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A SUMMARY OF INVESTIGATIONS RELATING TO THE ENGLISH LANGUAGE ARTS, ELEMENTARY AND SECONDARY, 1966.

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THIS COLLECTION OF RESEARCH REVIEWS SUMMARIZES A TOTAL OF 151 INVESTIGATIONS IN THE ENGLISH LANGUAGE ARTS ON THE ELEMENTARY AND SECONDARY LEVELS. THE ELEMENTARY EDUCATION SECTION REVIEWS ALL RESEARCH REPORTED IN JOURNALS BETWEEN JANUARY AND DECEMBER OF 1966 IN THE FOLLOWING AREAS--(1) RESEARCH SUMMARIES AND LISTINGS, (2) LANGUAGE, (3) ORAL COMMUNICATION, (4) WRITTEN COMMUNICATION (COMPOSITION, SPELLING, AND HANDWRITING), AND (5) READING. (BIBLIOGRAPHICAL REFERENCES TO THOSE INVESTIGATIONS ARE INCLUDED IN THE TEXT.) THE SECONDARY EDUCATION SECTION LIMITS ITSELF TO EMPIRICAL, SYSTEMATIC INVESTIGATIONS ON THE FOLLOWING TOPICS--(1) THE ENGLISH TEACHER AND THE ENGLISH CURRICULUM, (2) LITERATURE, (3) READING, (4) ENGLISH SKILLS, (5) COMPOSITION, AND (6) GENERAL SEMANTICS. (A BIBLIOGRAPHY OF THE INVESTIGATIONS RELATING TO SECONDARY EDUCATION IS APPENDED.) THE ARTICLES IN THIS PAMPHLET ARE REPRINTED FROM "ELEMENTARY ENGLISH," VOLUME 44, NUMBERS 4 AND 5, AND "ENGLISH JOURNAL," VOLUME 56, NUMBER 5. (DL)

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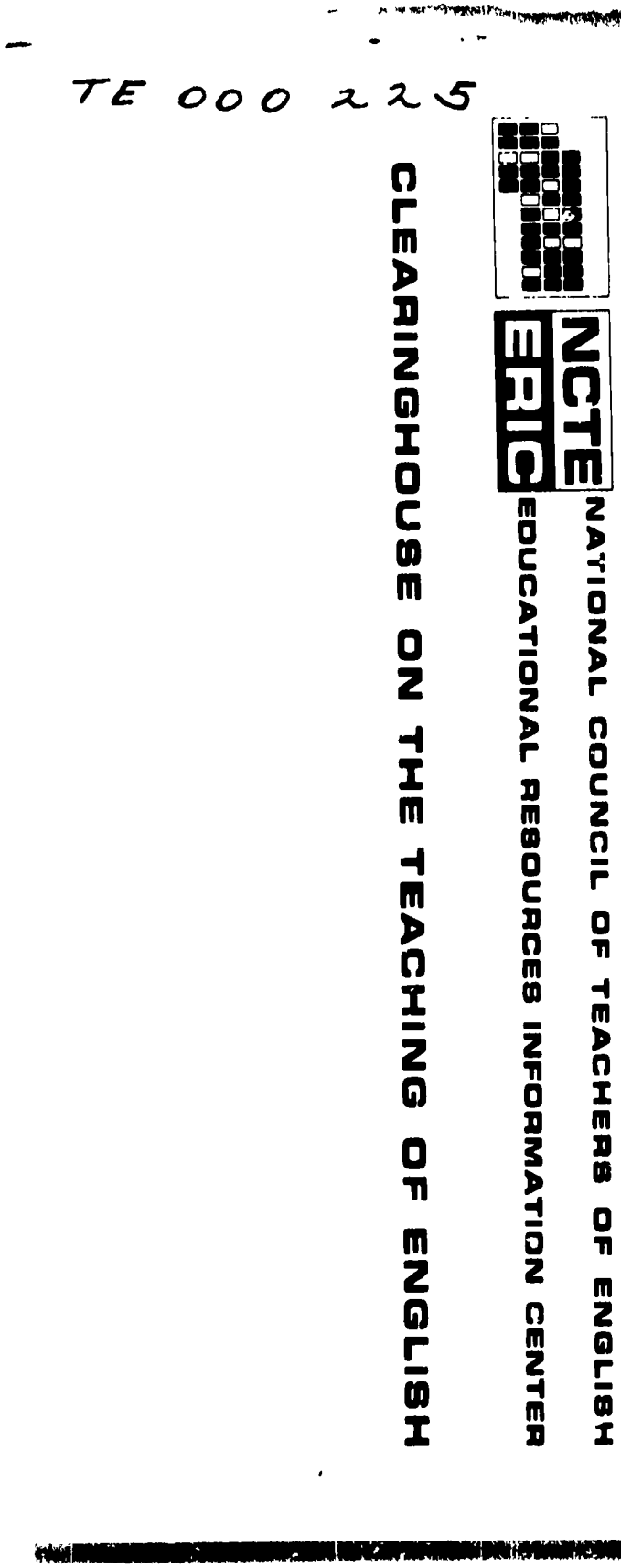

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A SUMMARY OF INVESTIGATIONS RELATING TO THE ENGLISH LANGUAGE ARTS ELEMENTARY AND SECONDARY 1966

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Knowledge is of two kinds: we know a subject ourselves, or we know where we can find information upon it.

—Samuel Johnson

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WALTER T. PETTY AND PAUL C. BURNS

A Summary of Investigations Relating to the English Language Arts in Elementary Education: 1966

Part I

The number of reports included in this sixth annual review of research in the elementary school English language arts has increased again this year. This year the number is 115. Once more the large majority of studies deal with various aspects of reading instruction, but there is an increasing number of studies related to other facets of the language arts.

The reviewers have attempted to include all research reported in journals between January 1966 and December 1966. Some decisions were made by the reviewers as to whether or not an article was actually a report of research; other omissions may be accounted for by faulty library searching. This review, as those made previously, is made under the sponsorship of the Committee on Research of the NCTE.

Research Summaries and Listings

A summary of investigations relating to reading made between July 1, 1964 and June 30, 1965 was presented by Harris and others.[1] The review suggested there was increasing evidence that psychologists, sociologists, and other specialists whose primary identification was not that of reading specialist were contributing valuable insights into the nature and conditions of the reading process. The authors summarized articles in the following categories: The Sociology of Reading; The Psychology of Reading; The Physiology of Reading; and The Teaching of Reading.

Three review articles were written by Weintraub, two of them[2,3] being "What Research Says to the Reading Teacher," a regular feature in *The Reading Teacher*. One review reported research as to the question: "Is pictorial material useful in teaching beginning reading, and if so what type of illustration is best?" He cited the conflicting data and urged continuing search for answers. The second review cited research related to differences in reading achievement between sexes and considers possible causal factors. Weintraub's[4] third review was a critique of a

[1] Theodore L. Harris, Wayne Otto, and Thomas C. Barrett, "Summary and Review of Investigations Relating to Reading, July 1, 1964 to June 30, 1965," *The Journal of Educational Research*, 59 (February, 1966) 243-268.

[2] Samuel Weintraub, "Illustrations for Beginning Reading," *The Reading Teacher*, 20 (October, 1966) 61-67.

[3] _____, "Sex Differences in Reading Achievement," *The Reading Teacher*, 20 (November, 1966) 155-165.

[4] Samuel Weintraub, "A Critique of a Review of Phonics Studies," *Elementary School Journal*, 67 (October, 1966) 34-40.

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review of phonic studies by Louise Gurren and Ann Hughes, "Intensive Phonics vs. Gradual Phonics in Beginning Reading: A Review," *Journal of Educational Research*, 58 (April, 1965) 339-346. Weintraub differed in culling research on phonics from that taken by Gurren and Hughes, urging readers to read the original studies.

A listing of experimental studies on the legibility of print together with related and supplementary reports with annotations was made by Tinker.[5] The studies and reports were organized under the following headings: methodology; legibility of letters, digits, and other symbols; kinds of type or type form; size of type, line width, and leading; color of print and background; printing surfaces; newspaper typography; special reading situations; relative supplementary reports; summaries and surveys; and illumination reports relevant to the hygiene of reading. Tinker concluded that rate of work or speed of reading appears the most valid for general use in measuring legibility of print. He cited the high importance in our daily lives of providing optional legibility and offered a number of specific recommendations based on research findings for the achievement of that goal. A shorter review by Tinker[6] proposed what, in his opinion, were the more important legibility studies.

Two other writers provided listings of important sources on two different topics. Vernon[7] cited ten studies relative to perception and Dale and Seels[8] compiled and annotated references on readability.

The third and fourth articles in a series sponsored by the National Conference on Research in English were published in two parts.[9,10] The first part brought research to the question of "How does the social-cultural environment of the home and school influence the development of articulation, vocabulary, fluency, and other oral language abilities?" In the second part of the article, research bearing upon these four questions was reported: a) What influence do the speaking habits of teachers have on pupil oral language growth? b) To what degree are the oral language habits of children a function of their school peers? c) Does the administrative organization of a school have any effect on oral language development? and d) What curricular and instructional practices are conducive to oral language growth?

The fifth article in the series sponsored by the National Conferences on Research in English dealt with listening.[11] It suggested a conceptual model based on research findings and indicated methods and techniques for making the teaching of listening practicable for teachers.

Another report of interest presented abstracts which are representative of re-

[5] Miles A. Tinker, "Experimental Studies on the Legibility of Print: An Annotated Bibliography," *Reading Research Quarterly*, 1 (Summer, 1966) 67-118.

[6] Miles A. Tinker, "The Ten More Important Legibility Studies—An Annotated Bibliography," *The Reading Teacher*, 20 (October, 1966) 46-48; 53.

[7] M. D. Vernon, "Ten More Important Sources of Information on Visual Perception in Relation to Reading," *The Reading Teacher*, 20 (November, 1966) 134-135.

[8] Edgar Dale and Barbara Seels, "Ten Important References on Readability," *The Reading Teacher*, 20 (December, 1966) 252-253.

[9] Frank B. May, "The Effects of Environment on Oral Language Development: 1," *Elementary English*, 43 (October, 1966) 587-595.

[10] _____, "The Effects of Environment on Oral Language Development: II," *Elementary English*, 43 (November, 1966) 720-729.

[11] Gloria L. Horrworth, "Listening: A Facet of Oral Language," *Elementary English*, 43 (December, 1966) 856-864; 868.

search studies in the field of spelling as it related to reading and writing.[12] The scope of the summaries reported cover a period of 44 years and included a wide variety of approaches. Salient conclusions were (a) individualized approaches based on needs determined through written expression should be considered, (b) no one spelling textbook can do the job of meeting individual needs, (c) children can spell better than standardized test results would indicate, and (d) supplementary phonics seem to aid children in spelling performance.

Witty[13] examined children's interest in TV and the other mass media and set forth facts from yearly studies made by the writer during the past fifteen years. In 1965 he found an average of 20 hours per week was reported to have been devoted to TV by the elementary school pupils; only a small percentage of pupils were counselled in the selection of TV programs by parents; pupils felt TV helped with homework and interested them in reading certain books.

A clue to some development and research projects underway in Great Britain was provided by Jones[14] for those who may be interested in pursuing research in other countries.

[12] Peter A. Lamana, "A Summary of Research on Spelling as Related to Other Areas of the Language Arts," *The Journal of the Reading Specialist*, 6 (October, 1966) 32-39.

[13] Paul A. Witty, "The Electronic Pied Piper—Enemy or Ally of Reading," *Education*, 87 (September, 1966) 42-47.

[14] Anthony Jones, "Some Curriculum Trends in the Teaching of English in Primary Schools (5-10) in the United Kingdom," *Elementary English*, 43 (November, 1966) 740-745.

Language

Increased attention continued to be shown in the past year on language learning. Much of this research is apparently attributable to the *Journal of Verbal Learning and Verbal Behavior*. Five of the nine studies reported in this section are from this journal. The first study[15] to be reviewed investigated certain qualitative aspects of verbalization of gifted children. Fifteen bright fourth-grade children, six girls and nine boys, enrolled in the same public school system were selected. Two control groups of average measured intelligence were also selected, consisting of: a) chronological age peers (C.A.C.) matched by sex with the bright group, and b) mental age peers (M.A.C.) matched by sex with the bright group.

The pupils' responses to the vocabulary section of the *Binet Scale* were recorded verbatim on tape. Five types of measures were used in the analysis: average words used for response, type-token ratio (unique words used), adjective noun ratios, adverb-noun ratios, average number of words per second. The following comparisons achieved significance at the .05 level: a) the high I.Q. group used more words per response than the CAC group; no significant sex differences; b) the high I.Q. group obtained lower mean type-token ratio overall responses than did the C.A.C. group; no sex differences; c) mean differences between high I.Q. and C.A.C. group approached but did not reach significance for the adjective-noun ratio; no sex differences; d) a significant sex by group interaction effect was obtained for the adverb-verb ratio; neither of the main effects were significant; e) the mean number of words per second of the high I.Q. and C.A.C. groups differed significantly, 2.05 and 1.67 respectively.

No significant differences were observed

[15] Henry F. Dizney and Ronald W. Roskins, "An Investigation of Certain Qualitative Aspects of Verbalization of Gifted Children," *American Educational Research Journal*, 3 (May, 1966) 179-186.

between high I.Q. and M.A.C. groups, sex categories, or the interactions between group and sex on any of the five variables investigated. Apparently, within the limitations of this study, qualitative indices of language behavior differentiate a sample of bright children from age peers of average mental ability but not from mental age peers.

Three separate studies were conducted by DiVesta[16] to investigate the development of children's affective meaning systems. The subjects were 100 children from each of the grades 2-6 inclusive. One-half of the sample was from a city school in a lower-middle socio-economic area. The other half of the sample was from the campus school of a state college and was representative of a middle socio-economic area. Semantic differential ratings were made of 20 concepts in one study and 100 concepts in each of the other two studies by the subjects. The data were analyzed by the principal-factor solution to factor analysis and rotated by varimox and equamox routines. There was evidence for the stability of the Evaluation-Potency-Activity framework even at the second-grade level. Progressive refinement and differentiation were evident in the unrotated principal-axes factors as reflected in the shift from a predominantly two-factor system, comprised of the Evaluation and Dynamisim factors, to the true factor EPA system.

[16] Francis J. DiVesta, "A Developmental Study of the Semantic Structures of Children," *Journal of Verbal Learning and Verbal Behavior*, 5 (June, 1966) 249-259.

A study reported by Prentice[17] compared the effects of semantics and syntax in word learning on subsequent use of new words. Forty-eight fourth graders were randomly assigned to one of three training groups. Seven CVC (consonant-vowel-consonant) trigrams, each of a different grammatical form class, were learned in response to sets of three pictured instances of a referent by a Semantics Training group; to sets of three sentences omitting the word of one form class by a Syntax Training group; to sets of three pictures presented with corresponding sentences by a Both Training group. Semantics Training subjects required the greatest number of trails to criterion. The subjects demonstrated acquisition of syntax of completing sentences in grammatical use test.

Semantic meaning was evidenced by matching trigrams to English equivalents. The subjects trained with sentences were best able to use the new words grammatically. The subjects trained with pictures were best able to identify new verbal instances of the referent. Sex differences were neither reliable nor consistent in direction. It was concluded that (a) referential association is more effective than syntax for acquisition of semantic meaning, and (b) grammatical use is more effective than semantics as a method of acquiring syntactic meaning.

[17] Joan L. Prentice, "Semantics and Syntax in Word Learning," *Journal of Verbal Learning and Verbal Behavior*," 5 (June, 1966) 279-284.

A study of speech perception at varying chronological age periods was reported by Warren and Warren.[18] Marked age differences have been found of the illusory changes called "Verbal Transformations" (VT's) which occur while listening to recorded repetitions of clearly pronounced single words: (a) VT's were experienced by all young adults (18-25 years) and all children aged 8 and aged 10; (b) VT's were generally not experienced by adults over 60 and children 5 years old; (c)

[18] Richard M. Warren and Roslyn P. Warren, "A Comparison of Speech Perception in Childhood, Maturity, and Old Age by Means of the Verbal Transformation Effect," *Journal of Verbal Learning and Verbal Behavior*, 5 (April, 1966) 142-146.

appearance of VT's at about age 6 resembles an all-or-none phenomenon, *i.e.*, the rate for VT's approximates that of older children and young adults; (d) the smallest organizational groupings seem to be meaningful words for the aged, English phoneme sequences for young adults, and individual phonemes for children. It was suggested that VT's reflect skilled reorganizational mechanisms employed during connected discourse as an aid to comprehension.

Children and adults verified sentences of four grammatical types—"kernel," passive, negative, and passive negative—with respect to pictures in a study reported by Slobin.[19] The pictures presented situations which were either reversible, in that the object of action could also serve as the subject, or non-reversible, in that the object could not normally serve as the subject. Chomsky's syntactic competence model correctly predicted that passives would take more time to evaluate than kernels, and passive negatives more time than negatives; but semantic and psychological factors are required to explain the finding that syntactically simple negatives took more time than relatively more complex passives.

Making sentences non-reversible largely washed out the difference in syntactic complexity between active and passive sentences; making passives was about as easy as kernels, and passive negatives about as easy as negatives. It was argued that non-reversibility facilitates comprehension of passive (both affirmative and negative) sentences in that, although the normal subject-object order is reversed, it is still clear which of the two nouns is subject and which is object. The syntactic theory also does not account for an obtained interaction between truth value and affirmation-negation. All of the factors considered—syntactic, semantic, and pragmatic—are important in accounting for the performance of subjects as young as six.

The process of acquisition of grammar was studied[20] with 320 children randomly selected from second, fourth, and sixth graders in three schools representing different socio-economic backgrounds. Subjects were individually presented 6 nonsense sentences and asked to guess the meaning of a stimulus word planted in each sentence. Two types of cues, grammatical "signal" and "signal plus syntactic position" were provided to suggest three parts of speech (noun, verb, and modifier).

Responses were classified either as homogeneous (proper grammatical identification) or heterogeneous. No difference was found in frequency of homogeneous responses with regard to children's socio-economic background. Significant differences were associated with increase in cue information and with increase in age.

Sentence structure was the concern of Hunt[21] who points out some things known about the development of language structure and a few more recent findings. As students mature they tend to have more to say about a subject; their sentences tend to get longer; and they tend to write more subordinate clauses per main clause. Hunt cited substantial evidence that as school children mature, they can learn to put their thoughts—spoken and written—into longer clauses (combining two or more into one mature clause) and that this idea

[19] Dan I. Slobin, "Grammatical Transformation and Sentence Comprehension in Childhood and Adulthood," *Journal of Verbal Learning and Verbal Behavior*, 5 (June, 1966) 219-227.

[20] Alice F. LaCivita, John M. Kean, and Kaoru Yamamoto, "Socio-Economic Status of Children and Acquisition of Grammar," *Journal of Educational Research*, 60 (October, 1966) 71-74.

[21] Kellogg W. Hunt, "Recent Measures in Syntactic Development," *Elementary English*, 43 (November, 1966) 732-739.

of clause-consolidation be a vital part of language arts program. This suggests that clause length is a better index of language maturity than sentence length or number of subordinate clauses. Also, if writers "build up" long clauses, then readers must "break them down." This fact has implications for reading instruction.

While not properly a research article, the suggestions by Wardhaugh[22] relative to English syllables suggested implications for teachers of elementary school language arts. He concluded with eight basic points about syllabication that may differ from some teachers, course materials, and textbooks.

[22] Ronald Wardhaugh, "Syl lab-i-ca-tion," *Elementary English*, 43 (November, 1966) 785-788.

Four groups of children in Florida elementary schools were subjects of a study reported by Jacobs and Pierce.[23] The subjects included 20 sixth-grade monolingual American, 18 fifth-and sixth-grade students primarily Czechoslovakian, Polish, or German ancestry with bicultural-bilingual influences in home and/or community, 16 fifth- and sixth-grade students from Greek-American homes, a total of 54 children. The bilinguals scored considerably higher on the non-verbal "Uses" test of creativity, and slightly lower on the verbal "Word Meanings" test.

[23] John F. Jacobs and Marnell L. Pierce, "Bilingualism and Creativity," *Elementary English*, 43 (May, 1966) 499-503.

The combined score showed the bilinguals scoring considerably higher. When matched by quartiles for I.Q., the bilinguals still scored higher on the creativity tests. Bilinguals scored better, comparatively, on non-verbal tests than on the verbal. The bilingual child seemed to have a significantly higher intelligence quotient than the monolinguals in spite of the verbal orientation of the I.Q. tests used.

Oral Communication

Four studies of listening and two on oral language are reported in this section. Lundsteen[24] continued her interest in listening by reporting a study to explore critical listening abilities as part of general listening ability. The sample was made up of twelve classes in a Texas city, including six fifth-grade and six sixth-grade classes. The mean score on the *California Test of Mental Maturity,* Form E, was 123; the reading grade average for the *Stanford Achievement Test,* Form N, was seventh grade. The control group followed the usual curriculum. The experimental group was given a series of 18 lessons, presented twice weekly, forty minutes each. The structure of the lessons used concepts of programmed learning.

[24] Sara W. Lundsteen, "Critical Listening: An experiment," *Elementary School Journal*, 66 (March, 1966) 311-315.

The pupils were presented with many illustrations of a certain concept important to critical listening. To test the pupils on critical listening, the experimenter constructed a test of 79 items consisting of three parts: detection of the speakers purpose, analysis and judgment of propaganda, and analysis and judgment of arguments. Measures of critical listening ability showed a difference between the experimental group and the control group significant at the .01 level in favor of the experimental group. The results suggested the possibility of an independent ability or abilities of critical listening. This appears to be related to, but not congruent with, other verbal and thinking abilities.

One study[25] sought to detect age trends in selective listening. Groups of 32 children in each of three grades (kindergarten,

[25] Eleanor E. Maccoby and Karl W. Konrad, "Age Trends in Selective Listening," *Journal of Experimental Child Psychology*, 3 (May, 1966) 113-122.

second, and fourth) listened to a man's voice and a woman's voice, speaking words simultaneously. On one run through the 23 pairs of words, subjects were instructed to report what the man's voice was saying; on another, the words spoken by the woman. The stimulus words were systematically varied with respect to the number of syllables they contained. For each subject, the stimulus words were presented on one occasion binaurally (both words in both ears), on another occasion, dichotically (two different words in each ear).

The number of correct reports of the word spoken by the desired voice increased with age; the number of intrusive errors (reports of words spoken by the unwanted voice) declined with age. At all age levels, scores were higher under dichotic presentation, but there was no change with age in the advantage derived from this presentation. Children at each age level made more errors on single-syllable than on multi-syllable words, but this difference was greater for older children.

A study reported by Fawcett[26] was designed to determine the effectiveness of teaching listening skills to fourth-, fifth-, and sixth-grade pupils and to investigate the relationship of selected variables to listening ability. The population was the total enrollment of pupils in grades four, five, and six of four elementary schools in Western Pennsylvania. Of the total 638 pupils, 322, or the experimental group, were administered a pretest of listening ability in the form of *S.T.E.P. Listening Test, 4A*, instruction in how to listen and finally, a posttest of listening ability (*S.T.E.P. Listening Test, 4B*). The control group of 316 received the same pretest and the posttest but did not receive any special instruction in developing listening skills.

[26] Annabel E. Fawcett, "Training in Listening," *Elementary English*, 43 (May, 1966) 473-476.

Some of the conclusions follow: a) pupils who received listening instruction evidenced significant improvement in listening ability, whereas those pupils who did not receive such instruction did not; b) listening ability was significantly related to several curricular areas of the school, especially reading, language, and arithmetic; c) boys and girls did not differ significantly in listening ability; d) the ability to use reference materials was related to listening ability and the degree of relationship was higher than that between listening ability and language usage; e) a child's report card grades in reading, language, and arithmetic were not as closely related to listening ability as scores obtained on standardized achievement tests in each of these respective areas.

The purpose of a study reported by Winter[27] was to throw light on a series of questions about aspects of listening. More than 500 intermediate-grade children (280 boys and 283 girls) from two elementary schools were chosen to participate. *S.T.E.P. Listening Comprehension Test*, Form 4A, was administered to the children, as well as the *SRA Achievement Test* and *California Test of Mental Maturity*. The researcher found differences in achievement from fourth to sixth grades were significant at the .01 level of confidence; also between fifth and sixth grades.

It was concluded the pupils improved in listening skill from fourth to sixth grade. Other findings suggested that girls performed better than boys; relationships between listening and intelligence, and reading and work-study skills were moderate and significant; and the relationship between listening and capitalization-punctuation skills and grammatical usage was a positive one. The general conclusion

[27] Clotilda Winter, "Listening and Learning," *Elementary English*, 43 (October, 1966) 569-572.

presented was that learning which takes place was dependent to a moderate extent upon listening skill.

An approach to oral language instruction suggested by DeLawter and Eash[28] resulted from a study in the area of linguistic analysis of patterns of speech. To obtain the language sample, the children were encouraged in a tape-recorded individual interview to speak freely in response to unfinished stories. From these data were detected some common errors in oral language, such as: failure to focus; poor organization of ideas; failure to clarify questions; lack of supporting ideas; inadequate descriptions; lack of subordination; stereotyped vocabulary.

[28] Jane Anne DeLawter and Maurice J. Eash, "Focus on Oral Communication," *Elementary English*, 43 (December, 1966) 880-891; 901.

Groff[29] presented a critique of a dissertation related to the oral language of kindergarten children, the findings of which were utilized by the *City Schools Reading Program*. The study was closely scrutinized by K. S. Goodman who expressed concern with some of the basic assumptions and interpretations of the study.

[29] Patrick Groff, editor, "Research Critiques," *Elementary English*, 43 (December, 1966) 897-901.

Written Communication

Composition

The effects of various types of motivating stimuli on the quality of the creative writing of elementary school children was the focus of a study reported by May and Tabachnick.[30] Pictorial stimuli used were (a) organized; (b) unorganized; or (c) a choice between the two to examine which resulted in the greatest degree of creativity in children's written stories. About 600 children were used, evenly divided between sixth grade and third grade. They were randomly assigned to one of the three stimulus conditions and with two pictures provided; the children were directed to check their choice and then write about it.

[30] Frank B. May and B. Robert Tabachnick, "Three Stimuli for Creative Writing," *Elementary School Journal*, 67 (November, 1966) 88-94.

Six judges rated each composition as creative or not creative in general or as a whole. Thus scores ranging from 0 to 12 was derived for each story. (A score of 5 would indicate that five of twelve judges considered it "creative.") Approximately similar results were achieved for "organized" and "unorganized" pictures for third and sixth graders, but in grade six the boys' performance was completely unlike the profile of the girls—the boys doing better with "unorganized" stimulus. The study pointed up the importance of recognizing differences in motivational patterns, especially differences between the patterns of boys and girls.

The effects of praise and blame upon quality and quantity of themes produced as well as upon children's attitudes toward creative writing were investigated.[31] The 105 fourth-grade pupils who served unknowingly as subjects for ten lessons over a period of 10 weeks were divided into groups and given (a) praise without correction, or (b) criticism with correction for all theme writing efforts. Results supported the assumption that praise without correction in the classroom was superior to blame. While both groups improved equally, the praised but uncorrected group produced significantly more work, exhibited more favorable attitudes, were more highly moti-

[31] Winifred F. Taylor and Kenneth C. Hoedt, "The Effect of Praise upon the Quality and Quantity of Creative Writing," *Journal of Educational Research*, 60 (October, 1966) 80-83.

vated, and appeared to be more independent than those subjected to blame and correction.

Spelling

Four studies of spelling are reported in this section. One investigation reported by Christine and Hollingsworth[32] compared a conventional study-test spelling teaching method for significant differences in spelling achievement. The subjects were fifth-grade pupils in the Campus Laboratory School at Arizona State University. Although there were no statistically significant differences of achievement between the two groups, several practical considerations were listed: a) the test-study group used a five-minute daily block of time compared to a minimal ten-minute daily block by the study-test group, b) the study-test group spelled better on the achievement tests; however, the corrected-test group achieved 94.7 percent as well in half the instructional time, c) the corrected-test method individualized the weekly word list, which each child needs to study. In view of the recommendations made in this study, Horn's conclusions (Thomas D. Horn, "The Effect of the Corrected-Test on Learning to Spell," *Elementary School Journal*, 47 (January, 1947) 277-285) that the corrected-test appeared to be the best single factor contributing to success of achievement in spelling was extended and strengthened.

A study reported by Personke[33] attempted to determine if there was an advantage in spelling achievement among Scottish children. Scottish children: began school at age five. phonics in reading instruction was incorporated from the beginning, and spelling words were introduced in phonetic groups. American children: began school at age six, whole-word method was used to start reading instruction, and spelling words were introduced around interest units. A group of 300 pupils from Jackson, Michigan and 300 pupils from West Lothian County, Scotland made up the sample studied. The *Metropolitan Achievement Test,* 1947 edition, was used. All words were compared with the Birmingham list of basic words for English children and with the lists of Gates, Rinsland, and Thorndike in the U.S.A.

Only the word *vacation* was found on the American list and not on the English list. It was found that West Lothian children were superior in spelling achievement to their American counterparts. The early start appeared to give some advantage. Time did not erase this advantage, nor did maturation. The evidence suggested that amount and kind of instruction were of more crucial concern in spelling instruction than maturation.

Grothe[34] sought to determine: (a) the extent of the relationship which existed between spelling conscience, academic achievement, and intelligence; and (b) whether spelling conscience was a stable characteristic which may be found in various types of elementary school writing experiences. To fulfill these purposes, various written exercises, a pupil self-evaluation device, *California Test of Mental Maturity,* and the spelling subtest of *SRA Achievement Series* were used. The 120 subjects were fourth, fifth, and sixth graders of above average ability (mean I.Q. of 112).

[32] Roy O. Christine and Paul M. Hollingsworth, "An Experiment in Spelling," *Education*, 86 (May, 1966) 565-567.

[33] Carl Personke, "Spelling Achievement of Scottish and American Children," *Elementary School Journal*, 66 (March, 1966) 337-343.

[34] Barbara Ford Grothe, "A Study of Spelling Conscience," *Elementary English*, 43 (November, 1966) 774-775; 784.

Several tests were constructed by the experimenter for use in the experiment. In all tests and written activities, words were chosen for each level which fell within the 50 percent range of difficulty, as determined by *New Iowa Spelling Scale.* In each written exercise, words spelled incorrectly were counted. Tabulation was made of the number of words which then were corrected by erasure, rewriting, striking out, or superimposition of the correct letter or word.

Scores were subjected to an analysis of multiple regression which yielded an F value. The conclusions listed were: a) the operation of spelling conscience was dependent upon intellectual ability and academic achievement, b) spelling conscience could be predicted from a series of variables (as teacher ranking of academic conscience; pupil self-evaluation of academic conscience; intelligence test scores; and achievement test scores), and c) spelling conscience is not maintained at a consistent level of operation.

To test the hypothesis that no significant differences would be found among children taught by either medium, ITA or T.O., two sets of data were collected by Mazurkiewicz and Lamana.[35] One involved standardized testing at the end of the first and second grades, and the other consisted of a creative writing sample at the end of the second grade. At the end of the first grade, using the spelling section of *Stanford Achievement Test* and a sample of 196 matched pairs, the results indicated that ITA pupils (when measured only on a T.O. basis and when only 54 percent of the population had made the transition to T.O.) spelled less well than the T.O. population. However, the data demonstrated superiority for ITA to T.O. procedures in promoting significantly better spelling achievement when the population was tested at the end of the second year. Using a restricted stimulus measure to obtain writing data, it was found that T.O.-taught pupils demonstrated superiority in capitalization and punctuation, but ITA populations observed more prolific free writing behavior (number of running words, number of poly-syllabic words). Spelling superiority by ITA-taught pupils was also evident when measured on a T.O. standard in free writing. Further testing of spelling achievement was planned by the researchers.

The objectives of an article by Hanna and others[36] were to point out contrasts between previous spelling research and a linguistic-based approach to spelling, and to outline the major areas of needed research. These areas were the linguistic descriptions of the orthography, the neurological and psychology of spelling, the spelling program in relation to the four language arts, and the measurement and evaluation of spelling. The suggestions for research are made in light of the findings by the Stanford University research project in spelling.

Handwriting

The purpose of a study reported by Renaud and Groff[37] was to determine through a questionnaire of eleven questions the opinions of parents as to the relative merits of cursive and manuscript hand-

[35] Albert J. Mazurkiewicz and Peter A. Lamana, "Spelling Achievement Following i/t/a Instruction," *Elementary English,* 43 (November, 1966) 759-761.

[36] Paul R. Hanna and others, "Needed Research in Spelling," *Elementary English,* 43 (January, 1966) 60-66.

[37] Albert J. Renaud, Jr. and Patrick J. Groff, "Parents' Opinions about Handwriting Styles," *Elementary English,* 43 (December, 1966) 873-876.

writing. The major findings indicated that both primary- and intermediate-grade school children (according to parent response) favored the use of manuscript writing in grades 1 and 2, but would object to its continued use through grade 6; parents held a similar opinion; and parents were concerned about handwriting today as compared to that of thirty years ago.

While not strictly a research article, Enstrom[38] points up the methods currently advocated for the left-handed writer and then proposes three ideas for writing with the left-hand: (a) the fingers back on the pencil; (b) pupil desk below normal in height; and (c) the paper turned clockwise *extra far* to aid vision and arm leverage.

[38] E. A. Enstrom, "The Little Turn That Makes the Big Difference," *Elementary English*, 43 (December, 1966) 865-868.

WALTER T. PETTY AND PAUL C. BURNS

A Summary of Investigations Relating to the English Language Arts in Elementary Education: 1966

Part II

Studies in Reading

Preschool Reading

Three studies indicate that research is being devoted to preschool readers. Durkin[39] sought to determine whether reading achievement is significantly higher for early readers than that of equally intelligent non-early readers. Her first study included 49 early readers; the second, 156 early readers. The *t*-tests demonstrated consistently that the average achievement of the early readers was significantly higher than the non-early readers with whom they were matched on intelligence. No attempt was made to determine the cause of success in early reading; the study was concerned only with early reading resulting from not necessarily deliberate help given at home. Recognizing that the number of subjects was small and the I.Q.'s of the subjects were high, the writer cautioned that one can't move directly from the findings to conclusions about the time at which it is best to begin school instruction in reading. Certainly, ways children reported learning to read might have implications about beginning reading instructions in schools.

McCracken[40] identified eight children who read before they entered first grade in a group of 360 entering first-grade children. They were observed and tested over a two-year period. Their I.Q. was 132, and all their reading achievement scores were well above average. They quickly mastered word-pronouncing skills and oral re··ng skills. Inability to comprehend adequately materials for grades 4-6 was a common failing of seven out of eight of the pupils at the end of second grade as measured by the *Standard Reading Inventory*.

The purpose of a third study[41] was to examine the psycho-social effects of reading instruction upon a class of kindergartners. Pretesting established the sub-

[39] Dolores Durkin, "The Achievement of Pre-school Readers: Two Longitudinal Studies," *Reading Research Quarterly*, 1 (Summer, 1966) 5-36.

[40] Robert A. McCracken, "A Two-Year Study of the Reading Achievement of Children Who Were Reading When They Entered First Grade," *The Journal of Educational Research*, 59 (January, 1966) 2-7.

[41] George E. Mason and Norma J. Prater, "Social Behavioral Aspects of Teaching Reading to Kindergartners," *Journal of Educational Research*, 60 (October, 1966) 58-61.

stantial equivalence of this group to two control groups in intelligence, reading readiness, personal social adjustment, and socio-economic status. The experimental group received regular instruction in reading from an experienced first-grade teacher during the second trimester and one-half (January to June) of the 1963-64 school year. Post-test data indicated that boys displayed less acceptable classroom behavior as a by-product of such instruction. Parents were favorable to the instruction, but the teachers involved were less so. The teachers maintained that the children, although interested, had to "work too hard" to master the task of reading.

Three studies dealt with auditory discrimination of pre-school children. Clark and Richards[42] assessed auditory discrimination ability of economically disadvantaged and nondisadvantaged preschool children using the *Wepman Test of Auditory Discrimination*. The results indicated a significant deficiency in auditory discrimination in the economically disadvantaged group, suggesting the need for further research, as well as a modified curriculum in the education of this group.

Another study[43] dealing with auditory discrimination was concerned with these two questions: (a) Will auditory training help the beginning reader, in lower socio-economic groups, to discriminate thirty-three basic speech sounds? and (b) When presenting contrasting pairs of thirty-three basic speech sounds, does the use of known or nonsense words make a difference? The sample was composed of random selection of the children attending morning kindergartens in three schools. Within the experimental group, sub-groups designated as Training 1 (use of known words) and 2 (use of nonsense words) were arbitrarily assigned. The experimenter worked for 15 minutes a day for a period of five weeks with the experimental group. The results of the analysis of variance showed significant gains made by the experimental group on the post-test, *Wepman Auditory Discrimination,* Form II, but not on the *Harrison-Stroud Reading Readiness Test.* There was no significant difference between the groups having known words and the groups having nonsense words.

A study reporting relationships between pre-reading measures of auditory discrimination and reading achievement at the end of the first grade was reported by Dykstra.[44] Seven measures of auditory discrimination and a group intelligence test were administered to 632 pupils at the beginning of the first grade, and two measures of reading achievement were given at the end of the school year. Relationships were assessed by means of correlation analysis and multiple regression. Results showed intercorrelations among auditory discrimination measures and between each measure and subsequent reading achievement to be uniformly low, few reaching .40. Five of the seven auditory discrimination measures made a significant contribution to a multiple regression equation which was designed to predict reading achievement. In addition, intelligence was significantly related to reading achievement. Nevertheless, variation in performance on auditory discrimination and intelligence measures accounted for less than half of the variation in performance on the reading measures.

[42] Ann D. Clark and Charlotte J. Richards, "Auditory Discrimination among Economically Disadvantaged and Nondisadvantaged Preschool Children," *Exceptional Children*, 33 (December, 1966) 259-262.

[43] Nicholas J. Silvaroli and Warren H. Wheelock, "An Investigation of Auditory Discrimination Training for Beginning Readers," *The Reading Teacher*, 20 (December, 1966) 247-251.

[44] Robert Dykstra, "Auditory Discrimination Abilities and Beginning Reading Achievement," *Reading Research Quarterly*, 1 (Spring, 1966) 5-34.

Other findings included significant sex differences in performance on three of the auditory discrimination tests and on both reading tests. All such differences favored girls.

A study by Robinson,[45] related to pre-school reading, raised the question of testing instruments designed to identify visual, auditory, and visuo-motor abilities of kindergarteners. The subjects were 258 kindergarten children in three schools from varying socio-economic levels. A variety of tests was administered on an individual, small group, or total class basis. The test-retest technique was used to establish reliability of those tests for which the technique was suitable. The *Pearson product-moment* method was used to compute *r*. For other tests, reliability was obtained through the use of the *Kuder-Richardson Formula 20*. It was found that the *Goodenough Draw-a-Man Scale* appeared to be reasonably reliable at the three socio-economic levels. Too, the *Metropolitan Readiness* and *Columbia Mental Maturity Scale Test* proved reasonably reliable. Findings indicated that perhaps new measures of auditory discrimination need to be developed for both disadvantaged and average groups.

[45] H. Alan Robinson, "Reliability of Measures Related to Reading Success of Average, Disadvantaged, and Advantaged Kindergarten Children," *The Reading Teacher*, 20 (December, 1966) 203-208.

Beginning Reading Instruction (First Grade)

A variety of reading programs are compared in this section, since many of the studies were first-grade reading studies under the United States Office of Education. Five studies dealt specifically with the use of basal readers vs. an experience approach. Bordeau and Shope[46] compared three approaches to teaching first-grade reading: basal readers; basal reader plus intensive phonics; and sensory experience approach. The subjects were 751 first-grade children, almost evenly divided among white and Negro children. Comparisons of total treatment groups and specific subpopulations, indicated (a) there were no significant differences between the basal reader approach and the basal reader plus phonics for white boys, girls, or total white population. There were significant differences between these two approaches for Negro boys, girls, and total Negro population—in favor of the basal reader. There were significant differences between phonic and sensory experience approaches in favor of the sensory experience approach (aural, oral, visual materials, *etc.*), for whites and Negroes, suggesting that more varied experiences provided the beginning learner, the better he will learn.

[46] Elizabeth Ann Bordeau and N. H. Shope, "An Evaluation of Three Approaches to Teaching Reading in First Grade," *The Reading Teacher*, 20 (October, 1966) 6-11.

A study by Stauffer[47] compared the basal reader with the need to consider reading, writing, listening, and speaking as an approach to language and communication. The experimental (language arts) group had 232 subjects, the control (basal reader) group, 201 subjects. The *Stanford Achievement Test* was the principal test of achievement used. Post-test results indicated: (a) the experimental population earned significantly higher scores at .01 level of confidence than did the control population on Word Reading, Paragraph Meaning, and Spelling. The author suggested that the language arts approach will produce good oral reading, better written expression, and yield high returns regardless of readiness or capacity, though

[47] Russell G. Stauffer, "The Effectiveness of Language Arts and Basic Reader Approaches to First Grade Reading Instruction," *The Reading Teacher*, 20 (October, 1966) 18-24.

in this study it did sufficiently influence achievement of the segregated Negro population to avoid having their performance materially influence the mean achievement scores of the total experimental population. The populations achieved the same results on tests of Word Study Skills and Vocabulary. The control group achieved better on Arithmetic. Boys in the experimental population scored significantly higher than boys in the control population. Each approach produced about the same attitude toward reading.

Other investigators[48] compared the coordinated basal language arts approach of the *Scott, Foresman* basal series (*We Listen, Speak, and Write*) and the integrated experience approach. On limited results, it was found that pupils in the integrated experience approach had significantly higher mean scores at the .01 level of confidence on Word Meaning, Paragraph Meaning, Vocabulary, and Word Study sections of the *Stanford Achievement Test* and the *San Diego Pupil Attitude Inventory*. Too, higher scores (at the .05 level) were achieved by the integrated experience group on *Gates Word List, Karlsen Word List, Creative Writing Mechanics Ratio,* and Flexibility and Elaboration Indices of *Minnesota Tests of Creative Thinking.*

[48] Elaine Vilscek, Lorraine Morgan, and Donald Cleland, "Coordinating and Integrating Language Arts Instruction in First Grade," *The Reading Teacher,* 20 (October, 1966) 25-30.

A comparison of two first-grade language programs was reported by Kendrick.[49] The study was designed to determine the relative effectiveness of the language arts experience approach as compared with the 'traditional method.' Four areas of the language arts were measured separately—reading, writing, listening, and speaking. For most of the analyses performed there was no significant difference between the two approaches. Among the differences observed (at the .01 level of confidence) the traditional method appeared more effective for developing the skill of deriving meaning from the written paragraph for males of all socio-economic levels and for middle-class females; and for developing speaking competence of both males and females in all three socio-economic levels. The experience approach apparently did something to increase interest in reading in lower-class males. This method also favorably affected both males and females in writing, as to the ratio of the number of different words to the total number of words spoken.

[49] William M. Kendrick, "A Comparative Study of Two First Grade Language Arts Program," *The Reading Teacher,* 20 (October, 1966) 25-30.

A study to determine the effect of an intensified and extended reading readiness program upon first-grade reading achievement was reported by Spache.[50] The program consisted of utilization of materials that would develop auditory and visual discrimination and auditory language ability. The plan also delayed the induction into formal reading of pupils in the second, third, and fourth quarters of the readiness achievement distributions for periods of 2, 4, and 6 months, respectively. The criterion of reading achievement was the median score earned on the five reading subtests of the *Stanford Achievement Test,* Primary I, 1964 Edition. This was compared with the score of first-grade pupils in other schools who received the typical basal reader program of instruction. The development under the basal reader program appeared to be later, slower, and more prolonged than under the intensified readiness program. The results indicated that the greatest achievement was attained

[50] George P. Spache and others, "A Longitudinal First Grade Reading Readiness Program," *The Reading Teacher,* 19 (May, 1966) 580-584.

(a) by girls, (b) by white pupils, (c) by control pupils among white groups, and (d) by experimental pupils among Negro groups. This suggested that the experimental readiness program was of significant value to Negro pupils, and that the achievement in the experimental and control groups was quite similar, despite the delay in the introduction of formal reading of the majority of experimental pupils.

A number of studies focused attention upon phonics, symbol-sound relationships, or linguistics. Murphy[51] compared the effects of a gradual approach to phonics instruction as outlined in a basal reader approach with a program of early teaching of letter names and sounds. Three problems were included: the relation of perception of word elements to sight vocabulary growth, the effect of early teaching of a speech-based phonics program on reading achievement, and the value of a writing emphasis in the speech-based phonics program. The children in Treatment A, gradual phonics group, followed the *Scott, Foresman* manuals, readers, and workbooks for first grade. Children of Treatment B, *Speech-to-Print* phonics group with visual word study, were taught the Scott, Foresman stories and the accompanying sight vocabulary. The pupils of Treatment C, *Speech-to-Print* phonics group with *Writing Word* study, used the same instructional materials as the second group except that the self-directed seat work consisted of practices involving writing. It was concluded that growth in sight vocabulary in beginning reading is related to perception of word elements. The early teaching of the speech-based phonics program resulted in higher achievement in reading and spelling. Emphasis in writing practice resulted in more writing and better spelling in children's compositions.

Two published programs were selected and two supplementary reading programs were developed to encompass the specific characteristics necessary for the experimental testing of four hypotheses by Ruddell.[52] Twenty-four first-grade classrooms in Oakland, California, Unified School District were selected as a sample of a wide range of socio-economic levels. After the first nine months of study the following conclusions were drawn: a) the first-grade program possessing a high degree of consistency in grapheme-phoneme correspondences in the vocabulary introduced showed a significantly higher (1) Word Reading, (2) Word Study Skills, and (3) regular word identification scores than did the reading programs making little provision for consistent correspondences, with one exception which was not significant; b) the first-grade reading program making provision for a high degree of consistency in grapheme-phoneme correspondences in the vocabulary introduced and placing special emphasis on language structure as related to meaning showed irregular word identification scores significantly higher than scores for the reading program making little provision for consistent correspondences and placing emphasis on language structure as related to meaning; c) the program making provision for a high degree of consistency in grapheme-phoneme correspondences and placing special emphasis on language structure as related to meaning showed significantly higher (1) Paragraph Meaning and (2) Sentence Meaning scores than did the

[51] Helen A. Murphy, "Growth in Perception of Word Elements in Three Types of Beginning Reading Instruction," *The Recding Teacher*, 19 (May, 1966) 585-589.

[52] Robert B. Ruddell, "Reading Instruction in First Grade with Varying Emphasis on the Regularity of Grapheme-Phoneme Correspondences and the Relation of Language Structure to Meaning," *The Reading Teacher*, 19 (May, 1966) 653-660.

program making provision for a high degree of consistency in correspondences and placing no special emphasis on language structure as related to meaning.

Schneyer[53] compared the reading achievement of 674 first-grade pupils (at above average, average, and below average ability levels) taught by the Fries *Linguistic and Reading Approach* and the *New Basic Readers* basal approach published by Scott, Foresman and Company. The major finding was that, when the two treatment groups were considered as a whole, neither approach resulted in significantly higher reading achievement than the other. Although there were significant differences between the treatments on ten of the fourteen criterion measures, the linguistic group was superior on four and the basal reader group on the other six. In addition, differences in many cases were not consistent at all ability levels. In analyzing the vocabulary of the two groups, on the Paragraph Meaning subtest the basal reader group met a much greater percentage of words than did the linguistic group. The basal reader group did significantly better on the Paragraph Meaning test. On the Word Reading subtest, the linguistic group met a slightly greater percentage of words than did the basal reader group. On this subtest neither group scored significantly higher. This group of studied pupils will be followed for two more years since it is possible that some of the initial differences may disappear or other differences may appear later.

[53] J. Wesley Schneyer, "Reading Achievement of First Grade Children Taught by a Linguistic Approach and a Basal Reader Approach," *The Reading Teacher*, 19 (May, 1966) 647-652.

A study[54] conducted at Syracuse University compared three sets of materials designed for the teaching of beginning reading: a) *Ginn Basic Reading Series*, Revised Edition; b) *Structural Reading Series*, L.W. Singer Co.; and c) *Let's Read*, Bloomfield and Barnhart. The subjects were 469 children in 21 central New York classrooms. Pre-experiment tests were: *Pintner-Cunningham Primary Test*, Form A., Revised, 1964; *Murphy-Durrell Diagnostic Reading Readiness Test*, Revised 1964; *Thurstone Pattern Coping*, Experimental Edition; *Thurstone and Jeffery Identical Forms*, Experimental Edition; *Allyn and Bacon Pre-Reading Test*. The post-instructional tests given in May were: *Stanford Achievement Test*, Primary I Battery, Form X, 1963; *San Diego Pupil Attitude Inventory; Writing Sample;* and Allyn and Bacon *First Reader Test*. No significant differences between treatment groups were found on pre-test measures of mental age, chronological age, and readiness test scores. An analysis of variance of the mean scores on all subtests of the pre-experiment measures yielded only one significant difference, this being the Rhyming Words subtest of the Allyn and Bacon Pre-Reading Test. Apparently there were no differences in achievement or attitude toward reading across the treatment groups. Further study of the available data revealed a very wide range of mean scores on the post-tests within each treatment group.

[54] William D. Sheldon and Donald R. Lashinger, "Effect of First Grade Instruction Using Basal Readers, Modified Linguistic Materials and Linguistic Readers," *The Reading Teacher*, 19 (May, 1966) 576-579.

The three different basal reading systems examined in another study[55] were: 1) the *Lippincott Basic Reading Series*; 2) the *Early-to-Read* ITA program; 3) the Scott, Foresman *New Basic Reading Series*. The

[55] Harold J. Tanyzer and Harvey Alpert, "Three Different Basal Reading Systems and First Grade Reading Achievement," *The Reading Teacher*, 19 (May, 1966) 636-642.

sample for this study was drawn from three Long Island school districts adjacent to New York City, 643 boys and girls randomly selected. Reading readiness tests were administered as pretests the first weeks of the school year. There was a significant difference on an end-of-year achievement test of reading and spelling among the children taught to read by all three different basal reading systems. The Lippincott and Early-to-Read ITA groups were significantly higher than the Scott, Foresman group on a composite reading score and on all of the subtests of the *Stanford Achievement Test.*

The Lippincott group showed significantly higher achievement on the subtests of Vocabulary and Spelling than the Early-to-Read ITA group. Sex was not a factor producing differential results among any of the three groups, nor was intelligence a major factor in distinguishing probable chances for success with any of the three basal reading systems. The Lippincott and Early-to-Read ITA series generally utilize an approach to reading that is considerably more analytic than the Scott, Foresman program. Those children taught to read in the Scott, Foresman basal series will, eventually, be taught the same skills developed in the Lippincott and ITA readers, but many of these skills will not appear until second or third grade with the program.

The "Huls approach," using a control of the introduction of the vocabulary, was the focus of one study.[56] The introduction of words is controlled by the phonic make-up of the words according to a planned sequence which limits the words in each new story to words containing only previously introduced phonemes, and words containing the new phoneme being introduced for the first time in that story. Words not conforming to this control, but needed for sentence flow, are held to a minimum, and their introduction spaced several stories apart.

Spelling patterns are introduced into stories at a rate, in general, of less than one new spelling pattern per story. This plan was used in San Diego by two first-grade experimental groups, pitted against the pupils of control classrooms, who had been matched on the basis of C.A. and I.Q. The experimental group was slightly older than the control group, and their I.Q. mean was higher. On the *Stanford Achievement Test,* higher scores were made by the control group. The author felt this result might be expected since the test was based on reading lists from readers used in the control classes. On a test of word knowledge, devised from the new and basal materials, the differences were in favor of the experimental group.

The ITA was a part of the experimental treatment in several studies. Twenty-one first-grade classrooms were selected from three middleclass suburban school districts in central New Jersey for Fry's study[57] of three different teaching methods: (a) Initial Teaching Alphabet (ITA); (b) the Diacritical Marking System (DMS); and (c) a traditional approach (TO). The ITA group used the *Early-to-Read* series. the traditional orthography group used *Sheldon Readers* by Allyn and Bacon, and the DMS group used *Sheldon Readers* that had been especially reproduced in black and white with diacritical marks superimposed on the words. The results did not show any superiority or inferiority for ITA or DMS or the traditional reading approach on most measures of reading achievement. There

[56] Lenora A. Crimmins, "And Now There Are Ten," *Elementary English,* 43 (November, 1966) 771-773.

[57] Edward Bernard Fry, "First Grade Reading Instruction Using Diacritical Marking System, Initial Teaching Alphabet and Basal Reading System," *The Reading Teacher,* 19 (May, 1966) 666-669.

were no differences when classes were treated as a whole or when broken down into subgroups by sex, age, or I.Q. A word of caution is in order in reminding the reader that all tests were given in traditional orthography, and this could have adversely affected the children in the special alphabet groups, although there was evidence that at least the majority of both special alphabet groups were reading TO material at their level. This project is being carried on another year when almost all children will have been transferred out of the special methods group. A report[58] of the study also appeared in *Elementary English*.

The results of Hahn's study,[59] comparing ITA, language arts, and basic readers, were limited to reports of tests given in May of the school year. The *Stanford Achievement Test*, Primary Form, and the *San Diego County Reading Attitude Test* were administered. Individual tests, including the *Gilmore Oral Reading Paragraphs* and three word lists, were given to a random sample of 55 pupils in each of the three approaches. Children in the three approaches showed no significant differences in reading attitudes.

All were enthusiastic in response to the *Reading Inventory* survey. ITA and the language arts pupils wrote freely and extensively throughout most of the school year. The time for writing seemed restricted in the basic reader approach and less writing was evident. ITA and language arts approaches had significantly higher scores than the basic reader approach on the Word Reading Test. Language arts and basic reader approaches provided significantly better spellers. No differences were found among the three approaches when ITA spelling was accepted.

On oral (individual) reading tests there were no significant differences recorded for speed or accuracy. ITA children recognized significantly more words on the Fry and Gates word lists when given ample time to sound through each word. There was evidence that ITA children employed a broader range of word attack skills. The capacity-achievement relationships were strongest for language arts in Paragraph Meaning and for ITA and language arts in Word Study. Girls and boys had comparable test scores on group data, but boys lagged behind the girls in reading achievement.

The following programs were evaluated by Hayes' study:[60] a) the "whole word," ability grouping, eclectic, basal approach (SF) *Scott, Foresman*, 1960 edition; b) the preceding approach supplemented by a phonics workbook represented by *Phonics and Word Power* (PWP, published in 1964 by American Education Publications; c) the phonic, filmstrip, whole-class approach (LIPP), published in 1963 by J. B. Lippincott Company; and d) the *Early-to-Read* ability grouping language arts program of ITA Publications, Inc. Teachers used only those materials and methods recommended by the book companies. Nine hundred fifteen pupils with an average I.Q. of 91 and a mean chronological age of 5 years, 7 months served as subjects.

The results were not always consistent from tests given at the beginning, middle, and end of the school year. Generally, ITA, LIPP, and PWP methods appeared to help children to higher silent reading

[58] Edward B. Fry, "Comparing the Diacritical Marking System, ITA, and a Basal Reading Series," *Elementary English*, 43 (October, 1966) 607-611.

[59] Harry T. Hahn, "Three Approaches to Beginning Reading Instruction—ITA, Language Arts and Basic Readers," *The Reading Teacher*, 19 (May, 1966) 590-594.

[60] Robert B. Hayes, "ITA and Three Other Approaches to Reading in First Grade," *The Reading Teacher*, 19 (May, 1966) 627-630.

achievement as measured by the *Stanford Achievement Test* than did the SF method. The results for attitudinal assessment were somewhat contradictory. The PWP group scored significantly higher on the *San Diego Attitude Inventory,* but this group read the smallest number of books. The SF group read significantly more books than each of the other three groups. The LIPP and ITA groups were significantly higher than the SF and PWP groups on both the *Fry and Gates Word list.* For *Gilmore Oral Reading Rate,* the ITA group was significantly higher than either of the LIPP or PWP. The author concluded that, due to the inconsistent results, any conclusions should be viewed as tentative.

The conclusions for a study of ITA and TO reading achievement when methodology is controlled,[61] were: a) the use of an ITA medium with an eclectic methodology that emphasizes the unity of the language arts permits early development of significant reading skill; b) the use of an identical methodology with traditional orthography is unable to overcome the inhibiting effects of the complexity of the phoneme-grapheme correspondences on first-grade reading achievement; c) the use of the ITA medium with an eclectic methodology emphasizing the unity of the language arts permits the development of skill in Word Reading on both ITA and TO standards that is significantly different from that obtained using traditional orthography at the mid- and end-points of instruction, but is no better than the same methods used with traditional orthography in developing skills measured on subtests of Paragraph Meaning, Word Study Skills, or Vocabulary; d) the use of an ITA medium is inferior to traditional orthography in developing Spelling skills when traditional orthography is the criterion toward the end of the first-grade year and when 50 percent of the ITA population is still being instructed in the ITA medium. A report[62] of the study may also be found in *Elementary English.*

The problems of evaluating ITA programs have plagued researchers for several years. A second ITA experiment[63] controlled some of the incidental variables more vigorously than an earlier study had done. In this second experiment each participating school contained an experimental group and one control group running in parallel. The two teachers involved shared their time between classes in such a way that each spent half of her time with each class. Both groups used the same series of basic readers, *Janet and John.* The advantages of this design were that most of the variables normally associated with reading attainment were controlled.

The findings were similar to those of an earlier study by the authors: Pupils beginning with ITA made more rapid progress and achieved superior word-recognition, speed and comprehension scores in reading ITA than did pupils learning and reading with TO. However, it was found that the results obtained from this second study were by no means identical with the previous study which was conducted in 1961. The authors found, in general, that the differences between the experimental and control groups of the second experiment were smaller than those of the original experiment.

[61] Albert J. Mazurkiewicz, "ITA and TO Reading Achievement When Methodology Is Controlled," *The Reading Teacher,* 19 (May, 1966) 606-610.

[62] Albert J. Mazurkiewicz, "A Comparison of ITA and TO Reading Achievement When Methodology Is Controlled," *Elementary English,* 43 (October, 1966) 601-606; 669.

[63] John Downing and Barbara Jones, "Some Problems of Evaluating ITA, a Second Experiment," *Educational Research,* 8 (February, 1966) 100-114.

Disadvantaged and lower ability pupils were subjects of four studies. The Harris and Serwer[64] study compared two methods of teaching reading to disadvantaged urban Negro children: (a) the skills-centered approach, and (b) the language-experience approach. Each of these was tried with two variations, making four treatment methods in all: 1) a skills-centered method using basal readers, with close adherence to the instructions contained in the teachers manual; 2) a skills-centered method utilizing basal readers, but substituting the phonovisual method of teaching word attack skills for the word-attack lessons; 3) a language-experience method, in which the beginning reading materials were developed from the oral language of the children; 4) a language-experience method with heavy supplementation of audio-visual procedures.

Twelve elementary schools in New York City, and 1,146 pupils, were selected for participation on the basis of having a high percentage of Negro children. A number of tentative conclusions were drawn from the first year of the study: a) the basal reader method held a slight lead among the four methods. It was associated with slightly but significant highest results in meaningful silent reading comprehension. It was significantly highest on the *San Diego Inventory of Pupil Attitude;* b) the phonovisual method, although liked by its teachers, did not demonstrate any superiority. Its scores were inferior to those of the basal reader method in Paragraph Meaning. It was the lowest of the four methods on the *San Diego Inventory of Reading Attitudes;* c) the language-experience approach *with* audio-visual supplementation showed higher scores on several tests than did this same method without audio-visual; d) the slight but statistically significant lead of the skills-centered approach over the language-experience approach is due to the language-experience method with audio-visual supplementation matching the skills-centered approach results. The differences, even when statistically significant, were not great and might disappear or be reversed in the second grade.

[64] Albert J. Harris and Blanche L. Serwer, "Comparing Reading Approaches in First Grade Teaching with Disadvantaged Children." *The Reading Teacher,* 19 (May, 1966) 631-635.

The purpose of the Chall and Feldmann study[65] was to investigate the various ways in which a small group of teachers (twelve) in one school system, with children from socially disadvantaged neighborhoods, interpreted an eclectic basal reader method, how they implemented it in the classroom, and whether the differences in their implementation affected the reading achievement of their pupils. Each teacher was rated on a meaning emphasis to sound-symbol emphasis continuum. There was an equal number of "meaning" and "sound-symbol" teachers. The teachers' reading classes were observed throughout the school year and data were collected from a battery of reading tests. The data included 45 measures of pupil skills and 83 measures of teacher characteristics and reading practices. Most of the 83 teacher measures came from the *Classroom Observation Inventory.*

All eight teacher variables selected from the total of 83 for the analysis of variance showed a significant association with pupil reading achievement measures. They were: overall competence, a sound-symbol approach to reading, high level of class participation, amount of approval given during reading lessons, appropriateness of

[65] Jeanne Chall and Shirley Feldmann, "First Grade Reading: An Analysis of the Interactions of Professed Methods Teacher Implementation and Child Background," *The Reading Teacher,* 19 (May, 1966) 569-575.

model of difficulty of the reading lessons, moderate control of classroom structure, attention to individual differences, and a thinking approach to learning. "Attention given to individual differences" was related to achievement in an unexpected direction: the less attention paid to individual differences the higher the pupil achievement scores.

Within the scope of this study, it was found that teachers using one given method vary in their implementation of that method and that certain teacher characteristics as well as a method emphasis tend to be significantly related to end-of-first year reading achievement of pupils. Thus it appears that what teachers do makes a difference in pupil achievement, even when initial skills and their own teaching experience is accounted for. A report[66] of the study appeared also in *Elementary English*.

Seven methods of beginning reading instruction were identified and developed from four of the possible approaches to teaching reading by Hale and Beltramo:[67] a) the Language method; b) the Letter-Sounds method; c) Literature method; d) Skills Development method; e) Method V, a combination of the Language and Letter-Sounds method; f) Method VI, a combination of the Language and Literature method; g) Method VII, a combination of the Language and Skills Development method. Four hundred twenty-four pupils who scored at or below the 60th percentile on the *Metropolitan Readiness Test*, Form A, were selected as subjects. Method VII, the combination of Language and Skills Development, produced the best results on the mid-year tests. Method III, Literature, ranked low on these tests.

The conclusion was that no one method proved markedly superior in all aspects of reading achievement measured by the *Stanford Achievement Test*. It was recommended that careful selection and combination of the outstanding strengths of the seven methods would be the critical factor in creating a reading program.

A study reported by Manning[68] evaluated the effectiveness of three methods of first-grade reading instruction employing similar basal reader story content. A 140-day instructional period in 36 first-grade classrooms in Fresno County, California (N = 920) produced the data. Treatment A followed procedures outlined in California state adopted teachers' manuals 1960. Treatment B followed A levels–designed program stressing early intensive letter readiness activities. Treatment C was similar to Treatment B, supplemented by a ten-level writing program using basal reader vocabulary. The widely-held assumption that pupils of lower ability levels and of different cultural backgrounds cannot be taught to read effectively in the regular classroom was held to be invalid from the results of this study. It was found that the I.Q. of this population was below normal as measured by the *Pintner-Cunningham* I.Q. test and a fourth of the pupils were from Spanish-language avented homes from living areas that could be described as deteriorating.

The mean grade placement was 1.9 for Treatment groups B and C. The results emphasized the efficiency of early intensive formal visual and auditory discrimination programs in developing readiness to read. The kindergarten readiness program of the

[66] Shirley C. Feldmann, "A Study in Depth of First-Grade Reading," *Elementary English*, 43 (October, 1966) 569-572.

[67] Hale C. Reid and Louise Beltramo, "Teaching Reading to the Low Group in the First Grade," *The Reading Teacher*, 19 (May, 1966) 601-605.

[68] John C. Manning, "Evaluation of Levels–Designed Visual-Auditory and Related Writing Methods of Reading Instruction in First Grade," *The Reading Teacher*, 19 (May, 1966) 611-616.

B and C populations significantly contributed to the development of two basic abilities—attention and persistence ability and the ability to follow directions.

Two reports were concerned with Spanish-speaking pupils. The primary purpose of the Horn[69] study was to compare the effectiveness of three methods of developing reading readiness through science-oriented content in Spanish-speaking boys and girls in grade one. Twenty-eight first-grade classrooms were arbitrarily assigned to one of three treatments: nine classrooms to oral-aural English; nine to oral-aural Spanish; and ten to no oral-aural treatment. With limitations, particularly in the field of evaluation instrumentation, no significant differences were detected. Primary need for developing suitable measures for assessing language levels of Spanish-speaking disadvantaged children was considered the most significant finding.

[69] Thomas D. Horn, "Three Methods of Developing Reading Readiness in Spanish-Speaking Children in First Grade," *The Reading Teacher*, 20 (October, 1966) 38-42.

In Colorado school districts first-grade teachers who: had between 10 and 20 Spanish-speaking pupils in their rooms in addition to some English-speaking pupils; were willing to participate; and met uniform criteria of a bachelor's degree, Colorado teacher certification, at least three years of teaching experience in first grade, and recommendation by the school principal; were identified and used in a study.[70] Three approaches were studied: a) a basal reader approach; b) a modified "Teaching English as a Second Language" approach (TESL) and c) a language experience approach (LEA). The sample was largely a New Mexico culture group, instead of the Mexican immigrant group, and more representative of a rural than an urban group. A total of 294 Spanish-speaking first-grade children were studied.

[70] Roy McCanne, "Approaches to First Grade English Reading Instruction for Children from Spanish-speaking Homes," *The Reading Teacher*, 19 (May, 1966) 670-675.

The experimental approach that developed the highest achievement in reading skills was the basal reader approach. The use of a basal reader approach with Spanish-speaking first-grade children was recommended by the author, who acknowledged the evidence leading to this conclusion may have been influenced somewhat by a relative lack of experience with the experimental method on the part of TESL and LEA teachers. The TESL and LEA were shown to have particular strengths in oral vocabulary and writing fluency, respectively. Thus, they may have value as supplementary approaches.

Sex differences was the focus of one study and individualized programs of two studies. Two experimental groups and one control group, each consisting of ten first-grade classes (total population of 633), were organized and studied by Wyatt.[71] In one experimental approach, children in ten classes were grouped by sex as well as by ability for reading instruction. With the children in a second group of ten classrooms, a linguistic approach to reading was used. The third group of ten classes was used as the control group. At the end of the 140-day instruction period the children were given the *San Diego Inventory of Reading Inventory* and the *Stanford Achievement Test.* The *Gilmore Oral Reading Test* and two oral word pronunciation tests were given to a sample of 50 children chosen from each treatment group through stratified random sampling.

[71] Nita M. Wyatt, "The Reading Achievement of First Grade Boys Versus First Grade Girls," *The Reading Teacher*, 19 (May, 1966) 661-665.

An analysis of the readiness test results revealed that there were few differences

among the boys assigned to the three approaches at the beginning of the instructional period. At the conclusion of the study, there were no significant differences among boys from all three groups on tests that measured Paragraph Meaning, Vocabulary, Spelling, Word Study, Oral Reading Accuracy, or Oral Reading Rate. The only significant differences occurred on the Word Reading subtest of the *Stanford Achievement Test* and on the *Fry Oral Test of Phonetically Regular Words.*

It was concluded that neither of the experimental approaches were better than the control approach for boys for any reading skill except Word Reading. For Word Reading, the linguistic approach was best; the sex-grouping was least effective. It was found that girls' achievement was higher in all three approaches than boys except on the test measuring knowledge of Word Meaning. Girls in the study seemed better equipped for reading at the beginning of instruction than boys, and this advantage was retained in the studies of achievement made at the end of the year. A second report of the study may be found in *Elementary English.*[72]

[72] Nita M. Wyatt, "Sex Differences in Reading Achievement," *Elementary English*, 43 (October, 1966) 596-600.

Spencer[73] reported a study in which the Scott, Foresman basal reading series was compared to an individualized method designed specifically for this study. The individualized program consisted of two parts: intensive systematic phonetic instruction and motivated varied story reading. Pupils in 22 first and second-first combination grades made up this sample. Test results were analyzed by a multivariate analysis of variance program available at the University of Minnesota Research Center. The final measures used after 140 days of instruction were: the *Stanford Achievement Test*, Primary I, Form X; *Gilmore Oral Reading*, Form A; *Gates Word Recognition* and *Gates Pronunciation.*

[73] Doris U. Spencer, "Individualized First Grade Reading Versus a Basal Reader Program in Rural Communities," The Reading Teacher, 19 (May, 1966) 595-600.

It was concluded that an individualized intensive phonetic program aids reading more effectively than the less formal more widely spaced basal reader phonics. The individualized program adjusted to individual progress in the subskills was more effective in developing writing and spelling skills, and tended to promote interest in reading.

The central hypothesis examined by MacDonald and others[74] was: if children, using typical basal reading materials, experience a one-to-one instructional relationship with the teacher rather than ability grouping, then achievement in reading will be significantly greater and attitudes toward reading and school learning will be more positive. The one-to-one relationship was defined as reading instruction that took place in the form of conferences between the teacher and each child individually.

[74] James B. MacDonald, Theodore L. Harris and John S. Mann, "Individual Versus Group Instruction in First-Grade Reading," *The Reading Teacher*, 19 (May, 1966) 643-648.

There were 163 pupils in the experimental group and 210 in the control group (usual ability grouping). No significant differences were found between experimental and control groups in mean raw scores on the four subtests of the *Stanford Achievement Test*, Form X, Primary I Battery. However, when the subjects were stratified into the upper one-sixth, middle two-thirds, and lower one-sixth on each of the two pre-treatment measures, evidence was secured by Cochran-Cox adjusted *t*

that the mean raw score of the high readiness control group was significantly higher in post-test reading achievement than that for the corresponding experimental group. In regard to attitude, it was found that the experimental group preferred reading to other school activities to a significantly greater degree ($P = .025$) than did the control group.

Three reported first-grade studies focused upon organization and improvement of the teaching of reading. The objective of Sister Marita's study[75] was to compare reading achievement under three classroom organizational patterns for reading instruction: a modified individualized organizational pattern using basal text for reading instruction with 3 to 5 groups during the morning session; afternoon, individualized; a 3 to 5 group organizational pattern using a different basal text for each group; and the whole class "child-centered" pattern development of concepts in which related reading materials were presented, read, and discussed by whole class, followed by word analysis skills and independent or "individualized" reading period.

[75] Sister M. Marita, "Beginning Reading Achievement in Three Classroom Organizational Patterns," *The Reading Teacher*, 20 (October, 1966) 12-17.

Thirty-two teachers and 810 heterogeneously grouped first-grade children from the Milwaukee suburban public schools took part in the study (ten classes for each of the three patterns). The results varied on the tests as to scores which were significant, but the writer concluded the whole class organizational pattern might be as meaningful an approach to the teaching of reading as either of the other two organizational patterns.

An investigation which studied the effects of an intensive in-service program on both teacher behavior and reading achievement of pupils taught by these teachers was reported by Heilman.[76]

[76] Arthur A. Heilman, "Effects of an Intensive In-Service Program on Teacher Classroom Behavior and Pupil Reading Achievement," *The Reading Teacher*, 19 (May, 1966) 622-626.

Thirty first-grade teachers in Williamsport, Pennsylvania public schools volunteered to participate. They were divided into a control and experimental group. Teachers in the experimental group attended a two-week preschool seminar and participated in 25 two-hour seminar sessions held during the first thirty weeks of school. There were no significant differences between the two groups of teacher's pupils on the *Metropolitan Readiness Test* and the *Pintner-Cunningham Primary Abilities Test* given as pretests. Following the 140 days of instruction the pupils were given the five reading subtests of the *Stanford Achievement Test*, Form X.

A record of changes in teacher behavior was secured by a one-page Teacher Evaluation Form handed out in each week of the school year, plus each teacher filed a final report at the conclusion of the project. While the mean reading achievement of all pupils taught by the experimental group teachers did not differ significantly from that of pupils taught by control group teachers, the differences that were found favored pupils in the experimental group on nine out of ten measures. One of the significant findings, the author concluded, was that given a proper climate for learning and sharing ideas, teachers will work co-operatively to upgrade the effectiveness of their teaching and the level of teaching in the community.

The role of the reading consultant supervisor was examined by Morrill.[77] The entire first-grade population of the Walling-

[77] Katherine A. Morrill, "A Comparison of Two Methods of Reading Supervision," *The Reading Teacher*, 19 (May, 1966) 617-621.

ford (Conn.) public schools were involved in this study—thirty-five classrooms under a number of teachers in ten elementary schools. Two groups were established with five schools in each in an attempt to discover the relative effectiveness of two different methods of providing consultant help to the teachers. Method I called for the usual consultant help on a one-to-one basis given at the request of the teacher or the building principal. Method II released the teachers from their classrooms for one-half day twice a month for a series of meetings with the other first-grade teachers in their group and the consultant. Data were recorded from a Pupil Service Inventory eight times during the 140 school days. In addition, the *Gates Primary Reading Test* was given to pupils in both groups.

No significant differences were found on the tests as a whole. However, a comparison of the subtests of each of the final tests showed a significant difference in favor of Method I in the Word Reading subtest of the *Gates Primary Reading Test.* While the statistical results did not favor Method II, the writer felt the value of the study was increasingly apparent in teacher attitude.

Programs and Grouping Practices

The first two studies reported in this section focus upon the use of the *Science Research Associates Reading Laboratory.* In the Pont study[78] 205 children were divided into two groups and matched for intelligence and age. Both groups were given a silent reading test (*Schonell* R_4) before the experiment, and from the results of this test, a reading quotient used to overcome the age change during the experiment was obtained for each pupil. During a twelve-week period the experimental group were taught with the *S.R.A. Reading Laboratory* (IIC) while the control group had their "normal" reading lesson. After twelve weeks the two groups were again given a silent reading test (*Schonell* R_4) and a verbal reasoning test (*Moray House Verbal Reasoning Test 58*). About seven months after the completion of the experiment, all pupils involved in the experiment, both in the control groups and the S.R.A. groups. were given the reading test (*Schonell* R_4) which had been given on the two previous occasions.

The results of the follow-up seem to suggest that improvement did not derive specifically from the S.R.A. Reading Laboratory but more from the carrying out of the experiment. While engaged in the experiment and immediately following it, the S.R.A. groups did appear to be better readers; however, in the months that followed the difference between experimental and control groups was almost eliminated.

Waldrip[79] reported that in phases one and two of his experiment 954 second graders followed similar basal reading programs during the school year, but 534 of the pupils had added, as a criterion variable, the *SRA Reading Laboratory.* Difference-in-mean tests of significance were applied to gains made in the areas of ten diagnostic subtests in phase one, and in phase two to gains made by three ability groups in three gross achievement areas. Eighteen classes participated in phase three to test by analysis of variance the effectiveness of the Laboratory as a total program. The study failed to disclose any facet of reading achievement at grade two for which the SRA Reading Laboratory is

[78] H. B. Pont, "An Investigation into the Use of the S.R.A. Reading Laboratory in Three Midlothian Schools," *Educational Research*, 8 (June, 1966) 230-236.

[79] Donald R. Waldrip, "An Experiment with the S.R.A. Reading Laboratory at Grade Two," *The Journal of Educational Research*, 59 (May-June, 1966) 419-423.

better suited than is a regular developmental program.

An investigation reported by Blakely and McKay[80] sought to discover what means are being used to supplement a basal reader program with individualized instruction in grades four, five, and six. A questionnaire was constructed and sent to the elementary supervisors in fifty Iowa school systems. The school systems were selected arbitrarily and subjectively, with geographic distribution within the state and elimination of very small systems being given consideration.

The fifty officials were instructed to distribute the five questionnaires to teachers whom they thought were using individualized reading procedures along with a basal reader program. Out of the 124 samples, 111 indicated they were using the individualized instruction along with the basal program. The results of the questionnaires gave credibility and meaning to the assertion that individualized reading procedures may enrich and strengthen an eclectic reading program, offering contributions that complement the basal reader series.

Sister Mary Edward Dolan[81] studied to find the effects of modified linguistic word recognition program on fourth-grade reading achievement. Results indicated that the experimental group performed significantly better than the control group in most word recognition skills and reading abilities. The writer did not isolate which phases of supplemental word recognition program influenced the results, as the modified linguistic approach; early learning of the alphabet; more systematic application of the principles of learning; or the use of appropriate supplemental word recognition exercises readily available for pupil and teacher use.

One study[82] was conducted to answer: (a) Can significantly greater gains in reading be achieved with groups of culturally disadvantaged elementary school children through the use of classroom self-directive dramatization of stories than through methods involving traditional use of basal readers in small groups or in the whole class? and (b) Can favorable changes in the self-concept of culturally disadvantaged elementary school children be brought about through classroom self-directive dramatization of stories? Self-directive dramatization of stories referred to the pupil's original, spontaneous interpretation of a character of his own choosing in a story which he selects and reads cooperatively with other pupils in a group formed only for the time being. The experimental group involved one first-, one second-, one third-, and one fourth-grade class, 30 to a class, representing a low socio-economic area. Matched pairs were selected from other classes in the same school and in another elementary school in the same system.

The study was of two periods, each three and a half months in duration. Data showed that the mean gain in reading for the first experimental group during the three and a half months dramatization period was more than 1 year. This gain exceeded the mean gain of the control group by 0.89. This difference was significant at the .01 level of confidence in favor of the experimental

[80] W. Paul Blakely and Beverly McKay, "Individualized Reading as a Part of an Eclectic Reading Program," *Elementary English*, 43 (March, 1966) 214-219.

[81] Sister Mary Edward Dolan, "Effects of a Modified Linguistic Word Recognition Program on Fourth-Grade Reading Achievement," *Reading Research Quarterly*, 1 (Summer, 1966) 37-66.

[82] Lessie Carlton and Robert H. Moore, "The Effects of Self-Directive Dramatization on Reading Achievement and Self-Concept of Culturally Disadvantaged Children," *The Reading Teacher*, 20 (November, 1966) 125-130.

group. The same results were observed for grade 2; grade 3 (at .02 level); and grade 4 (at .02 level).

To determine if a reading tachistoscopic program of 5,200 phrases in five hours of distributive training would help students improve their reading skills and be a useful supplement to regular reading program, an experimental study[83] was conducted. The phrase-training program was designed to increase perceptual span and help students develop habits of integrative phrase reading. Subjects were intermediate-grade school children and remedial readers in junior high school.

Motion picture films were developed to provide phrase reading training and to test phrase reading skill. Each phrase appeared on the screen for 1/8 second, the phrases ranging in length from 1 word to 5 words, selected from third-grade reading materials. Comparisons between experimental and control groups significantly supported the use of the phrase reading program. Both reading comprehension and reading rate improved, depending on the criterion test employed. Reading gains were consistent for low, medium, and superior readers and were maintained in follow-up posttests. A replication study of the above mentioned research was reported by Amble and Muehl.[84] It was designed to cross validate the idea that the gains resulted from an increase in reading comprehension independent of reading rate and to test the feasibility of adapting the training materials for use by classroom teachers as part of the regular program of reading instruction. Modifications were made in the design and materials and applied to a total of 436 fifth-grade children. While the results were much like the first study, this time the findings indicated differences in reading scores reflected differential changes in reading rate. Still another aspect of the study was reported by Amble[85] in *The Reading Teacher.*

Three studies dealing with grouping practices above grade one were reported in the literature. Berkun[86] reported that over 1,000 children in the third, fourth, and fifth grades were tested for reading achievement level in April after half of them spent the school year in experimentally homogeneous classes and the other half in control classes containing a full range of reading ability. Pupils in the experimentally homogeneous classes achieved an average of 0.4 year higher reading level than did the control classes, a statistically significant effect. There was a tendency for this advantage of grouping to be greater in the fifth grade and to be greater among those initially above average in reading level, but even the initially-below-average children demonstrated a significant advantage of the homogeneous grouping.

Studies involving plans to group for reading were completed—one in Joplin, Missouri, and one in Omaha, Nebraska. The purpose of a report was to survey the advantages and limitations of each procedure.[87] The Joplin plan involved the

[83] Bruce R. Amble and Siegmar Muehl, "Perceptual Span Training and Reading Achievement of School Children," *Journal of Educational Psychology*, 57 (August, 1966) 192-206.

[84] Bruce R. Amble and Siegmar Muehl, "Phrase Reading Training and Reading Achievement: A Replication Study," *The Journal of Experimental Education*, 35 (Winter, 1966) 93-99.

[85] Bruce R. Amble, "Phrase Reading Training and Reading Achievement of School Children," *The Reading Teacher*, 20 (December, 1966) 210-218.

[86] Mitchell M. Berkun, "An Experiment on Homogeneous Grouping for Reading in Elementary Classes," *The Journal of Education Research*, 59 (May-June, 1966) 413-414.

[87] Donald C. Cushenbery, "Two Methods of Grouping for Reading Instruction," *Elementary School Journal*, 77 (February, 1966) 267-271.

grouping of fourth-, fifth-, and sixth-grade pupils into reading classes on the basis of general reading ability as adjudged from the results of standardized test and teacher judgment. Under this plan a fifth-grade child might be sent for reading instruction in any one of several classes from Grades 3 through 7. To get an estimate of the reactions to the plan 43 teachers, 16 school principals, and 100 parents were interviewed. Reading achievement was ascertained by the *California Reading Test.* Records of the Missouri State Reading Circle for the previous year were studied to determine the pupils' voluntary reading. The Joplin plan of grouping resulted in reading achievement above national grade norms and in excess of mental-age expectancy. All 16 principals interviewed believed that their patrons reacted favorably to the grouping idea. Teachers were in favor of the plan. At least 95 percent of the parents knew the reading level of their children and believed their child was properly placed in reading classes.

Some aspects of the plan suggest that it may have limitations and that further refinement of organization is necessary. The cluster grouping plan used in Omaha consisted of grouping as many as 50 pupils in a two-room space. Two teachers divided assignments, one handling group activities and one working with the individual and small group activities of the total group. The large groups were made up of one of five groups: Grades 3, 4, 5, and 6, highly gifted; Grades 3, 4, 5, 6, who needed remedial work; academically talented third and fourth graders; academically talented fourth and fifth graders; academically talented fifth and sixth graders.

This co-operative grouping plan used the strengths of various teachers in various aspects of the language arts program. This plan seemed to develop good pupil-teacher relationships. The pooling of ideas was an asset in guidance. Independent work habits of pupils were improved and grouping could be flexible.

A replication of a study by Patrick Groff to answer the question "To what extent are pupils mobile in their reading groups?" was reported by Hawkins.[88] Twenty-six student teachers reported the changes in the reading group composition in their classrooms for a period of 17 weeks. Also reporting were 8 of the writer's former students. Pupils from 5 states, medium-sized cities, experienced teachers, and self-contained classrooms were conditions of the study. Of a total of 940 pupils, 9.1 percent were changed in their reading grouping. The percent of mobility was relatively constant as to grade level 1-4; less in grades 5 and 6. Changes occurred mostly in the third, sixth, ninth, and seventeenth weeks of school, with the most at the third week of school. Forty-one percent of the teachers made no changes.

[88] Michael L. Hawkins, "Mobility of Students in Reading Groups," *The Reading Teacher*, 20 (November, 1966) 136-140.

Vocabulary and Word Analysis

Three studies were located which dealt with the vocabulary of basal readers. Stauffer[89] reported on four different word counts. Word counts were made in 7 different basic primary level reading series and in 3 series in each of 3 content areas. Each word was assigned in a master list to the grade level at which the greater or greatest number of introductions occurred (for each of the 4 counts). The researcher found that words used in different reading series vary more and more at each succeeding grade level above grade one; only in arithmetic does the number of overlap

[89] Russell G. Stauffer, "A Vocabulary Study Comparing Reading, Arithmetic, Health, and Science Tests," *The Reading Teacher*, 20 (November, 1966) 141-147.

words increase from first-grade level up to third. Only about one-half of the words in the content areas for grades 1-3 appeared in the seven reading series.

Overlap of common vocabulary was very small. This suggests that vocabulary demands for the primary years are rather heavy. As the writer concluded, "Every teacher must be a teacher of reading, and beginning at the primary level, teach the reading of arithmetic, the reading of science, and reading of health."

In a study concerned only with basal reading series, (seven in number) it was found that 92 words or 12.06 percent of the total vocabulary appeared in five or more of the series.[90] At the pre-primer level, there was an overlap of 20 percent; primer, 12.11 percent; and first reader, 8.65 percent. The difference in vocabulary was great at the pre-primer level and increased as the books progressed. The author questions how is it possible to assume that by moving a pupil from pre-primer series A to pre-primer series B we reinforce and re-expose him to the vocabulary of series A?

A third writer[91] classified over 6,000 sounds from the vocabulary of 5 basal readers. It was found that greater variability of sound-symbol relationships occurred for vowels than with consonants. There were 311 (54 percent) regular long vowels as compared to 262 irregular. There were 567 regular short vowels as compared to 107 irregular without the short *u*. The short *u* had 103 regular and 188 irregular. There were 3,526 regular consonants as compared to 447 irregular. The practical application, the author concluded, lies in making clear the emphasis needed in teaching the most frequent sound-symbol combinations. For phonetic efficiency the author would: a) eliminate all double letters, b) indicate a long vowel with an *e* following it (*time, tiem*); c) use a single *u* for all schwa sounds; d) use a single *o* for almost all of the *ah, ar, au* variations and single *i, e,* and *a* for their respective short sounds; e) use *ou* for all *ouch* words; f) use the usual *t* in the *th* combination for *thin* and a double-bar *t* in the *th* for *this;* g) use *z* for *buzz,* and *zh* for *azure*; h) use *oo* for the short double-o sound in *good* and *eu* for the long double-o in *duty* (dewty); and i) use *k* for *c*, eliminating the *c-s* confusion.

Over a period of four weeks, twenty-six first-grade classes (554 pupils) from St. Paul public schools, thirteen classes in an experimental group and thirteen in a control group, were studied in an attempt to determine when and how instruction should be given in the use of variant word endings.[92] Pretest data revealed no significant differences between the experimental and control groups with regard to reading ability, mental ability, chronological age, or knowledge of the use of variant word endings. The experimental classes received 18 periods of 20 minutes duration of special instruction in generalizations concerning variant word endings and the application of them in contextual material. The endings taught were: *s* added to nouns and verbs; *ed, d,* and *ing* added to verbs with no change in the root word and also the dropping or doubling of a final consonant in the root word; *er* and *est* to form the comparative and superlative forms and *er* as a noun agent.

There was a significant difference between pretest and posttest means of class

[90] Arthur B. Olsen, "Vocabulary Problems Inherent in Basal Readers," *Education*, 86 (February, 1966) 350-351.

[91] David R. Stone, "A Sound-Symbol Frequency Count," *The Reading Teacher*, 19 (April, 1966) 498-504.

[92] Irene W. Hanson, "First Grade Children Work with Variant Word Endings," *The Reading Teacher*, 19 (April, 1966) 505-507.

means on the specially constructed Variant Ending Test in favor of the experimental group over the control group, significant at the 0.01 level for the total number and for the boys, and between 0.01 and 0.05 level for girls. There was no significant difference between the experimental group and control group in reading scores before or after the instruction as measured by the *Bond-Balon-Hoyt New Developmental Reading Test*. There were no significant differences among the gains on the Variant Ending Test of children in high, average, or low mental ability groups.

Winkley[93] sought to determine the value of teaching accent generalizations as a word recognition technique. Two groups of pupils of average ability and above at the intermediate-grade levels (4, 6, and 8) were compared. Pupils in one group received instruction based on the use of basal readers and children in another learned only the dictionary skill (in which the accented syllables were marked) of pronouncing words. Compared with pupils who had not been taught the accent principles, pupils in the "accent-generalization group" were found to have greater "power" in (a) ability to attack unknown words; (b) vocabulary development; and (c) comprehension.

As to *which* generalizations should be taught, the relative merits of each of the 18 accent generalizations proposed by Gray in *On Their Own in Reading* were assessed in two ways: (a) a word count was used to determine the percentage of multisyllabic words complying with each generalization and the percentage of words which were exceptions to each principle; and (b) an attempt was made to determine the relative usefulness of each generalization to children faced with the actual task of identifying unfamiliar words of more than one syllable on an Accent Test prepared by the investigator. Eight of the generalizations had importance significantly higher than the remaining generalizations.

Olson and Pau[94] reported a study where a group of 33 primary children were taught to read a list of 6 words, 3 of which were empirically classed as high-emotional words, such as *burn, kill, gold,* and 3 classed as low-emotional words, such as *high, many, hall,* in two independent experiments. The subgroups of words were matched for length, frequency, and grammatical function. Training was done by the anticipation method with correction after each trail. Children required significantly fewer trails to learn the high-emotional words. This finding is predictable both from psychological theory and from the observations of many good teachers and provides some evidence for the importance of motivational factors in learning.

Pairs of words were learned by 44 first graders during word-association training as reported by Samuels.[95] They were then given reading training on the same or different pairs of words and tested for word recognition and speed of recognition on the second word of each word pair. In the facilitation treatment, where word pairs were the same for word association and reading training, the mean recognition score was 1.46. In the interference treatment and neutral treatment, where word pairs were different for word association and reading training, the means were .84

[93] Carol K. Winkley, "Which Accent Generalizations Are Worth Teaching?" *The Reading Teacher,* 20 (December, 1966) 219-224.

[94] David R. Olson and A. S. Pau, "Emotionally Loaded Words and the Acquisition of a Sight Vocabulary." *Journal of Educational Psychology,* 57 (June, 1966) 174-178.

[95] S. Jay Samuels, "Effect of Experimentally Learned Word Associations on the Acquistion of Reading Responses," *Journal of Educational Psychology,* 57 (June, 1966) 159-163.

and .82. In the control treatment, where no word-association training was given, the mean was .34. These differences were significant ($p<.01$), and higher word-recognition scores were associated with faster speeds of recognition ($p<.01$).

A related study by Samuels and Jeffery[96] distributed 36 kindergarten subjects among 3 groups. Using the paired-associate anticipation method, each group was taught 1 of 3 lists of words that differed in discriminability. Discriminability was determined by the number of different letters (either 4, 6, or 8) used to construct 4 two-letter words. It was hypothesized that the more discriminable the list, the faster the learning rate but the greater the probability that subjects would learn on the basis of single letters. The hypothesis concerning learning rate was confirmed with $p<.01$. After the 4- and 8-letter groups were brought to the same criterion, the 8-letter group was found to identify words on the basis of single letter cues significantly more often ($p<.02$) than the 4-letter group, thus confirming the second hypothesis as well.

[96] S. J. Samuels and W. E. Jeffrey, "Discriminability of Words and Letter Cues Used in Learning to Read," *Journal of Educational Psychology*, 57 (December, 1966) 337-340.

One study of readability is included here since it is frequently associated with vocabulary load. Five problems basic to the development of precise readability formulas were investigated by Bormuth.[97] Cloze tests were used to determine the comprehension difficulties of 20 passages and of each word, independent clause, and sentence within each passage. A large number of entirely new linguistic variables were derived along with some previously studied variables and some refined versions of previously studied variables.

[97] John R. Bormuth, "Readability: A New Approach," *Reading Research Quarterly*, 1 (Spring, 1966) 79-132.

The results were as follows: First, nonlinear correlation techniques will have to be used in some readability formulas. At the word level of analysis, F tests of linearity showed most regressions were curvilinear. The results were inconclusive at the other levels of analysis. Second, readability formulas can predict difficulty as well for subjects at one level of ability as for subjects at the other levels. Third, readability formulas can make usefully valid predictions of the difficulties of individual words, independent clauses, and sentences. Fourth, the validity of readability formulas based entirely on linguistic variables can be greatly improved. A multiple correlation of .934 was found between the linguistic variables and passage difficulty. Fifth, the greatest improvement in readability prediction will result from developing more sophisticated linguistic variables. Several other new variables exhibited correlations exceeding .7 with comprehension difficulty. Two correlations reached .8.

Reading Achievement and Some Correlates

The WISC subtest patterns of 87 fourth-grade males were analyzed to determine the relationship between the patterns and reading achievement and social class.[98] All social-class effects and interactions involving social-class were non-significant. Scores on three Verbal Scale subtests (Arithmetic, Similarities, and Digit Span) and one Performance Scale subtest (Picture Completion) were found to be significantly related to reading achievement.

[98] Lowell A. Schoer and Wilham R. Reid, "Reading Achievement, Social-Class and Subtest Pattern on the WISC," *The Journal of Educational Research*, 59 (July-August, 1966) 469-472.

A study to obtain additional evidence about the relationship between reading and certain measures of Guilford's factors was reported by Harootunian.[99] Guilford theo-

[99] Berj Harootunian, "Intellectual Abilities and

Reading Achievement," *Elementary School Journal*, 66 (April, 1966) 386-392.

rized a three-way classification of intellectual abilities based on the content, the operation, and the product of a given intellectual act. The subjects were seventh- and eighth-grade students in suburban Philadelphia with a median I.Q. of 114 as measured by the *California Test of Mental Maturity*, Long Form. Fifteen predictor tests were administered. The results suggested two conclusions: first, that several of the tests measure variables relavent to reading; second, that these variables are not being elicited by I.Q. tests. Among the most important variables were Missing Facts, Best Answer, Critical Thinking, and First Letter. The ideational fluency and closure factors made little independent contribution to reading. The author concluded that the data supported the theory that thinking abilities such as judgment, evaluation, and conceptual foresight have most in common with reading ability.

The purpose of Olson's[100] study was to investigate the relationship between school achievement, reading ability, and six visual perceptual abilities as measured by the *Frostig Development Test of Visual Perception*. Frostig found in her studies that visual perception difficulties were a primary contributor to learning difficulties. A third-grade population of 121 pupils was selected. A battery of tests were administered: *California Achievement Test*, Complete Battery, Upper Primary-Form W (1963 norms); *California Short-Form Test of Mental Maturity* (Level 1), 1963 revisions; Hearing Sounds in Words Test (Primary); Visual Memory of Words Test (Primary) from the *Durrell Analysis of Reading Difficulty*.

[100] Arthur V. Olson, "School Achievement, Reading Ability, and Specific Visual Perception Skills in the Third Grade," *The Reading Teacher*, 19 (April, 1966) 490-492.

It was found that the *Frostig Developmental Test of Visual Perception* is a fair predictor of school achievement and specific reading skill ability. According to the population tested, the Frostig DTVP is a better predictor for girls than for boys. Visual perception difficulties and specific reading difficulties showed a moderate degree of correlation in some instances and no significant correlation in others. The results of this population did not support Frostig's postulates concerning the relationship between her tests and specific reading difficulties.

Another study was reported by Olson[101] which sought to determine if the *Frostig Developmental Test of Visual Perception* predicted specific reading difficulties. The population was composed of 29 girls and 42 boys in second grade, with a mean I.Q. of 104. Again a battery of tests were administered. Intercorrelations of the measures showed only a small degree of relationship between the results obtained and the specific reading abilities tested. The author felt that Frostig DTVP was of little value in predicting the specific reading abilities of the pupils tested in this study and that it seemed to have little relationship to either mental age or chronological age.

[101] Arthur V. Olson, "The Frostig Developmental Test of Visual Perception as a Predictor of Specific Reading Abilities with Second-Grade Children," *Elementary English*, 43 (December, 1966) 869-872.

Focus of a study by Della-Piana and Martin[102] was a comparison of the behavior of mothers of overachieving and underachieving sixth-grade girls in two semi-structured interaction situations. The sample included sixth-grade girls given *Gates Revised Reading Survey Tests* and

[102] Gabriel Della-Piana and Helen Martin, "Reading Achievement and Maternal Behavior," *The Reading Teacher*, 20 (December, 1966) 225-230.

Lorge-Thorndike Intelligence Test. The population was divided into: a) overachievers (those with reading scores 1.1 grades or more above grade placement and a verbal I.Q. of 15 or more points above the non-verbal); and b) underachievers, (those with reading scores 1.1 grades or more below their grade placement, who had nonverbal I.Q. of 15 or more points above their verbal I.Q.).

Two situations were set up in which mother-daughter interactions were observed: a Vocabulary Review Session and an Opinion Difference Discussion. Both were asked to fill out an "opinion survey" and then to try to resolve differences of answers. Although the underachieving girls and their mothers showed more disagreement in opinions than the overachieving girls and their mothers, the differences did not reach statistical significance.

A study designed to test differences between pupils who have moved and those who have remained in continuous residence on certain selected variables of reading achievements was reported by Snipes.[103]

[103] Walter T. Snipes, "The Effect of Moving on Reading Achievement," *The Reading Teacher*, 20 (December, 1966) 242-246.

The variables of mobility considered in the study were number of schools attended, grade level at which last change of residence occurred, and prior place of residence (determined by the place from which the pupil had moved to the school he was now attending). The reading variables were Vocabulary and Comprehension. Data were obtained on 483 sixth-grade pupils attending six schools located in a single county. The researcher concluded: a) the number of moves pupils make does not appear to have a detrimental effect on achievement in reading. Rather, moving appears to strengthen achievement in this specific variable; b) pupils who have had some experience in various schools tend to score higher on tests of reading achievement. The grade levels at which these changes occur are independent of achievement; c) pupils who have lived in other states and countries appear to be favored in reading achievement over nonmovers or in-state movers; d) no specific area of reading achievement appears to be favored in moving.

Suspecting that characteristics of format design may affect how people read written material, Marks[104] attempted to identify helpful elements by testing the effectiveness of 22 different formats with 1,650 junior high-school students. Results indicated that format did alter individuals reading competency. It can be noted that among other conclusions, particular size, type-face, and specific additions may be helpful; while color, double spacing, underlining, and capitalization under controlled circumstances are not helpful.

[104] Merle B. Marks, "Improve Reading Through Better Format," *The Journal of Educational Research*, 60 (December, 1966) 147-151.

While not strictly a research article, Hively[105] presented a rough classificatory scheme in which the behavior of elementary reading is broken down into a set of interrelated "repertories" along the general lines of B. F. Skinner's analysis of verbal behavior (Skinner, 1957). The model constructed by the author is intended to serve as a framework to help in the analysis of, and experimentation on, reading behavior. It is also intended to serve as a guide in the construction of programs for reading instruction.

[105] Wells Hively, "A Framework for the Analysis of Elementary Reading Behavior," *American Educational Research Journal*, 3 (March, 1966) 89-103.

Interests and Literature

Children's reading interests, attitudes,

and tastes received some attention during the past year. One study[106] sought to determine what kinds of poetry young children enjoy. Thirty-two third-grade children (16 boys and 16 girls) with an average I.Q. of 122 from a high level socio-economic background read a total of 1,140 books over a twenty-six week period. Fifty poems from recommended anthologies of poetry for children were included in the reading. About four poems were read a day, but not on successive days to avoid fatigue from becoming a factor in the children's choices. It was discovered that animal poems with a rollicking rhythm were decidedly the favorites. Humor was of great importance to the children.

Forty-five poems, fifteen at each of the first three grade levels, were read to children to elicit their preferences, to compare their preferences to predictions made by college students, and to compare poetry selections in texts of the present to texts of 1928 as reported by Nelson.[107] Action, a story line, either near nonsense humor or child experience, and minimum of description characterized the best liked poems in the study, while the least liked poems omitted these characteristics and tended to be "talky." College students, all teachers in training, proved to be mildly successful at best in predicting children's poetry preferences. Text makers of the present include poems which are clearly preferred over the poems to be read by children included in texts of 1928.

The objectives of an investigation by Homze[108] were to identify behaviors, backgrounds, and themes in children's trade books published from 1920-1960. A list of realistic children's books was compiled from issues of *The Book Review Digest*. The author examined 780 samples. It was found that realistic children's books depict a "child's world" in which adult characters are given decreasing importance. The child's world described in these books was a homogeneous one; it is a world of middle-class American children who direct their own lives without parents and solve their own problems without counselors. The geographic locations described in the books become more urbanized and extend throughout the United States.

It was the purpose of a survey reported by Wallace[109] to gather information about 174 children's daily after-school activities, recurrent after-school activities, favorite T. V. programs, favorite school subjects, favorite recess activities, and interests in the people whom history and adults have placed among the outstanding. The major findings: the interests of the suburban fourth-grade students proved to be play-centered after-school activities, comedy-type television entertainment, traditional school subjects as spelling and arithmetic, and national games and heroes were of great interest.

One hundred eleven pupils from five first-grade classrooms in three school systems were asked these questions: Do you want to learn to read? Why? What must you do to learn how to read in first grade? The questions and findings reported in an article[110] are part of a larger study by the

[106] Grace Pittman, "Young Children Enjoy Poetry," *Elementary English*, 43 (January, 1966) 56-59.

[107] Richard C. Nelson, "Children's Poetry Preferences," *Elementary English*, 43 (March, 1966) 247-251.

[108] Alma Homze, "Interpersonal Relations in Children's Literature 1920-1960," *Elementary English*, 43 (January, 1966) 26-28.

[109] Marion J. Wallace, "Suburban Students and Their Reading," *Elementary English*, 43 (March, 1966) 226-229.

[110] Terry Denny and Samuel Weintraub, "First-Graders' Responses to Three Questions about Read-

ing," *The Elementary School Journal*, 66 (May, 1966) 441-448.

authors. Children in Groups 1 and 2 were from a rural school in Indiana with no kindergarten experience. Groups 3 and 4 lived in a large industrial city in Michigan. Data for Group 5 came from Negro children in suburban Detroit. To sum up, 30 pupils, or about a fourth of the children, gave no reason or an extremely vague and meaningless reason for wanting to learn to read. Of the meaningful responses, 37 wanted to learn to read for themselves or to someone else, and 27 wanted to learn to read as a means to a goal. In summary of the responses to "What must you do to learn to read," slightly more than a third offered no meaningful explanation. Of the remaining responses, two-fifths indicated a passive type of obedience; slightly more than a fifth felt the teacher or someone else would show them how; and less than two-fifths, 37 percent, saw themselves as taking some action in learning to read.

Special Problems and Reading

Results from an experiment testing a series of six hypotheses deduced from the Delacato interpretation of neurological organization was presented by Robbins.[111]

[111] Melvyn Paul Robbins, "The Delacato Interpretation of Neurological Organization," *Reading Research Quarterly*, 1 (Spring, 1966) 57-78.

Comparisons were made on reading the lateral development among three groups of second graders: the first group was exposed to the Delacato type program; the second, to a non-specific or placebo type program; the third acted as traditional controls. In addition, a series of comparisons was made between reading and initial levels of neurological organization and laterality. The results did not support the rejection of any of the six null hypotheses suggesting that the Delacato type program did not enhance the lateral or reading development of the subjects and that the postulated relationship between neurological organization and reading could not be supported by this study.

Medical studies of the causes of reading disability were reviewed and discussed by Penn.[112] Theories of etiology were compared and conclusions drawn regarding the probably neurological causation of reading disability. Educational implications of these conclusions were discussed.

[112] Julia M. Penn, "Reading Disability: A Neurological Deficit?" *Exceptional Children*, 33 (December, 1966) 243-248.

A study reported by Kass[113] examined some psycholinguistic correlates of reading disability. Reading disability was defined as a retardation in reading which occurs after adequate instruction and which is not due to mental retardation or sensory defects (blindness or deafness). The nine subtests of the *Illinois Test of Psycholinguistic Abilities*, plus the five supplementary measures were given to selected nonreaders. Subjects were between C.A. 7-0 and 9-11, I.Q. 85 or above, and retarded in reading. These children tended to have problems at the integrational level of psycholinguistic functioning, suggesting difficulty in the skill of reading rather than in comprehension.

[113] Corrine E. Kass, "Psycholinguistics Disabilities of Children with Reading Problems," *Exceptional Children*, 32 (April, 1966) 533-539.

Krippner[114] reported that in 1963 the *Holtzman Inkblot Technique* was given to 24 elementary school children attending a summer reading clinic. Two forms of the *California Reading Test*. Form W and Form X, were also given, one at the beginning of the clinic and one at the end. Reading improvement scores were corre-

[114] Stanley Krippner, "Reading Improvement and Scores on the Holtzman Inkblot Technique," *The Reading Teacher*, 19 (April, 1966) 519-522.

lated with the 22 HIT Variables, and four significant correlations emerged: Location (∧.57), Shading (r:—.60), Pathognomic Verbalization (∧·—.96), and Hostility (r:—.65). These data are consistent with other research results in the area of reading difficulties. The two most significant correlations were with variables which have high loadings on HIT Factor III, indicating that children with disordered thought processes, bizarre perceptions, and emotionally disturbing fantasies might not be expected to do well in remedial reading until a personality change has been effected.

On the basis of experience with remedial reading students, the reporters[115] of one experiment noted some students responsive to usual treatment (comprehensive program of phonetic analysis, controlled reader training, and some psychological counselling). Examination of Ophthalmograph records revealed that all of the unresponsive subjects possessed an oculo-motor characteristic—that is, a very fine eye tremor occurring approximately at intervals of 18 seconds, with a duration of 1 to 3 seconds and termed oculomotor spasms (OMS) by the writers. When subjects with OMS were treated with small doses of Primidone, the spasms were no longer observed, with the result that the subjects were able to respond more favorably to reading training.

There has been no reappearance of the OMS to date among the medicated subjects tested for as long as 2 years following discontinuation of treatment. As the authors have taken pains to indicate, this was a pilot study and a great deal of research needs yet to be done to verify the results of this report.

[115] James J. Calvert and George F. Cromes, Jr., "Oculomotor Spasms in Handicapped Readers," *The Reading Teacher*, 20 (December, 1966) 231-236.

Summary of Investigations Relating to the English Language Arts in Secondary Education, 1966

[illegible]

[illegible]

RESEARCH studies that extend basic knowledge of language, learning, and instruction are reported in many journals. Unfortunately, these investigations rarely present generalized findings which permit prediction and generalization beyond the particular setting of the study. Such research is profitable in that it reports the analysis of the data, together with results and comments. Such research most often takes the form of case studies, experimental studies, surveys (longitudinal or normative), causal comparative studies, and summaries of the above.

The research reported here was located through 1966 issues of *Dissertation Abstracts*, *Education Index*, *Psychological Abstracts*, through available reports of Cooperative Research Projects (U.S. Office of Education), and through the scanning of certain periodicals high in their yield of research on the teaching of English. Dates between which the studies were listed or published are January 1, 1966, and December 31, 1966.

This summary does not attempt to include all studies published in 1966. In addition to presenting major articles on new research, a new NCTE journal, *Research in the Teaching of English*, published for the first time in Spring 1967 under the editorship of Professor Richard Braddock, gives a rather full listing of articles on research in the teaching of English published during a given six-month period. The purpose of this *English Journal* summary is to present abstracts of a relatively few studies which have relevance for teaching and

learning English in secondary school classrooms.

The English Teacher and the English Curriculum

A large number of the reports published in 1966 deal with the English teacher and the English curriculum. In this category are included such topics as the grouping of students, methods and materials, reviews and inventories of research, and status surveys.

Grouping

The purpose of a study by Fisher and Waetjen was to determine whether boys and girls in sex-segregated classes achieved at higher levels in English and held better self-concepts than did students in mixed classes. The rationale for separating classes was to allow teachers to vary instruction according to the needs and interests of a particular sex group. Eighth-grade students in a Maryland school were grouped into homogeneous sections according to teacher judgment of English achievement. There were two control classes of boys and girls in similar numbers; there were four experimental classes, two containing only boys, two containing only girls. At the beginning and at the end of the school year, all classes were given *The California Achievement Tests* (*Reading and Language Forms W and X*, 1957), as well as three measures of self-concept. Procedures developed by McKinstry and Lamb were used to obtain measures of teacher and pupil classroom role behaviors. The analysis of variance statistic was used to compare group gain or achievement in reading comprehension, reading vocabulary, mechanics of English, and spelling achievement. A difference in achievement ($p < .01$) in reading vocabulary favored pupils in the control (mixed) classes. On pre- and post-treatment measures of self-concept, the experimental group did not differ from control (mixed) classes. There was a trend for students in experimental groups (all boy and all girl classes) to be more responsive than students in the corresponding control classes. Teachers were found to react differently to their classes in terms of the sex of the class: to lecture more often to pupils in all boy groups, and so on. The study offers no conclusive evidence that students learn English better in segregated classes or that self-concept is enhanced in segregated classes. On an overall basis, it might appear that students in mixed classes achieve slightly higher in English.

Methods and Materials

Bennett investigated two hypotheses: (1) there is no significant difference in improvement of writing ability and in knowledge and application of principles of grammar associated with either of two instructional methods, programmed learning and lecture-textbook presentation and (2) there is no significant interaction between method of instruction and the ability level of the student. He used four eleventh-grade English classes and two teachers. Students in each of three ability categories were randomly assigned to control or experimental groups. Each teacher taught one experimental and one control group. The students in the experimental sections had four weeks of instruction using *English 3200*. Students in control sections had four weeks of conventional lecture-textbook instruction. Before instruction, all students were given the *STEP Writing Test;* after instruction, all students were given the final test in *Tests for English 3200* and the *STEP Writing Test*. A record was kept of the time each student spent in the learning task, and a student-opinion questionnaire was given to students in the experimental group. Data were analyzed by covariance techniques. The results showed no evidence of interaction between the ability level of the student and the comparative effectiveness of the method nor did they show

evidence of interaction between teacher and effect of method. Both methods, programmed learning and lecture-textbook presentation, were equally effective in improving writing skills as measured by objective test items in which students revise portions of whole compositions written by others. The method employing programmed materials was significantly more effective than the lecture-textbook method in teaching principles of grammar and ability to apply principles to revision of individual, unrelated sentences.

A second study on programming was conducted by Kahler whose purpose was to determine whether programmed grammar (*English 3200*) and/or journal writing would increase student writing ability. The independent variable was method of instruction. The control variable was pretest scores on the *STEP Writing Test*. The dependent variable was posttest scores on alternate forms of the *STEP Writing Test*. The population included 12 tenth-grade English classes sectioned in homogeneous groups according to past achievement in English. Four teachers were used, each with a control group and two experimental groups. Treatment for one experimental group consisted of *English 3200* and a free writing exercise, journal writing. Treatment for a second experimental group included journal writing exercises. Other than the programmed textbook and journal writing, the control and experimental group had instruction in common. Findings for low achievement students showed a significant difference ($p < .05$) between low achievement control group students and low achievement students using *English 3200* and journal writing, favoring the latter group. Findings for middle achievement students showed a significant difference ($p < .05$) between control group students and students using *English 3200* and journal writing and students experiencing journal writing; the gain favored both experimental groups over control; there were no significant differences between experimental groups. For high achievement students, no significant difference existed between pre- and posttest results. Kahler concludes that low and middle achievement sophomore English students using programmed materials and journal writing score higher as measured by the *STEP Writing Test* than the conventionally taught students (control group).

Still a third study of programming was conducted by Munday who compared a group studying grammar using programmed instructional materials, *English 3200*, and a group receiving instruction in grammar through conventional teaching procedures (drill, lecture, standard text). Eight twelfth-grade classes and two teachers in a large metropolitan high school were used. All students were given a pretest consisting of test items from the manual for *English 3200;* this population was divided into three groups —low, medium, and high in performance; students from each of the three groups were then assigned randomly to one of the eight classes. Comparison of pre- and posttest scores revealed the mean of differences for the control group to be 11.19; the mean of differences for the experimental group, 11.45. These differences were not significant at the .05 level, and the investigator concluded that group achievement with programmed materials is not significantly higher than the group achievement of students without programmed materials. However, the conventional groups required 31 hours and six minutes to complete 12 units of work while the experimental groups required only 22 hours and 22 minutes. Students using programmed materials learn as well as students taught by conventional methods and materials, but they complete the material in a much shorter period of time.

The purpose of an experiment conducted in England by Cooper was to compare the efficiency of two methods

of teaching English. The study was conducted in four secondary modern schools in South-East Lancashire. Four classes, one in each school, were taught by analytical methods; the other four classes were taught by incidental methods. Analytical methods involved deliberate analysis in reading, spelling, usage, vocabulary, punctuation, sentence structure, and written composition and entailed instruction, exercises, and drills in these separate aspects. The incidental methods involved treating English as a whole subject; emphasis was on extensive reading and writing, avoiding drills, analysis, and analysis of English into separate skills. Data obtained from in. al and final scores were analyzed by covariance techniques. There was no evidence of significant differences in level of achievement between the analytical method group and the incidental method group in tests of reading, spelling, usage, vocabulary, and written composition. There was evidence of significant differences between the two groups in punctuation and sentence structure; students taught by analytical methods made greater progress.

Jacobs sought to provide information regarding the effects of coaching on the *College Board English Composition Test* (*ECT*). Coached (experimental) and non-coached (control) groups were set up in each of six different secondary schools in a Northeast metropolitan area, matched with another control-only school. The students were juniors thought by each school to be likely college applicants; each student participating in the experiment volunteered. Coaching was given three hours a week for six weeks. After the sixth week of coaching, all students in the study took the *ECT*. In the spring after the first *ECT*, students in the coached-and-control schools were contacted again to take the *ECT*. Comparison of means suggested negligible leakage in coached-and-control schools. In two of the six coached-and-control schools, there was essentially no difference between coached and control groups; in each of the other four schools, there was a mean difference of from 44 to 73 points, a significant difference favoring the coached group. Coached groups achieve superiority by getting fewer items wrong; in general, this effect is not limited to the item of types for which students are coached. Comparison of overall scores on the retest of the *ECT* after te months suggests that there is variability from school to school in coaching effects and that the coaching increment has disappeared.

An experimental study conducted by LaRocque sought to determine differences in student learning attributable to inductive and deductive methods of teaching figurative language to eighth-grade students. To determine the difference of means of experimental groups, the investigator used a 2 x 2 x 2 x 2 factorial design with two levels of IQ, two sexes, two teachers, and two methods. The population consisted of junior high school students in San Francisco; data were analyzed for 60 students in a group taught figurative language inductively; for 53 students taught deductively; and for 59 students forming a control group. Two detailed lessons were developed and pretested: one presented concepts inductively; the other, deductively. The dependent variables were tests of retention and of transfer. Reliability for the retention test was .934; for the transfer test, .965; content validity for the testing material was established through the opinions of Stanford professors of English. The results indicated that mean scores were higher ($p < .01$) for both inductive and deductive groups than for the control population; that the inductive method was consistently less effective with students of low mental ability; and that the deductive method tended to greater overall effectiveness in teaching figurative language ($p < .01$).

The purpose of an experiment by Prettyman was to compare achievement between lecture method and a student activities method in teaching English literature. The experimenter taught two classes (N=27 and 26) for six weeks using a lecture method with one group and an activities method with the other. Four instruments were used posttreatment: a unit test validated by the experimenter's colleagues, an attitude survey constructed by the experimenter, a test to measure ability to interpret literary materials, and an inventory of reading experiences. The attitude survey of student opinions revealed no differences; other analyses suggested that each group preferred the method by which it was taught. Neither group gained significantly over the other in ability to interpret or in improvement of reading experiences. On the unit test, the lecture group significantly outperformed the activity group. Because the students in the lecture group made greater gains on the unit test than students in the activity group, the investigator recommended that supervisors reexamine their position on lecture method.

To determine whether or not it is necessary to teach the organization of expository writing explicitly or whether ability to organize expository writing is an implicit outcome of instruction in communication process, Reedy compared these two methods of teaching the organization of expository writing to ninth-grade students. Two experimental groups were used. Experimental Group A (N=193) received direct instruction in organization, learning six patterns for organizing exposition: chronology (process), chronology (events), classification, comparison and contrast, induction, and deduction. Experimental Group B (N=217) received indirect instruction in organization, learning three principles used in teaching communication process: consideration of audience, knowledge of content, and statement of purpose. Null hypotheses were tested to the effect that there was no significant difference between methods in their effectiveness for promoting (1) growth and retention of ability to organize expository writing or (2) growth in selected English language arts. Reedy also examined correlations between ability to organize exposition and critical thinking, reading, and recognizing well-organized writing. The experimental groups were matched as total groups and by sex, IQ, and curriculum categories. Both Groups A and B wrote 12 compositions as homework during a three-week instructional period. Class time was spent in discussion and in instruction in composition. Language-arts testing was by the *Watson-Glaser Critical Thinking Appraisal; Diagnostic Reading Test, Survey Section;* and the *Test of English Usage.* Composition scores were from three compositions: initial, posttreatment, and retention (four weeks after the posttest). The test compositions were rated for organization using a rank-order stanine scale. An inter-reader reliability of .77 was obtained over the reading period. Experimental Group A (direct) showed significant gains ($p < .01$) in ability to organize expository writing and in retention of this ability; significant gains in critical thinking, vocabulary, and usage ($p < .01$), and in reading ($p < .05$). High correlations were found between ability to organize expository writing and critical thinking, reading, and recognition of well-organized writing; but no significant difference was apparent between methods in these correlations. Reedy concluded that the ability to organize expository writing is not an implicit outcome of instruction and that, for promoting ability to organize expository writing, direct teaching of organization is more effective than indirect teaching. By-products of systematic instruction in writing seem to be growth in reading, vocabulary, mechanics, critical thinking, and effectiveness of expression.

Reviews and Inventories of Research

Blo int summarized selected investigations relating to English language arts in secondary education, 1965; Petty and Burns did the same for investigations in elementary edu tion, 1965. Gunderson published critiques of recent Cooperative Research Projects, Office of Education, U. S. Department of Health, Education, and Welfare. Haugh and Condon compiled summaries of 52 studies in language arts, Grades 7-13, recently completed at the University of Kansas. Hayes, Babylon, and Varley prepared an inventory of projects and activities in reading and English; Hayes and Babylon compiled a supplement to this inventory. Summaries of investigations relating to reading, July 1, 196? to June 30, 1965, were prepared by Harris, Otto, and Barrett and by Robinson, Weintraub, and Smith.

Status Surveys

Ahrens conducted a survey to provide a systematic description of censorship which proscribes or restricts the use of specific titles from literature in the English curriculum in public secondary schools. A questionnaire was sent to every twenty-ninth name on the membership list of the NCTE Secondary Section and an 81.6 percent response was obtained from the mailing. Of the 616 NCTE members responding, 78 (12.6 percent) reported censorship incidents. Some of the traits distinguishing teachers reporting incidents from teachers reporting no incidents were that teachers reporting censorship had more education; more of them had majored in English; more taught in liberal, suburban communities in moderately large schools; and more of them used a greater amount of literary material, material selected by a committee or by an English department rather than by the individual teacher. The books receiving complaints were most often American novels written since 1940; *Catcher in the Rye* was the most frequently mentioned title. Two-thirds of the books receiving complaints appear on well-known standard lists of books for use in the high school. Parents, the most frequent objectors, complained of vulgarity and of language. Despite objections, the majority of the teachers reporting censorship retained use of the books.

Berberi compared descriptive analyses of objectives for the study of literature by NCTE, NSSE, MLA, CEEB, and the National Association of Secondary-School Principals with objectives of textbooks having edition dates of 1935-1941, 1952-1958, and 1960-1964. In examining the publications of the several professional organizations Berberi found general support of modern views in the thirties, both traditional and modern views in the forties and fifties, and a renewed emphasis on the more traditional views in the sixties. In analyzing textbooks, she found that the series followed similar changes from edition to edition: predominantly traditional views in the thirties, some modern approaches in the fifties, and a reemphasis of traditional content and approaches in the sixties. The investigator concluded that a relationship does exist between the content of textbooks and the thinking of professional groups. Recent editions of the textbooks studied reflect the philosophy held by a majority of the members of professional groups. The content and approaches in textbooks change as the views of the majority in the groups change.

Among the findings of a normative study of aims of teaching English in secondary schools in the Manchester area, England, conducted by Casey, was that, in general, English teachers tend to prefer objectives which might be termed "intellectual" and "subject-centered" in content to objectives which might be termed "socio-emotional" and "aesthetic."

A survey conducted by Martz investigated materials and methods, means of identification, administrative provisions,

special instruction, and teacher qualifications as related to teaching academically talented students in English. Questionnaires from a total of 136 schools were obtained; seven schools were used for depth study. The results indicate that there is a comparative lack of supplementary instructional material in English classrooms. There is limited participation in advanced placement, and few colleges make provisions for advanced standing. Assignment of students to grouped sections is less precise than identification of academically talented students. Much of the work of the talented, in both grouped and ungrouped classes, is quantitative rather than qualitative.

In a study of English programs in selected high schools which consistently educate outstanding students in English, Squire and Applebee gathered information on characteristics of teachers, programs, and schools; the teaching of literature, composition, language, and reading; the organization and supervision of English departments and the development of curriculum; the school library and the personal reading of students; procedures used by the schools to evaluate student learning and teaching effectiveness; and a miscellany on the teaching of speech, ability grouping in the English classroom, attitudes toward teaching aids and learning materials, and so on. Two populations of schools were used in the report of final results: schools producing NCTE Achievement Award winners in at least four years of the five years between and including 1958 and 1962, and schools highly regarded in their regions not producing award winners during the specified five-year period. The total number of schools studied was 158; however, some statistical treatments involved data on some 53 matched schools (award-winning and non-award-winning schools matched on such variables as size of graduating class, percent of college-bound students, and so on). Fifteen separate instruments—questionnaires, interview schedules, observation guides, and so on—were prepared and analyzed. Among the many findings on the population of the study were:

(1) Results supported a hypothesis that English teachers in outstanding schools are well-prepared in content, active in professional associations, and involved in in-service education.
(2) Findings on literature programs suggest that interest in literature and in books characterizes the schools in the study, but that many schools have difficulty in providing an adequate supply of worthwhile books to students.
(3) Evidence tends to support a hypothesis that a good "intellectual climate" exists in these schools, with more emphasis on the processes of thought than on learning by rote.
(4) Frequent and varied composition experiences characterize most schools in the study; however, observers recommended that more attention be given paper correction and instruction in rhetoric and in the processes of writing.
(5) Teaching methods are less varied than anticipated; innovation and experimentation in instruction are comparatively rare; use of audio-visual aids is sometimes unduly restricted.
(6) More than 50 percent of all teaching in the English classroom emphasizes literature; 15.7 percent emphasizes composition; 13.5 percent emphasizes language.
(7) Sound reading programs were not characteristic of the schools in the study; most reading programs seemed lacking in purpose, organization, and impact; slow learners and non-college-bound students seldom received sufficient attention.
(8) A generally favorable climate—ap-

propriate salaries, interaction within English faculty, and so on--was reported in most schools.

(9) Department chairmen were found to have great impact on teaching practices; district supervisors and building principals had less direct impact.

(10) A small nucleus of outstanding teachers has great impact on the teaching effectiveness of colleagues and on motivating students to learn.

(11) Evidence suggests a lack of planned programs to meet the needs and interests of terminal students.

(12) Departmental leaders appear more aware of changes in scholarly developments in English than of changes in the culture which may affect the teaching of English: there is insufficient attention to modern media of communication, to use of audio-visual materials, and to program experimentation.

Literature

A report which does not lend itself to an abstract or critique but which is important for research and development activities in secondary schools is an article by Purves on an examination of the varieties of criticism. A purpose of the project described was to find means of categorizing the responses of students, teachers, and critics to a literary text. Growing out of the study is a table of elements of criticism and interpretation incorporating examination of 200 student papers, responses of 100 teachers, and responses of a number of critics. The investigator gives four sets of relationships which a reader may have with a text: engagement, perception, interpretation, and evaluation. Each category contains sub-headings which help account for every sentence in a critical essay. Purves reports that several readers, examining some 300 essays, have agreed on the classification of between 85 percent and 90 percent of the sentences. One preliminary finding on differences between 13- and 17-year-old students may suggest the value of these elements for research. In a study of essays written by *Ss* in the United States, the investigator found that 13-year-olds used four of the elements from the evaluative category about one-third of the time while 17-year-olds used the same elements less than one-fifth of the time. Seventeen-year-olds had seemingly forsaken evaluation. The article includes discussion of the uses of the categories and their sub-elements for teaching critical method as well as for research.

Reading

The English teacher, in his role as reading teacher, is interested in the impact of the reading program on student attitude. Of interest to him may be an experiment on the effect of an individual reading program conducted by Gurney using elementary school *Ss*. Hypotheses were postulated on the effects of an individualized reading program on attitude toward reading and on gains in reading level. An experimental group, one fourth-grade class, used the *SRA Reading Laboratory IIA*. A control group, formed using matched pairs, was engaged in the more usual grade group text approach. The experimental and control groups were matched on the basis of chronological age, reading level as measured by *Gates Reading Survey*, ability as measured by *Lorge-Thorndike, Level 3, Non Verbal Battery*, and attitude toward reading as measured by a locally constructed instrument. The criterion measure used at the end of 14 weeks was scores on the same instruments, with the exception of the *Lorge-Thorndike Intelligence Test*. At the end of treatment no significant difference in reading level was apparent. However, there was a significant difference in the attitude toward reading ($p < .01$) in the number of times that reading was chosen at the end of 14 weeks by *Ss* in the experimental group.

A normative survey by Newman pro-

vides information on the reading habits, attitudes, and achievement of vocational high school students who have dropped out of school after having received remediation in reading. The medium age of the dropouts (N=34) was 18. Data were obtained from cumulative record cards, personal interviews, and scores from standardized reading tests. Adverse school experiences were mentioned as the most common reason for leaving school. Most dropouts wanted to improve their reading, improvement of vocational status being the most frequently mentioned motive. The average amount of time which non-graduates spent reading was 25 minutes per day. The dropouts confined newspaper reading to two newspapers containing abundant pictorial material and dramatic, sensational content. They read *Hot Rod*, *Look*, and *Life* most frequently. Eight students had not read a book subsequent to leaving school; seven had never completed a book. At the time at which these dropouts were in a remedial reading program, their mean reading retardation was six years; but each had made better than average progress when instruction in reading was given, demonstrating an unrealized potential for future improvement. Because dropouts frequently mentioned poor teaching techniques as reasons for leaving school, Newman recommends that teachers' methods, materials, objectives, and goals be realistically adapted to students' needs and abilities and that systematic instruction and practice in reading skills be given by all teachers in the secondary school.

To determine whether present seventh- and eighth-grade students read at the same ability level as that of seventh- and eighth-grade students in 1932 was the purpose of a study by O'Connor. The basis for comparison was data from 207 *Ss* (101 in Grade 7; 106, Grade 8). Students were reading on or near grade level as determined by the *Metropolitan Reading Test, Advanced, Form A*, 1962 edition, given in January, 1965. Two weeks after taking the *Metropolitan Reading Test*, 1962, students were given the *Metropolitan Achievement Test, Advanced Reading, Form A, New York City Edition*, copyright 1932. Results of the two tests were used for comparative scores; paragraph reading, vocabulary, and average scores were tabulated. Seventy-three percent of the students scored higher on all parts of the 1932 test. In the two grades, there was median growth ranging from 5 to 15 months. Students below the norm based on current tests attained or surpassed norms for comparable students in 1932.

English Skills

Ranking next to the category "The English Teacher and the English Curriculum" in the amount of research published in 1966 is the category "English Skills." Included in this section are abstracts of articles on diagramming, grammar and usage, listening, and punctuation.

Diagramming

The purpose of an experiment by Whitehead was to study the effect of grammar-diagramming on student writing skills. Four teachers and 132 students were used. An experimental group had a six-week intensive review of grammar-diagramming following an introductory unit on grammar-diagramming. A control group had an introductory unit consisting of a literature-writing approach; it did not have the grammar-diagramming unit but reviewed grammar and sentence structure only as the need arose. Test-retest scores revealed no significant difference in final achievement between experimental and control groups in the areas of sentence structure, vocabulary, punctuation, or 500-word compositions. Whitehead concluded that grammar-diagramming is as effective as literature-writing in improving writing skills in the areas of sentence structure, vocabulary, punctuation, and 500-word compositions.

Grammar and Usage

A study by Bateman and Zidonis, recently published as NCTE Research Report No. 6, asked questions on the effect of a study of transformational grammar on the writing of ninth- and tenth-graders over a two-year period. The pupils constituting the ninth grade were randomly assigned to two sections, taught by two teachers also assigned randomly. Some 70,000 words of prose, written over a two-year period, were analyzed using an analytical instrument which the investigators developed to assess objectively the grammatical quality of the sentences in the sample. The experimental class studied the phrase structure component of tranformational grammar in the first year of the experiment and transformational materials in the second year. It was found that ninth- and tenth-grade students can learn the principles of transformational grammar relatively easily and that knowledge of these principles enables the student to increase significantly the proportion of well-formed sentences that he writes. Analysis tended to suggest that knowledge of transformational grammar enables the student to increase sentence complexity without sacrificing sentence grammaticality. It was found that knowledge of transformational grammar enables the student to reduce the occurrence of errors in his writing. Because almost half of the sentences written by ninth-graders were malformed according to rigorous criteria of well-formedness, the investigators suggest that, while some linguists maintain that children have acquired virtually full command of English grammar at an early age, it is possible that the grammar of English is never fully mastered.

A survey conducted in England by Brannan reports findings on mistakes in the written work of two groups of students, 74 boys from a secondary technical high school and 87 boys from a secondary grammar school. A group test of general intelligence revealed no significant difference between the two groups. The purposes of the study were (1) to identify mistakes made in several essays written by *Ss;* (2) to assign a score to the mistakes, according to their importance; and (3) to determine whether the grammar school *Ss*' greater knowledge of formal grammar was reflected in the technical accuracy of their work. One of the findings was that 82 percent of all mistakes fall under the categories of errors in spelling, punctuation (including use of the apostrophe), and sentence structure. Another finding was that there were no significant differences between the means of error scores achieved by the two groups of candidates, one group (grammar school) having had a detailed study of parts of speech and of the analysis of complex and compound sentences, and the other group (technical) having had little English grammar.

The purposes of a recent study by Hunt were (1) to refine and study further those quantitative syntactic measures which are significant indicators of chronological and mental maturity in writing, (2) to compare syntactic structures written by superior students in Grades 4 and 12 with those written by average students at the same level, and (3) to compare the syntactic structures written by superior and average twelfth-graders with those of skilled adults writing for *Atlantic* and *Harper's*. Declarative sentences from a 1000-word sample written by each *S* were analyzed according to five synopsis factors: clause length, subordinate clause index (clauses per T-unit), T-unit length, main clause coordination index (T-units per sentence), and sentence length. At each grade, writings were compared for 36 *Ss*, nine males and nine females of average ability (90-110 on *CMMT-Short Form*), the same writings used in an earlier study by Hunt for CRP 1998, and an identical number of males and females of superior ability (130+ on *CMMT*). Analyses are

also reported of the writings of 18 skilled adults, nine publishing in *Atlantic* and nine publishing in *Harper's*. To study the quantitive measures indicating syntactic maturity, the investigator used a 2 x 3 factorial design (sex x grade level) in an analysis of variance for Grades 4, 8, and 12. Contingency coefficients were then computed for these three grades and skilled adults. The Wilcoxon rank sum test was used to determine significance of differences between synopsis scores for average and superior fourth-grade *Ss*, average and superior twelfth-grade *Ss*, and twelfth-grade *Ss* and skilled adults. Results of the study of synopsis factors used to measure maturity showed: (1) that exclusion of non-declarative sentences (questions, imperatives, direct discourse, etc.) does not significantly affect differences in the five synopsis scores; (2) that the "subordinate clause index" (clauses/T-units) and the "main clause coordination index" (T-units/sentences) are useful ratios for describing syntactic characteristics; (3) that at all age and ability levels, T-unit length is a more significant measure of maturity than sentence length, but at twelfth-grade and adult levels the most significant index is clause length; and (4) that counting the complexity of nominals is representative of the kinds of analyses which must be devised to measure the less-than-clause structures.

The study of syntactic development as measured by the synopsis factors indicated that in fourth grade the T-units of superior *Ss* are significantly longer than those of average *Ss* because of an increase in the number of subordinate clauses, mainly adjective and adverb clauses. Average and superior twelfth-graders write the same number of subordinate clauses, but the clause length for superior *Ss* is significantly greater than that for average *Ss*. The significant increase in clause length extends beyond the twelfth grade to the writings of skilled adults, who consequently produce T-units of greater length.

Listening

An experiment using college freshmen *Ss* which has import for the secondary school was conducted by Brewster whose purpose was to determine the effect of training in listening in brief periods of time. Three groups of *Ss* were used: Group I *Ss* were enrolled in English composition; Group II, in a fundamentals of speech class; Group III, in a fundamentals of speech course in which 20 lessons designed by Brewster to improve listening skills, five to seven minutes in length, constituted a treatment not received by Groups I and II. *STEP Listening Test, Form IA*, was given at the beginning of the quarter; *STEP Listening Test, Form IB*, at the end of the quarter. Analyses were made to determine any differences attributable to treatment or to sex. The results indicate that a course in fundamentals of speech (Group II) is not likely to have any effect upon listening proficiency. A speech course in which students are exposed briefly to a series of listening exercises (Group III) is not likely to have any effect upon listening proficiency; short-cut methods of teaching listening are not effective. There appear to be sex differences in listening; high ability females perform better than high ability males.

Punctuation

The purpose of a study by Moran was to compare two methods of teaching punctuation, one method by which students learned punctuation through the writing of others, one method by which students learned punctuation from their own writing. Four classes of tenth-grade students in a public high school were used. There were two ability levels: "above average" and "average plus" as determined by percentile scores on standardized English tests which had been given in the ninth grade. Fifty

"above average" students were put in two classes of 25 students each (called A groups in the study–Experimental Group A and Control Group A); 50 "average plus" students were assigned in the same manner (Experimental Group B and Control Group B). Two treatments were used for six weeks. The control groups studied punctuation by a traditional method: emphasis was on rules and their application, on drill exercises, on punctuating someone else's writing; content was textbook oriented. The experimental groups were assigned a variety of writing tasks; various punctuation situations arose which were discussed in class; through discussion, the students became acquainted with various marks of punctuation; using their own terminology, students wrote rules which governed many situations and then wrote sentences exemplifying these rules. Dependent variables were data in the form of pretest, posttest, and retention test performances. No significant difference attributable to treatment existed between groups in growth and/or retention of punctuation skill. No significant difference attributable to ability level was apparent. The investigator inferred that the area of composition might be benefited by teaching punctuation as a corollary to composition rather than as a unit in itself. The experimental *Ss* in this study engaged in varied additional experiences in composition and yet their growth in punctuation skills did not suffer significantly.

Composition

Godshalk, Swineford, and Coffman reported studies investigating the relative validity of different approaches to the measurement of English composition skills. During a three-week period in fall 1961, 646 students, approximately half in Grade 11 and half in Grade 12, wrote on five different topics; took tests containing six classes of objective items (usage, sentence correction, paragraph organization, prose groups, error recognition, and construction shift); and took two interlinear exercises (poorly written prose requiring the student to locate and correct deficiencies). The objective tests and interlinear exercises were scored according to standard procedures. In December 1961, 25 readers, asked to make a global, or holistic, rather than an analytical, judgment of each paper, assigned scores of three, two, or one to the essays; each reader scored at least one essay produced by each student. The total of the scores assigned by the 25 readers was used as the criterion for evaluating objective tests and interlinear exercises. Estimates of reading reliability resulted in a correlation coefficient of .92; estimate of score reliability was .841. On the basis of this data, the investigators generalized that if students can write on as many as five different topics and if each topic can be read by five different readers, reliability per unit of reading time for short topics read holistically is high. Another finding was that objective questions designed to measure writing skills prove highly valid when evaluated against a reliable criterion of writing skills. Finally, a generalization is reported that an efficient predictor of a reliable direct measure of writing ability includes interlinear exercises or essay questions in combination with objective questions.

Scannell and Marshall studied the relative effect of selected composition errors on grades assigned by prospective teachers to essay examinations. The errors studied were punctuation, spelling, and grammar. The essay examination used in the study was based on a topic from American history and was designed to receive an average grade of approximately C or C+. Five forms of the essay, differing in effectiveness, were prepared. They were Control Form N with no gross errors, Form P with ten punctuation errors, Form G with ten grammatical errors, Form S with ten spelling errors, and Form C containing five errors

in punctuation, five errors in spelling, and five errors in grammar. *Ss* were prospective teachers enrolled in an undergraduate measurement course at the University of Kansas. Each of the five forms was graded by an equal number of *Ss* according to directions indicating that grades were to be based only on the content of the answer. An outline was provided of the content that an outstanding answer should contain, as was a description of a nine-point grading scale to be used. Four weeks after the examination was first given, Forms N and C were regraded. *Ss* who had graded Form N originally now graded C, vice versa. Analyses of the scores assigned to the five forms during the first administration showed the mean grade for the control form (Control Form N) to be higher than the means for the other four forms and revealed differences ($p < .05$) for Form S and Form C. A second analysis involved comparing grades assigned by the same *Ss* to Control Form N and to Form C; *Ss* consistently assigned higher grades to the control form. The results suggest that even when *Ss* are given specific instructions to grade an essay examination only on the basis of content and are supplied with an outline of the desired content, papers containing flaws are assigned lower grades than papers free from such flaws.

General Semantics

The purpose of an experiment conducted by Livingston was to study the effect of instruction in selected principles and techniques of general semantics on improving the critical reading ability of tenth-grade students. The experiment was conducted in three high schools in suburbs surrounding New York City and used three teachers, each teaching an experimental and a control group. The principles and techniques used by the teachers were drawn from Korzybski, Hayakawa, and Lee. The materials used in the experimental groups were based on S. I. Hayakawa's *Language in Thought and Action*, Irving Lee's *Language Habits in Human Affairs*, and Catherine Minteer's *Words and What They Do to You*. An analysis of variance was computed using data on the *Watson-Glaser Critical Appraisal*. The Ym form of this instrument was used as pretest; the Zm form, as posttest. The experimenter found no significant difference ($p < .05$) between experimental and control groups in abilities pretest, no significant difference ($p < .05$) between teachers, and no significant differences attributable to teacher-group interaction. There was a significant difference ($p < .01$) in gains in score of the experimental group as compared to gains of the control. The results indicate that critical reading ability improves as the result of instruction in general semantics.

Another study on semantics was designed by True who investigated hypotheses on the effects of the teaching of general semantics on tests of two factors of creative ability, ideational fluency, and spontaneous flexibility. The population consisted of sixth-grade children in 22 public schools, Madison, Wisconsin. Eighteen classrooms formed the experimental group; 18, the control group. The experimental group studied lessons dealing with the relation of language, thought, and behavior (general semantics) taken from Minteer's *Words and What They Do to You;* treatment lasted 30 minutes each day for 30 days. At the end of the lessons in general semantics, two tests of creativity were given to children in both the experimental and control groups. These tests were the *Product Improvement Test* and the *Unusual Uses Test* from the *Minnesota Tests of Creative Thinking*. Class means were estimated from a random sample of ten *Ss* from each classroom. Statistically significant differences favoring the experimental group ($p < .01$) were found on each of the two variables,

ideational fluency and spontaneous flexibility, as measured by the *Project Improvement Test* and the *Unusual Uses Test*. The investigator concluded that the general semantics lessons had a beneficial effect on the several factors of creative ability and should be included in the language arts program.

The Present Condition and Some Prospects

Much of the research presented in this summary in recent years has consisted of descriptive and status studies. These would include studies such as surveys on censorship, descriptive analyses of textbooks, teacher assessments of objectives, sentence structures used by superior students, and so on. It is important to conduct such studies. However, the teaching of composition, language, and literature needs more experimentation—research in which variables are manipulated and in which the effect of the manipulation of these variables on still other variables is observed. Only through experimentation will we ever secure a more complete understanding of the processes and the conditions involved in the efficient acquisition, retention, and use of the concepts and cognitive skills which comprise one of the major outcomes of learning in English. To learn more of conditions within the learner (*e.g.*, motivation or cognitive organization) and of conditions within the learning situation (*e.g.*, the content and sequence of instruction), greater use of multivariate designs in research, further replication of research, participation in a national abstracting and dissemination system and in a communication system among regional educational laboratories, Title III Centers, and so on, will be necessary. In 1966, more than ever before, systems and techniques for research, development, and dissemination are available to English teachers—what is needed most at this time is a large number of teachers who are advocates of experimentation as the best means of improving educational practice.

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