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THE EFFECTIVENESS OF EMPHASIZING READING SKILLS IN AN ENGLISH COURSE FOR UNDERACHIEVERS.

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SPECIALLY ADJUSTED ENGLISH COURSES FOR UNDERACHIEVING STUDENTS IN GRADES 10 THROUGH 12 WERE SPECIFICALLY DESIGNED TO EMPHASIZE READING SKILLS. A 15-STUDENT SAMPLE WAS DIVIDIED INTO ONE EXPERIMENTAL AND TWO CONTROL GROUPS AND WAS MATCHED ON IQ, READING ACHIEVEMENT, AND GRAMMAR. THE DATA WERE GATHERED OVER A PERIOD OF 1 ACADEMIC YEAR, AND THE FOLLOWING HYPOTHESES WERE TESTED--(1) EMPHASIS ON READING WILL BE RELATED TO GREATER ACHIEVEMENT IN READING SKILLS, (2) CONSEQUENT REDUCTION OF GRAMMAR AND ESSAY WRITING FOR THE SAMPLE GROUP WILL NOT SIGNIFICANTLY IMPEDE ACHIEVEMENT IN THESE AREAS WHEN COMPARED WITH THE CONTROL GROUPS, AND (3) STUDENTS TAKING A COURSE ADJUSTED TO THEIR NEEDS WILL EXPRESS MORE POSITIVE ATTITUDES TOWARD LEARNING THAN THOSE STUDENTS IN UNADJUSTED COURSES. AFTER COMPARING THE POST-TESTS TO THE PRETESTS, THE AUTHOR FOUND THAT THE EXPERIMENTAL GROUP MADE SUBSTANTIAL GAINS IN READING SKILLS, AND THE TWO CONTROL GROUPS ALSO MADE GAINS BUT IN SMALLER AMOUNTS. NONE OF THE GROUPS MADE GAINS IN COMPREHENSION. THERE WAS NO SIGNIFICANT DIFFERENCE AMONG THE THREE GROUPS IN BOTH GRAMMAR AND ESSAY WRITING EVEN THOUGH THE EXPERIMENTAL GROUP RECEIVED NO INSTRUCTION IN THIS AREA. THE EXPERIMENTAL GROUP'S ATTITUDE TOWARD LEARNING WAS NOT IMPROVED, AND IN EFFECT BECAME HOSTILE. THE AUTHOR SUGGESTED THAT, IF SOME MEANINGFUL DEMONSTRATION OF THE REAL PROGRESS MADE BY THE EXPERIMENTAL GROUP COULD BE EFFECTED, THE GROUP WOULD NOT FEEL SINGLED OUT AS "DUMB" AND WOULD POSSIBLY EVINCE A MORE POSITIVE ATTITUDE TOWARD LEARNING. THE AUTHOR CONCLUDED THAT SUCH A SPECIALLY DESIGNED ENGLISH COURSE WHICH DOES NOT SINGLE OUT THE UNDERACHIEVER AS BEING DIFFERENT OR UNUSUAL COULD BE SUCCESSFULLY IMPLEMENTED. (PM)

THE EFFECTIVENESS OF EMPHASIZING READING SKILLS IN AN ENGLISH COURSE FOR UNDERACHIEVERS

Cooperative Research Project No. S-252

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Chapter I

PROBLEM

How can teachers adjust a curriculum to meet the needs of children not learning as well as they might? In West Bend High School, West Bend, Wisconsin, the English Department has tried different techniques planned to be helpful, including special sectioning, audio-visual aids, and reduction of pace. These adjustments have met with little success.

West Bend's underachieving students are very much like those elsewhere. They have negative attitudes toward learning and teachers, short attention spans, and physically hyperactive characteristics. Over the past few years evidence accumulated that the problem of underachievement was related to underdeveloped reading skills. How to increase basic reading efficiency became a frequent topic of teachers and parents. Proposals were made to the school board which resulted in the creation of a developmental reading laboratory. While the reading laboratory was an effective tool in advancing the reading of students who already had adequate skills, the group of underachievers that needed help the most seemed to benefit from it least. These underachievers

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The Principal Investigator wishes to express his appreciation to Mrs. Helen Johnson, the project teacher, and Mr. Raymond Urbas , who ably participated in every phase of this study.

who were below grade level in reading appeared to need additional help before entering into the already established developmental program.

As in many high schools, responsibility for reading instruction was within the province of the English Department. In 1961 a committee of English teachers was formed to study this reading program problem. The members reviewed the value of the reading laboratory. As a result of this review a study involving the tenth grades was completed the following year. The results of that study, although inconclusive, gave sufficient evidence of success to warrant further experimentation. This study evolved from that initial investigation.

The 1961 committee stipulated the use of materials and content selected so that the most pressing needs of the underachiever were to be met, while avoiding tasks and materials beyond his capability. The committee also stipulated that the experimental population would include underachievers only, and would exclude the mentally retarded, the emotionally disturbed, the seriously socially maladjusted, and those with physical handicaps which directly influenced learning. However, if reading was to be emphasized for the underachiever, there would have to be a resulting

reduction in traditional English course content. The most likely content to be reduced appeared to be grammar and essay writing.

From the concerns of teachers to develop reading abilities in underachievers and a consequent concern for what would happen in the areas omitted from the curriculum as a result of emphasizing reading instruction, this study developed. This concern with what happens to areas omitted from the curriculum is also found in recent professional literature. In summarizing the weakness of research studies Wandt states (1965, p. 12), "A frequent error in educational research is the failure to determine whether improvement in one area has been obtained at the expense of a loss in another area."

The objective of this study, therefore, was to adjust an English course of study for the underachiever in order to test the following hypotheses:

1. Emphasis on reading for underachievers will be related to greater achievement in reading skills.
2. The consequent reduction of grammar and essay writing as a result of an emphasis on reading skills will not significantly impede achievement in grammar and essay writing as compared with

similar groups of children.

3. Children in a course of study adjusted to their needs will express more positive attitudes toward learning than children who are in a course of study that is not so adjusted.

The report that follows will survey some of the related literature, describe the objectives and procedures and report the findings, conclusions and implications of the study for the underachievers.

Chapter II

RELATED RESEARCH

The secondary school English curriculum was broadened to include all aspects of communication, including reading, by the first joint committee of the National Council of English Teachers in 1917 (Hosic, 1917). However, researchers in the high school English curriculum have concentrated their work in areas other than reading, often leaving it as a separate course of study at the high school level or neglecting it entirely.

Numerous articles dealing with developmental, corrective, and remedial reading have been written, but studies of corrective reading classes as part of an English program appear to be limited. Strang (1962, pp. 170-177) reviewed the trends in high school reading research. She reported that initial focus in high school was on remedial reading but now developmental programs are beginning and effective reading instruction in each of the content subjects seems to be the trend. In related developments she said that high school teachers seem to be no longer relegating reading instruction to elementary school teachers and many teachers believe that prospective secondary teachers should be taught how to help students develop fundamental reading skills.

A study involving reading as part of the English

program was conducted at Ocala High School in Ocala, Florida (Spache, 1963, p. 56). It initiated a special English class for the underachiever in which reading skills were stressed. No statistical analysis or controls were reported.

Rasmussen and Dunne (1962, pp. 95-101) compared the progress of junior high school retarded readers with normal intelligence in correctional and regular English classes over a three year period. The same general curriculum as the regular English classes was offered to the correctional classes but with an emphasis on reading. The investigators hypothesized that the correctional classes would result in a greater improvement in reading skills and a smaller dropout rate. Although there were no statistically significant differences between the two groups in respect to reading achievement, there were significantly fewer dropouts in the correctional group. As a result of the emphasis on reading improvement less subject matter was covered. However, the results of such a reduction in content were not reported.

Walker (1961, pp. 356-58) studied the effects of three approaches to reading at the seventh-grade level, an individualized approach using a variety of materials, an individualized approach using the SRA "Reading Laboratory," and a

"one textbook" approach. The two experimental groups did significantly better than the control group. In another experiment involving three high school classes, a control group, an experimental group emphasizing reading skills, and another experimental group emphasizing extensive reading, Goldberg (1946, p. 21) showed that extensive reading was more effective than an emphasis on reading skills. However, the control group improved more than either one of the experimental groups. Johnson and Howard (1960, pp. 545-46) studied one hundred fifty students divided into five ability groups in seventh grade. They concluded that although the advanced students did not seem to benefit from such grouping, the slower readers did.

Reading and Related Areas

Many studies have been concerned with the relationship between reading ability and achievement in other areas. Traxler states (1964, p. 21) in his summary of the literature, "There have been more studies dealing with reading in social studies and in mathematics than in any of the other content fields." This is true in spite of an apparent obvious relationship between English and reading and in spite of the fact that reading is more often taught as part of the English course of study than any other content area(Read

ing Instruction in Secondary Schools, 1942).

A few studies have been concerned specifically with reading achievement and the other language arts. The interrelationship between the language arts, including reading,has been borne out by research. Studies, including the one by Hughes (1953, pp. 97-106) have indicated that high scores in one language ability or skill are associated with comparatively high achievement in other language areas. Even when the influence of intelligence was held constant Artley (1950, p. 537) concluded that achievement in reading was positively related to other language skills. Bond (1938) found that reading ability was more closely related to achievement in literature than in the other areas studied. However, in separate studies O'Donnell (1962, p.88) and Strom (1956, p. 133) found little relationship between reading ability and the ability to analyze the syntax and grammar of the sentences read. Concluding a summary of studies in the field of English, nearly twenty-five years ago, Lyman (1932, p. 57) states that, "The narrow curriculum to which earlier generations have been subjected, consisting of the intensive study of a few literary masterpieces, is being widely supplemented by extensive reading of a natural sort." Consequently, as the English curriculum has grown over

the years it has become constantly concerned with the interrelationships of the various aspects of language development. Reading has become increasingly important, even on the high school level.

Grouping

Although many involve the elementary school, the studies concerned with grouping are reviewed here since this experiment is concerned with special provisions for the underachiever. Grouping is one such provision. The studies involving grouping were conducted to determine whether or not some type of homogeneous grouping would result in increased pupil achievement in the area of reading. Most early studies failed to establish control conditions.

In a number of early controlled studies, however, students were tested and then matched on the basis of their MA, IQ, and reading scores. The experimental pupils were then grouped homogeneously for reading while the controls remained in their heterogeneous classes.

One of the studies utilizing control groups was reported by David H. Russell (1946, pp. 462-70). This study is noteworthy because of the interesting comparison that can be made of his results with other studies. After six weeks and five months respectively, Shields (1927, pp. 7-10) and

Horrall (1931, pp. 444-47) each reported that their experimental groups had gained more than the controls. In the six weeks Shields's had gained a total of 15.4 points in rate and comprehension. Horrall is more conservative in his estimates but does assert that, on the whole, improvement was shown within grouped classes. On the other hand, Russell, whose study covers a longer period of two years, reports that at the end of this time there was no reliable difference in achievement between the groups in terms of pupil achievement on standardized reading tests or status on mental ability tests.

Despite the differences in the results of these three studies, their conclusions are not so diverse as might be imagined. On the basis of his data, Russell flatly states that inter-class grouping cannot be defended on the grounds of better pupil achievement. Both Shields and Horrall feel that grouping appears more helpful for the very bright and the very slow than for those that fall into the average range. Finally, Horrall brings up an important point which will be repeatedly in focus, that a teacher must be cognizant of the fact that she is teaching a selected group. If she does not adapt her methods to their needs, the fact that they are segregated will make no difference.

It seems that 1954 was a turning point in the research involving grouping because of the emergence of the Joplin Plan as reported by Floyd (1954, pp. 99-103). Its purpose was to provide for individual differences, and it used a grouping procedure similar to the one studied by Russell. Morgan and Stucker (1960, pp. 69-73) found the reading means of the fast and slow experimental groups significantly higher than the controls at well less than the .10 level that he considered acceptable, while Koontz (1964, pp. 249-53) found all experimental groups ahead by four months with a .01 level of significance. Green and Riley's (1963, pp. 73-78) results were similar to those of Morgan and Stucker.

Other studies failed to show that the experimental groups made significant gains; in fact, there are some hints that perhaps the controls did better. Moorhouse (1964, pp. 280-86) tested his subjects after one semester, three semesters, and five semesters and discovered a rather startling deterioration. After one semester, the mean gains of the experimental group were almost double that of the controls with a significance of .05. However, by the time the fifth semester had come to an end, there was no longer any significant difference between the groups.

Below (1962, pp. 28-32) discovered that classification

of students on the basis of standardized tests does not necessarily result in homogeneous groups. A range existed when subtests of the Iowa Silent Reading Test were compared, although the classes had been grouped using total scores.

William Savard (1960, pp. 56-60) instituted a plan of "limited-range" grouping that was designed to be a compromise between highly homogeneous groups and the extremely wide span of ability found in a typical heterogeneous class. The membership of each limited-range class consisted of average children plus a small group of either above-average or below-average. Pupils in upper-range groups showed greater growth only in arithmetic reasoning. However, in the lower-range classes, there was significant overall growth.

The below conclusions are a compilation of the most noteworthy findings and implications of the studies reviewed.

1. Progress can be made when children are grouped for reading but the possibility exists that it will be found more beneficial for those who are superior or inferior than for those in the middle range.

2. When the range of abilities in a class is reduced, teachers can develop better techniques of handling specific situations because their attentions are not so divided.

3. In a system of grouping, the below-level children may be removed from a threatening situation and this more relaxed climate may work to their advantage.

4. In any program, constant evaluation of teachers, methods, and materials plays a vital role.

5. Often growth seen in a situation of ability grouping is primarily related to initial knowledge and not a direct result of the grouping itself.

6. If children are to be grouped, teacher judgment must play a significant role in the proceedings.

7. Ability grouping can never remove individual differences.

8. Much more experimentation is necessary! This was a general consensus.

In summary, although grouping of various types appears to have certain advantages, grouping can only serve as an aid to the teacher and can not be advertised as a panacea for meeting the problems of the underachiever.

Factors Influencing the Underachiever

The term "underachiever" is central to this study and is subject to much variability by teachers and educators. Robinson (1962, p. 3) describes the underachiever as one

who, "if left to his own devices, will not work to his potential."

Many factors are related to underachieving and would probably include such circumstances as lack of opportunity to read, absence of reading guidance, and poor or unimaginative teaching methods. George D. Spache (1958, p. 5) has observed that "Reading interest can be fostered or stifled by different classroom practices." In addition, research studies show a direct relationship between the amount of interest in reading at home and the interest exhibited by pupils in school. For example, Sheldon and Carrillo (1952, p. 265) conducted studies that point to a positive relation between the formal education level and the occupational status of parents and the success in reading achievement of their children. As the number of books in the home increases, the per cent of good readers increases and the per cent of average and of poor readers decreases. It was difficult in the study to determine whether this direct relationship results from the attitude instilled in children by familiarity with books throughout their developmental years; from higher status and perhaps higher intelligence of parents and, therefore, heredity; or from a combination of these factors. Some relationship is apparent

in that good readers tend to come from homes of professional and executive fathers, and poor readers from homes of agricultural, skilled, or unskilled workers.

One of the most subtle and difficult factors related to underachievement in reading may be traced to emotional difficulties. According to Russell (1953, pp. 167-80) there are approximately a hundred references to studies of interrelationships of reading difficulties and emotional difficulties. Of these, Russell tabulated forty research studies involving the relationship of reading difficulties and personality disturbances. He found 15 that claimed intimate or causal relationships and 25 which discovered no significant differences between groups of retarded and normal readers or which included personality difficulties as only one of a number of related causes. The research studies have been summarized (Lantz and Liebes, 1948, pp. 10-13, H.M. Robinson, 1946, pp. 76-92). The research reports vary from individual case studies emphasizing psychiatric procedures to large-group studies in which data are treated by statistical procedures. With a few exceptions in the large-group results, the studies agree that there is a close relationship between reading difficulties and personality difficulties.

There is a general assumption that once the child has had his reading difficulty corrected, he will progress without further trouble in his educational career. A study which questioned that assumption was made by Lantz and Liebes (1943, pp. 604-26). It involved a systematic follow-up study of 33 non-readers, defined for this study as a public school boy whose reading accomplishment is seriously below the standard for his grade and/or mental ability. Within the limitations of this study, data would seem to support Lantz and Liebes' hypothesis that "in the majority of cases, non-reading may merely be the original expression of the child's inability to respond adequately to average classroom instruction" (1943, p. 624).

Attitudes and Interests

A part of this project was a comparison of the attitudes of the subjects before and after exposure to an adjusted curriculum. A change in student attitudes toward school and learning, as a result of an adjusted curriculum, has been reported in a number of studies by Sears (1940, pp. 498-536), Cartwright (1932, pp. 73-86), and Gebhard (1948, pp. 371-88). These studies indicated that confidence, realistic outlooks toward school work, and motivation can be products of students' experiencing academic success after the difficulty

of the work has been adjusted to their level.

A number of studies have reported a relationship between attitude or interest change and reading instruction. In separate studies Witty and LaBrant (1933, pp. 7-13) and Alexander (1931, pp. 248-51) describe experiments in which more leisure reading resulted from remedial training. Gibbs (1934, p. 837-31) showed an increase in the use of the library accompanying reading instruction. Collyer (1940, pp. 37-43) reports favorable comments made in conjunction with a reading course. Glock and Millman (1964, pp. 283-89) conducted a three year study to determine the immediate and long-term effectiveness of a reading and study skills program. They used the Brown-Holtzman Survey of Study Habits and Attitudes, the same test used in the present study, as a measure of attitudes. There was no statistically significant difference between groups in either reading achievement or attitudes. Many results tended to favor the control class.

The question of why there should be underachievers in reading would seem to be one for which there are few answers. Those who have sought to understand the problem have looked for insufficiencies in instructional techniques and in other areas as reviewed in this chapter. At the same time efforts to improve the situation have also reflected this

attempt to take into account multiple causations. Therefore, the research as reviewed here is representative of studies concerning reading and related areas, grouping, factors influencing the underachiever, and attitudes and interests.

This chapter has reviewed some of the literature pertinent to the problems of this study. The next chapter will describe the objectives and procedures.

Chapter III

OBJECTIVES AND PROCEDURES

The purpose of this project was to study an adjusted English curriculum designed for children not achieving in accordance with their intellectual potential. It investigated the effectiveness of emphasizing reading skills as part of an English curriculum with a consequent de-emphasis in English content. The project had the following problem areas:

1. Achievement in reading skills.
2. Achievement in the various English content areas reduced or omitted to provide the opportunity for the inclusion of reading skills, grammar and essay writing.
3. Attitudes expressed toward learning.

This chapter will present a description of the design, instrumentation, and the instructional programs used in the experiment.

Design

The problem facing the investigator was to design a course of study for underachieving tenth grade English students which emphasized reading, and which consequently deemphasized the typical grammar and essay writing instruction. To test the efficacy of the experimentally designed course,

an experimental group and two control groups were formed which were matched on the basis of age, sex, reading, intelligence, essay writing, and grammar. The experimental group was given instruction in reading skills with a consequent elimination of grammar and essay writing instruction. One control group, Control Group I, received special "slow" sectioning and was taught the regular English curriculum including grammar and essay writing at a reduced pace. The purpose of this group was to establish the presence of the Hawthorne effect by giving this group special treatment. The second control group, Control Group II, received no special treatment and was randomly assigned to the regular English sections. Pre- and post-assessments were made in reading, grammar, essay writing, and attitudes. Comparisons were made after one academic year.

Teacher Variable

To control for the teacher variable, the same individual taught both the group receiving special instruction in reading skills (Experimental Group) and the group receiving English instruction at a reduced pace (Control Group I). To help assure equal effort and emotional involvement in both groups on the part of the teacher, she was required to have both a specialty in reading and a major in English.

To assure that the program was followed according to the established procedures, observations were made periodically, on an average of every three weeks by the principal investigator and weekly by a school psychologist working cooperatively with the investigator. The teacher was instructed to treat both groups as experimental and was cautioned to report equally to both groups the progress they were making. Reporting equally the progress made was difficult, since Control Group I received grades for daily assignments and the Experimental Group did not. Consequently, the Experimental Group was placed at somewhat of a disadvantage, although individual progress charts of reading skills were kept.

In an effort to control for the teacher variable in Control Group II, as many teachers (six) as possible were included in the experiment. An approximately equal number of students was assigned randomly to each of the participating teachers. Teachers were requested to teach as they normally did, within the policies and courses of study established by the school. Although there was some natural variation in teaching procedures, the curriculum coordinator verified that the various teachers adhered to the school policy and taught within the framework of the curriculum outline.

School Setting

The public high school (grades ten through twelve) in which this study took place is located in West Bend, Wisconsin, a city with an approximate population of 12,000 and located 25 miles from Milwaukee. The city is probably typical of the Midwest in size and diversity of business and industrial pursuit. Principal industries include manufacture of cookware, farm machinery, concrete products, boats, campers and trailers, and there are the usual retail outlets and service ventures.

The city's Caucasian population has been traditionally Republican. Many religious denominations are represented. The surrounding farm area furnishes the school with nearly one-half of its student population.

Subjects in the three groups under study met in classrooms typical of those found in many Midwestern high schools. Adequate working space was available in the classrooms, which were also well-lit, properly heated and ventilated. Care was taken to assure that equipment, exclusive of the specific instructional materials, was similar in each of the rooms. Each room had blackboards of good size and condition, shelves containing dictionaries and other reference materials, and at least one work table. There was a desk for each student,

and audio-visual aids were available for the teachers' use.

Population and Selection of Sample

Since the student population from which the experimental and control groups were to be selected were to be tenth-graders, all ninth grade teachers in the high school were solicited in the Spring, 1965, for referrals of students who had received final grades of F, D and low C. Over one hundred students were so designated. These students' records were further screened to determine whether their individual records reflected general underachievement in the various academic areas. A small number were removed from the experiment, as prior achievement indicated no real problem in underachievement. The remaining group totaled approximately one hundred students.

All remaining referrals were involved in a program of psychological screening. They were seen individually by a licensed school psychologist, who administered the Wechsler Intelligence Scale for Children (WISC), the Bender Visual-Motor Gestalt test, and the House-Tree-Person projective drawings. An individual interview was held with each student. The psychologist furnished the researcher with a written report indicating the mental ability assessment of

each child and his judgment of the child's emotional climate and visual-motor ability. Approximately thirty students were excluded from the experiment for one or more of the following reasons: mental retardation (I.Q. below 80), repeated failure to meet appointments for psychological testing, moving from the school district, and emotional problems. No students were diagnosed as having severe visual-motor coordination or other serious physical or neurological problems. Several minor speech problems were noted but were not of sufficient intensity to warrant exclusion.

The remaining seventy students were convened as a group and given further group testing. The tests administered included the Gates Reading Survey; Diagnostic Reading Test, Survey Section; SRA Achievement Series: Language Arts Section, grades 6-9; Van Wagenen Analytical Reading Scales: Junior Division, and the Brown-Holtzman Survey of Study Habits and Attitudes. In addition, each student was alloued twenty minutes in which to write a short essay on the topic, "My Most Frightening Experience."

The group tests were scored, according to the directions in the manuals, rescored, and the results recorded. The essays were ranked in respect to fluency and adequacy of

expression by three English teachers serving as judges. The judges read the entire group of essays and, after determining their general quality, categorized them individually as belonging to the "best one-fourth," "second best one-fourth," and so on. Each judge thus furnished the investigator with four approximately numerically equal groups, representing a grading system of 1-2-3-4-, with 1 being the best and 4 the worst. Grammar and attitudes were ignored since such aspects were measured by other tests. Correlation coefficients of the rankings given by the judges were calculated and ranged from .944 to .984, with an average of .962.

All results were grouped on individual data cards for subsequent evaluation and the formation of the groups. Only students reading more than one year, but less than five years, below mental potential as indicated by the full-scale score of the WISC were included.

Three matched groups of fifteen students (nine boys and six girls) and three alternates (all boys) were formed using the information gathered. Matching was completed on the basis of sex, intelligence, grammar, essay writing, and reading. Groups of three, identified as being similar with respect to each of the critoria used, were matched.

The three members of the eighteen groups were randomly assigned individually to groups identified as 'A,' 'B,' and 'C.' A statistical analysis of the group was completed with respect to each of the criteria noted using the Mann-Whitney U Test (Siegel, 1956, pp. 116-27) or the Chi Square Test (Siegel, 1956, pp. 104-11) to establish the homogeneity of the groups with respect to each factor. Since the Mann-Whitney U was designed to be used for pairs, rather than triplicates, it was necessary to complete three analyses for each factor. In each case Group A was compared to Group B, Group A with Group C, and Group B with Group C. The results of those analyses are noted in Table 1 (see Appendix). They indicate that no statistically significant ($P>.05$) differences existed among the groups with respect to the criteria used to form the triplicates.

After the selection of groups was completed, they were randomly assigned to the three experimental conditions. One group received the experimental instruction with emphasis in reading training; another formed Control Group I, which received special sectioning with reduced pacing but with traditional materials and methods; finally, members of the third group, Control Group II, were randomly assigned to the various 'regular' English classes, where they received no

special consideration. All class sizes were approximately equal.

Instruments

The design of this study provided for creating three "matched" groups of which one would be the experimental group and the other two control groups. The matching was done in respect to sex, reading, intelligence, grammar and essay writing. Two additional reading achievement tests were given to help in the interpretation of the test results.

The instruments used can be divided into two general categories: 1) those used for psychological screening, and 2) those used for group testing. A discussion of these tests follows.

Instruments Used in Psychological Screening

Three tests were used by the psychologist. They included an intelligence test, a visual-motor coordination test, and a projective test.

The Wechsler Intelligence Scale for Children (WISC) is an individually administered, standardized intelligence test which taps ten areas of mental ability. It is highly regarded as being both reliable and valid, compared to many other available instruments. An important feature is that

it does not require that the examinee read or write in order to complete it. In an experiment involving reading skills, an instrument which relied on even very basic reading ability might affect the results. The WISC minimizes the possibility that reading ability would be a factor in the resulting score. The psychologist is also able to use the WISC as an aid in diagnosing emotional climate, since he observes the manner in which a subject responds in a controlled situation.

The Bender Visual-Motor Gestalt Test (Bender) is a test of visual perception of abstract designs and ability to reproduce them. The Bender is a non-standardized test that is highly affected by the examiner's skill in interpretation and was used by the trained psychologist to screen for visual-motor coordination anomalies and to aid in the diagnosis of emotional climate.

The House-Tree-Person projective drawings, although not standardized and subject to examiner variability, are useful together with the WISC and the Bender in the hands of a skilled examiner. Together, they can furnish evidence of gross emotional adjustment difficulties to make the type of determination necessary for this study.

Instruments Used in Group Testing

The group tests included three reading tests, a language arts test, and a survey of attitudes related to school and learning. A review of each of the group tests follows.

The Gates Reading Survey has had excellent reviews in Buros (1949, pp. 807-08) and was recommended by the Director of the University of Chicago Reading Clinic, Helen K. Smith, as being the best indication of reading achievement for the type of child in this experiment. It consists of three sections, only the first of which is timed. The timed section presents a series of short, easy paragraphs on the fourth grade level with questions following each paragraph. This section appears to measure a subject's ability to read and comprehend easy material quickly. The second section, a vocabulary test in ascending difficulty, is untimed and consists of statements followed by five choices of words. The third section, a comprehension test, is also untimed and consists of paragraphs followed by questions. The material becomes increasingly more difficult as the test progresses.

In addition to being a widely respected and used test, the Gates Reading Survey most nearly measured the quality of the students' achievement in terms of the instructional

objectives of this project. Further, it provided for a wide range of reading abilities and was reasonably free of time restrictions, important prerequisites of a test for underachievers.

Other reading tests were administered to compare test results in respect to additional, but subservient, educational objectives. One of these tests was the Diagnostic Reading Test, Survey Section, which has three timed sections. The first section purportedly measures "rate. The subjects are told to mark the line on which they are reading after three minutes have elapsed. The number of words read to that point is converted to a rate in words per minute. The subjects are then allowed to read on and answer questions at the end of the selection. They are allowed 15 minutes for the entire operation. Frequently, a student who reads slowly will fail to complete, or even begin, the questions at the end of the section because of insufficient time. The number of correct replies to the questions becomes part of a 'comprehension' score. The comprehension score, therefore, may be affected by the rate at which the examinee reads.

The second section of the Diagnostic Reading Test, Survey Section is a vocabulary test consisting of sixty

word choices and the statements related to each. The time limit is 10 minutes; difficulty does not appear to be regulated. Boag and Neild (1962, pp. 101-03) found that rate can be an important factor, especially for the underachiever.

The third section of the test consists of twenty questions related to several short reading selections at approximately the ninth-grade reading level. The section has a time limit of 15 minutes and its results are included in the comprehension score. Rate, then, is an important factor in all parts of the test.

The Van Wagenen Analytic Reading Scales: Junior Division - Form M is a test of twenty-five selections and 100 questions. Administered without time limit, it requires over an hour for most students to complete. It is designed to test the following processes: grasping central thought, retention of clearly stated detail, integration of dispersed ideas, drawing inferences, and interpreting contents. No information is given about reliability in respect to the possible diagnostic features. It differs substantially from the other two reading achievement tests administered in that it requires reading independently for a sustained length of time.

The Brown-Holtzman Survey of Study Habits and Attitudes was used to assess study habits and attitudes toward teachers and school. It is untimed and consists of one hundred items; the student must choose among five choices of answers to each item. The items state a condition, feeling, or attitude in respect to school or a learning situation. The subject may respond on a continuum ranging from complete agreement with the statement to complete disagreement. Extremes of the replies are weighted in the scoring. Data furnished by the authors in the test manual indicate fair reliability . The validity of this type of instrument has been attacked and remains suspect. The use of this instrument in the present study was considered appropriate, however, since the hypothesis was related to "expressed" attitudes.

The SRA Achievement Series: Language Arts, Grades 6-9 was given to measure achievement in basic language arts skills. The timed test consists of three equal-length sections on usage, punctuation and spelling. Because the group from which the sampling was drawn consisted of under-achievers, the grade 6-9 version of the test was used for these tenth-graders. The usage section was used for this study.

The Instructional Programs

For purposes of the experiment three courses of study were identified; an experimental course of study which emphasized reading with a consequent omission of grammar and essay writing, the course of study (Control Group II) normally used at the high school, and a course of study (Control Group I) similar to the one normally used including grammar and essay writing but adjusted more in keeping with the pace of the underachiever. The two "normal" courses of study will be discussed together since they had distinct similarities.

Control Groups

The objectives, time breakdown, amount of homework, and teaching procedures were the same for both control groups. The general objectives were as follows:

1. Understands and applies basic grammar
2. Writes essays thoughtfully and clearly
3. Spells accurately
4. Understands and knows word meanings
5. Understands component parts of plays, novels, short stories and poems

The time breakdown for the two control groups included ten weeks of grammar and composition, six weeks of plays, eight

weeks of novels, six weeks of short stories, six weeks of poems, and two weeks of essays. Spelling and vocabulary were done concurrently throughout the year. The instructional procedures were probably typical of methods used in many high schools and were usually along the following pattern: 1) the teacher introduced a unit or assignment, 2) a reading or practice assignment followed, 3) the teacher led a discussion evaluating what was done, and 4) the children were tested on the unit. Usually some class time was allowed for supervised study and individual help. Control Group I received additional supervised class study and individual help. The basic texts for both groups were Adventures in Appreciation by Cook and Doban, and English Grammar and Composition 12 by Warriner. Both groups read the novels Death Be Not Proud and To Kill a Mockingbird with Control Group II reading How Green Was My Valley and Silas Marner and the two plays, Romeo and Juliet and West Side Story as well. In addition both groups read Non-Fiction II and Control Group II read Poetry II and Drama II, all from the MacMillan Paperback series.

A certain amount of teaching of reading took place in the control groups. Vocabulary and spelling were done under supervised conditions. Some reading instruction was inevitably

included along with the instruction devoted to the reading of novels, plays, poems, essays, and short stories. The actual exposure time to assignments involving reading was probably more than the exposure time in the experimental section. The main differences from the Experimental Group were in the objectives, materials and methods used.

Experimental Group

The experimental program differed in respect to objectives, materials and procedures used from the courses of study normally found for teaching tenth-grade English. The general objectives for the experimental section were as follows:

1. Utilizes sources to locate materials
2. Adjusts reading speed to the type and difficulty of the materials and to the reading purpose
3. Comprehends written material
4. Evaluates material intelligently
5. Applies concepts gained from the reading material to confronting situations
6. Understands the importance of reading and ways to satisfy intellectual curiosity through reading.

The entire experimental course of study emphasized reading objectives whereas the control groups' course of study had a greater variety of objectives. Two observations in respect to the objectives are worth noting. The objective of the control groups, "Understands component parts of plays, novels, short stories, and poems," although not explicitly stated for the experimental group is incorporated as part of some of the other objectives, e.g. four and six. As is true with the control groups, not all objectives were evaluated at the end of the experimental period, only those most pertinent to the study.

The instructional procedures in the experimental setting were different from those used in the other English classes. The principal differences were as follows:

1. The experimental class received intensive reading training. They received no grammar training or essay writing and experiences with the study of literature were sharply altered to enable the class to study within the level of its reading ability.
2. Individual help from the teacher was greatly increased in the experimental section. Students were able to work at their ability

levels in all work except for the Vanguard textbook work completed in the first semester.

3. Supervised study was greatly increased in the experimental section. There was no homework except for one outside book report per quarter.

In the experimental section the materials used were designed to help improve the reading difficulties that were displayed by the students. The use of the materials presumed a foundation of word attack skills. The resulting selections of materials differed widely from the Control Groups.' Teachers' manuals were followed closely in the experimental section. However, caution should be taken to note that materials could not dictate instructional procedures. The effectiveness that the teacher displayed using the materials played an important part in the experimental program. Commercial materials were used almost exclusively, however, so that generalizations could be made to similar programs and since the purpose of this study was not to develop new materials or methods.

In selecting the instructional materials for the Experimental Group many considerations were involved. What was needed was a variety of materials which could adequately

meet the individual needs of the students in the class. One of the considerations was the interest of the students. The materials had to meet the interests of a range of maturity levels (preadolescents as well as adolescents) of both boys and girls , and of children raised in an urban setting and children raised in a rural setting. Another consideration was the level of difficulty since the subjects ranged in reading achievement from one year below expectation to five years below expectation. In addition, the material had to be varied enough to help children with different insufficiencies in reading skills. Fortunately, there is an increasing amount of instructional material on the market which may be useful for the underachiever. The following is a brief description of the materials used.

Dunning, S., and Burton, D.L. "Courage," Scholastic Literature Unit. New York: Scholastic Book Service.

A total of 120 paperback books provide for class-wide instruction, small group work, and individual reading. The books cover a wide range of reading abilities. More than twenty-one different titles are provided, including National Velvet, Bridges at Toko-Ri, The Red Badge of Courage, and God is My Co-Pilot. A teacher's manual provides lesson plans, vocabulary study, quizzes, book report guides, and tests.

This particular unit is designed for the eighth grade although units for other grades are available.

Guiler, W.S., and Jungeblut, Ann. Reading for Meaning. Philadelphia: J.B. Lippincott Company.

These materials provide systematic practice in six basic reading skills: word meaning, total meaning, getting central idea, getting detailed meanings, seeing organization, and making inferences. There is a book at each grade level from grades 4 through 12.

McCall, W.A., and Crabbs, L.M. Standard Test Lessons in Reading, Revised. New York: Bureau of Publications, Teachers College, Columbia University.

Each booklet contains 78 one-page exercises, consisting of a short selection followed by a variety of multiple-choice questions. It is to be administered with a three-minute time limit. There are grade norms supplied which help in showing progress. Books A through E are written from third to seventh grade level.

Niles, Olive S. et al. Tactics in Reading. Chicago: Scott, Foresman, 1961.

This is a kit of exercise materials for word attack, dictionary study, and comprehension which parallels the text, Vanguard. It is for poor readers at the ninth grade level. Enough copies of the 50 exercises are included to permit a whole class to use each exercise simultaneously.

Parker, D.H. SRA Reading Laboratory. Chicago: Science Research Associates.

A kit containing 150 exercises,15 at each level, with exercises in comprehension, word study, and vocabulary. Also included are materials for developing rate and listening. Teacher's manual, scoring keys, pre-test, and student record books accompany the kit. Each student works individually.

Pooley, R.C. et al. Vanguard. Chicago: Scott, Foresman, 1961.

This is a ninth grade anthology and reading skills text designed specifically for poor readers. It consists of the usual collection of short selections with discussion and word study questions and exercises in picture interpretation, word attack, library skills, and comprehension. It is used in conjunction with Tactics in Reading.

Schumacher, Melba; Schick, G.B., and Schmidt, B. Design for Good Reading. New York: Harcourt, Brace & World, 1962.

This material is designed for developmental reading using literary type selections. It provides exercises for speed, vocabulary and comprehension. Two books are available, one for grades 9-10 (used in this study) and one for grades 11-12.

Reader's Digest. Pleasantville, N.Y.: Reader's Digest Association, Inc.

This is the well known monthly magazine which provides

condensations of articles from current, popular magazines. The educational edition includes a special 16-page inset of exercises on rate, comprehension and vocabulary which are based on the reading material.

Taylor, S.E. et al. Word Clues. Huntington, N.Y.: Educational Developmental Laboratories.

A programmed test designed solely for vocabulary building using context clues. Each book contains thirty lessons of ten words each. Three steps are used in developing the meaning for each word. There are seven books for grades 7-13. Tests are available for selecting the appropriate level.

Thurstone, Thelma G., ed. Reading for Understanding. Chicago: Science Research Associates, 1962.

A set of 400 reading comprehension exercises designed to aid the student improve his ability to get meaning, especially inferential reading. There are 100 steps with four lessons in each step ascending in difficulty. A teacher's handbook, student record books, and pre-tests accompany the exercises.

No attempt is made to say that these are the best materials to be found on the market. However, they appeared to be able to meet the instructional objectives of the experimental curriculum. Obviously, the skill of the teacher using

the materials was of equal importance to the materials themselves. Each child's reading skills were evaluated using the results of the tests administered in the fall and the tests accompanying the various materials described above. From this evaluation an individualized instructional program was constructed for each child. No two children had exactly the same program.

A few changes from the original proposal occurred during the experimental period regarding materials used in the experimental class. In each case the changes were implemented in an effort to meet the individual needs of the students. The most significant change was that instead of devoting time to work on rate using pacers and other mechanized approaches, diagnostic testing showed that most students had not reached a level of skill commensurate with that objective. However, five students were thought to be sufficiently advanced to meet with the regular developmental reading laboratory for two days per week for the last eight weeks of the Spring semester.

This chapter has described the objectives and procedures of the study. The next chapter will present the findings, conclusions, and implications.

Chapter IV

FINDINGS, CONCLUSIONS, AND IMPLICATIONS

The purpose of this chapter is to report the findings pertinent to the main problem of the study, which was to investigate the effectiveness of emphasizing reading skills as part of an English curriculum for the underachiever with a consequent de-emphasis in English content. For purposes of convenience, the three hypotheses tested are restated.

1. Emphasis on reading for underachievers will be related to greater achievement in reading skills.
2. The consequent reduction of grammar and essay writing as a result of an emphasis on reading skills will not significantly impede children's achievement in grammar and essay writing as compared with similar groups of children.
3. Children in a course of study adjusted to their needs will express more positive attitudes toward learning than children who are in a course of study that is not so adjusted.

The data for this study were gathered over a period of one academic year from three groups of fifteen students, matched using information concerning intelligence, sex, reading, grammar and essay writing.

The matched groups of fifteen students and three

additional alternates for each group were formed at the beginning of the experimental period, using intelligence (Wechsler Scale of Intelligence for Children), reading achievement (Gates Reading Survey), and grammar (SRA Achievement Series: Language Arts, Grades 6-9) scores and essays ranked for clarity and fluency as judged by three English specialists. The three groups were equated ($P > .05$, Table 1) using the Mann-Whitney U Test on the various test scores and the Chi Square test for the judges' ranks. Considerable effort was made to have the jduges agree on the criteria of evaluation for the essays, since if no significant differences were found it might be due to low reliability of judge evaluation rather than the quality of the essays themselves. However, high correlation coefficients (.962, Table 2) among the judges were obtained and the results of the judging can be reported with confidence. The judges evaluated the essays independently once the criteria were agreed upon and did not know to which group the author of the essay belonged.

At the end of the experimental period three subjects, all boys, had dropped from the experiment. Consequently they and their partners were omitted from further analysis. The remaining fifteen subjects in each group were used for the

final evaluation. Since the groups had changed membership, the fifteen triplicates were again subjected to statistical analysis to determine their comparability on the variables (intelligence, reading achievement, grammar, essay writing) by which they had been matched in the fall (Table 3). No differences ($P>.05$) were found among the groups. In addition, a statistical analysis (Table 4) was used to determine the comparability of the groups' scores on the Van Wagenen Analytical Reading Scales: Junior Division, Form M, Brown-Holtzman Survey of Study Habits and Attitudes, and Diagnostic Reading Test - Survey Section. These tests had been administered in the fall, but the groups had not been matched because of the difficulty of matching the many variables. Although the groups had not been matched using the scores on these tests, no statistical differences ($P>.05$) were found among them. Consequently, the three groups were considered equated in the fall on all variables under investigation. Differences on the post-tests among the groups in the spring could, therefore, be attributed to the experimental conditions.

The Experimental Group was given instruction in reading skills using materials and procedures commonly found on the market. A second group, Control Group I, was given an

adjusted English instruction including grammar and essay writing. The last group, Control Group II, was included in regular English classes. The same individual taught the group receiving special instruction in reading and the group receiving English instruction adjusted to the academic underachiever. The third group of pupils did not operate as a group but were included within the various regular English classes.

Nonparametric statistical tests were used whenever possible in the analysis of the data since the size of the sample was too small to be able to assume that it was drawn from a normally distributed population. The Mann-Whitney U and Chi Square tests were found to be the most appropriate devices and were consequently used. Since the tests are used with pairs, three analyses were completed to compare the three groups on each variable.

Results

The results in respect to each of the three hypotheses are presented in the order in which they are stated above. The limitations, conclusions and implications of the study are found at the end of this chapter. In each comparison, pre- and post-tests were given using different forms of standardized tests wherever possible.

Hypothesis I

The first hypothesis states that "Emphasis on reading for underachievers will be related to greater achievement in reading skills" for the child who is not achieving in accordance with his intellectual potential. The scores from the Gates Reading Survey (Table 5) support ($P<.02$) this hypothesis. Not only is the hypothesis supported in respect to the total scores, but it is also supported (Table 6) in respect to all subscores(including rate, vocabulary, and comprehension) on at least the .02 level of confidence.

The Gates Reading Sruvey was the test on which the subjects were matched at the beginning of the experiment and most nearly reflected the objectives of the experimental program, the development of basic reading skills. Two additional reading achievement tests, The Van Wagenen Analytical Reading Scales: Junior Division,Form M and Diagnostic Reading Test - Survey Section, were given to help interpret and evaluate the results of the instructional period, although neither test reflected the central hypothesis nor the central instructional objectives of the study.

Even though the scores of the latter two tests had not been used in the original matching of the groups, analysis ($P>.05$) indicated that the three groups were comparable in

respect to scores from the two tests (Table 4) administered in the fall. In neither case was there a difference ($P > .05$, Tables 7 and 8) in the three groups at the end of the year. However, such results could be anticipated since both tests measured different reading skills from the Gates Reading Survey and different skills from the ones the experimental reading program was designed. The Diagnostic Reading Test - Survey Section scores (see Chapter III) are affected by the ability to read difficult material rapidly. With few exceptions, improvement in rate was not an important educational objective. The subjects were urged to read slowly when reading difficult material and to read rapidly when reading easy material. (The Gates Reading Survey divorces the factor of rate from other aspects of reading, and the section that measures rate employs only easy, fourth-grade material). The Van Wagenen Analytical Reading Scales: Junior Division, Form M measured the ability to read for a substantial length of time, over an hour for most subjects. It is not surprising that the underachievers of this experiment, with their generally short attention spans, found it difficult on this test to show the relative progress they made in basic reading skills.

The results cited so far indicate only that a difference existed between the groups. Such results could be obtained

by the subjects' losing reading skill, with the Experimental Group losing less than the two control groups. Therefore, further analyses were needed.

The subjects' fall scores on the Gates Reading Survey were compared (Table 9) to the spring scores on an alternate form of the test. The results of the analysis showed that the Experimental Group made statistically significant gains in the total score ($P<.002$) and in all subtests of rate ($P<.002$), vocabulary ($P<.002$), and comprehension ($P<.02$).

Control Group I made significant gains in the total score ($P<.02$) and rate ($P<.002$), but not ($P>.05$) in vocabulary or comprehension. The gains by Control Group I in the total score, therefore, can probably be attributed to gains made in rate, probably a minor educational objective for this type of child. Since rate is often a result of additional effort on the part of the reader, the differences in the rate scores could be attributable to the children's attempts to please their teacher. It is important that Control Group I's scores did not improve in either vocabulary or comprehension.

Control Group II made significant gains in the total ($P<.05$) and vocabulary ($P<.05$) scores, but not in either rate

or comprehension (P>.05). The gain in the total score, therefore, is probably due to a gain in vocabulary. Of course, it may be possible that some gains in vocabulary would be made without specific instruction over a period of nine months. As was true with Control Group I, it is important that no significant gains were made in respect to comprehension.

In summary, the Experimental Group made substantial gains; the two Control Groups made some gains but in smaller amounts, and neither control group made gains in the critical area of comprehension. Therefore, Hypothesis I was supported by the findings in this study.

Hypothesis II

Hypothesis II states that "The consequent reduction of grammar and essay writing as a result of an emphasis on reading skills will not significantly impede achievement in grammar and essay writing as compared with similar groups of children." The results of the first part of the hypothesis, dealing with grammar, will be discussed first.

The scores (Table 10) from the Usage Section of The SRA Achievement Series: Language Arts, Grades 6-9 indicated that there were no significant differences (P?.05) among the three groups at the end of the experimental period

in respect to grammar. This is true even though the Control Groups had received substantial instruction in the area and the Experimental Group had received none.

The second part of the Hypothesis, essay writing, was tested by having judges evaluate essays under controlled conditions in respect to fluency and clarity of expression. Judges were requested to ignore grammar, since it had been tested in the first part of the hypothesis. The results (Table 11) showed that there was no significant difference ($P > .05$) among the three groups in essay writing even though the Experimental Group had received no instruction in this area and the other groups had.

In summary, the findings supported Hypothesis II in respect to both grammar and essay writing.

Hypothesis III

Hypothesis III stated that "Children in a course of study adjusted to their needs will express more positive attitudes toward learning than children who are in a course of study that is not so adjusted." The Brown-Holtzman Survey of Study Habits and Attitudes was used in testing this hypothesis. The pre-test given in the fall indicated (Table 4) no statistically significant differences ($P > .05$) at the beginning of the instructional period. There-

fore, any differences among groups at the end can be attributed to the instructional program. The analysis (Table 12) shows that there were statistically significant differences ($P<.05$) between both the Experimental Group and Control Group I and between the Experimental Group and Control Group II ($P<.05$). However, there was no significant difference ($P>.05$) between the scores of Control Group I and Control Group II. Inspection of the results indicated that the differences in scores between the Experimental Group and the two Control Groups were due to lower Experimental Group scores and not lower Control Group scores as had been anticipated. Therefore, not only was Hypothesis III rejected; the opposite was found to be true. This is an important finding and must be considered seriously in any interpretation of the results. The implications of this finding will be discussed later.

Conclusions

Hypothesis I and Hypothesis II were accepted in light of the results of this study. Not only was Hypothesis III rejected, but the opposite was found to be true. Therefore, the conclusion of this investigation is that an English course of study for the underachiever may be so adjusted to help in the development of basic reading skills. The con-

sequent de-emphasis in grammar and essay writing will probably not hurt the child's abilities in these areas. However, poorer attitudes toward school and learning may accrue as a result of such an adjusted curriculum. A discussion of the limitations and implications follows.

Limitations of Study

As is true with other studies, there are certain limitations restricting the implications which can be made from the conclusions of this study. Obvious limitations are that the sample size of the students was small; few teachers were involved; the duration of the experiment was short; and the nature of the statistical devices used limited the generalizations which may be made.

This study involved the teaching of reading skills most nearly approximated by the types of material covered in the Gates Reading Survey. There are suggestions that other reading skills are not learned through the teaching procedures used and might be studied in another experimental setting.

Since this study dealt only with underachievers, generalizations to other types of children would be inappropriate. No attempt was made in the present study to include retarded readers whose lag in reading skills might have been due to

learning disorders such as brain damage, neurological impairment, emotional disturbance, and mental retardation. Conversely, efforts were made to screen out such students and to include only underachievers with relatively normal mental ability and without other impairments which might affect learning.

Although the English curriculum involved in this study was probably representative of many, different procedures for teaching grammar and essay writing may have changed the results. Comparisons of literary appreciation and knowledge were not made in this investigation.

The experiment did not study specific methods, procedures, or materials, but an entire adjusted English curriculum. Although to assure a degree of generalization to other instructional programs teachers' manuals were followed stringently, materials could not within themselves dictate methods. How materials are used, even when manuals are closely followed, may be more important than the materials themselves. Therefore, generalizations made to other schools must consider the abilities of the teachers involved.

Implications

Although there are limitations to the present

study, there are tentative implications which are probably justified. Caution, however, must be taken in drawing them. For example, the investigator believes that a wrong implication would be that materials should be purchased and procedures followed similar to the ones in the experiment by other school systems in establishing an English curriculum for the underachiever. Materials do not dictate methods. Instructional procedures should come from a knowledge of the principles involved and not adapted because they have worked someplace else. Individual differences must be considered in any good instructional program, and there are individual differences among schools as well as students.

The findings in respect to Hypothesis III, that the Experimental Group exhibited poorer attitudes than the Control Groups, must be taken seriously in interpreting the results. The investigator heard negative comments and observed hostile behavior on the part of students, even though the teacher was especially warm and sensitive to the children's problems. He did not hear or see such manifestations in the Control Group. The teacher commented several times that, although she was enthusiastic about the help she was able to give, she was concerned

that the students felt they were selected because they were "dumb." Although the students in the control groups knew they were being studied, they had the comfort of being in a program similar to their peers. Probably as a consequence, the children in the Experimental Group displayed negative attitudes toward their learning situation and the children in the Control Groups did not. The investigator believes that more interpretation could have been given in respect to the students' abilities and the purpose of the study. If the very real progress made in reading could have been demonstrated in some meaningful manner their attitudes may have been more positive. The investigator had appreciated that on-going interpretation would have been of value, but in the interest of maintaining experimental controls little interpretation had been given. Certainly, this aspect of the study merits further investigation.

Nevertheless, the investigator believes that the evidence at hand clearly indicates that the subjects resented being singled out for placement in a specially adjusted curriculum. What was gained in reading skills may have been lost in negative attitudes toward learning and school. Perhaps at a later date the attitudes may change when the

children apply the skills they have learned, but the investigator had no opportunity to study this further.

What, therefore, are the legitimate implications that can be made? The experimental subjects made more gains in respect to reading skills than the control groups without loss in grammar and essay writing. Therefore, an implication seems to be that the curriculum for under-achievers such as those in this study could emphasize reading skills more and grammar and essay writing less if they did not conspicuously single out the underachiever as being someone different or unusual. A solution may be a greater emphasis on reading in the regular English section for this type of child. Regular English teachers, however, would probably need more training in the teaching of reading than they currently have.

APPENDIX

Table I

COMPARISON OF GROUPS ON MATCHING VARIABLES IN FALL

Measure	df	Mann-Whitney U	Chi Square	Probability [a]
WISC				
Experimental-Control I		383		...
Experimental-Control II		216		...
Control I-Control II		120		...
SRA Language Arts				
Experimental-Control I		161		...
Experimental-Control II		175		...
Control I-Control II		200		...
Gates Reading Survey				
Experimental-Control I		225		...
Experimental-Control II		150		...
Control I-Control II		187		...
Essays				
Experimental-Control I	3		1.54	...
Experimental-Control II	3		1.61	...
Control I-Control II	3		1.26	...

a $P > .05$

Table 2

AGREEMENT OF JUDGES IN RESPECT TO ESSAY RANKINGS

Judge	Correlation Coefficient
A and B	.958
A and C	.944
B and C	.984
Mean	.962

Table 3

COMPARISON OF GROUPS ON MATCHING VARIABLES IN FALL EXCLUDING DROPOUTS

Measure	df	Mann-Whitney U	Chi Square	Probability
WISC				
Experimental-Control I		112		...
Experimental-Control II		97		...
Control I-Control II		80		...
SRA Language Arts				
Experimental-Control I		104		...
Experimental-Control II		122		...
Control I-Control II		121		...
Gates Reading Survey				
Experimental-Control I		80		...
Experimental-Control II		109		...
Control I-Control II		85		...
Essays				
Experimental-Control I	3		1.48	...
Experimental-Control II	3		1.72	...
Control I-Control II	3		1.53	...

Table 4

COMPARISON OF GROUPS ON VARIABLES NOT USED IN MATCHING IN FALL EXCLUDING DROPOUTS

Measure	Mann-Whitney U	Probability
Brown-Holtzman Attitudes		
Experimental-Control I	75	...
Experimental-Control II	81	...
Control I-Control II	110	...
Van Wagenen Reading		
Experimental-Control I	109	...
Experimental-Control II	111	...
Control I-Control II	96	...
Diagnostic Reading		
Experimental-Control I	89	...
Experimental-Control II	107	...
Control I-Control II	77	...

Table 5
COMPARISON OF GROUPS IN SPRING ON TOTAL SCORE OF GATES READING SURVEY

	Mann-Whitney U	Probability
Experimental-Control I	46	.02
Experimental-Control II	44	.02
Control I-Control II	109	...

Table 6
COMPARISON OF GROUPS IN SPRING ON SUBSCORES OF GATES READING SURVEY

Measure	Mann-Whitney U	Probability
Rate		
Experimental-Control I	55	.02
Experimental-Control II	37	.002
Control I-Control II	115	...
Vocabulary		
Experimental-Control I	50	.02
Experimental-Control II	49	.02
Control I-Control II	116	...
Comprehension		
Experimental-Control I	56	.02
Experimental-Control II	50	.02
Control I-Control II	100	...

Table 7
COMPARISON OF GROUPS IN SPRING ON
VAN WAGENEN READING TEST

	Mann-Whitney U	Proba-bility
Experimental-Control I	118	...
Experimental-Control II	112	...
Control I-Control II	79	...

Table 8
COMPARISON OF GROUPS IN SPRING ON
DIAGNOSTIC READING TEST

	Mann-Whitney U	Proba-bility
Experimental-Control I	97	...
Experimental-Control II	114	...
Control I-Control II	97	...

Table 9

COMPARISON OF GROUPS ON DIFFERENCES BETWEEN FALL AND SPRING SCORES OF GATES READING SURVEY

Measure	Mann-Whitney U	Probability
Experimental Group		
Total	4	.002
Rate	8	.002
Vocabulary	40	.002
Comprehension	46	.02
Control Group I		
Total	60	.05
Rate	73	...
Vocabulary	62	.05
Comprehension	82	...
Control Group II		
Total	47	.02
Rate	20	.002
Vocabulary	70	...
Comprehension	68	...

Table 10

COMPARISON OF GROUPS IN SPRING ON "USAGE SECTION" OF SRA LANGUAGE ARTS TEST

	Mann-Whitney U	Probability
Experimental-Control I	128	...
Experimental-Control II	99	...
Control I- Control II	105	...

Table 11

COMPARISON OF GROUPS IN SPRING ON ESSAYS AS RANKED BY JUDGES

	df	Chi Square	Probability
Experimental-Control I	3	2.56	...
Experimental-Control II	3	1.80	...
Control I-Control II	3	2.22	...

Table 12
COMPARISON OF GROUPS IN SPRING ON
BROWN-HOLTZMAN ATTITUDES

	Mann-Whitney U	Probability
Experimental-Control I	63	.05
Experimental-Control II	61	.05
Control I-Control II	107	...

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