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ABSTRACT

This collection of abstracts is part of a continuing series providing information on recent doctoral dissertations. The 56 titles deal with a variety of topics concerning the relationship of reading achievement to many variables such as memory, listening comprehension, intelligence, self-concept, classroom behavior, reading attitude, home environment, oral language, hemispheric and motor laterality, teacher knowledge, Wechsler Intelligence Scale for Children (WISC) subtest scores, conservation, spelling, oral language ability, visual perception, and imagery. (MKM)

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SELECTED STRUCTURE OF INTELLECT MEMORY FACTORS AND THEIR RELATIONSHIPS TO READING ACHIEVEMENT IN THE ELEMENTARY GRADES

Order No. 7911185

BLAZEY, Mark Lee, Ed.D. State University of New York at Albany, 1978. 238pp.

Relationships were examined between reading achievement and memory abilities in the elementary grades. Specifically, three reading variables - Word Pronunciation, Listening Comprehension, and Reading Comprehension - were related to eight memory variables - Memory of Figural Units, Memory of Figural Systems, Memory of Symbolic Units, Memory of Semantic Units, Memory of Semantic Systems, and Memory of Semantic Transformations.

Two hundred seventy five predominantly Caucasian students were tested on all criterion measures by regular school staff during the school day in April, 1978. The students included in the study were within the normal range of intelligence and distributed along the socio-economic continuum. Their mean reading performance was at the fifty fourth percentile for New York State.

The data were analyzed using stepwise multiple regression, polynomial regression, and analysis of variance. Scatter diagrams and Pearson correlation coefficients were computed for each bivariate relationship.

The results of the study suggest that certain memory abilities relate to reading achievement according to the task demands of the particular achievement. Memory abilities which related significantly to one type of achievement did not relate significantly to others where the task requirements were substantially different. In addition, the non-linear, bivariate relationships suggested that certain memory abilities were prerequisite to gains in the related achievement. Symbolic Memory related to reading achievement tasks in which the student was required to read or pronounce words as in Word Pronunciation and Reading Comprehension tests. Semantic memory related to reading tasks when the student was required to understand meanings as in Listening and Reading Comprehension. That is, for Reading Comprehension achievement, both Symbolic and Semantic Memory abilities were factors. For Word Pronunciation Symbolic Memory was a factor.

A COMPARISON OF CONCEPT ATTAINMENT WITH READING COMPREHENSION, LISTENING COMPREHENSION, AND IQ IN SELECTED SIXTH GRADE STUDENTS

Order No. 7823289

BORDELON, Judy Carter, Ed.D. University of Arkansas, 1978. 118pp. Major Professor: Dr. Robert G. Stephens

The purpose of this study was to assess relationships among concept attainment, reading comprehension, and listening comprehension. In addition, factors of IQ and sex were examined as they related to the other variables. The null hypotheses tested were: 1) No significant relationship exists between concept attainment and reading comprehension. 2) No significant relationship exists between concept attainment and listening comprehension.

Forty sixth grade students from Rogers, Arkansas participated in the study. The twenty boys and twenty girls were randomly selected from the population of students whose parents had granted permission for them to participate.

The following four tests were used: 1) a concept attainment test based on a study by Jerome Bruner and others measuring number of trials-to-criterion; time-to-criterion; and percent of focusing strategy; 2) the Durrell Listening Comprehension Test; 3) cloze reading tests on grade levels three through eleven; and 4) the Cattell Culture Fair Intelligence Test. All tests were administered and scored by the examiner.

The Pearson Product-Moment coefficient of correlation was used in order to study relationships among concept attainment, reading comprehension, listening comprehension and IQ. A t-test for independent samples was used to determine the significance of sex as a variable.

The findings of the study were as follows: 1) No significant relationships were found between reading comprehension as measured by the cloze tests and concept attainment. The first null hypothesis was therefore not rejected. Good readers were not found to exhibit greater efficiency in attaining concepts than did poor readers. 2) No significant relationships were found between listening comprehension and concept attainment, and the second null hypothesis was also not rejected. It was thought that the lack of relationship might be due to the different types of intellectual operations required by these activities. 3) A significant relationship was found between reading comprehension and listening comprehension at the $p < .01$ level of significance. 4) Significant correlations were found among the cloze tests, indicating a consistency of scores on the different levels tested. Results of the cloze tests did not agree with the readability levels set by SRA on the power builder material used in constructing the tests. 5) Concept attainment variables correlated with one another at the $p < .01$ level of significance. No significant correlation was found, however, between the concept variables of Task I with those of Task II. Students who used a high percent of focusing strategy required fewer trials and less time to solve the concept tasks, supporting Bruner's study in establishing focusing as the most efficient strategy for this type of concept attainment task. 6) No significant relationships were found between scores from the non-verbal IQ test and other variables. 7) Significant differences were not found between scores of boys and girls in the study.

TRENDS IN READING ACHIEVEMENT FOR THE FIFTH GRADES IN MISSISSIPPI PUBLIC SCHOOLS, 1972-73 TO 1974-75, AND THE RELATIONSHIP OF CERTAIN VARIABLES TO READING ACHIEVEMENT Order No: 7905113

BROOME, Lorice Anderson, Ed.D. University of Southern Mississippi, 1978. 83pp.

Purpose of the Study

The two purposes of this study were to determine the trend in reading achievement for public schools with fifth grades in the state of Mississippi for the academic years of 1972-73 and 1974-75 and to determine the relationship between certain predictor variables and the criterion variable of reading achievement for 1972-73. The following predictor variables were used: (1) school district variables, (2) racial composition of the school, (3) teacher characteristics, (4) expenditure variables, and (5) community background data.

Procedure

The population for this study was identified as the public schools in Mississippi with fifth grades that had participated in the statewide testing program in 1972-73 and 1974-75 and had given their students the California Achievement Test, 1970 edition.

Findings

The major findings of the study were as follows:

1. Reading achievement in the Mississippi public schools included in this study increased significantly from 1973 to 1975. The percentile rank increased from 27.99 to 31.96.
2. The percentile gains in reading achievement from 1973 to 1975 for the schools in this study were found to be equal regardless of the type of district, the size of the district, or the racial composition of the school.
3. The single best predictor of reading achievement in 1973 was the racial composition of the school.
4. The second best predictor of reading achievement was the municipal separate type of school district. When compared to the other types of districts, the municipal separate districts tended to have a higher educational level, higher percentage of high school graduates, higher median family income, and fewer families below the poverty level.
5. The strongest relationship between community background data and reading achievement at the district level was found between reading achievement and the percentage of fami-

lies below the poverty level ($r = -.56$). Thus, as the percentage of families below the poverty level increases, the level of reading achievement decreases.

6. A strong positive relationship was found for reading achievement at the district level and the community background characteristics of median educational level, percentage of high school graduates, and median family income.

Recommendations

The following recommendations were made:

1. A long-range study of reading achievement in Mississippi is needed to determine if reading achievement continues to improve.

2. Other predictor variables that can be controlled by the schools such as classroom social climate, teaching methods, and teacher materials need to be identified as a possible means of predicting reading success.

3. Since reading improved in Mississippi's fifth grades in this study regardless of the racial composition of the school, type of district, and district enrollment, further research should be conducted to determine if this finding would remain true at higher levels of achievement.

4. Due to the limited response of districts, it is recommended that further efforts be made to include all districts and all schools in future research on reading achievement in Mississippi.

5. Due to the limitations of ex post facto research, it is suggested that experimental research be conducted to determine school-controlled predictor variables of reading.

A CROSS-LAGGED CORRELATION OF SELF-CONCEPT AND READING ACHIEVEMENT IN FIRST GRADE

Order No. 7904950

CASELLI, Delila Anne, Ed.D. University of South Dakota, 1977. 151pp. Directed by: Dr. Loraine Webster

Problem

This study was designed to investigate the degree of relationship between self-concept over one period of time to changes in reading achievement over a later period of time.

Procedure

A stratified randomly selected population included 40 second semester first grade Sioux Falls, South Dakota, students representing lower and upper socioeconomic boys and girls. Self-concept was measured by Self-Concept and Motivation Inventory (SCAMIN), defining the construct as hierarchical and organized. Measurement was composed of the student's positive acceptance of academic aspirations and demands which he perceives "significant others" expect of him and his personal view of present successes and likelihood for future academic success called Self-Concept; this is combined with Academic Motivation, made up of the student's positive regard for reinforcement associated with academic achievement and his awareness and/or concern for avoiding embarrassment and sanction which he associates with academic failures. Subtests, Word Identification and Passage Comprehension, of the Woodcock Reading Mastery Test were administered individually to measure reading achievement. Five equidistant measuring points were established at each of the four attendance centers. The investigator used a structured variance of ordering the two measurements to counterbalance test order effects of one measure upon the other.

The "cross-lagged panel correlation" design offered the opportunity to measure causal influence of one variable prior to the other by means of Pearson Product-Moment correlation. Path coefficients were computed to "partial out" effects of previous vertical relationships and the correlational reliability of the variable to be predicted. The one-way analysis of variance technique revealed path coefficient averages considered to be non-zero measures giving evidence of their mutual dependency. A t test with .05 significance was performed on measures found to be zero through the one-way analysis of variance.

Results

Directional Pearson Product-Moment correlations suggested self-concept subscales as causal to reading achievement subscales in 20 instances with a significance at or in excess of .05. Path coefficients indicated self-concept variable averages across the five measuring points to be causal in 12 of the 18 possible correlations. One-way analysis of variance testing revealed a more accurate statement to infer causality of only Motivation over Reading Total with an F significance of .015. Results of a t test found a .05 significance substantiating this inference. Change in self-concept over one period of time is related to reading achievement over a later period of time with significance at .05. An inferred causality was found for Motivation prior to Reading Total.

A STUDY OF RELATIONSHIPS AMONG AFFECTIVE AND BEHAVIORAL CORRELATES OF READING IN URBAN PRIMARY CLASSROOMS

Order No. 7911348

CHILDS, Shirle Moone, Ph.D. The University of Connecticut, 1978. 189pp.

For many urban youngsters who have failed to acquire needed skills such as auditory discrimination, decoding and encoding, and comprehension, learning to read is a difficult task. These children are characterized as "culturally disadvantaged", "learning disabled", and "slow learners". Teachers' expectations of success or failure are often affected by such labels.

Educational systems' continued use of the norm referenced test as a major assessment tool may be among major factors contributing to these reading deficits. "Are children being tested on what they actually know or what educational systems assume they know?" is a continuing controversy. This study employed multivariate techniques to evaluate data collected from a large urban public school community in central Connecticut. The sampling procedures resulted in 246 primary grade students and 33 teachers participating in the study. The three instruments used to collect the data were: a standardized test, an instrument to assess attitude towards reading, and an instrument (developed by this writer) to assess the extent of reading related activities young urban, minority students engage in during the school day. The data were treated through a series of stepwise multiple regressions to determine the predictive ability of the independent variables on reading achievement. The independent variables are (a) sex, (b) attitude towards reading and (c) Reading Related Activities. There are eight distinct factors which describe Reading Related Activities: Reading-Language Arts, Listening, Speaking, Writing, Social Development-Caring, Social Development-Language Arts, Recitation-Dictation, and Language Arts Using Audio Visual Aids.

The findings revealed that (1) there was a weak correlation between the predictor and criterion variables with Reading-Language Arts having the greatest effect on reading achievement, (2) the optimal equation for these data contained seven predictors as follows: Reading-Language Arts; Listening; Social Development-Caring; Attitude Towards Reading; Language Arts Using Audio Visual Aids, Recitation-Dictation; and Social Development-Language Arts. The predictors in the equation were statistically significant predictors of reading achievement at the p .01 level. The low variability may be indicative of two distinct approaches to assessing reading achievement of urban minority children.

The reader is cautioned in the use of the standardized test alone in determining reading achievement of these Title I youngsters. The lack of a strong relationship between the predictor and criterion variables raises a question as to which one has more credence - Reading Related Activities or the MAT? Reading Related Activities that children engage in during the school day have been shown to mildly correlate with reading achievement. Further assessment of the quality of these activities may need to be studied. Reading progress of children should be assessed in such a manner to be more supportive of the children's future growth.

The authors of the MAT suggest that each school system evaluate the content validity of the MAT based on their schools' curriculum.

CLAYTON, Mary W. Martin, Ph.D. The Ohio State University, 1978. 218pp. Adviser: Professor Donald J. Tosi

Because of the general recognition of a relationship between reading efficiency and academic success, there is a growing interest in the development of ways of dealing with reading problems. A major complication is children from the inner city start out behind other children. There is a wide range of reading ability that exists at every grade level. Often the student's unsuccessful reading experiences are a reason for them to suffer in other content areas. Their confidence is lowered, and their attitude toward reading and school becomes increasingly negative.

The purpose of this study was to find out if classroom behavior of students attending inner city schools follows a predictable sequence, whether students who act out are also poor readers, if students achieve, do they also have a good attitude toward reading, feel good about themselves and maintain self discipline.

The study was designed to investigate the following four research questions:

1. How well does reading achievement, reading attitude and self-concept predict classroom behavior?
2. How well does reading attitude, self-concept and classroom behavior predict reading achievement by sex and race?
3. What are the reading attitudes, self-concept and classroom behavior correlates of reading achievement?
4. What are the reading attitudes, self-concept and classroom behavior correlates of sex and race?

Subjects for the study were a randomly selected group of 154 males and 130 females enrolled in fifth grade classrooms from each of fifteen inner city elementary schools located in a large midwestern school district. The 284 students had been placed in the Elementary School Counseling Component of the school district's Disadvantaged Pupil Program Fund (DPPF).

The research questions were answered by using intelligence, achievement and social behavior data that were collected during the 1976-77 school year. The instruments used were the Self Observation Scales (SOS), the Survey of Reading Attitudes (SRA), the Comprehensive Tests of Basic Skills (CTBS), and the Devereux Elementary School Behavior Rating Scale (DESB). The method of canonical correlation was used to determine the relationships between the tested (SOS, SRA, AND CTBS) and observed (DESB) variables. Correlational analysis was used to obtain the measure of relationship between two variables.

The results showed that twenty correlates of reading achievement could be identified. There were ten variables that correlated significantly with the sex of the student, and nine variables that correlated significantly with the race of the student. There were five variables that correlated with both sex and race.

Findings of the study showed that: (a) classroom behavior problems tend to be multivariate in nature; (b) the student's attitude, behavior, and the way he sees himself is highly related with reading achievement; (c) there are different variables for male and female students that may influence reading achievement; (d) there are different variables for white and non-white students that may influence reading achievement; (e) there are specific variables of reading achievement and classroom behavior that are common among all students; (f) the reading achievement data from this study could be further analyzed in the terms of additional variables such as, age of student and number of years in same grade; and (g) the data collected for classroom behavior may make a difference if the variables of teacher attitude and classroom climate were added before analyses were made.

CONNELLY, Leokadya Kozlowski, Ph.D. The University of Connecticut, 1978. 132pp.

Purpose of the Study

This study was designed to indicate the efficiency of selected variables identified at kindergarten entry and at first grade entry as predictors of first grade reading success.

The purposes of this study were to determine (a) which of the selected variables predicted first grade reading achievement; (b) whether pupils retained their relative status as low, average, or high risk from kindergarten through end of first grade; and (c) whether the variables discriminated among the low, average, and high achievers in reading achievement at the end of first grade.

Hypotheses

- H₀₁ There is no significant relationship between the selected variables and a child's reading achievement at the end of first grade.
- H₀₂ There are no significant changes in the initial and final status ranking of the high risk, the average risk, and the low risk pupils from the beginning of the kindergarten year to the end of first grade.
- H₀₃ The set of predictors will not serve to differentiate among the three final status levels.

Procedures

Data on twelve variables were collected on one hundred forty-eight public school pupils over a period of two years. Tests were administered to all the pupils at the beginning of the kindergarten year, at the beginning of the first grade, and at the end of first grade. The independent variables were subtest scores on the Dallas Preschool Screening Test, subtest scores on the Murphy-Durrell Reading Readiness Analysis, score on the Otis-Lennon Mental Ability Test, and measures of chronological age, socioeconomic status, and sex. The dependent variable was the Total Reading score on the Metropolitan Achievement Tests. The hypotheses were tested by the use of multiple regression analysis, the chi-square technique, and discriminant function analysis.

Findings and Conclusions

The optimal regression equation developed for the total sample included five variables: scores on Murphy-Durrell Learning Rate, Dallas Language, Dallas Auditory, Murphy-Durrell Phonemes, and socioeconomic status. The multiple correlation of .79 accounted for sixty-three percent of the variance. However, little was added to the prediction efficiency by the inclusion of variables beyond Murphy-Durrell Learning Rate and Dallas Language. Separate regression equations for each sex made no difference in the efficacy of the prediction.

The findings of the contingency table for chi-square and the uncertainty coefficient suggested the change from initial status based on pupil prekindergarten screening to their final status based on first grade achievement to be relatively independent of each other.

The powerful discriminant function equation generated to differentiate among the final status levels of first grade reading achievement included seven variables: scores on Murphy-Durrell Learning Rate, Otis-Lennon Mental Ability, Dallas Language, Murphy-Durrell Phonemes, age, and sex. The classification routine correctly identified 76.35 percent of the cases as members of their respective first grade reading achievement groups.

Two conclusions seemed apparent. (1) Learning Rate was an important predictor and discriminator; and (2) the present kindergarten and first grade offerings were insufficient to meet the needs of the pupils who were low achievers.

Implications

The assessment of pupil performance at timely intervals in their learning should be utilized to adjust curriculum, instruction, and related services to accommodate these pupils' needs and to avoid cumulative deficits. In order to focus on prevention of reading failure, instead of later remediation, early identification of high-risk pupils is needed.

SIX SELECTED HOME READING ENVIRONMENT FACTORS AND THEIR RELATIONSHIP TO READING ACHIEVEMENT AT THIRD GRADE

Order No. 7905993

COUSERT, Girly Carolyn, Ed.D. Indiana University, 1978.
104pp. Chairman: Carl B. Smith

The major purpose of this study is to determine whether there is a relationship between the personal reading habits of the parents, between whether the parents read or did not read to the child in preschool years, and whether the parent reads or does not read to the child at present and the child's reading achievement at third grade.

The third grade students in four elementary schools in a midwest city suburban area were selected for the study. Students in the top 26% of the class and students in the bottom 26% of the class were chosen on the basis of their scores on the Stanford Achievement Test. Letters were sent to the parents of these students requesting interviews. Those parents who agreed to participate were interviewed by one of the team of interviewers.

The data obtained from the parents in the interviews were tabulated. The median test was then applied to each set of data for which the median test was appropriate. (Hypotheses 1 and 2) For the hypotheses for which a median test was not appropriate, the data were dichotomized into a read-no read arrangement for a 2 x 2 chi-square analysis. (Hypotheses 3, 4, 5, and 6)

Summary of Findings

Data were analyzed to determine the relationship between the home reading environment of the child and the child's achievement at third grade level. The home reading environment factors are the amount of time the mother spends in personal reading, the amount of time the father spends in personal reading, whether the father reads to the child at the present time, whether the mother reads to the child at the present time, whether the father read to the child in preschool years, and whether the mother read to the child in the preschool years.

There was a high relationship between the amount of time the mothers spent in personal reading and the student's achievement at third grade for the total population ($p < .001$), for girls only ($p < .01$), and for boys only ($p < .01$).

There is an extremely significant relationship between the father's personal reading habits and the achievement of the child at third grade ($p < .001$). The relationship of the father's personal reading habits to the achievement of the girls is strong ($p < .01$), and its relationship to the boy's achievement is even stronger ($p < .001$).

When computed for the entire population, a slight relationship was found ($p < .05$). However, for boys and for girls H_0 could not be rejected at ($p < .05$), when computing whether the father reads to the child at present.

The interviewers reported that the parents of high achieving students would answer that, since the child could now read well, the child no longer wanted to have someone read to him/her but preferred to do his/her own reading. Parents of low achieving students tended to answer the question with a simple "yes" or "no."

There is a relationship between whether the mother read to the child at the present time and the child's achievement ($p < .01$). There was a slight relationship for both boys ($p < .05$) and for girls ($p < .05$). There was not a significant difference between the results for the boys and the girls. Many mothers reported that they only read to the child in order to help with the child's school work. Others reported that the or readers preferred to read for themselves. More mothers or fathers reported reading to the child.

There was a very significant relationship ($p < .00$) between whether the father read to the child in the preschool years and the child's achievement. The evidence for boys ($p < .05$) and for girls ($p < .05$) separately is also significant.

There is a very significant relationship between whether the mother read in the preschool years ($p < .001$). There is not a significant difference between boys ($p < .01$) and girls ($p < .01$).

A STUDY OF RELATIONSHIPS BETWEEN SELECTED ASPECTS OF ORAL LANGUAGE, SHORT-TERM MEMORY, AND WORD IDENTIFICATION AT THE PRIMARY LEVEL

Order No. 7819728

CROWELL, Edee Gammon, Ed.D. Boston University School of Education, 1978. 263pp. Major Professor: Dr. Roselmina Indrisano

The problem of the study was concerned with 1) correlation between measures of word identification, selected aspects of oral language, short-term memory for temporal patterns of verbal stimuli, and other selected factors at the primary level; (2) the simultaneous effect of selected variables on Word Identification at each grade; and 3) differences between grades one, two, and three; between the highest, middle, and lowest thirds of the population in Word Identification at each grade; and between boys and girls at each grade in Word Identification, selected aspects of oral language, short-term memory, and other selected factors.

The following reading, oral language, memory, and other variables were developed: 1) Reading: Word Identification measured by the Iota Word Test and the Word Discrimination Test from the Monroe Diagnostic Reading Tests; 2) Oral language: Sentence Comprehension measured by the author's adaptation of the Northwestern Syntax Screening Test; Sentence Repetition measured by the author's adaptation of the NSST; Comprehension and Repetition, the sum of scores in Sentence Comprehension and Sentence Repetition; Following Directions, written response to oral directions containing directional terms used in reading instruction; Left-Right Errors, the number of errors in Following Directions due to confusion of left and right; Temporal-Spatial Errors, the number of errors in Following Directions due to confusion of temporal-spatial terms; Hearing Vocabulary measured by the Peabody Picture Vocabulary Test; 3) Memory: Auditory Memory measured by the ability to repeat series of spoken nouns; Visual Memory measured by the ability to reconstruct temporally ordered sets of pictures; and 4) Other: Verbal, Performance, and Total Intelligence measured by the Short Form Test of Academic Aptitude, Level 2, or the Wechsler Intelligence Scale for Children; Age in months; Grade; and Sex.

The population consisted of 65 first graders, 79 second graders, and 42 third graders from twelve heterogeneous classes in two public schools. Data were obtained in the spring of 1974. The data were analyzed by correlational analysis including partial correlation to remove the effect of Verbal Intelligence, stepwise multiple regression to build an explanatory model of Word Identification variance at each grade, and analysis of variance supplemented by the Scheffé method of multiple-comparison.

The major findings and conclusions derived from the analysis of the data were:

1. At all grades the variable Comprehension and Repetition explained a significant proportion of Word Identification variance in addition to that explained by Verbal Intelligence. This finding suggests that competence in word identification at the primary level is associated with the oral language process manifest by the ability to comprehend and repeat sentences.
2. At grade one, Following Directions also explained a significant proportion of Word Identification variance.
3. Significant partial correlation indicated relation between competence in Comprehension and Repetition, Following Directions, and Temporal-Spatial Errors.
4. Correlation between Hearing Vocabulary and other variables was due to the effect of intelligence.
5. The partial correlation of Auditory Memory with Word Identification was significant at grades one and two, with Sen-

tence Comprehension at grades one and two, with Sentence Repetition at all grades, and with Age at grade one.

6. Little significant correlation was found with Visual Memory.

7. Age within grade was most significant at grade one.

8. All between grade differences in Word Identification and oral language variables were between grades one and two.

9. Within each grade the highest third in Word Identification differed from the lower two-thirds in most oral language variables. Auditory and Visual Memory means did not differ.

10. There was greater relation between Verbal and Performance Intelligence and non-intelligence variables than between Performance Intelligence and non-intelligence variables.

11. Boys and girls differed little.

AN EVALUATION OF JOURNAL PUBLISHED RESEARCH ON ATTITUDES IN READING, 1900-1977

Order No. 7823319

DAVIS, Patsy McLain, Ed.D. The University of Tennessee, 1978. 220pp. Major Professor: Dr. J. Estill Alexander

Reading is a complex process. Part of the complexity is due to the number of variables in both the cognitive and affective domains which influence reading. One variable in the affective domain which educators believe affects reading is attitude toward reading.

A literature search revealed there is no one source which identifies and reviews research dealing with attitudes in reading. Since the value of research in the field of reading is determined by the use made of that research in understanding the reading process and in improving the teaching/learning of reading, this study was designed to meet a need for a basic evaluative source of information about research on attitudes in reading.

The study answered these questions:

1. What research studies pertaining to attitudes in reading have been published in American professional journals from 1900 through 1977?
2. What specific factual information from these studies will be valuable in helping educators make their own evaluation of the study?
3. What is the relative merit of each research study?
4. What conclusions can be drawn from the studies rated good or higher when evaluated with the Suydam Instrument for Evaluating Experimental Research Reports?

For each research study, specific information was noted on type of study, design paradigm, statistical procedures, sampling procedures and size, type of test, grade level, and duration of the study. Research questions, major conclusions, and relative merit of each study were stated. The relative merit was determined by evaluating the research with the Suydam criteria. This instrument focuses on the significance of the problem, definition of the problem, research design, sampling procedures, measuring instruments, analysis of the data, and reporting the study. A five-point scale is used to rank each question. A total score of 9 to 12 indicates an excellent study; 13 to 20, very good; 21 to 28, good; 29 to 36, fair; and 37 to 45 indicates a poor study.

Analysis of the data revealed these findings about attitude research in the field of reading:

1. A total of 110 research studies were published in 30 professional journals from 1900 through 1977.
2. Measures of reading attitudes can be classified as: verbal self-report instruments, direct observation, projective techniques, ethnic-specific instruments, and pictorial activity preference instruments.
3. The use of self-report instruments dominated the methodology of attitude study.
4. More than 50 percent of the attitude studies were conducted with subjects in fourth through sixth grades.
5. Less than 100 subjects were involved in 32 percent of the studies and less than 150 subjects were in 43 percent of the studies.

6. The design paradigm most frequently noted was one group pretest-posttest.

7. Statistical procedures most noted were means, percentages, analysis of variance, and t test.

8. Many of the reported studies were correlational studies in which the researcher was looking for relationships between attitudes toward reading and variables such as: grade level, race, sex, classroom grouping, intelligence, achievement, instructional programs, content and format of textbooks, early reading successes or failures, self-concept, counseling available, parental reading habits, child-rearing practices, classroom behavior, socio-economic status, father's occupation, and cognitive styles.

9. When assessing attitudes toward reading, researchers are more interested in relationships among responses than in a single response.

Findings from the highest-rated research studies indicated the following:

1. Good comprehension and a positive self-concept are related to good attitudes.
2. Attitudes are more related to achievement than to ability.
3. Classroom organization, instructional programs, and content of textbooks may affect attitudes and can be used to change attitudes.
4. Class size, race, socioeconomic status, father's occupation, and attitudes toward teachers do not significantly affect attitudes toward reading.

THE RELATIONSHIP OF LISTENING AND READING IN GRADES TWO, FOUR AND SIX

Order No. 7819731

DI BIASIO, Marie C., Ed.D. Boston University School of Education, 1978. 171pp. Major Professor: Roselmina Indrisano

The purpose of this study was to analyze the relationship between listening and reading and related language skills. The study was conducted on a sample of 493 subjects in grades two, four and six in a small suburban town in Rhode Island.

The following measures were administered:

- 1) The Durrell Listening-Reading Series to yield listening and reading scores;
- 2) The Comprehensive Test of Basic Skills to yield reading and language scores;
- 3) The Short Form Test of Academic Aptitude to yield IQ scores.

Three statistical procedures were applied to analyze the data:

- 1) The Pearson Product Moment Correlation: to determine the coefficient of correlation between all variables;
- 2) A Factor Analysis: to reveal the number and nature of the constructs underlying the large number of variables;
- 3) Canonical Variate Analysis: to analyze the relationships between sets of reading variables and sets of listening variables.

Analysis of these data enabled the investigator to reach the following conclusions:

Hypothesis 1: There is a high positive correlation between listening as measured by the Durrell Listening-Reading Series (subtests include: vocabulary listening, paragraph listening, total listening) and IQ as measured by the SFTAA.

Findings: All correlations were significant indicating a relationship between listening and IQ. Because the correlations were moderate, the hypothesis that a high positive relationship exists between listening and IQ was not supported.

Hypothesis 2: There is a high positive correlation between the Durrell Listening-Reading Series scores and the subtest scores of the CTBS.

Findings: The correlations were significant and the hypothesis was partially supported.

Hypothesis 3: There is a high positive correlation between scores on the Durrell Listening Series and scores on the Durrell Reading Series.

Findings: The correlations were significant, however, the hypothesis was not supported.

Hypothesis 4: There is a statistically significant difference in the relationship between listening and reading skills across second, fourth and sixth grades, with the relationship increasing from grade two to grade six.

Findings: The data indicate that the correlation between listening and reading is greater at grades four and six than at grade two, higher at grade six than at grade four, and higher at grade six than at grade two. These findings support Hypothesis 4.

Hypothesis 5: There are three underlying factors which explain most of the variance in the test scores. Those factors are:

- a) a general factor in all tests;
- b) a reading ability factor in all reading tests;
- c) a listening factor in the listening tests.

Findings: This hypothesis was partially supported by the data. At grade two, a reading and language factor and a listening factor was extracted; at grades four and six, only a general factor was extracted.

Hypothesis 6: There is a relationship between the CTBS subtests, the Durrell Listening subtests and the Durrell Reading subtests that cannot be attributed to intelligence.

Findings: The findings partially support this hypothesis. The data indicate that the relationship of listening and reading, with IQ partialled out, is not significant at grade two. However, the relationship between listening and reading, with IQ partialled out, is significant at grades four and six.

Summary

The data revealed: that listening and reading are not related at grade two but are related at grades four and six; that the relationship increases as grade increases; that a reading and language factor and a listening factor at grade two, and a general factor at grades four and six accounted for most of the factor variance and with the effect of IQ removed, the relationship between listening and reading was significant at grades four and six, but not at grade two.

THE RELATIONSHIPS AMONG SCORES ON THE READING SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS AND ACHIEVEMENT OF THE READING STANDARDS ON THE THIRD GRADE FLORIDA STATEWIDE ASSESSMENT TEST ACCORDING TO PUPIL RACE, SEX, AND INTELLIGENCE Order No. 7907738

EMOND, Susie Mendenhall, Ed.D. The University of Florida, 1978. 138pp. Chairperson: Dr. Ruthellen Crews

The purpose of this study was to determine if a relationship existed among the reading subtests of the Metropolitan Achievement Test (MAT) given at the end of grade one and grade two and the reading standards of the third grade Florida Statewide Assessment Test (FSAT).

The investigation was conducted with a random sample of 335 children, representing 20 percent of the third graders who were enrolled in the Alachua County School System in 1977-78. Data were compiled from test records of the Primary I and Primary II Batteries of the Metropolitan Achievement Tests, the Otis-Lennon Mental Ability Test, and the reading portion of the third grade Florida Statewide Assessment Test.

Three null-hypotheses were tested through use of discriminant function analysis to determine if there were relationships between the achievement and assessment scores. The scores were analyzed by race, sex, and intelligence. Analyses of the data revealed significant relationships between the subtests of the MAT and eight of the nine reading standards of the

Findings from this study had direct implications for first and second grade teachers: Instruction in subskills of the MAT that predicted success on the FSAT could enable teachers to intervene and possibly prevent children from experiencing the feelings of frustration and failure at later points in their lives.

A CASE STUDY USING ORAL HISTORY IN THE ANALYSIS OF FACTORS CONTRIBUTING TO ILLITERACY

Order No. 7905009

EMPACHER, Marjorie R. Paisner, Ed.D. Boston University School of Education, 1978. 348pp. Major Professor: Thomas E. Culliton, Jr.

Purpose

It was the purpose of this study to gain insights into the broad spectrum of illiteracy in our society. What are the causes of a lack of reading and writing skills in individuals who have attended schools for eight to ten years before becoming educational drop-outs? What recommendations can be made for the prevention and treatment of illiteracy in a democracy?

Procedure

Oral history was used as a technique to explore in depth the life experiences of one adult illiterate. The author had tutored and counseled her individually in her home beginning in May 1971. She learned to read and changed psychologically in the process. Her life story was taped during successive summers, transcribed, and edited. Letters and interviews with family, friends and involved educators corroborated and augmented her oral history.

Results and Conclusions

The subject's illiteracy was caused by multiple factors: a mild perceptual weakness, linguistic deprivation, and strong psychological factors caused by social factors in her early environment. Social factors that contributed to her disability involved family, school, and community. Her subsequent life experiences reinforced strong feelings of inferiority which were deeply entrenched. Only reading therapy could have released her potential, however she is permanently impaired in our illiterate society due to the years of ego deprivation.

Recommendations are in two areas, prevention and treatment of illiteracy. To prevent illiteracy teachers must be sensitized to the devastating psychological effects of reading disability and taught diagnostic-prescriptive techniques. Referral for reading treatment is never too late or impossible. With adult illiterates counseling must be concomitant with reading instruction because of the tremendous psychological impact. The social aspects of reading disability are the major discoveries of this in depth research. Society contributes to the ego destruction of our unfortunate illiterates. The family, school, larger community, and finally all of society share in the responsibility.

RELATIONSHIPS OF INFORMATIONAL BACKGROUND, AURAL COMPREHENSION, IQ, AND METHOD OF INSTRUCTION TO READING ACHIEVEMENT Order No. 7909994

FARMER, Wilma Jackson, Ed.D. Temple University, 1979. 93pp.

This study was designed to investigate the relationships and predictive values of informational background, aural comprehension, and IQ to reading achievement at the end of first grade. This was done in an attempt to determine if measures of informational background and aural comprehension might be used in place of measures of intelligence to predict reading achievement. Further the study considered the method of instruction when examining the relationships and predictive values of the above factors to reading achievement. The following hypotheses were tested:

1. Informational background will have the highest correlation and predictive value among informational background, aural comprehension and IQ, when using reading achievement as the dependent variable.
2. Aural comprehension will be second in correlation and predictive value among informational background, aural comprehension and IQ when using reading achievement as the dependent variable.
3. There will be no significant difference in the relationship and predictive value of informational background, aural comprehension, and IQ to reading achievement between children grouped on the basis of sex.
4. There will be no significant difference in the relationship and predictive value of informational background, aural comprehension, and IQ between two groups of children grouped on the basis of instructional method.

The Slosson Intelligence Test for Children and Adults (SIT) and the Gates-MacGinitie Reading Test, Primary Level Form A were administered to 135 children in eight intact first grade classes located in Camden, New Jersey. Scores from the Environment and Aural Comprehension subtests of the Stanford, Early School Achievement Test, which was administered at the end of the kindergarten year, were gathered from the children's cumulative folders. The Environment subtest was used to measure informational background. The Aural Comprehension subtest was used to measure aural comprehension. Reading was taught using either an analytic phonics method or a synthetic phonics method.

An analysis of the data indicated that informational background had the highest correlation and predictive value with reading achievement. Using Pearson product moment correlation a coefficient of $r = .602$ was obtained for informational background compared to $r = .589$ for IQ and $r = .567$ for aural comprehension. As expected from the correlations, stepwise multiple regression analysis selected informational background first in predictive value.

The IQ, rather than aural comprehension, was second in correlation and predictive value. Both variables, however, were significantly related to reading achievement.

The variables were also significantly related to reading achievement when boys as a group and girls as a group were considered. When Fisher's Z-statistic was performed no significant differences were found between the correlations obtained for boys and girls.

An analysis of the data indicated that IQ had the highest correlation and predictive value with reading achievement for the synthetic phonics group, while the reverse was true for the analytic phonics group. A significant difference was found between the two correlations. Informational background was significantly related to both methods. Aural comprehension had the highest correlation to reading achievement when the analytic phonics method was used but it had the lowest correlation when a synthetic phonics method was used.

It can be concluded from this study that informational background, aural comprehension and IQ are significantly related to reading achievement. It can also be concluded that these factors are significantly related to reading achievement for both boys and girls. A further conclusion is that within the different methods of instruction the variables have significantly different relationships. Therefore, method of instruction should be considered when determining the relationships of various factors to reading achievement.

THE RELATIONSHIP BETWEEN SELF-CONCEPT AND THE ABILITY TO ANALYZE READING ACHIEVEMENT AMONG THIRD AND SIXTH GRADE CHILDREN Order No. 7900890

FELTON, Martha Harriet, Ph.D. Michigan State University, 1978. 130pp.

The purpose of this study was to seek information regarding the relationship of self-concept to a child's perception of his reading abilities in relationship to his peers and to his perception of his ability to use specific skills in reading on the third and sixth grade levels. This study examined the accuracy of both third and sixth graders in analyzing their reading skills and reading abilities.

The population of this study was composed of all third and sixth graders from Beekwith School, Grand Rapids Public Schools, Grand Rapids, Michigan. There were 45 third graders and 38 sixth graders in the sample.

The Coopersmith Self-Esteem Inventory and the Self-Analysis Reading Test, developed for this study, were administered to all the third and sixth graders as a group test. The Bader Individual Reading Analysis was administered to each student individually. Testing was completed during the first two weeks in November 1977. Scores from the Reading Sub-test of the Metropolitan Achievement Test, administered during the Spring of 1977, were obtained from the permanent records for the purpose of determining accuracy of response on Part 1 of the Self-Analysis Reading Test. Both group tests were read orally so that reading vocabulary would not be a problem.

The hypotheses were tested using nonparametric correlations, specifically, the Spearman Rank Correlation Coefficient and the Mann-Whitney U Test. Statistical information was obtained from the Michigan State University Computer and Data Processing Center using the SPSS-Statistical Package for the Social Sciences, Vogelback Computer Center, Northwestern University, Version 6.5, MSU, September 16, 1976. The .05 level of confidence was adopted as being significant for the purpose of this study.

Three research hypotheses were developed for study. Operational null hypotheses were derived from each of the research hypotheses. The three hypotheses were:

- I. There is a relationship between students' self-concept and the accuracy of their perceptions of reading ability in relationship to their peers.
- II. There is a relationship between third and sixth grade students' perceptions of their ability to use specific skills in reading and the accuracy with which they use those skills.

Major Findings

Data were submitted to analysis of covariance. The adjusted estimate of the treatment effect on the STEP posttest of listening was 10.59, with a standard error of 3.05, favoring the experimental group ($F = 12.03$, p less than .002), and was significant at the .05 level.

The adjusted estimate of the treatment effect on the STEP reading test resulted in a difference between the groups of 8.9, with a standard error of 2.89, favoring the experimental group ($F = 9.49$, p less than .005), and was significant at the .05 level.

The adjusted estimate of the treatment effect on the NCTE critical reading test, A LOOK AT LITERATURE, was 3.9, with a standard error of 2.02, favoring the experimental group ($F = 3.66$, p less than .07), which did not reach the .05 level of significance.

Conclusions

It appears that instruction in critical listening should be included in reading instruction in the elementary school.

Children's literature appears to be an effective medium for improving critical listening, critical reading and general reading comprehension.

Direct instruction in critical listening in which select literary materials are used appears to improve subjects' positive attitudes toward reading, as well as abilities to think and respond critically to literature.

RELATIONSHIP BETWEEN RECEPTIVE COMMUNICATION MODALITY PERFORMANCE AND SELECTED LEARNER VARIABLES

Order No. 7909653

GAINES, Margaret Ann, Ed.D. East Texas State University, 1978. 134pp. Adviser: James B. Wilson

Purpose of the Study: This study investigated the secondary student's receptive communication modality performance, as measured by accuracy of recall, and its relationship to reading achievement grade level, reading potential grade level, and ability by sex.

Procedure: Ninety-two students in the ninth, tenth, eleventh, and twelfth grades (forty-six males and forty-six females) were randomly assigned, by reading achievement grade level, to one mode of presentation (auditory or visual) and to one mode of response (oral or written). Accuracy of recall was measured with an auditory or a visual cloze test over the exact prose presentation passage. A subject in the auditory presentation group was exposed to the auditory cloze test. A subject in the visual presentation group was exposed to the visual cloze test. The cloze test score, reading achievement grade level, reading potential grade level, and ability by sex were statistically examined with the independent t test and with analysis of variance for difference and interaction.

Findings: There was a significant difference between the modes of presentation. There was no significant interaction between the modes of presentation and reading achievement grade level, reading potential grade level, or ability by sex. There was significant interaction between the mode of presentation and the mode of response. There was significant difference between levels of reading achievement and between levels of reading potential. There was no significant difference between the ability of the males and of the females.

Conclusions: For this group, the visual presentation was the more efficient mode. The mode of presentation was not influenced by reading achievement grade level, reading potential grade level, or ability by sex. The visual-written presentation/response was the most effective method. The auditory-written presentation/response was the least effective method. The students in the highest reading achievement grade level group performed significantly better than those in the lowest reading achievement grade level group, but not significantly better than the students in the average reading achievement grade level group. The students in the average reading achievement grade level group performed significantly better than those in the lowest reading achievement grade level group. The highest reading potential grade level students performed significantly better than the average and the lowest reading potential grade level students. The students in the average reading potential grade level group did not perform significantly better than those in the lowest reading potential grade level group. Although there was no significant difference between the ability of the males and of the females, the females attained a larger mean score than the males.

HEMISPHERIC LATERALITY AND MOTOR LATERALITY IN FOUR LEVELS OF READING ACHIEVEMENT

Order No. 7910917

GARREN, Richard B., Ed.D. The University of Texas at Austin, 1978. 142pp. Supervisor: Waneen Wyrick Spirduso

Since 1937 there has been a great deal of research in an attempt to determine if incomplete hemispheric lateralization is related to dyslexia in children. However, the results of these investigations have been extremely contradictory, with many investigators finding such a relationship to exist, and just as many others finding no such relationship.

The contradictions must lead to several considerations. The considerations, addressed by this study, include the possibility that the concept of a relationship between reading deficiency and laterality is not valid; the methods used for determining laterality are not appropriate; and that the greatly varying methods of defining dyslexia have contributed to the contradictory research findings. Two of the more popular methods for determining laterality have been tachistoscopic half-field presentations and hand preference inventories. Dyslexia has been defined as a reading deficit ranging from six months to two years.

The purpose of this study was to determine if motor laterality as determined by differential proficiency of the hands, is related to reading deficiencies. A second purpose was to determine if motoric laterality can be used as efficiently as tachistoscopic half-field presentations to determine hemispheric laterality. The final purpose was to determine if incomplete hemispheric lateralization is related to all levels of reading deficiency or only to the severe cases.

Eighty white, male children between the ages of 8 to 10 years were divided into four reading level groups on the basis of the difference between their chronological and reading age, as determined by the reading recognition subtest of the Peabody Individual Achievement Test. All subjects were also administered a tachistoscopic half-field presentation and the Fitts tapping task at four levels of difficulty.

The results of an analysis of variance indicated that the motor laterality scores of the Fitts tapping task do not differ among any of the four reading groups. The analysis of variance further indicated that there was a difference among the reading groups on the tachistoscopic half-field presentation scores, with the difference between the scores of the left and right visual half-fields becoming less as the reading deficit increased. However, this difference only became significant when the reading deficit was eighteen months or more. The results of a Pearson Product Moment Correlation indicated that there was no significant correlation between the tachistoscopic half-field presentation and the Fitts tapping task.

TEACHER KNOWLEDGE AND STUDENT READING ACHIEVEMENT: SPECIFICALLY TEACHER KNOWLEDGE, TEACHING EXPERIENCE AND COLLEGE HOURS IN READING AND THEIR RELATIONSHIP TO STUDENT READING ACHIEVEMENT

Order No. 7901589

GEHBAUER, Sharron Ann, Ed.D. Brigham Young University, 1978. 95pp. Chairman: James W. Dunn

The purpose of this study was to determine if a relationship existed between teacher knowledge, teaching experience, and teachers' college hours in reading and student reading achievement. Teacher knowledge was determined by the use of the Inventory of Teacher Knowledge of Reading and student gains were determined by the use of the Stanford Diagnostic Reading Test, Forms W I and W II. The study was conducted for five months in grades four, five and six in four schools of the Millville School District, St. Louis, Missouri. The population consisted of thirty teachers, ten each at grades four, five and six, and their respective seven hundred twenty-two students.

Gains were analyzed by analysis of covariance. Teacher knowledge and teaching experience were found to have an effect on student gain in vocabulary at grades five and six. Teacher knowledge, experience and college hours did not have an effect on student gain in comprehension. Other teacher variables not isolated in this study were found to have an effect on student gain in comprehension.

WORD RECOGNITION ABILITY OF REFLECTIVE AND IMPULSIVE SECOND GRADE STUDENTS

Order No. 7902532

GLASS, Esther Wigden, Ed.D. Hofstra University, 1978. 131pp.

This study investigated the relationship between the R-I cognitive style and word recognition ability of second grade children. It was hypothesized that a Reflective or an Impulsive cognitive style would tend to influence one's ability in learning to recognize or decode words, an important skill in reading. Therefore, the R-I cognitive style was considered to be a potentially significant variable in reading achievement.

All second grade students in one school within a public school district on the eastern end of Long Island were the potential subjects for the study. However, only those who could be clearly identified as Reflective or Impulsive were actually included as subjects. In addition, intelligence was statistically equalized. A total of 104 second graders, fifty-two (52) Reflec-

tive and fifty-two (52) Impulsive, constituted the sample. The pupils attended the school during the months of February through June of 1978.

Three criterion tests were administered; (1) The Matching Familiar Figures Test (MFF), the measure of R-I which was individually administered to all second grade students in the school, (2) The Otis-Lennon Mental Ability Test, the measure of intelligence, administered to all students who had been identified as Reflective or Impulsive in the second grade, in small groups, (3) The Devised Word Recognition Test, a measure of word recognition ability developed by this investigator for the study. The test consists of two lists of twenty (20) words and two sets of paragraphs, all individually administered.

Five null hypotheses and two exploratory questions were established for the investigation. Hypotheses One and Two predicted no relationship between Reflective and Impulsive second grade children when they read words in list form and then words within the context of paragraphs. Hypotheses Three and Four predicted no difference between Impulsive children when they read words in and out of context and no difference when Reflective children read in and out of context. The fifth hypothesis predicted that there would be no difference between the Reflective and Impulsive subjects in the types of errors they made as they read words within context. Errors were categorized into ten types which had been established by Kagan in an earlier study. The ten error categories were: Mispronunciations, Meaningful substitutions, Non-meaningful substitutions, Self corrections, Skipped lines, Intrusions, Intentional omissions, Impulsive omissions, and Suffix errors.

The two exploratory questions raised by this investigator concerned: (1) the question of whether boys and girls were different in their word recognition achievement when words were in and out of context, and (2) whether the top twenty-five percent and poorest twenty-five percent achievers in reading, based on teacher judgment, fell into the Reflective or Impulsive cognitive style.

The second grade population of one elementary school were first tested on the MFF to determine their placement on the R-I scale. Of the one hundred and eighty-six (186) second graders, one hundred and fourteen (114) were identified as Reflective or Impulsive. In order to establish two groups, one Reflective and one Impulsive, of equivalent intelligence, the Otis-Lennon Mental Ability Test was administered. In this way, two groups of equivalent intelligence were established consisting of fifty-two (52) Reflective children and fifty-two (52) Impulsive children. Each of these children was then administered the Devised Word Recognition Test. One word list and one set of paragraphs was read by each child. Errors made by the subjects were recorded by the examiner. The order of the reading of the word lists and paragraphs was alternated so that an equal number of students read first from the paragraphs. The number of errors made on the word lists and paragraphs was calculated. Only those words which appeared on the word lists were calculated for errors in the paragraphs. When the errors made were categorized, all words within the paragraphs were considered for error type.

A Split-Plot Analysis was computed with significance set at the .05 level and applied to test four of the five null hypotheses. To test the fifth hypothesis, ten t-tests were applied to the number of errors made in each of the ten error categories by the Reflective and Impulsive groups. Chi-square analyses were applied to the data in order to test for the exploratory questions.

Findings revealed no significant differences between the R-I groups in the number of errors made either on the list of words or on the paragraphs read. In addition, no significant differences were seen when the Reflective and Impulsive subjects read words in list form or in paragraph form. In examining the number of errors made by both groups of subjects in the ten error categories, no significant differences were found in any of the categories.

In answer to the exploratory questions, no difference was found between boys and girls in the number of word recognition errors they made in or out of context. However, there was a significantly larger number of boys in the Impulsive category

than girls although no such difference was seen in the Reflective group. A significant difference was found when the strongest readers and poorest readers of the second grade classes, as judged by their teachers, were analyzed for their R-I disposition. There were significantly more Reflective children in the best reader category than Impulsive children and more Impulsive than Reflective children in the poorest reader category.

On the basis of the findings, no evidence was found that the R-I cognitive style had a significant relationship with word recognition performance of second grade children. The MFF was not found to be a predictor of strength or weakness in word recognition except for extremely good or poor readers.

A COMPARISON OF THE WORD RECOGNITION SKILLS OF LEARNING DISABLED CHILDREN AND TWO GROUPS OF AVERAGE READERS

Order No. 7910615

GRAHAM, Stephen Edward, Ed.D. University of Kansas, 1978. 161pp.

1. Statement of the Problem. Expert and clinical judgment indicates that learning disabled children exhibit difficulty in the use of word recognition skills, but research examining the word recognition skills of learning disabled children is lacking. The word recognition skills used by learning disabled children have not been clearly investigated or defined and it has not been demonstrated that learning disabled children have greater difficulty than average children in the use of word recognition skills. Therefore, this study was undertaken to investigate the differences between the word recognition skills of learning disabled children evidencing reading problems (LD), average readers with equivalent reading ability (YN), and average readers with an equivalent chronological age (ON).

2. Subjects. The study consisted of three groups of 15 subjects each. Subjects in all three groups scored within the range of + one standard deviation on a group or individual intelligence test administered during the preceding two years. Subjects in the LD and YN groups scored between 2.8 and 3.7 on the Comprehension Subtest of the Stanford Diagnostic Reading Test, Level 1, (SDRT I). Subjects in the YN and ON groups received no special services. In addition, the LD group met the following requirements: (1) were fourth, fifth, and sixth grade students receiving learning disabilities services and (2) were rated independently by three experts as meeting the U.S.O.E.'s definition of learning disabilities. The YN group was composed of average third graders, while the ON groups was composed of average fifth graders.

3. Procedures. The procedures consisted of two assessment sessions, five training sessions, and reliability measures. During the first assessment session, each subject was individually administered sections I-V of the Sundbye Minimal Contrast Phonics Test (SMCPT). The SMCPT provided a measure of the subjects non-text word recognition skills. During the second assessment session, each subject was individually administered an oral reading sample. Analysis of oral reading miscues indicated in-text word recognition proficiency; the ability of the reader to use graphic, semantic, or syntactic cues in connected reading; and the ability of the reader to detect in-text word recognition errors and successfully correct those errors. The training sessions consisted of training examiners in the collection and analysis of the data. Since the SMCPT and the oral reading sample are informal measures, it was necessary to establish scoring reliability for these instruments. Eleven percent of the tests were independently scored by two examiners, and the results indicated that examiners were consistent in their administration and scoring of the two instruments.

4. Results. No significant differences were found between the LD, YN, and ON groups on: mean score on the SMCPT, I-V; mean percent of substitution miscues which were graphically, semantically, or syntactically acceptable; mean percent of miscues successfully corrected; and mean percent of miscues unsuccessfully corrected. The LD and ON groups differed on the mean number of oral reading miscues produced on an oral reading sample.

5. Conclusions. The LD group did not differ from the average readers on: (1) a measure of non-text word recognition skills, (2) the ability to use graphic, semantic, or syntactic cues in recognizing words in text, (3) and on the ability to detect in-text word recognition errors and successfully correct those errors. However, the LD and ON groups differed on in-text word recognition proficiency. This would suggest that learning disabled children evidencing reading problems and average readers use similar non-text and in-text word recognition skills, but that learning disabled children are less efficient in the use of those skills. In addition, the educational implications of the findings were discussed and a profile of the word recognition skills of learning disabled children was presented.

THE RELATIONSHIP AMONG SELECTED WORD ATTACK SKILLS, SELECTED COMPREHENSION SKILLS, SELECTED LISTENING SKILLS, AND INTELLIGENCE

Order No. 7906319

GREENFIELD, Alton Lee, Ph.D. University of Minnesota, 1978. 102pp.

Purpose

The purpose of the study was to investigate the extent to which certain word analysis and word recognition skills relate to the literal and inferential aspects of comprehension among fifth grade children. Also of concern was the relationship of listening comprehension to reading comprehension and the extent to which intelligence influences these relationships. Stated in question form, the study attempted to answer the following:

1. What is the relationship of intelligence to selected word analysis and word recognition skills, to selected comprehension, and listening skills?
2. What is the relationship of word analysis and word recognition skills to literal and inferential comprehension of the passages read?
3. What is the relationship of literal comprehension to inferential comprehension of passages read?
4. What is the relationship of literal and inferential comprehension of passages read to listening comprehension of passages heard read?
5. To what extent will the interrelatedness of skills among domains differ among good and poor readers?

Procedures

Data required to complete this study were obtained from a sample of 109 fifth grade students from an elementary school in a large urban district. A cross-section of students from various socioeconomic levels was obtained. The five test measures administered to obtain the data were 1) selected subtests of the McCullough Word-Analysis Tests, 2) an investigator-devised word recognition (vocabulary) test, 3) an investigator-devised reading test, 4) an investigator-devised listening test, and 5) the Lorge-Thorndike Intelligence Tests.

The analysis of the data utilized the techniques of 1) descriptive statistics, 2) the Pearson product-moment correlation to determine the extent of the relationships existing between word analysis and word recognition skills, reading comprehension, listening comprehension, and intelligence, and 3) the z transformation test to determine the strength of significant correlations between good and poor readers.

Conclusions

Based on the findings, the following conclusions were made:

1. A significant positive linear relationship exists between intelligence and word analysis skills (.27 to .65).
2. A significant positive linear relationship exists between verbal intelligence and word recognition (.79).
3. A significant positive linear relationship exists between intelligence and reading comprehension for good readers (.23 to .55) but not for poor readers (.09 to .30). This

positive relationship between intelligence and reading comprehension is significantly stronger for good readers when good and poor readers are determined by a word recognition test.

4. A significant positive linear relationship exists between intelligence and listening comprehension for good readers (.25 to .55) but not for poor readers (.15 to .33). This positive relationship between intelligence and listening comprehension is significantly stronger for good readers when good and poor readers are determined by a word recognition test.
5. A significant positive linear relationship exists between the word analysis skills and the ability to recognize words (.35 to .69).
6. The means of the word recognition test and the word analysis tests differ significantly for good and poor readers and the linear relationship between the word analysis skills and the ability to recognize words differs for good and poor readers.
7. A significant positive linear relationship exists between word recognition ability and reading comprehension. This relationship is .76 for literal comprehension and .52 for inferential comprehension.
8. A significant positive linear relationship exists between the word analysis skills and reading comprehension (.15 to .65). This linear relationship differs for good and poor readers.
9. A significant positive linear relationship exists between literal reading comprehension and inferential reading comprehension (.69). This significant positive relationship exists for good readers but not for poor readers when good or poor readers are determined by the reading measure.
10. A significant positive linear relationship exists between reading comprehension and listening comprehension (.63 to .66). This significant positive relationship is stronger for good readers (.57 to .72) than for poor readers (.23 to .43).
11. The means of the reading test and the listening test differ significantly for good and poor readers.

AN EXAMINATION OF WISC SUBTEST SCORES AS CORRELATES OF READING ACHIEVEMENT OF LEARNING DISABLED ADOLESCENTS

Order No. 7913853

HOBGOOD, Linda Diane Jones, Ed.D. Northeast Louisiana University, 1978. 96pp.

The study examined the relationships of Wechsler Intelligence Scale for Children (WISC) subtest scores of learning disabled secondary students to vocabulary, comprehension and total reading gains on the California Achievement Test (CAT). The subjects were ninety-one learning disabled students, grades seven through twelve, who were evaluated and diagnosed by competent authority teams from the Ouachita Parish School System and the Special Education Department at Northeast Louisiana University (NLU) in Monroe, Louisiana.

The students were referred to special resource rooms in the Ouachita Parish and Monroe City School Systems or in clinical settings at NLU. All students were instructed by participants in a learning disability certification program sponsored at NLU by Project HOLD (Helping Operation in Learning Disabilities), a secondary special education project funded by the United States Office of Education, the Bureau of Education for the Handicapped and Title VI-G.

Posttest gains or losses in school months were computed for each student and a canonical analysis was applied to the resulting data in order to determine whether any subtest scores on the WISC correlated with reading achievement subtest gains on the CAT.

Results of the study revealed no significant correlation at the .01 nor at the .05 levels of significance. However, had a larger sample size been possible, data trends suggested several possibilities for significance at the .05 level. Important findings were: (1) positive correlations were found among

three WISC subtests (Information, Comprehension, and Picture Arrangement) and the CAT Total Reading score gain at the .0639 level of significance; (2) positive correlations were found among five WISC subtest scores (Information, Similarities, Comprehension, Picture Completion, and Picture Arrangement) and Reading Vocabulary at the .0858 level of significance.

DISABLED READERS' CONCEPT OF "A WORD".

Order No. 7903912

HUFFMAN, Gail McKnight, Ed.D. University of Missouri - Columbia, 1978. 93pp. Supervisors: Veralee B. Hardin, Neila B. Pettit

This study investigated second-, third- and fourth-grade disabled readers' conceptual understanding of "a word" when presented visually and auditorially. Forty-two children, divided into groups of 14 students from each grade level, were drawn from three elementary schools in Columbia, Missouri. All subjects had an IQ of 85 or above, according to the results of the Slosson Intelligence Test. Disabled readers were identified by matching each subject's reading achievement, as measured by the Gates-MacGinitie Reading Test, to the results of the Bond and Tinker Reading Expectancy Formula. Subjects were randomly selected from those who met criteria (0.66 months or more below expectancy in grade two; 0.75 months or more below expectancy in grade three; and 1.0 year or more below expectancy in grade four).

Prereading tasks and test stimuli were presented to each child individually. Test stimuli consisted of randomly ordered examples of seven classes of auditory stimuli and seven classes of visual stimuli. Subjects were randomly assigned to first receive either the auditory stimuli or the visual stimuli.

A 3 (grade level) x 7 (auditory stimulus class) x 7 (visual stimulus class) univariate analysis of variance with repeated measures on the auditory and visual stimulus class factors was used to analyze the data. The data were first analyzed in terms of the number of correct responses given by the subjects at each grade level for each of the 14 classes. A correct response was "yes" when the subject was presented with either a short or a long word and "no" when the subject was presented with any of the remaining classes of stimuli.

Additionally, the data were analyzed within each grade level group relative to the number of children who knew whether a particular type of stimuli represented "a word." A child was classified as knowing the correct concept if the response was "yes" to all five presentations of both long and short words in both auditory and visual presentations and if the response was "no" to all presentations of stimuli other than single words. The data were converted to binary form by coding all of a subject's responses to a class of stimuli as "1" if the subject demonstrated knowledge of the concept according to the above criterion and "0" if the subject did not.

The first analysis revealed that as a total group disabled readers gave significantly fewer correct responses to isolated letters or phonemes, syllables and long words than to the other classes of stimuli. Within the classes of phonemes and letters and syllables and long words, disabled readers gave significantly fewer correct responses to phonemes and to syllables when presented auditorially than to letters and syllables presented visually. The subjects also gave significantly fewer correct responses to long words when presented visually than when presented auditorially. The second analysis indicated that significantly fewer subjects at grade level two responded correctly to all examples in a stimulus class than at grade levels three or four.

Conclusions: The findings of this study led to the following conclusions: (1) A significant number of disabled readers at the second-, third- and fourth-grade levels indicate a lack of mastery of the concept of "a word." (2) As disabled readers progress from second grade to grades three and four, they indicate that they are closer to the attainment of the concept of "a word." (3) The method of presentation (auditory or visual) has a significant effect on the ability of disabled readers to respond correctly to certain stimuli. A strong possibility exists that responses will be affected by the degree of meaning attached to the stimuli.

METALINGUISTIC AWARENESS AND CONSERVATION: THEIR RELATIONSHIP, DEVELOPMENT, AND USE AS PREDICTORS OF READING ACHIEVEMENT

Order No. 7900902

JEWELL, Alyce Post, Ph.D. University of Maryland, 1978. 237pp. Supervisor: Dr. Robert V. Duffey

The purpose of this study was to investigate metalinguistic awareness and conservation in young children during the initial stages of reading instruction. The term metalinguistic awareness as used in this study was limited to measures of the child's ability to speak about or make judgments about written language or spoken language directly related to written language.

Research questions centered on four areas: the relationship of metalinguistic awareness to conservation; the development of the two factors during the time of initial reading instruction; the use of scores on metalinguistic awareness subtests and conservation tasks as predictors of first-grade reading achievement; and the influence of school program on either factor.

The study was begun in May with 124 kindergarten subjects from five schools in a large suburban Maryland county. Each child was tested individually with a Metalinguistic Awareness Battery (MAB) and the Concept Assessment Kit - Conservation (CAK-C), Form A. The MAB and CAK-C were administered to each subject again in October and in December of first grade. The Peabody Picture Vocabulary Test was administered in November. A group test of reading achievement, the Gates-MacGinitie Reading Tests, Primary A, Form 1, was administered in January. A total of 105 children completed the study.

Bivariate correlations were performed to investigate relationships among variables. Stepwise multiple regression was computed to investigate the relationship of combined variables to reading achievement scores. A one-way analysis of variance was computed to determine the significance of differences among schools at the initial and final testing.

Correlations between MAB subtest scores and CAK-C scores ranged from .11 to .45 at the initial administration of the batteries. All correlations were significant beyond the .01 level except the correlation between conservation and the Graphemic Awareness subtest.

The relationship between the MAB and CAK-C total score was stable, varying between .44 and .48 for three administrations of both batteries.

A gradual increase in MAB subtest scores was observed. Increasing awareness of metalinguistic terms was noted, but wide variations among children were present at each testing.

MAB subtests given in kindergarten produced correlation coefficients with reading achievement which were significant beyond the .01 level for all subtests. Correlations ranged from .77 for the Phonemic Awareness subtest to a low of .51 for the Graphemic Awareness subtest. Three subtests combined in a regression equation to account for 75% of the variance in the criterion score ($R = .8649$). Conservation scores did not make a significant contribution to the prediction of reading achievement.

Significant differences were found among schools at both the initial and final administrations of the MAB, and at the final administration of the CAK-C. The amount of change over time was not significantly different among schools.

The findings of this study suggest that there may be an order of difficulty of facets of metalinguistic awareness related to written language, beginning with the smallest unit, the letter, from its recognition as a unique symbol to awareness of its function in representing oral language. Mature reading processes described by Goodman may already be reflected in the reading of some first-grade children, as indicated by the use of prediction from combined graphic and semantic/syntactic cues.

There appears to be some factor which is tapped by both conservation tasks and metalinguistic tasks which is shared. This may be a catalyst to reading development rather than a prerequisite to the acquisition of reading skills.

Implications for instruction centered on the wide range of abilities apparent in each school at each testing and strategies which might enhance the development of metalinguistic awareness. Implications for research were also considered.

RELATIONSHIP BETWEEN SPEECH COMMUNICATION CENTRISM AND READING ACHIEVEMENT

Order No. 7818652

JOHNSON, John Richard, Ph.D. University of Denver, 1978. 94pp.

The purpose of the present study was to develop and test the formal and material validity of a middle range theory designed to explain and predict the relationship between speech communication egocentrism and reading achievement. Speech communication egocentrism was conceptualized as the degree to which a speaker takes into account the information and comprehension needs of the listener while engaged in encoding spoken symbolic messages intended for the listener. Reading achievement was identified as the level at which one can read silently with comprehension. The theory predicted that there would be an inverse relationship between elementary school children's levels of speech communication egocentrism and reading achievement. The initial testing of the theory's formal and material validity resulted in the confirmation of formal but not material validity. Therefore, a research hypothesis was developed to test the material validity of the theory. The research hypothesis was:

There is a negative correlation between elementary school children's levels of speech communication egocentrism (as measured by Greenspan's Matrix Test of Referential Communication) and reading achievement (as measured by the Metropolitan Achievement Test: Reading Subtest).

The hypothesis was tested with a sample of elementary school children enrolled at Hutchinson Elementary School, Lakewood, Colorado. Fifteen males and fifteen females were randomly selected from each grade level (first through sixth). This resulted in a total sample population of 180 students.

Pearson product moment correlations computed to determine the association between speech communication egocentrism and reading achievement by grade level were: (1) grade one, $r = -.09$ ($p < .316$); (2) grade two, $r = .56$ ($p < .001$); (3) grade three, $r = -.60$ ($p < .001$); (4) grade four, $r = -.45$ ($p < .006$); (5) grade five, $r = .45$ ($p < .006$); and (6) grade six, $r = -.67$ ($p < .001$).

Owing to the significant moderate correlations the hypothesis was accepted for elementary school children in grades two, three, four, five, and six.

The correlation coefficient for the first grade, although negative, was low and statistically nonsignificant. Therefore, the hypothesis was not supported for elementary school children in grade one.

A supplementary analysis was performed to determine if males and females differed significantly with regard to the relationship between speech communication egocentrism and reading achievement. No support was found for a gender difference.

Two explanations were offered as to why the research hypothesis was not supported for the subjects in the first grade. The first possible explanation concerned the necessity of heterogeneous scores for the production of a correlation. Given the relative homogeneity of the first grade reading achievement scores this could have influenced the degree of association between speech communication egocentrism and reading achievement.

The second possible explanation was discovered upon examination of the correlations between speech communication egocentrism and the two reading achievement subtests, word knowledge (reading vocabulary) and reading (sentence and paragraph comprehension). The correlation coefficient for speech communication egocentrism and word knowledge in grade one was $r = -.25$ ($p < .089$). The correlation coefficient for speech communication egocentrism and reading in grade one was $r = .06$ ($p < .382$).

The difference between the two subtest correlations in the first grade could be attributed to the relative experience of the subjects with word knowledge or single word reading and the relative inexperience of the subjects with reading or sentence and paragraph comprehension. The possibility exists that a moderate or strong correlation could be established between speech communication egocentrism and reading achievement if the first grade subjects were exposed earlier to reading acquisition.

In summary, the findings of the study permitted the proposed theory to claim both formal and material validity with the reservation that the material validity was limited to elementary school children enrolled in grades two through six.

RELATIONSHIP BETWEEN LEARNED HELPLESSNESS AND READING ACHIEVEMENT IN FOURTH GRADE

Order No. 7817310

KATZ, Gail S., Ph.D. Temple University, 1978. 140pp.

The effects of controllability and noncontrollability of reinforcement on learning were compared in fourth grade higher achieving and lower achieving readers in order to determine whether the two groups differed in learned helplessness.

The subjects were 80 boys (48 higher achieving readers and 32 lower achieving readers) selected from the entire population of fourth grade boys in two Philadelphia parochial elementary schools.

Intelligence and reading achievement scores were derived from the Educational Development Series. Conditions of controllability and noncontrollability of reinforcement were created by manipulating reinforcement schedules on a two-choice discrimination learning task so that some subjects in both groups received a solvable problem and some an unsolvable problem. Some subjects did not receive the initial discrimination learning problem. Performance on a subsequent, solvable discrimination learning task, employing two geometric shapes of different sizes and colors, was administered to all subjects to measure the effects of controllability and noncontrollability on higher achieving readers' and lower achieving readers' learning.

The following hypotheses were tested:

In their performance on the second discrimination learning task:

1. Subjects who have received a solvable problem on the first discrimination learning task will perform better than subjects who did not receive the initial discrimination learning task; these subjects will, in turn, require fewer trials to learn than those who have received an unsolvable problem on the first discrimination learning task (solvable < no problem < unsolvable).
2. Higher achieving readers will perform better than lower achieving readers when both groups have received an unsolvable problem on the first discrimination learning task.
3. Higher achieving readers will perform better than lower achieving readers when both groups have received no prior discrimination learning problem.
4. There will be no difference between the two groups of readers when both have received a solvable problem on the first discrimination learning task.

A two-way analysis of covariance, with intelligence test scores as a covariate, was employed to analyze discrimination learning scores (trials to criterion). There were two levels of reading achievement and three levels of reinforcement contingency.

Hypotheses 1 and 3 were not confirmed. Hypotheses 2 and 4 were confirmed. However, within each group of readers, means were not ordered as expected (i.e., solvable < no problem < unsolvable). For higher achieving readers, they were: unsolvable problem < solvable problem < no problem. For lower achieving readers, they were: no problem < solvable problem < unsolvable problem.

An initial success or failure experience on a learning task negatively affects lower achieving readers' later learning. An initial success or failure experience has a positive effect on higher achieving readers' later learning.

Higher achieving readers' prior learning experience whether successful or unsuccessful, may provide them with a cognitive strategy which aids their subsequent learning.

Higher achieving readers appear to take action to change things following a failure. This may be the result of their assuming responsibility for outcomes in the learning setting and their perception of personal control over reinforcement.

Higher achieving readers may require a "warm-up" prior to learning in order to motivate them to perform most efficiently.

Regardless of prior learning experience (success or failure), fear of failure and anxiety may negatively affect lower achieving readers' subsequent learning performance. The initial experience, whether success or failure, may signal the start of an anxiety-provoking situation.

Tasks requiring changes in learning sets may negatively affect lower achieving readers' learning.

Past history in the academic setting may develop an expectancy of failure in lower achieving readers and an expectancy of success in higher achieving readers.

THE RELATIONSHIP BETWEEN THE VESTIBULAR SYSTEM, DYSLEXIA, AND READING IN A SELECTED POPULATION: A CLINICAL STUDY

Order No. 7907103

KEATING, Catherine Louise, Ph.D. The University of Michigan, 1978. 146pp. Co-Chairmen: Wanda O. Milburn, William M. Crutckshank

The primary purposes of this study were: (1) to investigate the effects of caloric-evoked nystagmus in a group of adolescent dyslexic males and a group of adolescent non-dyslexic males, and (2) to evaluate subject differences on a series of motor function tests purported to indicate vestibular sensitivity. Each of the non-randomly selected subjects was exposed to electro-nystagmographic recording of bithermal caloric stimulations and the resulting protocols subjected to a digitized computer analysis. A high speed cinematographical procedure was used to evaluate the dyslexics and their controls in maintaining the 0° upright position without vision under conditions of feet in parallel (Romberg) and feet in tandem (Mann) positions. In addition, the subjects' ability to execute--with and without vision--finger-nose (dysmetria), finger-object and finger-arm (diadokokinesic) maneuvers, as well as arm-leg opposition on a forward gait maneuver were all filmed. Hand tracing of subject movements on the films of the Romberg, Mann and Gait tests were completed by running each film through a Recordak film reader. Graph paper affixed to the Recordak was used to calibrate deviations from 0° upright. All function tests were further subjected to subjective viewing by two judges and coded independently, resulting in 100% reliability.

Study findings demonstrated that:

1. There were no statistically significant differences between the dyslexic and the non-dyslexic groups on the slow phase of the caloric-evoked nystagmus. Since the slow phase of nystagmus originates in the vestibular system these findings indicate that there were no apparent functional differences in the horizontal semicircular canals of the vestibular systems between these two groups.

2. Statistically significant differences were found between the two groups on the fast phase of caloric-evoked nystagmus in response to side of the head irrigated. The dyslexic group reacted more intensely to the initial right sided caloric irrigations and demonstrated habituation to the stimulus with repeated left irrigations. For the control group the converse was true in that they reacted less vigorously to the initial stimulation but tended to show a steady increase in responsiveness with repeated stimulation. Since the fast phase originates in the brain stem and not the vestibular system this finding demonstrates central nervous system differences between the two groups.

3. On all aspects of the motor functioning tests (Romberg, Mann, Gait, Dysmetria, Diadokokinesic, and Past Pointing Tests) there were no statistically significant differences between the subjects, indicating that these tests do not differentiate between dyslexic and non-dyslexic children. Further, since these tests are purported to be indicative of vestibular processing, these results correlate with the caloric test findings and do not support a vestibular basis for dyslexia in this sample.

In general, this study does not support the contention that there is a vestibular basis to dyslexia, however, it does confirm earlier reports that there are differences at the brain stem level (as indicated by the fast phase of nystagmus) between the way dyslexic and non-dyslexic children react to stimuli.

A STUDY OF DIFFERENTIAL PERFORMANCE BETWEEN NORMAL AND POOR READERS ON IMMEDIATE RECOGNITION AND RETENTION OF VISUAL STIMULI

Order No. 7908286

KOROL, Leona Gardner, Ph.D. Saint Louis University, 1978. 220pp.

This dissertation examined the influence of four classes of visually presented stimuli on the performances of good and poor readers on a recognition and delayed recall task. The stimuli were designated as meaningful/nonlinguistic (pictures), meaningful/linguistic (words), nonmeaningful/nonlinguistic (shapes), and nonmeaningful/nonlinguistic (nonsense words). The tasks measuring recognition and delayed recall were operationally defined. No verbalization of the stimuli was required. The experimental sample consisted of 340 public school children in grades 2, 4, and six.

The study was an attempt to clarify what variables along the meaningful and linguistic dimensions would increase or decrease performances in different reader groups on a recognition and a delayed recall task. A further consideration examined was the relative importance of the linguistic and nonlinguistic quality of a stimulus in reading instruction. Therefore, various hypotheses related to reading achievement and to the qualities of the visual stimuli in the recognition and recall conditions were generated.

Children were operationally labeled as good and poor readers. The results indicated that good readers recognized all classes of visually presented stimuli better than the poor readers. However, in the delayed recall task, both groups performed equally on nonlinguistic stimuli across all grades studied. These particular findings were interpreted as support for the contention that pictures would be remembered best from the classes of visual stimuli presented. It was concluded, however, that the ability to retain pictorial representations is in no way indicative of reading performance or reading potential. Although pictorial presentations were associated with superior retention, their usefulness in the reading process itself may be suspect. Since good readers did recognize all classes of visually presented stimuli better than the poor readers, it may be concluded that the ability to pick out a target stimulus from distractor items may be a useful predictor of reading ability.

The predictive ability of the task, however, cannot in itself be established as useful without considering the linguistic quality of the stimulus. Recognizing and retaining words and nonsense words appear to be positively related to reading achievement. The meaningfulness of the stimulus appeared to influence more profoundly the recognition performance in the lower grades where learning to read occurred, without equally influencing delayed recall performance. The linguistic quality of the stimulus was associated with greater recognition and recall performances as grade level increased, thereby indicating that the capability to retain and retrieve the linguistic forms occurs after the primary reading processes have been established.

These results suggest that the quality of the stimulus must be considered when preparing reading programs for developmental or remedial programs. For the developmental program, associative learning using pictures with words appears to be contraindicated since presentation of the pictorial stimulus could interfere with the processes essential for "learning to read" the word. For remedial techniques, use of existing familiar linguistic capabilities may be of extreme utility. The visual language experiences available throughout one's environment can be a valuable adjunct in both the teaching and the remediation of reading.

TENTH-GRADE READING COMPREHENSION AND TENTH-GRADE SPELLING PERFORMANCE PREDICTION AS DETERMINED BY MULTIPLE REGRESSION ANALYSIS BASED PRIMARILY ON KINDERGARTEN TEST DATA

Order No. 7910726

LAYTON, Powell Alexander, Ed.D. Northeast Louisiana University, 1978. 145pp. Adviser: Dr. James E. Sullivan

The purposes of this study were: (1) to provide predictive insight of reading performance beyond the elementary school level through the use of standardized tests and other data; (2) to provide optimal combinations of variables which could be more beneficial in the prediction of reading performance enhancing the process of reading behavior modification; and (3) to determine the relationship of readiness for reading instruction, mental ability, sex, socioeconomic index, and student absences with tenth-grade reading performance prediction accuracy.

The group consisted of forty-nine students and was composed of twenty-five boys and twenty-four girls followed through ten years of schooling.

The test data used in the project were retrieved from the student's permanent record card located within each school and included scores from the Science Research Associates Primary Mental Ability Test, Lee-Clark Reading Readiness Test, Harrison-Stroud Reading Readiness Test, Durrell Analysis of Reading Difficulty, and the Horst Reversals Test. In addition to these data, sex of student, socioeconomic index, and student absences were the predictor variables used. The Stanford Achievement Test, Reading Comprehension and Spelling subtests, provided the data for criterion variables. A stepwise multiple regression analysis was computed using twenty-one predictor variables with two criterion variables, tenth-grade reading comprehension and tenth-grade spelling. A second run was utilized reducing predictor variables to ten for comprehension and to eleven for spelling. Attention was focused on combining the best predictors into an instrument that might be used for predicting tenth-grade reading comprehension and spelling performance. An F test at each step was performed to determine the degree of contribution each predictor variable made toward the multiple regression equation. In order of importance, variables entered in the prediction formula for reading comprehension were: Lee-Clark Reading Readiness Test, Word Symbols subtest; Harrison-Stroud Reading Readiness Test, Visual Discrimination subtest; Durrell Analysis of Reading Difficulty, Comprehension subtest; mental age; and socioeconomic index. Spelling prediction formula variables, in order of importance, were: sex; mental age; Harrison-Stroud Reading Readiness Test, Visual Discrimination subtest; Durrell Analysis of Reading Difficulty, Silent Memory and Comprehension subtests; Lee-Clark Reading Readiness Test, Word Symbols subtest; and socioeconomic index. The lack of adverse effect of student absences upon reading performance is worthy of notice.

A STUDY OF THE RELATIONSHIP BETWEEN WRITTEN SYNTACTIC FLUENCY AND SILENT READING COMPREHENSION IN MATURE READERS

Order No. 7910992

MAGEE, Mark, Ph.D. The University of Texas at Austin, 1978. 160pp. Supervisor: John G. Bordie

Purpose and Rationale

This study was an exploration of the relationship between written syntactic fluency and silent reading comprehension. Specifically, relationships of clause-level and within-clause syntactic indexes to different reading comprehension measures were investigated. The study also inquired in this way into the utility of a short sentence-combining exercise as a practical means of analyzing syntactic proficiency in mature readers and as a means of investigating the syntax/reading comprehension relationship.

The review of the literature covered relevant aspects of the question from the areas of cognitive psychology, psycholinguistics, the writing studies, and studies of syntactic proficiency reading comprehension. Specifically, the results of the

writing studies of Kellogg Hunt and John Mellon suggest that reading difficulty is due to within-clause complexity brought about by reduction of relative clauses into nonclausal nominal modifiers. This study asked the general question: What is the nature and degree of the relationship between syntactic fluency thus measured and silent reading comprehension? Also, does production of nonclausal modifiers actually relate more strongly to reading comprehension than does production of relative clauses?

Subjects

Subjects for the study were fifty bilingual junior college freshmen enrolled in a developmental reading course in a junior college in South Texas.

Procedure

Two sentence-combining exercises were used to collect a writing sample from the subjects. A pilot study was done with one of these. On the basis of the pilot study results, which showed no significant relationship between the syntactic indexes and a standardized reading comprehension test, a simpler test was made up of selected comprehension tasks from the released exercises of the reading assessment of the National Assessment of Educational Progress (NAEP).

A T-Unit analysis and a count of certain nominal modifiers, i.e., relative words, relative phrases, and relative clauses was applied to the writing sample and these indexes were correlated (Pearson's r) with comprehension scores. A thirty-item questionnaire covering educational background, language background, and reading habits was used to describe this population.

Results, Conclusions, and Implications

Correlational analysis produced highly significant, moderately strong r values between mean T-Unit length, mean clause length, and subordinate clause index with the NAEP comprehension scores, but resulted in no significant correlations when the T-Unit variables were compared to the more difficult standardized test. Mean T-Unit length was the best overall predictor. Non-clausal modifiers did produce a highly significant correlation while the relative clause count did not. Six of the seven null hypotheses were thus rejected, as the null hypothesis relating relative clauses to comprehension could not be rejected.

The investigator concluded that when appropriate level comprehension material is used, there is a highly significant correlation between syntactic fluency and reading comprehension. Also, these results supported the notion that proficiency in within-clause modifiers is positively related to reading comprehension while proficiency in relative clauses is not.

Implications of this study urge research and instructional attention to nominal modifiers as a possible avenue to diagnosis and improvement of reading comprehension ability in mature readers.

RECOGNITION OF DEEP AND SURFACE STRUCTURES BY READING LEVEL, VOICE AND TRANSFORMATIONAL STATUS

Order No. 7909100

MAJOR, Karen Paula, Ph.D. The Pennsylvania State University, 1978. 83pp. Adviser: John Salvia

This study was designed to ascertain if there were differences in the way good readers and poor readers attend to syntactic and semantic features of meaningful prose. Fifth graders, 25 good readers and 25 poor readers, read a 42-sentence story. The story was composed of 21 active sentences and 21 passive sentences. Immediately after reading the story the subjects read and responded to a recognition test. The test was composed of 30 items. The test was constructed by drawing randomly 10 active sentences and 10 passive sentences from the story. Five of each of the active and passive reversible sentences were reproduced verbatim in the test, while five each were transformed to the opposite voice. In addition, 10 foil sentences (five active and five passive) were included which had not appeared in the story.

A five-way analysis of variance was performed on the data (sex X reading group X structure scores X voice X transformational status). Sex was found to be non-significant and was excluded from further analyses. A four-way analysis of variance yielded two significant three-way interactions. Upon further analysis, the reading group X voice X transformational status interaction yielded two significant differences between the high and low reading groups; the high group exceeded the low group on untransformed active and transformed passive sentences. Further analysis of the structure X voice X transformational status interaction yielded four significant differences between deep and surface structure scores; deep structure scores were higher than surface structure scores for untransformed active, transformed active, untransformed passive and transformed passive sentences. Thus, good readers remembered both deep and surface structures better than did poor readers. Furthermore, both good and poor readers remember deep structure better than they remember surface structure.

IS A CHILD'S ORAL LANGUAGE ABILITY AT THE BEGINNING OF KINDERGARTEN A PREDICTOR OF HIS/HER PERFORMANCE ON READING READINESS TESTS AT THE END OF KINDERGARTEN? Order No. 7908060

MELTON, Martha Anne, Ph.D. Southern Illinois University at Carbondale, 1978. 122pp. Major Professor: Dr. Nancy L. Quisenberry

The Problem

This study was designed to examine the language of kindergarten children to determine if their oral language ability at the time they enter kindergarten in the fall is a predictor of their reading readiness performance at the end of kindergarten as measured by reading readiness tests. More specifically, the research questions posed were constructed to determine if the child's performance on vocabulary, expressive language, receptive language, morphological forms, and the syntax of language, as measured by number of T-units and average length of T-units, were predictive of the child's performance on reading readiness tests at the end of kindergarten.

The Sample

The sample for the study consisted of seventy-two children selected from kindergarten classes in three elementary schools in the Iowa City School District, Iowa City, Iowa.

The Procedure

Data were collected in the fall on the Peabody Picture Vocabulary Test for vocabulary, the Northwestern Syntax Screening Test for receptive and expressive language, and the Berko morphological test for morphological forms. An oral language sample was elicited from each subject and analyzed for number of T-units and average length of T-units.

Reading readiness was defined as auditory skills, visual skills, language skills, and knowledge of letter names. In May, the Harrison-Stroud Reading Readiness Profiles, the Murphy-Durrell Reading Readiness Analysis, and the Metropolitan Readiness Test were administered to the subjects. The tests were divided into components and combined to form scores for auditory skills, visual skills, language skills, and knowledge of letter names.

The four areas of reading readiness were the dependent variables, and the language measures were the independent variables. The data were analyzed by multiple linear regression (DPLINEAR) to determine the unique contribution of each independent variable to each of the dependent variables. Zero order correlations were made to determine the zero order contribution of each independent variable to each of the dependent variables. An alpha of .05 was set.

Findings

Expressive language was the single best predictor of children's reading readiness performance on all four models-- auditory skills, visual skills, language skills, and knowledge of

letter names. The other five independent variables did not show significance in the restricted models. Vocabulary showed zero order correlations to auditory skills, visual skills, and language skills. Receptive language showed zero order correlations to auditory skills, visual skills, and language skills. Morphological forms showed zero order correlations to all four reading readiness models. Average length of T-units showed zero order correlations to all four reading readiness models. Number of T-units was not significant in any of the models.

Conclusions

It was concluded from the findings in this investigation that all of the aspects of language studied, with the exception of number of T-units, were relevant as predictors of reading readiness. Vocabulary was an important factor, but one that must be viewed in the total framework of language development. Syntactic and morphological factors were also concluded to be important. The high correlation between expressive language and reading readiness factors led to the conclusion that assessment of expressive language is a valid method of determining a child's reading readiness needs. Inherent in these conclusions was the implication that reading readiness draws on the child's knowledge and use of spoken language.

AN INVESTIGATION OF THE STRUCTURE AND MODE OF CLASSIFICATION STRATEGIES OF RETARDED AND ACHIEVING READERS: A MODIFIED REPLICATION Order No. 7904838

MORGAN, Raul James, Ph.D. Ohio University, 1978. 78pp. Director of Dissertation: Dr. Milton E. Ploghoff

This research is a sharply modified replication of an earlier study by Custenborder¹ which sought to determine the significance of the following null hypotheses:

1. There is no difference between achieving and retarded readers in the use of superordinate classification structures.
2. There is no relationship between type of classification structure used and mental ability.

The test of the hypotheses involved the random selection of elementary schools and sixth grade students from these schools for the formation of the research groups. All test data were from the STS Educational Development Series.²

The research groups were:

I-A which was comprised of 25 students with IQ scores of 105 or more and reading achievement one or more grade levels above grade placement.

I-B which was comprised of 22 students with IQ scores of 105 or more and reading achievement one or more grade levels below grade placement.

II-A which was comprised of 16 students with IQ scores of 95 or below and reading achievement one or more grade levels above grade placement.

II-B which was comprised of 25 students with IQ scores of 95 or below and reading achievement one or more grade levels below grade placement.

Each student was individually examined to determine the frequency of use of superordinate classification structures. Superordinate classification in this study was regarded as the use of genuine conceptual grouping on the basis of one or more attributes common to all the items in a group. Examination was made by individually presenting two series of nine nouns each to each sixth grader in the study. The series of nouns were generated by Bruner and Olver³ while doing research on cognitive development. The series were: banana-peach-potato-meat-milk-water-air-germs-stones and bell-horn-telephone-radio-newspaper-book-painting-education-confusion. All items in each series except the last one share a common characteristic. Individual children were presented each word

orally and then typed on a small card and asked how the word presented differed from the others in the series and then if it was "like" them or "equivalent"

The data were then treated statistically to determine whether there were significant differences among the groups on the use of superordinate classification structures.

In this study there is a relationship between reading achievement or retardation and the use of superordinate classification and between mental ability and the use of superordinate classification structures. Three separate statistical treatments, Chi-square, analysis of variance, and the t-test for differences among means support the rejection of the null hypotheses. Further, the effects of reading achievement and mental ability on the use of superordinate structures of classification are separate and additive rather than multiplicative.

Although it is not the intent of this study to prove a cause and effect relationship between the use of superordinate structures of classification and reading achievement additional research should be carried out to determine whether there is a causal relationship between the two. In as much as classification skills are teachable through the use of selected curricula and instructional processes, a readily available method for the improvement of competency in reading might be at hand.

Catherine Custenbender, "An Investigation of the Mode and Structure of Classification Strategies of Retarded and Achieving Readers." (unpublished doctoral dissertation, Ohio University, Athens, Ohio, 1968).

STS Educational Development Series, Form A, (Bensenville, Illinois: Scholastic Testing Service, Inc., 1971).

Jerome S. Bruner and Rose R. Olver, "The Development of Equivalence Transformations in Children," *Society for Research in Child Development*, 28: 125-141, 1963.

THE RELATIONSHIP BETWEEN INTELLIGENCE AND TWO MAJOR CATEGORIES OF READING COMPREHENSION: LITERAL-EXPLICIT AND INFERENTIAL-IMPLICIT

Order No. 7824659

MOSLEY, Mary Hardy, Ed.D. North Texas State University, 1978. 87pp.

This study examined correlations between assessed intelligence and two major categories of reading comprehension: literal-explicit and inferential-implicit. In addition, efficiency of prediction for criterion variables was investigated by utilizing two regression models which incorporated intelligence scores squared and the square root of intelligence scores. Since it is generally accepted that the higher the assessed intelligence of an individual, the higher will be his achievement in all areas of reading comprehension, the present study sought to discover whether there was a curvilinear relationship between intelligence and the two categories of reading comprehension with the factor of intelligence statistically controlled. It was felt that the hypothesized curvilinear relationship would result in significantly better performance by brighter students on inferential questions and significantly better performance by less-bright students on literal questions.

The subjects of this study were seventh-grade students who attended the public junior high school of a small Louisiana city. The criterion for inclusion in the sample was exhibited decoding skills ability as demonstrated by reading achievement scores of not more than two years below present grade placement. Of the 152 subjects included in the final sample, 73 were male and 79 were female. The ethnicity of the group was limited to black and white subjects. The sample included 80 white subjects and 72 black subjects. This sample received the literal and inferential subtests of a standardized reading test and assessed intelligence scores were obtained through use of the Otis-Lennon Mental Ability Test.

The data generated were used to test the research hypotheses of curvilinear relationships between intelligence and both literal and inferential reading-comprehension scores. After testing the data with a first-degree, linear regression model, as well as a second-degree polynomial, curvilinear regression model, the statistical analysis revealed an F ratio of 7.87 for

literal and an F ratio of 11.82 for inferential, which indicated that the relationships were curvilinear rather than linear. Both second-degree polynomial regression models indicated a curvilinear relation at levels of significance beyond the .01 level (0.0008, inference; 0.0026, literal). The regression equations generated then provided data which were plotted on a graph to provide a visual representation of the curvilinear relationships which exist between intelligence and literal and inferential comprehension.

Although no cause and effect has been established, based on the data presented in this study and within the limitations of this study, the following conclusions seem tenable.

1. Since reading comprehension may be viewed as a thinking process, it is important to note that a relationship exists between the assessed intelligence of an individual and his performance on both literal and inferential tests of that process.

2. This study has demonstrated the curvilinear nature of the relationships hypothesized. The higher the assessed intelligence of an individual, the increasingly higher will be his performance on inferential questions. Brighter students tend to make more inferences, but they lose some detail in the process. The less bright students, on the other hand, do very well with detail questions but experience less success in making inferences concerning what is read.

This study does not imply that assessed intelligence precludes either literal or inferential comprehension in any individual. Further research may investigate the causal factors of the curvilinear relationships between intelligence and literal and inferential comprehension.

CHILDREN'S READING ABILITY AND INFORMATION RETRIEVAL

NEWMAN, Judith Marta, Ph.D. University of Toronto (Canada), 1976

A series of experiments was conducted in which children's ability to retrieve semantic items from memory was examined. Experiment I investigated age differences in the performance of various verbal acquisition tasks and subsequent retrieval of the verbal information. Sixty Grade 1-2 and sixty Grade 4-5 children of average and above average reading ability were randomly assigned to one of three acquisition tasks: Intention, Rhyming, and Categorization. The results replicated the findings with adults that semantic-associative processing produces more durable retention than manipulation of phonological aspects of words. In addition, the amount of information retrieved was shown to be a function of the age of the student.

Experiment II examined the relative effectiveness of semantic vs. structural processing for readers of different reading proficiency. Two hundred seventy-four Grade 5 students were grouped into High, Average, and Low reading levels. The students at each reading level were randomly assigned to one of four acquisition tasks: Intentional, Rhyming, Classification (Class Word - Example), and Association (Example - Example). The results indicated that the different acquisition tasks did not discriminate among readers of different reading ability on either immediate or long term retention tests. The results suggested, however, that the accessibility of specific semantic items may vary with the reading proficiency of the student. Poor readers were less successful in retrieving words from memory using task and stimulus word constraints. In addition, the time necessary to produce a response on the acquisition task was found to be significantly longer for poor readers.

Experiment III investigated the possibility that deficient semantic integration contributes to reading underachievement. Sixty Grade 5 students (20 from each reading level) were presented with eight short stories followed by recognition sentences (consisting of true and false statements, logical and pragmatic inferences), to determine whether the unskilled readers would construct implied relationships among the sentences of a story. The results showed that all children tended to respond affirmatively to the logical inferences. Taken in conjunction with their overall higher affirmative responses, however, poor readers' greater number of 'yes' responses for logical inferences was considered to be less an indication of their capacity for deriv-

ing inferences than a reflection of partial, less accurate encoding and retrieval of sentence information.

Experiment IV investigated the differences in students' ability to use language and content cues for retrieving semantic alternatives. The same sixty subjects used in Experiment III orally read a cloze passage from which 54 words had been deleted. The results indicated that poor readers a) were able to make significantly fewer exact predictions, b) tended to show a higher incidence of failures to respond, c) used less contextual information for generating predictions, and d) required significantly longer time to generate predictions. Poor readers did not, however, show cumulative loss across the passage.

The data suggest that poor readers' semantic knowledge is less accessible. The implications of a restricted semantic accessibility for reading achievement are discussed and specific educational suggestions are advanced.

THE RELATIONSHIP BETWEEN READING ACHIEVEMENT AND PIAGET'S PHASE OF FORMAL OPERATIONS FOR NINTH GRADE STUDENTS

O'NEILL, Helen Kyle, Ph.D., University of Southern California, 1978. Chairman: Professor Grayce A. Ransom

Purpose. The study was concerned with determining whether high school students' in the ninth grade, assumed to be in the fourth phase of Piaget's developmental sequence because of their chronological age, are performing at the formal operations level of his hierarchy. Examined was the relationship between reading ability and performance on the formal operations level of the Piagetian hierarchy.

Method. Subjects of the sample were all ninth grade students from one high school, and all had previously been administered the Reading Test portion of the Comprehensive Tests of Basic Skills. With the Expanded Standard Score determined to be an adequate basis for equating scores across levels of difficulty, two groups of randomly selected students were chosen. The above-level group included those students whose Expanded Standard Scores were above the District mean, and the below-level group included those students whose Expanded Standard Scores were below the District mean. The dual-instrument, Concrete-Operational Reasoning Test (Ankeny and Joyce, 1974) and Logical Reasoning Test (Burney, 1974) was administered to each group as a paper and pencil test in group setting. Results identified students as Formal, Transitional Formal, Concrete, or Below Concrete. Categories were then collapsed into Transitional-Formal and Concrete-or-Below. The two students shown to be on the line between Formal and Transitional-Formal were absorbed into Transitional-Formal. A chi-square analysis was used to develop correlation matrixes on the data collected. Correlations were computed between reading ability and performance on the Piaget-type test of formal operations. Chi-square analysis was also used to develop correlation matrixes between selected variables and performance on the Piaget-type test of formal operations. These variables were sex, college aspiration, ethnic group membership, years of formal schooling, and socioeconomic status.

Findings. The data revealed that the relationship between reading ability and performance on the Piaget-type test of formal operations was significant at the .0001 level for both the above-level group and the below-level groups. Null hypothesis 1 was rejected. No significant relationship was found to exist, however, between sex and performance on the Piaget-type test of formal operations for either the above-level group or the below-level group, and null hypotheses 2 and 3 were accepted. Those students from the sample who had indicated college aspiration were included in the investigation into that variable and its relationship to performance on the Piaget-type test. The data revealed that a relationship did exist and was shown to be significant at the .01 level. The null hypothesis 4 was rejected for the variable of college aspiration. For the selected variables of ethnic group membership, years of formal schooling, and socioeconomic status, no significant relationship was shown to exist with performance on the Piaget-type test of formal operations. The null hypothesis 4 was accepted for those variables.

Conclusions. The data appeared to warrant conclusions that reading ability is related to ability to function on the formal

operations level, that the use of tasks based on the Piagetian hierarchy is a useful method of diagnosis, and that many students aged 14 or 15 in the ninth grade may not be formal thinkers or capable of performing logical operations.

Recommendations. Recommendations for further consideration or research might be (1) replication of the study with a larger sample of ninth grade students, (2) further study to determine the relationship of other commonly used standardized tests of reading to performance on Piaget-type tests at the formal operations level, (3) the inclusion of Piaget-type tests within the routine diagnostic framework at the secondary school level, and (4) replication of the study with the sample comprised of upper division secondary school students.

(Copies available from Micrographics Department, Doheny Library, USC, Los Angeles, CA 90007.)

READING DISABILITY AND VISUAL PERCEPTION: A FAMILY STUDY

Order No. 7900492

OXFORD, Rebecca Louise, Ph.D., The University of North Carolina at Chapel Hill, 1978. 361pp. Supervisor: Kinnard P. White

The study investigated the relationship between reading disability and visual perception in 250 families (n = 1,044), half containing a reading disabled child and half containing a matched, nondisabled control child. All affected and control children were of normal intelligence and lived with both biological parents. Eight tests, three in reading and five in visual perception, were given to all 1,044 subjects.

A theoretical framework was established covering six research areas: visuoperceptual problems accompanying reading disability, developmental lag vs. deficit theories, cerebral dominance, perceptual programs for reading improvement, sex differences in reading and visual perception, and familial nature of reading and visual perception.

Of the 15 hypotheses tested, 10 were fully supported and the others partially supported. Hypothesis testing involved multivariate and univariate analysis of variance (ANOVA) and two types of correlation, Pearson and canonical.

ANOVA results gave very strong support for the predicted familial nature of reading and visual perception, with members of control families having higher test score means than members of affected families. The precise contributions of genetics and environment were undeterminable from the data.

Sex effects in ANOVA were not as clear as family-type effects. Predictably, in many subgroups males surpassed females on visual perception tests related to spatial ability, while females excelled in spelling. However, unexpected female superiority on some visual perception tests occurred in some subsamples. Sex by family type interactions occurred in the whole sample but not in any subsamples.

Within the total sample the strength of relationship between reading and visual perception was revealed by a first-pair canonical correlation of .646. Its square indicated that 41.7% of the variance in the first reading variate was explainable by the first visual perception variate. Canonical correlations between reading and visual perception were higher in affected than control subgroups for the first variate pair. Opposite results occurred for the second variate pair, which is orthogonal to the first.

Canonical variate loadings showed spelling and reading composition tests to contribute most in forming the first and second reading variates. Perceptual speed and nonverbal intelligence tests contributed most in forming the first and second visual perception variates. Overlap in visuoperceptual content and high Pearson test intercorrelations were used to explain these contributions.

Two-way ANOVA showed that males and affected families had significantly higher canonical variate score means than females and control families. This suggested that the canonical variate scores might be closely associated with reading disability, which occurs more often in males than in females and in families of reading disabled children than in families of control children.

General conclusions were presented on strength of relationship, content linkages, familial nature, and sex differences. Specific educational implications included individualization,

early treatment, screening and diagnosis, selection and use of remedial strategies, and education of relevant groups. Nine future research directions related to reading and visual perception were also discussed.

THE RELATIONSHIP OF SOCIO-ECONOMIC STATUS TO RECEPTIVE AND EXPRESSIVE LANGUAGE, LISTENING AND READING COMPREHENSION ABILITIES OF INTER-MEDIATE GRADE CHILDREN Order No. 7820417.

PALAMAR, Mary Coyle, Ed.D. The University of Rochester, 1978. 81pp.

This study was designed to measure, describe, and examine language differences among students from the working class, middle class and upper middle class socio-economic groups within a single school. A total of one hundred four subjects, evenly divided between students completing their fifth and seventh years of school were tested. Thirty-two students were from the working class, forty-two from the middle class and thirty were from the upper middle class. A battery of tests was administered to measure the following skills: receptive language, expressive language, listening vocabulary, listening comprehension, reading vocabulary and reading comprehension.

A descriptive analysis of the data revealed statistically significant differences among the three socio-economic groups from the two grade levels on all of the measured language variables. However, when the variance due to I.Q. was controlled, no statistically significant differences were found.

Conclusion

Despite the fact that all students had been educated in the same school continuously from the inception of their educational careers, definite social class patterns of achievement emerge. The relationship between social class and intelligence is so closely intertwined that as one controls for the variance associated with I.Q., this also removes the socio-economic variable.

THE RELATIONSHIP OF THE HOME LITERARY ENVIRONMENT AND THE READING ACHIEVEMENT OF LOW SOCIO-ECONOMIC DISABLED READERS Order No. 7907786

PERRY, Adrienne Mills, Ph.D. The University of Florida, 1978. 91pp. Chairperson: Ruthellen Crews

The purpose of this study was to investigate the relationship of a home literary environment and the reading achievement of low socioeconomic disabled readers.

Seventy-four students from three Orange County schools in Orlando, Florida, participated in the study. They were students in grades four, five, and six who were identified as disabled readers for their grade level. They also met the criteria of low socioeconomic subjects as they qualified for free or reduced school lunches. The children received four selected youth periodicals (alphabetically, *Daisy*, *Highlights for Children*, *Ranger Rick's Wildlife Nature Magazine*, and *Wee Wisdom*) and related teaching materials prepared by the examiner each month for eight months and were visited monthly by the examiner. Parents were directed to encourage their children to use the magazines and other materials provided.

The method of investigation was an experimental study which compared an experimental group who received selected children's periodicals and participated in a daily family reading period and a control group who did not receive any special treatment. The data were analyzed for differences in gains made in pre- and posttest scores on the *Stanford Diagnostic Reading Test*. It was hypothesized that the availability of reading materials and participation in daily family reading periods and the sex of the participants would yield no significant mean differences between the experimental and control groups.

Multivariate analyses of variance were conducted and the findings suggested that low socioeconomic disabled readers can benefit from the program provided for the experimental group.

It was also suggested that direct parental involvement in student learning experiences can result in improved student achievement.

It was further suggested that future studies investigate the feasibility of daily family reading periods, weekly visits from an examiner, and uses of other periodicals to ascertain the effectiveness of this approach to improve reading.

AN INVESTIGATION OF THE RELATIONSHIPS OF SELECTED DEMOGRAPHIC AND SCHOOL RELATED VARIABLES TO THE READING ACHIEVEMENT OF STUDENTS IN GRADES FOUR AND SEVEN Order No. 7907624

PHILLIPS, Theresa King, Ph.D. University of South Carolina, 1978. 102pp.

The purpose of the investigation was to examine the relationship of reading achievement to six variables--four were background factors: socioeconomic status (SES), sex, race, and IQ; the other two were school-related variables: teacher effectiveness (TE), and class heterogeneity (CH). The research was ex post facto.

The samples consisted of 363 fourth graders, 413 seventh graders, and 21 teachers who taught reading to the 35 classes. The investigation was conducted during the 1974-1975 school year.

To assess reading achievement, the Comprehensive Tests of Basic Skills (CTBS), Form S, Level 1, was administered to the fourth graders in the Fall of 1974 and again in the Spring of 1975. The CTBS, Form S, Level 2, was administered to the seventh graders in the Fall of 1974 and again in the Spring of 1975. A predicted reading score, obtained by correlating the CTBS Fall and Spring scores, was subtracted from obtained Spring score, and the difference was residual reading gain (RRG)--the measure of reading achievement in the investigation. The same procedure was carried out for both grades.

To assess SES, occupations were ranked according to occupational prestige of the head of the household.

Sex differences were recorded and race was either black or white.

To assess IQ, in the Fall of 1974, the Short Form Test of Academic Aptitude (SFTAA), Level 2, was administered to the fourth graders, and the SFTAA, Level 3, to the seventh graders.

To assess TE, three separate tests were required, namely, (a) teacher characteristics--administered to the 21 teachers who taught reading to the 35 classes, (b) supervisor rating of teacher efficiency--administered to the supervisors of the reading teachers, and (c) supervisor ratings of reading teachers on a semantic differential--administered to the supervisors. The scores on each of the three tests were converted to Z scores and summed, and the total score was the measure of TE.

To assess CH, in the Fall of 1974, the total reading score earned on the CTBS, Level 1, administered to the fourth graders, and the total reading score seventh graders earned on the CTBS, Level 2, were used to compute the standard deviation for each of the 17 fourth-grade and the 18 seventh-grade classes.

Simple, partial, and multiple correlation coefficients were computed. The data were also analyzed by path analysis.

In fourth grade, simple correlational analyses revealed a highly significant positive relationship between IQ and RRG, and in the seventh grade, significant relationships between the following: SES and RRG (positive), sex and RRG (negative), IQ and RRG (positive), and CH and RRG (positive).

In fourth grade, partial correlational analyses revealed significant relationships between: sex and RRG (negative), TE and RRG (negative), and CH and RRG (negative), and in seventh grade, significant relationships between: SES and RRG (negative), sex and RRG (negative), race and RRG (negative), and TE and RRG (negative).

In fourth and seventh grades, multiple correlation coefficients revealed small, positive, significant relationships between RRG and the independent variables, and can be used to predict residual reading gain.

In grades four and seven, results of data analyzed by path analysis revealed that in each stage in the analysis the error weight for the error of estimate contributed the most influence.

In fourth grade, path analysis revealed that SES influenced race and IQ, IQ influenced TE and RRG, and TE influenced CH; in seventh grade, SES influenced race and IQ, and IQ influenced CH.

With the risk of generalization it can be concluded that significant differences do exist between some of the independent variables and RRG. Information obtained has implications for program planning and instructional decisions.

THE EFFECT OF NONVERBAL IMAGERY AND VERBAL CODING AS MODES OF MEDIATION ON THE VISUAL SEQUENTIAL MEMORY OF NONMEANINGFUL FIGURES OF THIRD- AND FIFTH-GRADE CHILDREN OF DIFFERING READING LEVELS
Order No. 7911262

RICKARD, Carol Gluck, Ph.D. New York University, 1978.
123pp. Associate Professor: Sheldon B. Kastner

The purpose of this study was to test hypotheses derived from the dual coding theory of Paivio (1971), that nonverbal imagery is specialized for processing spatial information while verbal coding is specialized for processing sequential information, and Blank and Bridger's (1966) hypothesis that poor readers have a verbal coding deficit. It was predicted that visual sequential memory, as tested by recall of nonmeaningful figures in the order presented, is related to reading level and instruction to use verbal coding or nonverbal imagery as a mediational technique, and to the interaction between reading level and type of instruction. It was also predicted that recall of sequences of nonmeaningful figures is related to grade in school and instruction to use one or the other mediational technique, and to the interaction between grade and type of instruction.

Ninety (90) third-grade and 90 fifth-grade children were randomly selected and randomly assigned to three treatment conditions. Children in the Verbal Mediation condition were instructed to use meaningful labels they were taught to aid in the recall of sequences of the figures in the order presented. Children in the Visual Mediation condition were instructed to visualize, to "see" the figures, to aid their recall. Children in the Control condition received no instruction to aid their recall of the figure sequences.

Recall scores of children in the Verbal Mediation condition were significantly higher than those of children in the Visual Mediation and Control conditions at the third-grade level. At both the third- and fifth-grade levels in the Control condition, recall scores and speed of generation of labels for the nonmeaningful figures were superior for children who reported the use of verbal coding as a mediational technique when compared to those of children who reported the use of nonverbal imagery.

The recall scores of girls were significantly higher than those of boys at the third grade level, but scores of the two groups did not differ significantly at the fifth-grade level. At the fifth-grade level, girls in the Visual and Verbal Mediation conditions had higher recall scores than boys in those conditions, while in the Control condition boys outperformed girls in recall of figure sequences.

In the Control condition, while there was no difference in the speed with which third-grade girls and boys generated labels for the experimental figures, at the fifth-grade level boys generated labels significantly faster than did girls. Third-grade Control condition girls reported the use of verbal coding more frequently than did boys in that condition; while at the fifth-grade level, Control condition boys more frequently reported the use of verbal coding than did girls in that condition.

Children who reported the use of verbal coding as a mode of mediation were superior to children who reported the use of nonverbal imagery in their recall of the nonmeaningful figures in the order presented. Good readers generally reported the use of verbal coding, while poor readers generally failed to verbally decode the nonmeaningful figures. The results on the relations among mediational technique, grade, and sex, and recall were discussed from the theoretical viewpoint that with increasing age the thinking of children normally shifts from a predominantly visual mode to a predominantly symbolic mode, in which verbal cues become important.

Suggestions for further research were discussed in light of the findings that visual sequential memory was related to reading level and mediational strategy.

LOGICAL THINKING SKILLS OF LITERAL AND NON-DISCREPANT COMPREHENDERS
Order No. 7822085

ROTHENBERG, Carol Cole, Ed.D. Columbia University Teachers College, 1978. 126pp. Sponsor: Professor Miriam L. Goldberg

The main purpose of the study was to investigate the relationship between aspects of Piaget's developmental theory of the growth of logical thinking and children's ability to generate inferences from the printed page.

A review of the literature supported the fact that literal comprehension, which depends solely on the ability to deal with explicitly stated material, can be accomplished with simple cognition. The child can answer a literal question by merely reproducing the author's words without any real understanding of the text. On the other hand, inferential comprehension, which deals with implicitly stated material and requires the reader to go beyond the stated material, depends on higher levels of cognitive skills.

According to Piaget and others who have replicated his work, the main difference between children's abilities in the preoperational and concrete operational stages is their ability to carry out actions mentally. The concrete operational child has moved from intuitive thought based on unstable, inflexible judgments to thought based on logic.

The hypothesis of the study was that eight year olds of normal intelligence who were adequate literal comprehenders but performed poorly on inferential comprehension would perform at a preoperational level on logical thinking tasks.

The subjects for the study were third-graders attending a suburban school in New York. The discrepant group consisted of twelve children who missed no more than 3 literal items and were thus adequate decoders but missed a minimum of 9 out of 28 inferential items on the New York State Test in Reading. The range of item errors for the twelve nondiscrepant subjects was 0-2 on both literal and inferential question types.

Tasks assessing classification, class inclusion, seriation and transitivity were selected to measure level of logical thinking and individually administered.

In order to assess whether the two groups differed significantly in intelligence, the Goodenough Draw-A-Person Test was group administered. IQ score was used as a covariate in the analyses of group differences on the logical thinking tasks. A nonverbal intelligence test was selected for the study in order to avoid penalizing poor readers. Additional background information which was examined included SES status, health records and a Kindergarten Reading Readiness Checklist.

An analysis of covariance technique was used to compare the two groups on the four Piagetian tasks and three summary measures: Logic of Classes, Logic of Relations and Total Logical Thinking. The hypothesis of the study was sustained. There were significant effects of each of the logical thinking tasks on inferential comprehension even when nonverbal IQ was accounted for.

In addition to the quantitative analyses, a description of behavioral characteristics was noted based on the video tapes of the interviews. Generally, the nondiscrepant subjects showed evidence of organizational skills while the discrepant subjects seemed to rely on trial-and-error methods.

The discrepancy between literal and inferential comprehension was discussed in terms of common processes inherent in both inferential reading and in logical thinking. These included active structuring behavior as opposed to a passive mechanical mode; "flexibility in hindsight and foresight"; conceptual versus perceptual strategies. Finally, as the literature suggests the fully competent use of various syntactic structures appears to depend in large measure on cognitive development.

Implications for education stressed the early identification of children who perform below the expected norm on logical thinking tasks. Suggestions for further research included a follow-up of discrepant readers to assess changes related to possible academic or personal-social problems due to cognitive lag.

THE RELATIONSHIP BETWEEN CHILDREN'S OBSERVABLE BEHAVIORS AND THEIR READINESS TO READ

Order No. 7910019

WALISBURY, Helen Holland, Ed.D. Temple University, 1979. 155pp.

The primary purpose of the study was to determine the relationship between children's observable behaviors, and their readiness to read as measured by their scores on the Metropolitan Readiness Test. Are there behaviors that can be used as predictors of a child's readiness to read? Six hypotheses were stated and subsequent research questions related to each were asked. Questions regarding the relationship between reading readiness and sex; chronological age; teacher's prediction of a child's chance of success in a formal reading program; physical, emotional, mental, and social development were included in the research questions.

Procedures

Two hundred and twelve kindergarten children enrolled in eleven groups using the Strategies in Early Childhood Education developmental model served as the subjects. There were more boys than girls, they were predominately white, and the majority were enrolled in Title I schools.

Six certified teachers had received in-service training in observing and recording techniques as well as the use of materials included in the Strategies in Early Childhood Education program. They observed and recorded each child's behavior throughout the school year, and planned curricular activities that matched each child's developmental level. A report of the child's developmental level in September and in May was given to the building principal at the end of the school year. The (MRT) (Level I, form P) was administered to the children in May. All of these records were made available for this study.

A subsample (89s) developed due to problems in data collection. Teacher opinionnaires prepared for the study were completed by only three of the six teachers.

The two statistical techniques used to treat the data were the Pearson correlation and the multiple regression.

Conclusions

The results of the analyses support the primary thesis of the study that observable behaviors are related to readiness for reading, and could be used as reliable predictors for entering a formal reading program. The issue of "when children should begin to read" could be resolved by observing and recording their behavior to determine the optimum time to begin the reading process with some prognosis of success. Observable behaviors provide objective information for predicting readiness.

Significant evidence surfaced in this investigation that gives credibility to the idea that readiness for reading must be assessed by a multifactor approach. Physical, emotional, mental, and social behaviors contribute to the child's developmental level. A strong relationship between the developmental level of the child and reading readiness was exhibited throughout the study.

Chronological age, the criterion used most in schools to place children in a formal reading program, did not contribute significantly to the multiple R, it was the developmental level of the child that contributed most. This information could be the most forceful finding of the study in regard to assessment procedures used in current placement practices.

Sex, usually considered to be closely related to maturing abilities for reading readiness was not a significant factor in any of the analyses.

The child's developmental level in all areas of growth contribute to readiness for reading. By observing and recording the child's behavior on a regular basis the adult can determine the child's developmental level and match it with the developmental curriculum sequences. This could be a viable method of assessing children's readiness for reading.

THE RELATIONSHIP OF CONCRETE OPERATIONS TO COMPREHENSION IN LISTENING AND IN READING

Order No. 7906127

STAFFORD, Betsy Duck, Ed.D. Auburn University, 1978. 119pp. Director: Elizabeth G. Allen

The primary purpose of the study was to investigate the relationship between concrete operations (as defined by Piaget) and comprehension in both listening and reading in 54 selected sixth grade subjects who were enrolled in a rural Southern school and who, based upon their performance on a measure of cognitive development, were classified as concrete operational. A secondary purpose was to analyze the relationships of the demographic variables of sex and race to the primary variables, concrete operational responses and scores in listening and in reading.

Each subject was administered a battery of Piagetian tasks and the Durrell Listening-Reading Series, Intermediate Level, Form DE. The data were statistically analyzed by a Pearson product moment correlation technique and a partial correlation analysis. The criterion for significance was established at the .05 level.

Positive and significant relationships were found between concrete operational responses and comprehension scores in total listening and total reading. Correlation coefficients relating scores on the Piagetian tasks and listening were reported for the following groups: total subjects, .684 ($p < .001$); male subjects, .685 ($p < .001$); female subjects, .621 ($p < .01$); black subjects, .591 ($p < .05$); and white subjects, .597 ($p < .001$). Correlation coefficients relating scores on the Piagetian tasks and reading were found for the following groups: total subjects, .551 ($p < .001$); male subjects, .731 ($p < .001$); black subjects, .620 ($p < .01$); and white subjects, .509 ($p < .001$). Reading scores for female subjects were not significantly related to concrete operational responses.

When demographic variables were studied by means of a partial correlation analysis, the resulting significant coefficients ($p < .001$) indicated that sex was not a highly contributing variable within the context of the total sample. That the subjects of this study relied more heavily on listening than on reading while processing information was suggested by the resulting nonsignificant coefficients when the variance related to listening was removed. Implications of these findings for elementary education were given in the concluding chapter.

THE RELATIONSHIPS BETWEEN READING COMPREHENSION AND THE FACTORS OF SYNTACTIC AWARENESS IN ORAL READING, SYNTACTIC MATURITY IN WRITING, AND ORAL READING FLUENCY

Order No. 7904843

STEWART, Oran John, Ph.D. Ohio University, 1978. 139pp. Director of Dissertation: William H. Cooper

The findings of previous research indicated that: (1) there is a positive relationship between readers' knowledge of grammatical information in text and their reading comprehension; (2) lower comprehenders possess a limited ability to use syntactic information in text to aid their comprehension; (3) context and readers' confirmed expectations of the grammatical structure of text have a facilitative effect upon efficient reading; (4) high comprehenders are more aware of syntactic information as evidenced by their oral reading behavior; (5) there is a positive relationship between readers' comprehension and their abilities to compose syntactically mature written discourse.

From the research, this researcher proposed that less able comprehenders (less fluent readers) might suffer from disabilities in the use of syntactic knowledge in both their reading and their writing, disabilities that might prevent their comprehending the material which they read. Accordingly, hypotheses were proposed to focus the investigation upon (1) the variance that reading vocabulary, syntactic awareness in oral reading, syntactic maturity in writing, and fluency in oral reading contribute to the prediction of reading comprehension, and (2) the variance that is common among the variables which readers are made statistically equivalent in their reading vocabulary.

The study was conducted in a school district of a small rural city where ninety-six subjects (N=96) were randomly drawn from six fourth grade classrooms. Five instruments were administered to the sample: (1) a standardized reading comprehension test; (2) a standardized reading vocabulary test; (3) a test of sensitivity to syntactic violations in oral reading; (4) the "Aluminum" passage (Hunt, 1970) as a test of syntactic maturity in writing; and (5) A Test of Sentence Meaning (Marcus, 1968) as a test of syntactic knowledge during silent reading (used to assess the validity of the researcher-constructed test of sensitivity to syntactic violations in oral reading). In addition, judges assessed the oral reading fluency of each subject.

The relationships among subjects' performance on the variables were analyzed through multiple linear regression analysis in order to discover the contributing variance of each variable to the prediction of reading comprehension (the dependent variable). In addition, partial correlation analysis was used to assess the strength of the relationships between the variables, controlling for subjects' reading vocabulary.

A multiple correlation coefficient of .71, significant at the .0001 level, was found to exist between the dependent variable (reading comprehension) and a linear combination of the independent variables: reading vocabulary, sensitivity to syntactic violations in oral reading, syntactic maturity in writing, and fluency in oral reading. Only reading vocabulary and fluency in oral reading, however, made significant contributions to the prediction of reading comprehension. A partial correlation coefficient of .26, significant at the .01 level, was found to exist between reading comprehension and fluency in oral reading, with reading vocabulary controlled. The hypotheses involving the partial correlations between sensitivity to syntactic violations in oral reading and syntactic maturity in writing and the other variables were retained as null.

Further analyses of the data indicated that A Test of Sentence Meaning, put into the analyses in place of the test of sensitivity to syntactic violations in oral reading, was significantly related to reading comprehension, syntactic maturity in writing, and fluency in oral reading. These relationships had not been demonstrated through the use of subjects' sensitivity to syntactic violations in oral reading.

From the findings, the following conclusions were drawn:

1. Children's oral reading errors while reading syntactically-violated sentences do not produce systematic evidence of knowledge of syntax in text.
2. Syntactic maturity in writing does not contribute significantly to the prediction of the reading comprehension of fourth graders when average number of words per T-unit is used as the sole index of syntactic maturity.
3. In keeping with established findings, subjects' reading vocabulary is the most significant predictor of reading comprehension.
4. Fluency in oral reading is a significant predictor of reading comprehension, although the instruments intended to measure syntactic knowledge in reading and in writing did not produce data which accounted for this relationship between fluency and reading comprehension.
5. The correlations between certain pairs of variables for subjects of different fluency ratings demonstrated that subjects perform differentially on these variables.
6. In the further analyses, syntactic knowledge during silent reading was found to be significantly related to reading comprehension, syntactic maturity in writing, and fluency in oral reading, with vocabulary controlled, indicating that children who read with limited comprehension may suffer from disabilities of syntactic knowledge in both reading and in writing.

A STUDY TO DETERMINE THE RELATIONSHIP BETWEEN REMEDIAL READING ACHIEVEMENT AND LEVEL OF VISUAL PERCEPTUAL DEVELOPMENT OF JUNIOR HIGH SCHOOL STUDENTS CLASSIFIED AS REMEDIAL READERS

Order No. 7823207

STEWART, Therese Miros, Ed.D. University of Arkansas, 1978. 64pp. Major Professor: Larry J. Greathouse

PURPOSE

The purpose of this study was to examine the relationship between visual perceptual development and reading achievement with junior high school students classified as remedial readers. The study was designed in an effort to yield valuable information regarding this relationship.

PROCEDURE AND DESIGN OF THE STUDY

The data were collected from approximately one-hundred students who had been previously identified as retarded readers and were selected from the seventh and eighth grade students enrolled in two public Junior High Schools. Further diagnostic testing was the basis for the selection of the sample.

The Frostig Developmental Test of Visual Perception was administered to establish perception levels. The Gates-MacGinitie Reading Test was administered in an effort to provide measures of reading growth. The data were collected during the spring semester of 1975-76 school year. Pre and post testing was completed within a 10-day period.

The data were treated by computation of a correlation matrix between variables. The variables entered were Pre-test, Post-test, and Gain Scores on the reading test, and the change scores as indicated in pre and post test scores on the Frostig DTVP. Zero order Pearson Product Moment Coefficient Correlations were computed between variables and correlation levels of .05 or .01 were identified. T-values were also computed for the two groups.

FINDINGS

1. In step one, the computation of correlation coefficients between pre-test Frostig and pre-test Reading scores showed an essentially random relationship. Even though three correlations with Group A and five correlations with Group B were statistically significant, they were quite small. With Group A the significant correlations were between Position in Space and Comprehension, Spatial Relations and Vocabulary, and Spatial Relations and Comprehension. With Group B the significant correlations were between Visual-Motor and Number Attempted, Visual-Motor and Number Right, Form Constancy and Comprehension, Spatial Relations and Vocabulary, and Spatial Relations and Comprehension.
2. In step two, the computation of correlation coefficients between post test Frostig and post test Reading scores demonstrated a random relationship between Frostig and Reading scores. Group A showed a significant correlation in two areas while Group B showed no statistically significant correlations on their post test results. With Group A the significant correlations were between Visual-Motor and Number Attempted, and Figure Ground and Number Attempted.
3. In step three, correlation coefficients were computed between pre-test Frostig and Reading change (post-test minus pre-test scores). Both groups showed only one area each which was statistically significant. With Group A the significant correlation was between Position in Space and Number Attempted and with Group B between Visual-Motor and Number Attempted.
4. In step four, correlation coefficients were computed between Frostig Change scores and Reading Change scores. Group A showed three areas of statistical significance which were between Position in Space and Number Attempted, Position in Space and Number Right, and Spatial Relations and Comprehension. Group B showed no correlation coefficients which were large enough to reach statistical significance.

IMPLICATIONS

The data strongly suggest the existence of a relationship between visual perceptual development and reading achievement in junior high school students but the computed correlation values were so small that they provide little basis for specifying that relationship.

ORAL LANGUAGE COMPREHENSION AS A PREDICTOR OF BEGINNING READING ACHIEVEMENT Order No. 7901541

SUDAQ, Diane R., Ph.D. Case Western Reserve University, 1978. 65pp.

With the advent of psycholinguistics as a discipline, reading has come to be regarded as an acknowledged language process. The literature is rich with theoretical papers concerning the relationship between oral language and reading acquisition. While there is general acceptance of the principle that oral language is involved in the reading process, there is some controversy as to its value as a predictor of beginning reading achievement.

It was within the purview of this study to measure the capacity of a standardized test of oral language comprehension grounded in generative transformational theory to predict beginning reading achievement. The investigation was further designed to compare the predictive capacity of the language measure with that of the reading readiness measure administered by the school system and with the intelligence measure administered by the investigator. In addition, the predictive capacity of the language measure with regard to sex was explored.

The test of auditory comprehension of language, designed to test vocabulary, syntax, and morphology, was administered by the investigator, an experienced speech and language therapist, in the spring of the kindergarten year, as was the intelligence measure. The results of the standardized reading readiness test were obtained from school records. Two subtests of a reading achievement test, word identification and passage comprehension, were administered by the investigator the following spring.

The original sample consisted of 114 children, half of them male, half female, with no known sensory deficits, from a middle-class public school system in a small Northeastern Ohio city. The children were randomly selected from 19 kindergarten classes taught by 11 teachers in six schools. Due to attrition over the course of the year, the final sample was reduced to 77 children drawn from 18 first-grade classrooms and included 36 boys and 41 girls with an I.Q. range of 93 to 149.

Correlational procedures and regression analyses proved the language measure to be an unreliable predictor of beginning reading achievement. Its predictive capacity was exceeded by both the reading readiness measure and the intelligence test. Further, the language measure proved to be a slightly better predictor for boys than for girls. Ancillary findings regarding intercorrelations among the subtests of the reading readiness measure and those of the reading achievement test offer some potential insights into the process of beginning reading acquisition.

The major implication of the study is that although there is strong research evidence that beginning readers exploit their knowledge of the syntax and morphology of oral language to facilitate extraction of meaning from text, syntactical and morphological control, as measured in this study, were not efficient predictors of beginning reading achievement. The results of this study suggest, rather, that this control may be used as an auxiliary strategy to the main task of the beginning reader: the learning of sound-symbol correspondences.

This study should be replicated with a considerably larger sample in order to allow for consideration of such factors as teaching materials and methodology and could be further extended to an investigation involving children who are speakers of nonstandard English. In addition, the language measure utilized in this study did not allow for measurement of awareness of the phonetic structure of speech. This study suggests the need for development of a test of this ability in order to enhance prediction of beginning reading acquisition.

AN INVESTIGATION INTO THE FACTORS CONTRIBUTING TO THE HIGH LITERACY RATE IN JAPAN

SWEENEY, Arlyn Gordon, Ed.D. University of Southern California, 1978. Chairman: Professor Marvin A. Nottingham

Purpose. The purpose of this study was to investigate the factors contributing to the high literacy rate in Japan. Isolation of such factors could be of benefit to administrators planning programs designed to develop a more literate population. Answers were sought to the following major questions: (1) If illiteracy is a world problem, how has Japan managed to avoid being afflicted with this problem? (2) Is the Japanese educational system the sole contributing factor to the high literacy rate in Japan? (3) Is the literacy rate in Japan as high as it is reputed to be? (4) What are the factors responsible for the literacy rate? (5) How could Japanese educators prioritize suggested factors in order of importance?

Procedure. A survey instrument was developed which listed possible factors contributing to the high literacy rate in Japan as gathered from review of literature in the field. After field testing, the questionnaire was distributed to Ministry of Education officials, classroom teachers, administrators, university professors, and Japanese culture teachers in the Department of Defense schools. Of the 150 people sampled, 108 returned completed questionnaires, for a 72% return rate. Data were tabulated manually and frequency distribution of rankings calculated.

Selected Findings. (1) Japanese educators ranked parental participation highest of the suggested factors as contributing to the high literacy rate. (2) Compulsory education received the next highest ranking. However, probing revealed that to the Japanese, compulsory education means it is the law to become educated, not merely to attend school, and as law-abiding citizens, the Japanese feel a duty and obligation to become educated. (3) Administrative support from local and national school officials was ranked third highest.

Selected Conclusions. (1) Support and encouragement of the family in educational achievement is, in the opinion of Japanese educators, of prime importance as a contributing factor to the high literacy rate in Japan. The family, with its rigid system of obligations, provides the type of environment within which children internalize family-defined goals that emphasize educational success and subsequent occupational mobility. (2) Compulsory education to the Japanese means more than mere attendance responsibility; it means the duty and obligation to become educated, to improve oneself, recognizing that improvement of the individual has a great bearing on the strength and future of the nation. (3) Administrative support by local and national school officials also assumes major proportions in the opinions of Japanese educators as partially responsible for the high degree of success achieved by Japanese students.

Selected Recommendations. (1) Educational priorities in America need to be re-examined and reordered, with universal literacy the first necessity. Otherwise valuable human resources are being wasted. (2) Administrators, as the people who can make things happen in schools, should concentrate on eradicating illiteracy by dedicating themselves to improving the quality of reading instruction; to establishing an atmosphere which enhances the reading program; and to budgeting sufficient funds to implement an effective reading program. (3) Administrators should work toward greater parental involvement in the educational program, especially reading, by training parent volunteers and training the professionals who are to work with these volunteers. (4) Summer reading programs, primarily staffed by parent volunteers, should be established to prevent regression and sustain interest in reading. (5) Administrative support for education should begin in the U.S. Office of Education and flow to the local school systems aimed to develop increasing respect for the education profession and its participants. A campaign to improve attitudes toward education and respect for learning is essential. (6) This study should be replicated involving a sample of the parent population of Japan.

**THE RELATIONSHIP OF CONSERVATION ABILITIES TO
SUBSEQUENT READING PERFORMANCE OF FIRST GRADE
STUDENTS** Order No. 7903594

TADLOCK, Dolores Rae, Ph.D. Washington State University,
1978. 101pp. Chairman: Jerry Milligan

This study was designed to determine the relationships between conservation ability of first grade children at the beginning of the school year and their subsequent reading achievement at the end of the school year. More specifically, the data collected in the study were used to indicate:

1. The extent to which conservation ability predicts subsequent reading achievement.
2. Which, if any, of the different conservation tasks assessed are better predictors of subsequent reading performance than the others.
3. The extent to which different aspects of the reading process (word analysis and comprehension) can be associated with differing levels of intellectual functioning.

Four first grade classes were randomly selected to serve as the sample. Each student's ability to conserve number, volume, mass, area, length, and weight were assessed. The Iowa Tests of Basic Skills was used to assess reading achievement levels of all subjects. Depending on the total conservation score achieved, each subject was placed into the category of conservator, high transitional, low transitional, or nonconservator.

Significant differences were found between mean word analysis scores of the following groups: (1) conservators and low transitionals, (2) conservators and nonconservators, and (3) high transitionals and low transitionals. There were no significant differences between mean word analysis scores of the following groups: (1) conservators and high transitionals, (2) high transitionals and nonconservators, and (3) low transitionals and nonconservators. When conservators and high transitionals (combined) were compared to low transitionals and nonconservators (combined), the difference in word analysis scores was significant ($p < .001$).

Significant differences were found between mean comprehension scores of the following groups: (1) conservators and high transitionals, (2) conservators and low transitionals, (3) conservators and nonconservators, and (4) high transitionals and low transitionals. There were no significant differences between mean comprehension scores of the following groups: (1) high transitionals and nonconservators and (2) low transitionals and nonconservators. When conservators and high transitionals (combined) were compared to low transitionals and nonconservators (combined), the difference in comprehension scores was significant ($p < .001$).

The mean word analysis scores for subjects who were able to conserve on each conservation task was compared with the mean word analysis scores for subjects who were unable to conserve on the same task. In every instance, the subjects who successfully conserved attained significantly higher word analysis scores.

The mean comprehension score for subjects who were able to conserve on each conservation task was compared with the mean comprehension score for subjects who were unable to conserve on the same task. With the exception of the conservation of area task ($p = .07$), subjects who were able to conserve attained significantly higher comprehension scores than subjects who were unable to conserve. As indicated by the highest t value, conservation of volume was the best predictor of both word analysis and comprehension.

No significant differences were found between word analysis and comprehension scores for any of the four groups. For low transitionals and nonconservators, comprehension and word analysis scores were highly correlated ($r = .71$ and $.77$). For conservators and high transitionals, comprehension and word analysis scores were not well correlated ($r = .53$ and $.08$).

The data indicate that (1) conservation ability of first graders at the beginning of the school year is an adequate predictor of their later reading achievement, (2) conservation of volume was the best predictor of both word analysis and comprehension, and (3) poor readers depend on word analysis skills for comprehension, good readers do not.

**A COMPARISON OF GOOD AND POOR READERS' ABILITY
TO READ FOR MEANING** Order No. 7818580

TAYLOR, Barbara Muenzer, Ed.D. Virginia Polytechnic Institute and State University, 1978. 146pp.

While research suggests that poor readers are less skilled in reading for meaning than good reading peers, little work has been done comparing poor readers to younger good readers in terms of reading comprehension ability. Therefore, the recall protocols of poor readers and younger good readers reading on the same grade level were compared to investigate poor readers' ability to read for meaning.

Thirty-one fifth graders and thirty-one third graders reading on a 3.0-4.5 grade level read and orally recalled a third grade familiar passage, a third grade unfamiliar passage, a fifth grade familiar passage, and a fifth grade unfamiliar passage. A discourse analysis procedure was used to determine the number of total, main, and detail idea units recalled by the subjects on each of the four expository passages.

The poor readers' mean scores were greater than the good readers' mean scores for total and detail idea units recalled on the third grade familiar passage. There was no evidence to suggest that the two groups' mean scores for total or detail idea units differed on the other three passages or that the two groups' mean scores for main idea units differed on all four passages. On the third grade familiar passage the good readers recalled as many main idea units as expected, but the poor readers recalled less main idea units than expected, based on the proportion of main idea units in the passage. The poor readers' total mean score was greater for the fifth grade familiar passage than for the third grade unfamiliar passage, whereas the good readers' total mean scores were not found to differ for these two passages.

The findings that the poor readers recalled more than the younger good readers on the easiest passage but lost this retelling advantage on the more difficult passages suggests that the poor readers were more impaired in their ability to read for meaning than the good readers when processing difficult material. It appears that the poor readers were more impaired in their ability to read for meaning when processing unfamiliar material than material written on a difficult reading level. Also, the finding that the poor readers recalled less main idea units than expected on the easiest passage suggests that they were having some difficulty focusing on main ideas when reading this relatively easy passage.

While there were several differences, most of the poor and good readers' scores for total, main, and detail idea units were very similar across the four passages. The finding that the poor readers recalled at least as much as the younger good readers suggests that the poor readers were actively attending to meaning while reading. The poor readers seemed to be comprehending what they had read as well as could be expected for their reading level. It does not appear that the poor readers were suffering from a reading disability or processing problem but were simply reading on a lower grade level much like younger good readers.

**THE RELATIONSHIP OF EXPRESSIVE LANGUAGE TO
READING ACHIEVEMENT AND READING EXPECTANCY** Order No. 7904878

THOMAS, Huba Lajeane Gentry, Ed.D. Northeast Louisiana University, 1978. 118pp. Adviser: Dr. Harry B. Miller

The purpose of the study was to investigate the relationship between expressive language and reading vocabulary, reading comprehension, reading achievement, and reading expectancy with selected elementary school students. Participants in the study were from four elementary schools and two junior high schools in the Monroe City School System, Monroe, Louisiana. The schools that participated were selected randomly as were the classrooms of students from each grade level. Students were then classified into six subgroups as follows: grade two, average-to-high I. Q.; grade two, average-to-low I. Q.; grade five, average-to-high I. Q.; grade five, average-to-low I. Q.; grade eight, average-to-high I. Q.; and grade eight, average-to-low I. Q. Forty subjects were randomly selected from each of the six subgroups resulting in a total sample size of 240.

Written and oral language samples were collected from each student. The researcher read a story to the students. Each student then wrote a story. Later, the students told a story to a listener. Oral samples were recorded on magnetic tape and transcribed into written form. The written and oral samples were then evaluated using the Fry Readability Formula.

A reading expectancy grade level was computed using the Harris 2 Reading Expectancy Formula. The California Achievement Test: Reading was employed to assess the reading vocabulary, reading comprehension, and reading achievement for each student.

Using the resultant data from the language samples, reading expectancy formulae, and reading tests, the researcher attempted to determine if significant relationships existed between written language, oral language, or written and oral language taken together and each of the dependent variables -- reading vocabulary, reading comprehension, reading achievement, and reading expectancy. Pearson r was employed to identify significant relationships between correlations involving one independent variable and one dependent variable. Multiple regression was used to identify significant relationships between the two independent variables taken together and each dependent variable.

Significant relationships were found between written language and reading vocabulary, reading comprehension, reading achievement, and reading expectancy for second grade students in the average-to-high I. Q. group; between written language and each of two dependent variables -- reading vocabulary and reading achievement -- for second grade students in the average-to-low I. Q. group; between written language and reading vocabulary for fifth grade students in both I. Q. groups; between written language and reading achievement for fifth grade students in the average-to-low I. Q. group; between written language and reading expectancy for eighth grade students in the average-to-high I. Q. group. For fifth grade students in the average-to-high I. Q. group, a significant relationship existed between oral language and reading expectancy. However, multiple regression revealed that in all cases where a significant R was found using both independent variables, oral language did not contribute significantly to the prediction of the dependent variable. Therefore, it was generally concluded that written language alone may be used to predict all four dependent variables for second grade students in the average-to-high I. Q. group; reading vocabulary and reading achievement for second grade and fifth grade students in both I. Q. groups; and reading expectancy for eighth grade students in the average-to-high I. Q. group.

THE EFFECT OF A REFLECTIVE OR IMPULSIVE CONCEPTUAL TEMPO UPON THE DECODING ABILITY OF EMOTIONALLY-DISTURBED BOYS

Order No. 7902538

WEISSBACH, Marilyn, Ed.D. Hofstra University, 1978. 125pp.

The major purpose of this study was to determine whether impulsive emotionally-disturbed boys performed differently than reflective emotionally-disturbed boys on a test of decoding ability. Secondary considerations were (1) to determine whether those classified as fast-accurate and those classified as slow-inaccurate performed differently on a test of decoding ability, and (2) to determine whether those classified as reflective and those classified as impulsive performed differently on the Bender Visual Motor Gestalt Test (Koppitz Developmental Scoring System). To further identify behaviors of those classified as impulsive and those classified as reflective, the Locus of Conflict rating scale was used to see if the subjects in these classifications differed in their internalizer/externalizer scores. Intelligence Quotient scores were considered in each of the resulting groups, and there was no significant difference between groups as to IQ or age. IQ, however, as measured by the Peabody Picture Vocabulary Test, was utilized as a covariate in the statistical comparison involving decoding ability, and age was utilized as a covariate in the statistical comparison involving Bender scores.

The subjects were boys residing at a psychiatric hospital for the emotionally disturbed. The ages were ten through sixteen, and a total of forty children were involved. After using the double median split procedure with the Matching Familiar Figures Test data, sixteen were classified as impulsive, six-

teen as reflective, one as fast accurate, and one as slow-inaccurate. Six subjects performed at the median and were therefore excluded from the study. The Wide Range Achievement Test was administered to each of the subjects. The Peabody Picture Vocabulary Test scores and Bender Visual Motor Gestalt Test scores were available at the facility. Teachers were asked to complete a Locus of Conflict Rating Scale for each subject to identify behaviors categorized as internalization/externalization.

The following conclusions were drawn from the statistical analysis of the data:

1. With IQ utilized as a covariate, reflective emotionally-disturbed boys performed significantly better than impulsive emotionally-disturbed boys in decoding ($p < .01$) as measured by the WRAT. It was concluded that emotionally-disturbed students more proficient in decoding could be differentiated from those less so on the basis of the Matching Familiar Figures Test. These findings support Kagan's position that conceptual tempo of some children influences their performance in problem-solving situations.

2. Based upon teachers' ratings on the Locus of Conflict Rating Scale, impulsive subjects showed stronger internalization and externalization behavior than reflectives, though no significance was found statistically. Both reflectives and impulsives showed stronger externalization behavior than internalization behavior, though figures did not reach statistical significance. It appears that cognitive style as measured by the MFFT cannot be interpreted as being part of a global behavior pattern.

3. A significant difference ($p < .10$) was found between reflectives ($N = 11$) and impulsives ($N = 16$) in Bender error scores; however, when age was utilized as a covariate, the reflective group could not be considered statistically superior to the impulsive group.

No analysis could be made of fast-accurate or slow-inaccurate performance because of insufficient data.

In analyzing the quality of decoding (the first seven words of the WRAT incorrectly pronounced), reflectives appeared to attend more to graphic features. They supplied more phonetically-correct parts of words than the impulsives. Impulsives supplied more meaningful words but they were less similar phonetically. Reflectives more actively attempted the words.

It was suggested that instructional considerations begin with an awareness on the part of educators of cognitive style and the effect it might have upon the reading performance of impulsive emotionally-disturbed boys, structuring a learning environment which encourages a more flexible response pattern.

SEMANTIC CHUNKING AND THE TRANSITION TO FLUENT READING STRATEGIES

Order No. 7903390

WEISSMAN, Beth, Ph.D. Northwestern University, 1978. 139pp.

This research was designed to study the reading strategies of fifth and sixth grade students, in order to discover why some children learn to decode well, but cannot comprehend what they read. It was hypothesized that such readers had not made the transition to fluent organized reading strategies and were, instead, reading in a word-by-word fashion. Additionally, this study tested whether such poor comprehenders were capable of employing mature, meaningful reading styles if given text that was preorganized into chunks or phrases of meaning.

Three groups of subjects were used -- good readers, poor comprehenders with adequate decoding skills, and poor comprehenders with deficient decoding skills. All were presented with texts in three modes -- single words, regular sentences, and preorganized phrases. Comprehension tests accompanied each text.

The results bore out the hypotheses. Good readers comprehended well with any surface presentation. Poor readers with inadequate decoding skills understood little under any circumstances. The experimental subjects who normally comprehended poorly despite adequate decoding skills, scored significantly higher on comprehension tests of materials presented as organized phrases. They scored equally low on single word and regular sentence presentations.

It was concluded that this type of poor reader can, but does not under normal conditions, employ skilled, meaning oriented strategies. We need to work on focusing his attention on meaning and organization, rather than on surface structure.

THE RELATIONSHIPS OF SELECTED HOME ENVIRONMENTAL EXPERIENCES TO PERFORMANCE ON THE METROPOLITAN READINESS TESTS FOR THREE HUNDRED AND FORTY-NINE KINDERGARTEN CHILDREN Order No. 7819228

WHITE, Judith A., Ed.D. The University of Alabama, 1978. 161pp.

The purpose of this study was to provide additional information concerning the relationships of kindergarten children's home environmental experiences and their readiness for formal instruction.

The primary problem was to investigate the relationships of selected home environmental factors to Metropolitan Readiness Tests scores for kindergarten children. Answers were sought as to which specific environmental experiences contribute to differences in kindergarten children who are ready for formal instruction and those who are not ready and the relative contribution of each experience.

The population of the study included 349 five-year-old beginning kindergarten children from nine of the 15 elementary schools in Tuscaloosa, Alabama. The group of children consisted of boys and girls, Blacks and whites, and varying socioeconomic levels.

The instruments used to collect data for the study were the Survey of Home-Based Activities of the Pre-Kindergarten Child and the Metropolitan Readiness Tests. The Survey instrument, designed by the investigator, was a self-reporting questionnaire which contained 69 items pertaining to living conditions, social and emotional experiences, psychomotor experiences and cognitive experiences of the child during the first five years of life. The Metropolitan Readiness Tests are a battery of six tests developed to measure the extent to which school beginners have developed in the skills and abilities that contribute to formal instruction.

On the basis of the Metropolitan Readiness Tests scores the subjects in the study were separated into two performance groups: (1) Low-Normal or Above, those who were designated as being ready for formal instruction; and, (2) Low, those who were designated as not being ready for formal instruction. The tests scores for the two groups were then compared with the responses provided on the Survey. The Survey was completed by parents or guardians of the kindergarten children. The following statistical procedures were utilized: 1. Data Description and Transformation (SPEC10). 2. General Purpose Factor Analysis (CORR10). 3. Cattell's Coefficient of Profile Similarity (CORR05). 4. Discriminate Analysis (CORR20).

Based on the responses to the Survey items, the home environmental experiences for the two performance groups were significantly different at the .01 level of confidence. Ten specific environmental experiences were identified as being individually significant at the .05 level or beyond in contributing to the differences between kindergarten children who were ready for formal instruction and those who were not ready for formal instruction. These ten experiences were as follows: 1. Whether the child had ever lived with someone other than the persons with whom he/she lived at the time of the study. 2. Whether the child had visited other cities. 3. How many states the child had visited. 4. Whether the child asked many questions. 5. Whether the child had many books of his/her own. 6. Whether the child knew any nursery rhymes. 7. Who taught the nursery rhymes to the child. 8. How many years the child had watched Sesame Street on T.V. 9. Whether the child could use scissors. 10. How far the parent and/or guardian would like for the child to go in school.

It was concluded from the study that there were significant differences in the home environmental experiences of children in the study who were ready for formal instruction and those who were not ready. Certain specific home environmental experiences were present more frequently in the background of children who were ready for formal instruction than they were in the background of children who were not ready for formal instruction.

There were far more similarities than there were differences in the home environmental experiences of children who were ready for formal instruction and those who were not ready for formal instruction. The differences between the two groups were more in the degree of responses rather than in the kind of responses.

AN INQUIRY INTO THE IDENTIFICATION OF DISCRIMINATING FACTORS RELATING TO HIGH AND LOW FUNCTIONAL LITERACY PERFORMANCE IN ENGLISH IN SELECTED FLORIDA PUBLIC HIGH SCHOOLS

Order No. 7907806

WILSON, Charles Lee, Ph.D. The University of Florida, 1978. 113pp. Chairman: Vincent McGuire

The purposes of this study were to examine how competency-based testing for functional literacy evolved as a part of educational accountability, to determine any theoretical positions which have emerged, and to determine how functional literacy is defined and interpreted in terms of English communication skills in Florida's public high schools. The study proposed to identify discriminating factors in terms of working conditions and facilities, experiential background, teaching practices, and teaching principles of Florida English teachers, grade-ten through twelve, for the 1977-78 academic year.

The study employed a causal-comparison design to establish likely causes of differences between comparative groups. The comparison was made between two groups of high schools, one of which performed below the state mean on the communication section of the first Statewide Grade Eleven Functional Literacy Test and one of which performed above the state mean on the same test. Visits of two to three days were made to each school, and data were collected by questionnaires. Several different statistical tests of significance were applied to this information.

In terms of significant differences, the tests revealed that teachers in English programs where grade eleven students performed above the state mean on the Grade Eleven Functional Literacy Test tended to differ from teachers in English programs where grade eleven students performed below the state mean on the Functional Literacy Test. Compared to the teachers in the low group, the high group teachers:

1. Had more teaching experience, were older, had more teaching time in their present schools, and more of them held only Rank III certification.
2. Had a greater incidence of undergraduate work in private universities or liberal arts colleges.
3. Had a greater likelihood of an undergraduate English major rather than the English education major, and less chance of an undergraduate minor.
4. Had assigned written work in class more often, made critical evaluations less often, emphasized organization and content in their evaluations, and always assigned one to two hours of writing homework a week.
5. Were likely to require that students give formal speeches before the class, have students work in small groups, have students select writing topics, and encouraged maximum student participation.
6. Made very frequent use of the Socratic (questioning) method of instruction, and frequently required individual work of their students.
7. Felt that listening instruction was very important and that other areas of school instruction should support English objectives.
8. Continued to take graduate credit courses in literature, teaching methods, and other education courses since beginning their careers.
9. Took part in English teacher workshops, conferred often with English specialists, and were currently subscribing to professional journals.
10. Spent their summers either teaching or attending school.

In terms of significant differences, the test revealed that working conditions and facilities for English programs where grade eleven students performed above the state mean on the Grade Eleven Functional Literacy Test tended to differ from working conditions and facilities in English programs where grade eleven students performed below the state mean on the Functional Literacy Test. Compared to the working conditions and facilities available to the low group, the high group:

1. Considered their work week to be longer--51-60 hours.
2. Used the school or classroom library almost exclusively to other libraries.
3. Did not feel that workbooks with student drills, teaching manuals, and clerical service were absolutely essential.
4. Were likely to consider very important the responsiveness of the administration to their ideas.

AN INVESTIGATION OF THE IMAGING BEHAVIORS OF
GOOD AND POOR FOURTH GRADE READERS WITH EASY
AND DIFFICULT TEXT

Order No. 7817136

WITTE, Pauline Louise, Ph.D. The University of Wisconsin-Madison, 1978. 94pp. Supervisor: Professor Richard J. Smith

This study investigated the ways in which good readers, difference-poor readers and deficit-poor readers at the fourth grade level differ in their use of imagery while reading. Thirty good readers, thirty difference-poor readers and thirty deficit-poor readers were selected on the basis of Stanford Diagnostic Reading Test scores from a total of 238 fourth grade students who formed the subject pool. There were equal numbers of boys and girls in each reader group, and the subjects were matched on SES using parental occupation as an index of SES.

These 90 subjects performed the following task: Each subject read two passages, one at the third grade level and one at the fourth grade level. The subjects were instructed to stop at the end of each sentence. If the sentence gave them a picture in their mind they were asked to describe it. If the sentence did not give them a picture, they were instructed to say "no" and to continue reading. Each subject also answered five comprehension questions about each of the two passages. The subjects' responses were then analyzed in terms of three variables: (1) number of images reported for each passage, (2) text dependency of the images reported, and (3) completeness of the images reported. The results of this analysis showed that there were significant differences between good readers and difference-poor readers and between good readers and deficit-poor readers for number of images reported and for the text dependency of the images reported. The differences between difference-poor and deficit-poor readers were not significant for any of the variables, and there were no significant differences among any of the reader groups for completeness of the images reported.

It was concluded that the good readers in this study reported more images than the poor readers and that the images reported by the good readers more closely reflected what was read than the images reported by the poor readers. Based on the results of this study, it was also concluded that there were no quantitative or qualitative differences between the reported images of the difference-poor and the deficit-poor readers and that the difficulty level of the material did not effect the quantity or quality of the reported images.

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