraph meaning)
3. Letter Grades (reading, spelling, language (mechanics), and handwriting).

^a Approximately two years after first grade

^b At the conclusion of first grade

^c Refers to reading comprehension, vocabulary, spelling, capitalization, punctuation, handwriting, and language usage

Immediate Post-First Grade i/t/a Gains

Lakewood i/t/a Study of 1965

In 1965 a Lakewood study* was made of the test results of first grade pupils who were involved in an i/t/a reading program as compared to first grade pupils involved in a traditional reading program.

In this study two experimental groups (i/t/a-KF and i/t/a-F) and two comparable control groups (T.O. -KF and T.O.-F) were employed. We defined the i/t/a-KF group (N=35) as one^{who} received one semester of i/t/a instruction in kindergarten and one full year of i/t/a instruction in first grade. The i/t/a-F (N=62) group received a full year of first grade i/t/a instruction. The SRA Primary Mental Abilities Test scores were used as an indication of pre-first grade comparability between the groups.

In May of 1965 the transliterated Stanford Reading Test, (test items were printed in i/t/a) consisting of vocabulary, word meaning, and paragraph meaning sub-tests, were administered to both i/t/a samples. The traditional Stanford Reading Test, same sub-tests, was administered to the control groups.

The results of the study, Table 3-1, indicated a lack of statistical significance in the analysis of means between i/t/a and T.O. groups in vocabulary skills. However, the study did suggest significantly higher mean scores for both i/t/a groups in word reading skills and significantly higher mean scores for the i/t/a-F group in paragraph meaning skills. No differences in mean scores were noted between the i/t/a-KF and T.O.-KF groups in paragraph meaning skills.

We therefore concluded that first grade pupils who received i/t/a instruction did as well or better than first grade pupils who received traditional reading instruction. We must, however, not forget that the Hawthorne effect created by interested and motivated i/t/a teachers appeared in operation. Teacher enthusiasm is often contagious in the classroom. Children might well arise to occasion and learn more effectively because of teacher interest and motivation. The i/t/a program is an opportunity and a challenge for teachers to demonstrate their creative abilities. If we should apply the same dynamics in a traditional first grade reading program would greater reading progress be forthcoming?

* Refer to "Effects Of An i/t/a Reading Program On Vocabulary, Word Reading, and Paragraph Meaning Skills- - -," Bulletin No. 12, October 13, 1965, Lakewood Public Schools, Lakewood, Ohio.

TABLE 3-1

SUMMARY OF FIRST GRADE DATA AND ANALYSIS OF VARIANCE OF THE DIFFERENCES BETWEEN THE MEANS OF i/t/a AND T.O. GROUPS AS MEASURED BY THE STANFORD PRIMARY I READING TEST

Kindergarten and First Grade i/t/a Instruction

Sub tests	i/t/a-KF		T.O.		F	R	Interpretation
	\bar{X}	s	\bar{X}	s			
Vocabulary	28.3	11.58	26.1	9.54	.717	3.99	.05 not significant
Word Reading	28.7	6.71	21.6	5.83	20.59	3.99	.05 significant
Par. Meaning	21.2	7.48	21.4	7.00	.074	3.99	.05 not significant
	N=35		N=32				

First Grade i/t/a Instruction

Sub tests	i/t/a-F		T.O.		F	R	Interpretation
	\bar{X}	s	\bar{X}	s			
Vocabulary	26.5	9.33	26.4	9.22	.011	3.92	.05 not significant
Word Reading	28.6	5.57	20.8	4.36	74.5	3.92	.05 significant
Par. Meaning	23.7	7.35	20.1	4.69	10.6	3.92	.05 significant
	N=62		N=64				

* Grade placement or national average at the time of testing was 1.8 (first grade plus eight months). Move decimal point one digit to the left in order to interpret the above mean scores.

Stanford Reading Test Results of 1966

In May of 1966 the Stanford Reading Test (vocabulary, word reading, and paragraph meaning) was administered to first grade i/t/a and T.O. (traditional orthography) classes in the Lakewood Schools. In this comparison all T.O. classes (N=508) and all i/t/a classes (N=229) were included. i/t/a and T.O. pupils were not matched or paired in any way as in other investigations. Transliterated tests (test items printed in i/t/a) were administered to i/t/a classes; traditional tests (test items printed in traditional alphabet) were administered to T.O. classes.

Tables 3-2 and 3-3 reveal significantly higher mean scores in word reading skills and paragraph meaning skills for the i/t/a groups. A lack of significance is noted for mean differences in vocabulary skills between the groups. Once again first grade pupils who received i/t/a reading instruction are out-performing pupils who received T.O. reading instruction in two reading areas as measured by the Stanford Reading Test at the conclusion of the first grade.

In short, both investigations, Lakewood Study of 1965 and the Stanford Reading Test Results in 1966, suggest that pupils who received i/t/a instruction demonstrate greater immediate^a post-first grade i/t/a reading scores in word reading and paragraph meaning than pupils who receive traditional reading instructions.

TABLE 3-2
DATA ON FIRST GRADE STANFORD PRIMARY I READING TEST^b

School	i/t/a N=229			T.O. N=508		
	Vocabulary	Word Reading	Paragraph Meaning	Vocabulary	Word Reading	Paragraph Meaning
Franklin	3.1	2.9	2.3			
Garfield				2.1	1.8	1.8
Grant				2.5	2.1	1.8
Harrison	2.3	2.7	2.0			
Hayes				2.5	2.0	2.0
Lincoln				2.4	1.9	1.8
Madison	2.5	3.2	2.6			
McKinley ^c	1.9	2.6	1.9	2.5	2.2	2.2
Roosevelt				2.5	1.9	1.8
Taft				2.4	1.9	1.9
Total All Schools	2.5	2.9	2.4	2.4	1.9	1.9

^aAt the conclusion of first grade.

^cBoth i/t/a and T.O. classes

^bGrade placement or national average at the time of testing was 1.8

TABLE 3-3

SUMMARY OF STATISTICAL ANALYSIS^a OF THE DIFFERENCES BETWEEN THE MEANS OF
i/t/a AND T.O. GROUPS AS MEASURED BY THE STANFORD READING TEST

Sub-tests	i/t/a N=229	T.O. N=508	Value Of Statistic	Critical Value (.05)	Interpretation
Vocabulary	2.5	2.4	+ 1	±1.96	not significant
Word Reading	2.9	1.9	+ 17.9	±1.96	significant (i/t/a)
Par. Meaning	2.4	1.9	+ 6.33	±1.96	significant (i/t/a)

Results of The Iowa Tests of Basic Skills

The results of the Iowa Tests of Basic Skills (ITBS) were used in this study as one indication of long-term post-i/t/a language arts achievement of i/t/a and T.O. groups. The ITBS are administered each year in January to all pupils in grades three through seven in the Lakewood Schools. All pupils in this study at the time of administration of the ITBS^{*} were third graders. This would represent a time lapse of approximately one and one half years⁺ after the first grade i/t/a instructional period. For the purpose of the study we used the following ITBS language arts sub-tests: vocabulary, reading comprehension, spelling, capitalization, punctuation, and language usage.

You will recall, as defined in chapter one, the i/t/a-KF group received one semester of i/t/a instruction in kindergarten and one full year in first grade. The i/t/a-F group received one year of first grade i/t/a instruction. In each case, the matched control groups, T.O.-KF and T.O.-F, were provided with traditional reading instruction during the same period.

A paired t-test analysis of the differences between the means (Table 3-4) of i/t/a and T.O. groups indicates a statistical difference in four instances favoring the T.O. control groups. In every language arts area but one, the T.O. groups have out-performed the i/t/a groups.

In such areas as spelling, capitalization, punctuation, and language usage T.O. pupils out performed i/t/a pupils by four to five school months. In short, the assumption that pupils who have had i/t/a instruction would score at a higher level with language arts test materials during the long-term post-i/t/a was rejected.

^aTwo sample normal curve Z statistical test

*All Iowa Test materials were printed in the traditional alphabet

+School year is defined as ten months

TABLE 3-4

SUMMARY OF THIRD GRADE DATA AND PAIRED t-TEST ANALYSIS OF THE DIFFERENCES BETWEEN THE MEANS OF i/t/a AND T.O. GROUPS AS MEASURED BY THE IOWA TESTS OF BASIC SKILLS

Kindergarten and First Grade i/t/a Instruction

Iowa Sub-Tests	i/t/a-KF N=28	T.O.-KF N=28	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Vocabulary	4.2	4.3	-.1	- .480	±1.703	Not significant
Rdg. Comprehension	4.1	4.3	-.2	- .962	±1.703	Not significant
Spelling	4.0	4.4	-.4	-1.335	±1.703	Not significant
Capitalization	4.2	4.7	-.5	-1.791	±1.703	Significant (T.O.)
Punctuation	4.1	4.4	-.3	- .774	±1.703	Not significant
Language Usage	4.3	4.8	-.5	-1.282	±1.703	Not significant

First Grade i/t/a Instruction

Iowa Sub-Tests	i/t/a-F N=65	T.O.-F N=65	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Vocabulary	4.1	4.2	-.1	- .967	±1.671	Not significant
Rdg. Comprehension	4.3	4.3		+ .285	±1.671	Not significant
Spelling	4.0	4.4	-.4	-2.018	±1.671	Significant (T.O.)
Capitalization	4.4	4.8	-.4	-2.509	±1.671	Significant (T.O.)
Punctuation	4.2	4.6	-.4	-2.300	±1.671	Significant (T.O.)
Language Usage	4.2	4.4	-.2	-1.223	±1.671	Not significant

* Grade placement or national average at the time of testing was 3.5 (third grade plus five months)

Results of The Stanford Reading Test

The results of the Stanford Primary II Reading Test were used as a formal indication of long-term post-i/t/a reading achievement of i/t/a and T.O. groups. The Stanford Reading Tests (sub-tests printed in traditional alphabet) were administered in April, 1967 to all pupils in the study. All pupils in this study who took this test were third graders. This would represent a time lapse of approximately one year and eight months⁺ after the first grade i/t/a instructional period. The word meaning and paragraph meaning sub-test scores were used for the study. It was assumed that the pupils who received i/t/a instruction would achieve at a higher level with a test of this kind than a comparable T.O. control group.

A paired t-Test analysis of the differences between the means (Table 3-5) of i/t/a and T.O. groups does not in any way support the assumption that i/t/a pupils would achieve at a higher level in reading than a comparable T.O. group. In one example, T.O. pupils scored significantly higher in paragraph meaning than the paired i/t/a pupils. Therefore, it is concluded that pupils who received i/t/a reading instruction did not do better in terms of standardized reading test results, one year and eight months⁺ after the i/t/a instructional period, than a T.O. control group who received traditional reading instruction during the same period.

⁺ School year is defined as ten months

TABLE 3-5

SUMMARY OF THIRD GRADE DATA AND PAIRED t-TEST ANALYSIS OF THE DIFFERENCES BETWEEN THE MEANS OF i/t/a AND T.O. GROUPS AS MEASURED BY THE STANFORD PRIMARY II READING TEST

Kindergarten and First Grade i/t/a Instruction

Stanford Sub-Tests	i/t/a-KF N=28	T.O.-KF N=28	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Word Meaning	4.0	4.1	-.1	-.520	±1.703	Not significant
Paragraph Meaning	3.9	4.5	-.6	-2.023	±1.703	Significant (T.O.)

First Grade i/t/a Instruction

Stanford Sub-Tests	i/t/a-F N=65	T.O.-F N=65	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Word Meaning	4.1	4.1		-.461	±1.671	Not significant
Paragraph Meaning	4.2	4.1	+.1	+.385	±1.671	Not significant

* Grade placement or national average at the time of testing was 3.8 (third grade plus eight months)

Results of Letter Grades

Third grade mean letter grade values were used as additional formal indications (teacher judgment) of long-term post-i/t/a language arts achievement of i/t/a and T.O. groups. The letter grades used in this report were obtained from the pupil progress reports at the end of the fourth marking period of the participating elementary schools. The fourth marking period ended during the month of March which would represent a time lapse of approximately one and one-half years after the first grade i/t/a instructional period.

In this study the assigned values for the letter grades are A=4, B=3, C=2, D=1, and E=0. The following language arts areas were used in this part of the study: reading, spelling, language (mechanics), and handwriting. The assumption was that students who received i/t/a reading instruction would be more successful in these areas, as determined by third grade classroom teachers, than a comparable T.O. control group.

Inspection of the data and a sign test analysis of total average means between the groups (Table 3-6) in no way suggest that i/t/a pupils are more successful in language arts areas, in terms of teacher judgment, than T.O. pupils. All T.O. mean letter grade values appear greater than i/t/a mean letter grade values. The T.O.-F group total average results, for example, are significantly greater, per sign test analysis, than the i/t/a-F group total average results. In short, i/t/a reading instruction does not appear to have a greater long-term effect on third grade language arts achievement, one and one-half years after the i/t/a instructional period, as determined by teacher marks. In fact, in many instances, the T.O. groups were appraised at a higher achievement level in language arts than their counterparts.

TABLE 3-6

SUMMARY OF THIRD GRADE DATA AND SIGN TEST ANALYSIS OF THE DIFFERENCES BETWEEN THE TOTAL AVERAGE MEANS OF i/t/a AND T.O. GROUPS AS DETERMINED BY LANGUAGE ARTS LETTER GRADES

Kindergarten and First Grade i/t/a Instruction						
Language Arts	i/t/a-KF N=28	T.O.-KF N=28	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Reading	2.28	2.67	-.39			
Spelling	2.53	3.10	-.57			
Language	2.39	2.82	-.43			
Handwriting	1.92	2.60	-.68			
Average	2.28	2.79	-.51	$\mu = .076$	± 1.96	Not significant
First Grade i/t/a Instruction						
Language Arts	i/t/a-K N=65	T.O.-F N=65	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Reading	2.26	2.64	-.38			
Spelling	2.49	2.76	-.27			
Language	2.27	2.84	-.57			
Handwriting	2.21	2.93	-.72			
Average	2.31	2.79	-.48	$\mu = -3.203$	± 1.96	Significant (T.O.)

IV

RESULTS OF INFORMAL THIRD GRADE EVALUATIVE PROCEDURES

Introduction

As stated previously, consideration is given in this study to what is described as "dealing with human beings who cannot be reduced to a test tube level." As a result, informal and subjective data about the samples, a more flexible but equally vital approach, are presented.

The purpose of the chapter is to reveal additional evidence in the areas of writing and spelling, for or against the second hypothesis, pupils who received i/t/a reading instruction will make greater long-term post-i/t/a progress in language arts than a similar control group.

Many studies that have been conducted throughout the nation have not included "pupil attitudes" in their investigations. Therefore this chapter will also present data on the long-term effects of i/t/a instruction on pupil attitudes (third hypothesis).

Lastly, no study of this kind would be complete without a survey of teachers who have been involved in i/t/a instruction or the effects of i/t/a instruction upon pupils. Consequently, teacher judgment and opinion in terms of advantages and preferences for i/t/a instruction, based upon the results of a teacher questionnaire, will be presented (fourth hypothesis).

Results of the Writing Exercise

A writing exercise, constructed and pre-tested by the Coordinator of Language Arts for the Lakewood Elementary Schools, was used in the study as a long-term post-i/t/a informal indicator of traditional writing proficiency. The exercise contained five different topic choices (see appendix). The subjects chose one topic about which to write. The exercise was administered by one individual during the month of April, 1967 to all pupils participating in the study. Since all participants were third graders the time lapse from the i/t/a instructional period was approximately one school year and eight months.

The evaluation of the results of the writing exercise was based upon the following criteria:

1. Original Thought. Pupils should be able to express some creative ideas other than what the subject might obtain from environmental media.

2. Logical Sequence of Story. The writing effort should progress in a sequential order from beginning to end.
3. Capitalization. Proper nouns, the pronoun I, and the initial word in each sentence should be capitalized.
4. Punctuation. Pupils should make acceptable use of periods, commas, apostrophes, and question marks.
5. Handwriting. Handwriting was judged as reasonable and readable.
6. General Quality. Denotes overall mastery of writing skills as suggested by the above criteria.

The evaluation of the papers was accomplished by two English teachers who were not involved with the instruction. The maximum possible score to be achieved per evaluation area was five points. Total maximum score for all areas was 30 points. The assumption was made that pupils who received i/t/a instruction would demonstrate greater development and proficiency in writing skills than a comparable T.O. control group.

The T.O. results (Table 4-1) reflect scores in all evaluative areas as equal or slightly higher than i/t/a results. Significant differences, however, in terms of total scores (number right out of 30 points) were not demonstrated for the groups. In short, i/t/a reading instruction does not appear to have a greater long-term effect on third grade writing development and proficiency, approximately two years after the i/t/a instructional period, than traditional reading instruction.

TABLE 4-1

SUMMARY OF THIRD GRADE DATA AND PAIRED t-TEST ANALYSIS OF THE DIFFERENCES BETWEEN THE TOTAL AVERAGE MEANS OF i/t/a AND T.O. GROUPS AS MEASURED BY AN INFORMAL WRITING EXERCISE

Kindergarten and First Grade i/t/a Instruction

Writing Appraisal Areas	i/t/a-KF N=28	T.O.-KF N=28	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Original Thought	3.6	3.8				
Logical Sequence of Story	3.3	3.7				
Capitalization	4.0	4.1				
Punctuation	3.5	3.9				
Handwriting	2.8	3.5				
General Quality	2.9	3.2				
Total Number Out of 30	20.1	22.2		-1.461	±1.703	Not significant

First Grade i/t/a Instruction

Writing Appraisal Areas	i/t/a-F N=65	T.O.-F N=65	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Original Thought	3.8	3.8				
Logical Sequence of Story	3.4	3.7				
Capitalization	4.1	4.1				
Punctuation	3.4	3.7				
Handwriting	3.5	3.5				
General Quality	2.9	3.1				
Total Number Out of 30	21.1	21.9		- .818	±1.671	Not significant

* Raw scores

Results of The Spelling Test

A spelling test, also constructed and pre-tested by the Coordinator of Language Arts, Lakewood Elementary Schools, was used as a long-term post-i/t/a informal measure of spelling achievement. The spelling test contained 25 traditional words ranging from second through the fifth grade level (see appendix). The 25 words selected for the test appeared at least five times in ten different spelling books other than the spelling books that are used in the Lakewood Schools. The test was administered by one member of the i/t/a committee during the month of April 1967 to pupils in all study groups. The time lapse (third grade) from the i/t/a instructional period was one school year and eight months. The test papers were judged simply on the basis of correct or incorrect spelling.

Once again, (Table 4-2) T.O. pupils achieved a higher score value in this language arts achievement area. These results support the Iowa Test spelling test scores (Table 3-4). However, in this case, the results were not reported as significantly different. It is further suggested that third grade pupils who had a longer i/t/a instructional period (kindergarten and first grade instruction) have more difficulty with traditional spelling. In any event, the assumption that pupils who have had i/t/a instruction would score at a higher level in spelling during the long-term post-i/t/a period was rejected.

TABLE 4-2

SUMMARY OF THIRD GRADE DATA AND PAIRED t-TEST ANALYSIS OF THE DIFFERENCES BETWEEN THE MEANS* OF i/t/a AND T.O GROUPS AS MEASURED BY AN INFORMAL SPELLING TEST

Kindergarten and First Grade i/t/a Instruction

	i/t/a-KF N=28	T.O.-KF N=28	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Mean* Score	17.2	18.9	-1.7	-1.478	±1.703	Not significant

First Grade i/t/a Instruction

	i/t/a-F N=65	T.O.-F N=65	Mean Difference	Value of Statistic	Critical Value (.05)	Interpretation
Mean* Score	17.1	17.5	-.4	-.608	±1.671	Not significant

*Number of words spelled correctly

Results of Pupil Attitudes

An inventory relating to pupil attitudes toward reading, school, and "self" was administered to i/t/a and T.O. groups during April 1967. The time lapse from the i/t/a instructional period was approximately one school year and eight months. The results of the inventory were used to determine major attitudinal differences between third grade pupils who received i/t/a instruction and pupils who received traditional reading instruction. The assumption was made that pupils with i/t/a instruction would demonstrate more favorable long-term post-i/t/a attitudes toward reading, school, and "self," because of early success in reading, than a comparable T.O. control group.

The committee selected the most desirable response in terms of each statement in the inventory and these responses are listed, or circled in Tables 4-3, 4-4, and 4-5. The responses indicated are those for combined i/t/a and T.O. groups. It was felt that length of i/t/a experience or sex was not imperative for this part of the study. The committee wished to obtain an overall impression of attitudinal differences between the two groups.

The numbered items in the following Tables were considered especially pertinent to the study. They are listed under three attitudes toward divisions:

reading	Table 4-3
school	Table 4-4
self-concept	Table 4-5

The mean scores represent the intensity of the most favorable attitudes toward reading, school, and "self" between i/t/a and T.O. groups.

TABLE 4-3

COMPARATIVE FREQUENCIES OF MOST DESIRABLE ATTITUDINAL RESPONSES TOWARD READING AS INDICATED BY THE PUPIL INVENTORY FOR i/t/a AND T.O. GROUPS

Item	i/t/a		T.O.	
	Yes	No	Yes	No
2. I go to public library	74		76	
5. Stories are easy to write	39		40	
7. I would like to have more reading in school	60		65	
10. I wish my reading books were easier to understand		64		60
23. I like to read for fun	82		77	
Mean	63.80		63.60	
N	93		93	

Item	i/t/a			T.O.		
	Always	Sometimes	Never	Always	Sometimes	Never
14. I like to sound out new words	(41)	40	12	(46)	36	11
15. I like to read	(58)	29	6	(64)	25	4
17. I like to write stories	30	(46)	16	35	(46)	10
19. I like to read out loud	(40)	37	16	(47)	33	13
36. My eyes get tired when I read	8	(54)	31	9	(46)	38
Mean		47.80			49.80	
N		93			93	

Note: Most desirable responses, as judged by the i/t/a committee, are listed or circled.

TABLE 4-4

COMPARATIVE FREQUENCIES OF MOST DESIRABLE ATTITUDINAL RESPONSES TOWARD SCHOOL AS INDICATED BY THE PUPIL INVENTORY FOR i/t/a AND T.O. GROUPS

Item	i/t/a		T.O.	
	Yes	No	Yes	No
3. I am afraid to take these tests		86		86
Mean		86.00		86.00
N		93		93

Item	i/t/a			T.O.		
	Always	Sometimes	Never	Always	Sometimes	Never
11. I like school	39	48	6	39	50	4
13. I worry about school	3	34	55	5	26	61
18. My school work is easy for me	14	72	7	15	72	6
21. I need help with my school work	4	71	18	0	74	18
Mean		56.25			55.50	
N		93			93	

Note: Most desirable responses, as judged by the i/t/a committee, are listed or circled.

COMPARATIVE FREQUENCIES OF MOST DESIRABLE ATTITUDINAL RESPONSES TOWARD "SELF"
AS INDICATED BY THE PUPIL INVENTORY FOR i/t/a AND T.O. GROUPS

Item	i/t/a		T.O.	
	Yes	No	Yes	No
26. I want to learn to speak better	46		56	
27. I know right from wrong	87		85	
28. I need to learn how to get along with people		72		62
30. I need more friends		60		54
31. I like most of the girls and boys in my class	85		80	
32. Adults think I'm always wrong		82		71
33. I think most boys and girls in my class like me	67		73	
Mean	71.29		68.71	
N	93		93	

Item	i/t/a			T.O.		
	Always	Sometimes	Never	Always	Sometimes	Never
35. I can sit still	31	55	7	41	44	8
37. My feelings are easily hurt	9	43	41	13	46	33
38. I get angry	11	65	17	7	73	13
39. I am happy	31	62	0	31	60	1
40. I have as much fun as other boys and girls	43	46	4	55	31	7
41. I am careless	3	50	38	4	50	37
42. I often feel lonesome	6	60	27	2	60	29
43. I am shy	10	39	44	9	44	40
44. I like the things I do	35	56	1	43	48	2
45. I "show off"	4	29	60	1	27	65
46. The boys and girls in my class tease me	5	42	45	9	40	44
47. I like to have adults speak to me	31	54	8	44	47	2
Mean		50.08			47.50	
N		93			93	

Note: Most desirable responses, as judged by the i/t/a committee, are listed or circled.

All selected inventory items, based upon desirable responses as determined by committee judgment, were tested for significance. A Chi-square analysis* at the .05 level of significance revealed only one significant response (Item No. 47). We can expect at least one statistical test to be significant, and as a result, it is attributed to random error. All other selected inventory items were not significantly different. Therefore, i/t/a reading instruction does not seem to have a more favorable long-term post-i/t/a effect on pupil attitudes, one year and eight months after the i/t/a instructional period, than traditional reading instruction.

A summary of mean scores (Table 4-6) of the three inventory areas reveals little difference in the results between the i/t/a (N=93) group and the T.O. (N=93) group.

An inspection of the results implies there is little difference between i/t/a and T.O. attitudinal responses in the area of reading and school (Table 4-6). It is interesting to note that in Table 4-3, that T.O. children express a stronger desire to have more reading in school, to read aloud and to sound out new words. Table 4-4 indicates T.O. children worry less about school.

There are some suggestions in Table 4-5 i/t/a children appear more self-confident in their relationships with peers and adults. i/t/a children also exhibit a more positive attitude concerning their speech and the things they do.

*Chi-square results are available upon request.

TABLE 4-6

SUMMARY OF THIRD GRADE MEAN SCORES BETWEEN i/t/a AND T.O.* GROUPS AS REVEALED BY AN INFORMAL PUPIL ATTITUDE INVENTORY

Area	i/t/a N=93	T.O. N=93
	Total Mean Score	Total Mean Score
(1) Reading	55.8	56.7
(2) School	62.2	61.6
(3) Self-Concept	57.9	55.3

Notes: (1) Reading - The items in this area of the Inventory involve student's attitudes toward reading, phonetics and writing.

(2) School - This section is concerned with the pupil's attitude toward school and his schoolwork.

(3) Self-Concept - This area is concerned chiefly with the pupil's concept of himself and his personal adjustment.

* i/t/a and T.O. groups were combined for this part of the investigation because of the nature and validity of informal inventories.

Results of the Teacher Questionnaire

All primary teachers in the Lakewood Schools currently involved in teaching reading by the i/t/a method or involved with the effects of i/t/a programming were asked to respond to the questionnaire. As a result 28 teachers completed the questionnaire (kdg. - six, Grade 1 - nine, Grade 2 - seven, and Grade 3 - six).

The spring of 1964 marked the beginning of the i/t/a reading program in the Lakewood Schools. This study, therefore, is limited to a three year period. The experience which any teacher has had with i/t/a does not exceed three years. The following is a summary* of teacher responses to the questionnaire.

QUESTIONNAIRE FOR TEACHERS OF LAKEWOOD i/t/a CLASSES

To evaluate the i/t/a approach to reading in the Lakewood Schools, we need the help of all teachers K-3 who have used this method. Will you please answer all the questions below which apply to your experience with i/t/a. Omit those questions which in your experience do not apply. As example, question 7 might be omitted by kindergarten teachers and question 10 by third grade teachers, while question 11 should be answered by all teachers. Please return this questionnaire to your principal by March 16. Thank you for your help.

Miss Mildred Dicke, Principal
Madison Elementary School

Name Composite of Grades Kdg., 1, 2, and 3 School Franklin, Harrison, Madison and McKinley

Date April, 1967 28 teachers responding

4. Has your experience with traditional methods of teaching reading been for a longer or shorter time than your i/t/a experience?

Has your opinion of i.t.a changed since your contacts with this approach?
(Please explain)

Twenty-one of the 28 teachers in the study have had a longer experience with traditional approaches to reading than with i/t/a. Two of the 28 teachers have had no experience with teaching reading by traditional methods.

*More detailed information can be provided upon request.

First grade teachers indicated that i/t/a had been more successful than they had anticipated. Second and third grade teachers were disappointed in total language arts performance of the i/t/a children. Reading achievement was not as high as expected by third grade teachers.

5. In your experience what are the advantages of the i/t/a approach?

At all grade levels the phonetic aspects of i/t/a and the power which this gives children in word attack and gaining independence in reading were recognized. The fact that children are able to write any word they can say and have greater freedom in written expression was also recognized. Interesting and exciting materials in the early stages of reading with success in reading coming earlier are other advantages of i/t/a.

6. In your experience what are the disadvantages of i/t/a?

Beginning with first grade, teachers indicated that comprehension skills are weaker for i/t/a children. Second grade teachers noted that science, social science, language and spelling are hindered because textbooks in these subjects are in T.O.⁺ Some children continue to read in i/t/a at the second grade level for a long period of time. At all grade levels, teachers spoke of too much verbalization and lip reading which slows silent reading and makes it difficult for others to read or work. Lack of i/t/a materials in the child's world, other than at school, is also a disadvantage. i/t/a makes it necessary for a child to learn, unlearn and relearn reading, writing and spelling. Rules of capitalization, punctuation, spelling, sentence structure, and paragraph formation are difficult for i/t/a children.

⁺Traditional orthography

7. What effect does i/t/a have on writing and spelling?

In first grade creative writing is better and some kindergarten children can write creatively. i/t/a makes the first grade child independent in writing and spelling which enables him to write stories, letters and short reports with enthusiasm and interest.

Second grade teachers believe that there is an emotional adjustment for children from first grade to second grade. The feeling is they can write and spell anything in T.O. and as a result do not meet success in these areas.

Second and third grade teachers revealed too many changes in handwriting, i/t/a, then manuscript, then cursive. They also indicated more problems in teaching punctuation, capitalization and usage. One third grade teacher commented that the i/t/a approach leaves a child unaware that written expression must be organized so that another reader can understand its meaning.

8. How do you handle the problems of children who have been taught by a traditional approach to reading and then move into an i/t/a class?

Replies of teachers indicated that while there are problems in this area, they can for the most part be overcome. Some children have had a frustrating experience.

9. What problems would a child encounter who moves from an i/t/a class to a class which does not use this approach?

i/t/a children moving to a class using a traditional approach need individual help. There seem to be more problems here than in question 8.

10. What effect does i/t/a have on the child who is a pre-school reader or the pre-school child who gets books from the public library?

Much depends on the parents' attitude toward i/t/a. The lack of i/t/a materials in libraries may be discouraging to interested readers. However, children who can read before entering school should encounter little difficulty with i/t/a books.

11. What has been the attitude of parents toward i/t/a?

The parent's attitude is closely related to the child's success or lack of success with i/t/a. Many parents have neither positive nor negative views because they do not know enough about i/t/a. Also, parents look to the school for professional opinion and respect the practices of the school. Some parents are concerned about the effects of i/t/a on spelling. They are also concerned because they cannot help their children as they would like, and that i/t/a requires unlearning. Some parents are most enthusiastic and ready to write letters to the Board of Education in defense of i/t/a.

12. What kinds of attitudes do children taught by i/t/a have toward reading?

Kindergarten teachers find feelings of failure in children when they are unable to hear or see differences in symbols. They also believe i/t/a brings too much pressure on children who are not ready.

First grade teachers reported many positive attitudes such as enjoying reading during free periods; attempting to read anything in the environment in either i/t/a or T.O. There is less frustration and children have a better self-concept in reading.

Second grade teachers also reported positive attitudes, although it is noted that children who are slow in transition have a feeling of insecurity. One teacher reported that i/t/a students are no more enthusiastic about reading than those taught by traditional methods. Much of the child's attitude depends upon his success in reading.

Some third grade teachers acknowledged that children are more willing to attack new words and noted that children enjoy reading. Other teachers at this level say children have no greater interest in reading, finding the same individual differences in reading interests as in the past with no change in attitudes. Some third grade children become discouraged and confused because i/t/a has made them believe they can read and write anything. Third grade teachers also indicated that children show little expression when reading orally and have little regard for punctuation.

13. Would you prefer to teach reading with i/t/a or a traditional approach? Please give reasons for your answer.

9 of the 28 teachers say they definitely prefer a traditional approach. 5 of the 28 teachers definitely prefer i/t/a. These are all first grade teachers.

3 teachers did not respond to this question.

3 are undecided.

1 teacher had no real preference, saying that both systems are equally effective if properly presented.

1 teacher indicated it was too early to say.

1 teacher who never taught T.O. believes that i/t/a is too limited in that it can only be a classroom experience.

The remaining 5 teachers did not make a definite statement but pointed out advantages and disadvantages of i/t/a.

14. If you have additional comments, please write them below.

Kindergarten teachers believe that not all children are ready for i/t/a, that there is too much learning and unlearning, and that there is not enough time for i/t/a and everything else.

First grade teachers reflected the need for better materials and a complete guide to improve the transition in writing and spelling. They are pleased with the i/t/a experience and would use some of the i/t/a method. Lack of i/t/a materials in subject areas is a definite problem in second grade. In writing, going from i/t/a to manuscript and then to cursive

is a heavy load for second grade. One second grade teacher stated that creative writing can be developed with T.O. children as well as i/t/a if time is used for this purpose. Second grade teachers also revealed that not all i/t/a children are enthusiastic readers.

Third grade teachers indicated that the advantages of i/t/a would probably be in first or second grade. i/t/a children in third grade need more help in developing language and spelling skills.

Interpretation of Responses to Questionnaire for Teachers
of Lakewood i/t/a Classes

Summary of Teacher Questionnaire

At all grade levels the phonetic aspects of i/t/a and the power which this gives children in word attack and gaining independence in reading were recognized. The fact that children are able to write any word they can say and have greater freedom in written expression during first grade was indicated. Early reading success and interesting materials in the early stages of reading were also cited as other advantages of i/t/a.

Weakness of comprehension skills was indicated at all grade levels as a disadvantage of i/t/a/. At all grade levels, teachers speak of too much verbalizing and lip reading which slows silent reading. This verbalizing contributes to confusion, sometimes making it difficult to maintain a learning atmosphere in the classroom. Second grade teachers noted that science, social science, language and spelling are hindered because textbooks are in T.O., and for a long period in the second grade some children are still reading in i/t/a. Second and third grade teachers revealed that i/t/a instruction makes it necessary for children to learn, suppress and relearn in the areas of reading, writing and spelling. These teachers also believed that rules of capitalization, punctuation, spelling, sentence structure and paragraph formation are difficult for i/t/a children.

First grade teachers indicated that the positive effects of i/t/a in terms of children becoming independent in writing and spelling, enables them to write stories, letters and short reports with enthusiasm and interest. Second grade teachers reported that there is an emotional adjustment for children coming from first grade who feel they can write and spell anything in a T.O. world, when actually they do not meet success in either area. Second and third grade teachers emphasized the changes in handwriting as a problem -- i/t/a, manuscript, and then cursive. One third grade teacher commented that the i/t/a approach leaves children unaware that written expression needs to be organized so that another reader can understand the meaning.

Teachers did not report problems of great magnitude with children transferring from a T.O. class to an i/t/a class. Likewise, teachers do not foresee i/t/a having a negative effect on the children who are pre-school T.O. readers.

In regard to reading attitudes, kindergarten teachers indicated that not all children are ready for i/t/a and that i/t/a brings too much pressure on these children who are not ready. They also believe that there is not enough

time during the kindergarten day for i/t/a and everything else. First grade teachers reported many positive attitudes such as enjoying reading during free periods, attempting to read anything in the environment in either i/t/a or T.O., and children having a better self-concept in regard to reading. Second grade teachers also reported positive attitudes, although it is noted that children who are slow in transitioning have a feeling of insecurity. Much of the children's attitude depends on their success in reading. Third grade teachers implied that i/t/a children have no greater interest or more favorable attitudes toward reading. Some third grade children become discouraged and confused, because i/t/a has made them believe they can read and write anything. Again, this carries emotional overtones.

The parents' attitude toward i/t/a is closely related to the children's success or lack of success with i/t/a. Many parents have neither positive nor negative views, for they feel they don't know enough about i/t/a. Also, parents look to the school for professional opinion and respect the practices of the school. Some parents are concerned about the effect of i/t/a on spelling, the fact they cannot help their children as they would like, and that i/t/a requires unlearning. Other parents are most enthusiastic and ready to write letters to the Board of Education in defense of i/t/a.

The question, "Would you prefer to teach reading with i/t/a or a traditional approach?", resulted in the following:

9 of the 28 teachers definitely prefer a traditional approach.

5 of the 28 teachers definitely prefer i/t/a. These are all first grade teachers.

3 teachers did not respond to this question.

3 were undecided.

1 teacher had no real preference,⁹ saying that both systems are equally effective if properly presented.

1 teacher indicated it was too early to say.

1 teacher who never taught T.O. believes that i/t/a is too limited in that it can only be a classroom experience.

The remaining five teachers did not make a definite statement but pointed out advantages and disadvantages of i/t/a.

Although the data above must be regarded as subjective judgments it should be stressed that the teachers responding to the questionnaire reflected a professional opinion and genuine concern in helping to develop a reading program which meets the language arts needs of Lakewood primary level boys and girls. It should be noted that this part of the study did not lend itself to tests of statistical significance. However, there is sufficient subjective data at hand to make a judgment for or against the fourth hypothesis, primary

teachers who were involved in i/t/a instruction or the effects of i/t/a upon pupils will indicate more advantages and a preference for i/t/a instruction.

In short, first grade teachers have identified the following main advantages of i/t/a instruction: stronger word attack skills, independency with i/t/a reading materials, and more freedom and proficiency in written expression. However, the majority of primary teachers cited the following disadvantages: weaker reading comprehension skills, the "learning, suppression, and relearning sequence" necessitated by i/t/a instruction, and the difficulties which i/t/a pupils encounter with rules of capitalization, punctuation, spelling, sentence structure and paragraph meaning and development. Most first grade teachers expressed a preference for i/t/a reading instruction. Most kindergarten, second and third grade teachers believed that the disadvantages of i/t/a outweighed the advantages. All teachers agreed that certain instructional methods and techniques of i/t/a programming could be used profitably in a primary level traditional reading program.

GENERAL SUMMARY

Restatement of the Problem

The purpose of this study is to evaluate the experimental i/t/a reading program in the Lakewood Schools. The main problem of the study is to provide evidence in terms of whether to continue, modify, or discontinue i/t/a programming in the Lakewood Schools. In order to accomplish this task it was necessary to obtain objective and subjective data and judgments, and in particular investigate the long-term effects of i/t/a instruction upon Lakewood pupils in reading, writing, spelling, pupil attitudes, and in various other language arts areas. The problem is approached with the intent of making an optimal statistical analysis of a delimited set of hypotheses. The study was designed to test four hypotheses:

1. Pupils who received i/t/a reading instruction will demonstrate greater immediate post-i/t/a reading gains than a similar control group.
2. Pupils who received i/t/a reading instruction will make greater long-term post-i/t/a educational progress in reading, writing, spelling, and other language arts than a similar control group.
3. Pupils who received i/t/a reading instruction will show more favorable long-term post-i/t/a attitudes toward reading, school, and "self" than a similar control group.
4. Teachers who were involved in i/t/a instruction or the effects of i/t/a instruction upon pupils will indicate more advantages and a preference for i/t/a instruction in terms of language arts skills and pupil attitudinal differences.

Plan and Scope of Presentation

Three pre-i/t/a instruction variables (intelligence quotients, chronological age, and sex) were examined and used to show comparability between the groups. Although some limitations had to be imposed, it was felt, nonetheless, that in the study the data collected and the experimental design and analysis were sufficiently valid and powerful to show significance or a lack of significance in most areas.

The i/t/a experimental group (N=93) was divided into two subgroups (N=28 and N=65) because of the differences in the length of i/t/a instruction. We

defined the i/t/a-KF group (N=28) as one who received one semester of i/t/a instruction in kindergarten and one full year in first grade. The i/t/a-F group (N=65) received one year of first grade i/t/a instruction. The T.O.-KF (N=28) and T.O.-F (N=65) control groups were provided with traditional reading instruction during the same periods.

Standardized reading tests and teacher judgment were utilized (first hypothesis) to reveal immediate differences in reading performance of the groups at the end of the first grade instructional period. The second hypothesis, the long-term effects of i/t/a instruction on reading and other language arts skills, was approached through multiple measures such as formal evaluative procedures (standardized achievement tests and letter grades) and informal evaluative procedures (informal writing and spelling tests, and teacher judgment). The third hypothesis, long-term effects of i/t/a instruction on pupil attitudes toward reading, school, and self-concept, was approached and based upon the results of a pupil inventory and teacher judgment. The last hypothesis, teacher judgment and opinion in terms of advantages and preferences for i/t/a instruction, was approached and based upon a teacher questionnaire.

All formal and informal measures and procedures were administered to the groups during the spring of 1967. This would mean that all pupils in the study were classified as third graders. The time elapse after i/t/a instruction (long-term post-first grade period) was approximately two years. We defined "long-term i/t/a effects" as the effects occurring upon pupils approximately two years after i/t/a instruction.

Summary of Results

The most important immediate and long-term post-i/t/a findings of the study, based on multiple objective and subjective measures, of the i/t/a experimental and T.O. control groups, are summarized as follows:

1. First grade pupils in 1965 and 1966 who received i/t/a instruction demonstrated significantly greater immediate post-i/t/a grade scores in word reading and paragraph meaning (Stanford Reading Tests) than pupils who received traditional reading instruction. Conversely, on both occasions there was a lack of significance of the results in the area of vocabulary skills between i/t/a and T.O. groups.
2. The results of the Iowa Tests of Basic Skills at the third grade level in such areas as vocabulary, reading comprehension, spelling, capitalization, punctuation, and language usage indicated that pupils who received traditional reading instruction demonstrated language arts development and proficiency at a higher

level, than comparable i/t/a groups.

3. The results of the Stanford Primary II Reading Test, another indicator of long-term third grade reading achievement, showed little difference in word meaning and paragraph meaning scores between i/t/a and T.O. groups. In one instance T.O. pupils scored higher than i/t/a pupils (i/t/a-KF vs. T.O.-KF groups) by six school months significantly in the area of paragraph meaning.
4. The results of third grade letter grades revealed conclusively that i/t/a instruction did not have a greater long-term effect on language arts achievement, as determined by teacher marks. The T.O.-F group total average results, for example, were significantly greater than the i/t/a-F group total average results.
5. The results of an informal third grade writing exercise and spelling test suggested that the T.O. scores in all evaluative areas were equal or slightly higher, though not significantly, than i/t/a scores. In short, i/t/a reading instruction does not appear to have a greater long-term effect on third grade writing and spelling development and proficiency than traditional reading instruction.
6. The i/t/a reading program did not seem to have a more favorable long-term significant effect on third grade pupil attitudes toward reading, school, and "self" than a traditional reading program.
7. The results of a questionnaire completed by Lakewood primary level teachers who were involved in i/t/a instruction or the effects of i/t/a instruction upon pupils reported the following advantages, disadvantages and preferences:
 - a) First grade teachers identified stronger word attack skills, independence with i/t/a reading materials, and more freedom and proficiency in written expression as the main advantages of i/t/a instruction.
 - b) The majority of the primary level teachers listed the following as main disadvantages of i/t/a instruction: weaker reading comprehension skills, the "learning, suppression, and relearning sequence" necessitated by i/t/a instruction, and the difficulties which i/t/a pupils encounter with rules of capitalization, punctuation, spelling, sentence structure and paragraph meaning and development.
 - c) Most first grade teachers expressed a preference for i/t/a reading instruction, especially in terms of method and techniques

which have occurred as a result of the i/t/a medium.

- d) Most kindergarten, second and third grade teachers believed conclusively that the disadvantages of i/t/a instruction outweighed the advantages. All teachers agreed that certain instructional methods and techniques of i/t/a programming could be used profitably in a primary level traditional reading program.

Conclusions

The first hypothesis in the study is accepted. Pupils who received i/t/a reading instruction demonstrated significant immediate post-i/t/a gains in two of three reading skill areas. These results are consistent with other investigations of immediate post-i/t/a gains reported in the present study. We must be aware that the Hawthorne effect, which can be created by enthusiastic and motivated teachers, is a force which must be considered when examining the results of the program.

The majority of the long-term post-i/t/a formal and informal comparisons, between i/t/a and T.O. groups, including vocabulary, reading comprehension, spelling, capitalization, punctuation, language usage, and in general written expression, failed to reach statistical significance in support of i/t/a reading instruction. In several instances the results showed significantly that T.O. pupils performed at a higher level than i/t/a pupils approximately two years after the i/t/a instructional period. For the most part the responses of primary teachers to the questionnaire on i/t/a programming agreed with the above results. In light of the analysis of the data, the second hypothesis is rejected. Pupils who received i/t/a reading instruction did not make greater long-term language arts progress than similar control groups.

The third hypothesis, that pupils who received i/t/a reading instruction will show more favorable long-term post-i/t/a attitudes than similar control groups, is also rejected. In addition the opinion of the majority of primary teachers, as elicited by the questionnaire, supported the rejection of the hypothesis.

Since the results of the teacher questionnaire, in terms of advantages, disadvantages, and preferences for i/t/a instruction, did not lend itself to a statistical analysis, the last hypothesis was neither accepted nor rejected. However, most of the data reported indicated clearly that the disadvantages outweighed the advantages of i/t/a instruction. Most primary teachers, with the exception of first grade teachers, believe that a more effective reading program can be achieved with a traditional reading medium including some of the methods and techniques of i/t/a.

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2

ita Telephone Survey Questions
ERC Schools

Name of School _____

Interviewee _____
(Name & Title)

1. Do you have an ita program? _____
(if program discontinued still attempt
to obtain information)

How long in operation? _____

Grade level _____

Number of classes and pupils _____
involved _____

Program is now experimental _____ or permanent _____

2. If program has been discontinued state reasons why

Program now being used _____

3. What have been the reactions of ita teachers to the program?

favorable _____

unfavorable _____

undecided _____

4. What have been the reactions of parents and pupils to the program?

favorable _____

unfavorable _____

undecided _____

5. What have been your personal reactions to the program?

favorable _____

unfavorable _____

undecided _____

6. Results of any local studies, test results, research? (please have them send copies if available.)

favorable _____

unfavorable _____

undecided _____

Interviewer _____

Date _____

WRITING EXERCISES

Choose only one to write about.

1. Write a story about a make-believe animal.
2. Write a story about your favorite word.
3. If I were
4. Write a story of what you think this picture is about.
5. Finish the following story:

The children were playing on the beach when they found the strange footprints in the sand. Their curiosity got the better of them and they decided to follow them along the shore.

SPELLING TEST

<u>see*</u>	Did you see the birds at the zoo?	<u>see</u>
<u>cap</u>	The color of his cap matched his coat.	<u>cap</u>
<u>bank</u>	Tom's father works at the bank.	<u>bank</u>
<u>yellow**</u>	Mary has a yellow sweater.	<u>yellow</u>
<u>top*</u>	Sam received a red top for his birthday.	<u>top</u>
<u>sheep</u>	The sheep had eaten their hay.	<u>sheep</u>
<u>find**</u>	I am trying to find nuts to fill this basket.	<u>find</u>
<u>trip</u>	Some men are making a trip to the South Pole.	<u>trip</u>
<u>our</u>	This is our first pet.	<u>our</u>
<u>draw</u>	Will you draw a picture for me?	<u>draw</u>
<u>those</u>	We have one of those in our kitchen.	<u>those</u>
<u>would*</u>	I'd hurry as fast as my legs would go.	<u>would</u>
<u>party*</u>	The girls gave a party for Joyce.	<u>party</u>
<u>their*</u>	I like their new hats.	<u>their</u>
<u>pretty</u>	Judy's mother bought her a pretty party dress.	<u>pretty</u>
<u>help</u>	I will cut the string and help you open the box.	<u>help</u>
<u>quit</u>	The men quit work at five.	<u>quit</u>
<u>toward</u>	We drove toward home.	<u>toward</u>
<u>fruit</u>	Mother gives us fresh fruit each day.	<u>fruit</u>
<u>awful</u>	Our electricity failed us during the awful thunderstorm.	<u>awful</u>
<u>caught**</u>	They caught up with us.	<u>caught</u>
<u>course</u>	The ship followed the northern course.	<u>course</u>
<u>travel</u>	Did you ever travel by airplane?	<u>travel</u>
<u>office</u>	Father's office is in a skyscraper.	<u>office</u>
<u>machine</u>	An automobile or an airplane is a machine.	<u>machine</u>

* Words taught at second grade level in basic speller

** Words appearing in lesson 25 and beyond in basic third grade speller

NAME _____ SCHOOL _____

DATE _____

READ EACH SENTENCE AND CIRCLE YOUR ANSWER

ABOUT ME AND MY SCHOOL

- | | | | | |
|-----|--|--------|-----------|-------|
| 1. | I want to learn to read better..... | Yes | No | |
| 2. | I go to the public library..... | Yes | No | |
| 3. | I am afraid to take these tests..... | Yes | No | |
| 4. | I want to learn how to spell better..... | Yes | No | |
| 5. | Stories are easy to write..... | Yes | No | |
| 6. | I wish I could get better grades in school..... | Yes | No | |
| 7. | I would like to have more reading in school..... | Yes | No | |
| 8. | I wish I were smarter in school..... | Yes | No | |
| 9. | I want to learn how to write better..... | Yes | No | |
| 10. | I wish my reading books were easier to understand..... | Yes | No | |
| 11. | I like school..... | Always | Sometimes | Never |
| 12. | I can do arithmetic..... | Always | Sometimes | Never |
| 13. | I worry about school..... | Always | Sometimes | Never |
| 14. | I like to sound out new words..... | Always | Sometimes | Never |
| 15. | I like to read..... | Always | Sometimes | Never |
| 16. | I like social studies..... | Always | Sometimes | Never |
| 17. | I like to write stories..... | Always | Sometimes | Never |
| 18. | My schoolwork is easy for me..... | Always | Sometimes | Never |
| 19. | I like to read out loud..... | Always | Sometimes | Never |
| 20. | I like to work in my reading study book (workbook) | Always | Sometimes | Never |
| 21. | I need help with my schoolwork..... | Always | Sometimes | Never |
| 22. | The social studies book is easy to understand..... | Always | Sometimes | Never |

ABOUT MYSELF

- | | | | | |
|-----|---|--------|-----------|-------|
| 23. | I like to read for fun..... | Yes | No | |
| 24. | I should answer more questions in class..... | Yes | No | |
| 25. | I am afraid to raise my hand and speak in class..... | Yes | No | |
| 26. | I want to learn to speak better..... | Yes | No | |
| 27. | I know right from wrong..... | Yes | No | |
| 28. | I need to learn how to get along with people..... | Yes | No | |
| 29. | I can do everything well..... | Yes | No | |
| 30. | I need more friends..... | Yes | No | |
| 31. | I like most of the boys and girls in my class..... | Yes | No | |
| 32. | Adults think I'm always wrong..... | Yes | No | |
| 33. | I think most boys and girls in my class like me..... | Yes | No | |
| 34. | I wish I could talk to someone about my problems..... | Yes | No | |
| 35. | I can sit still..... | Always | Sometimes | Never |
| 36. | My eyes get tired when I read..... | Always | Sometimes | Never |
| 37. | My feelings are easily hurt..... | Always | Sometimes | Never |
| 38. | I get angry..... | Always | Sometimes | Never |
| 39. | I am happy..... | Always | Sometimes | Never |
| 40. | I have as much fun as the other boys and girls.... | Always | Sometimes | Never |
| 41. | I am careless..... | Always | Sometimes | Never |
| 42. | I often feel lonesome..... | Always | Sometimes | Never |
| 43. | I am shy..... | Always | Sometimes | Never |
| 44. | I like the things I do..... | Always | Sometimes | Never |
| 45. | I "show off"..... | Always | Sometimes | Never |
| 46. | The boys and girls in my class tease me..... | Always | Sometimes | Never |
| 47. | I like when adults speak to me..... | Always | Sometimes | Never |
| 48. | My classmates think I'm too smart in school..... | Always | Sometimes | Never |

QUESTIONNAIRE FOR TEACHERS OF LAKEWOOD i/t/a CLASSES

To evaluate the i/t/a approach to reading in the Lakewood Schools, we need the help of all teachers K-3 who have used this method. Will you please answer all the questions below which apply to your experience with i/t/a. Omit those questions which in your experience do not apply. As examples, question 7 might be omitted by kindergarten teachers and question 10 by third grade teachers, while question 11 should be answered by all teachers. Please return this questionnaire to your principal by March 16. Thank you for your help.

Miss Mildred Dicke, Principal
Madison Elementary School

Name _____ School _____ Grade _____

Date _____

1. If you are a kindergarten teacher how long have you been using i/t/a in your classroom? _____
2. If you are a first grade teacher, how long have you been using i/t/a as an approach to reading? _____
3. If you are a second or third grade teacher, how long have you been teaching children who learned to read by i/t/a? _____
4. Has your experience with traditional methods of teaching reading been for a longer or shorter time than your i/t/a experience? _____

Has your opinion of i/t/a changed since your contacts with this approach?
(Please explain)

5. In your experience what are the advantages of the i/t/a approach?

6. In your experience what are the disadvantages of i/t/a?

7. What effect does i/t/a have on writing and spelling?

8. How do you handle the problems of children who have been taught by a traditional approach to reading and then move into an i/t/a class?

9. What problems would a child encounter who moves from an i/t/a class to a class which does not use this approach?

10. What effect does i/t/a have on the child who is a pre-school reader or the pre-school child who gets books from the public library?

11. What has been the attitude of parents toward i/t/a?

12. What kinds of attitudes do children taught by i/t/a have toward reading?

13. Would you prefer to teach reading with i/t/a or a traditional approach?
Please give reasons for your answer.

14. If you have additional comments, please write them below.