A linear programmed textbook, "Reading by Patterns: A Programmed Guide to Reading Sentences and Paragraphs," by Carl Lefevre, et al., is evaluated in three studies and found to be effective with remedial readers with nonstandard English dialects. The textbook is used in a tutorial program in which a tutor reads the directions and exercise materials while the student reads the text. The first study, involving 63 fourth graders, compared tutorial programs supplementing the Lippincott basal reading program which is primarily a phoneme-grapheme correspondence approach to word identification. Three types of supplemental tutoring were compared: material which reinforced the Lippincott basal program, "Reading by Patterns" read by adult paraprofessionals, and "Reading by Patterns" on prepared tape cassettes. The second study, involving 71 tenth and eleventh graders, compared the effects of "Reading by Patterns" with "Basic Reading Skills; Section Two: Comprehension." (BRS), both supplemented by listening skill instruction. The third study involved 42 students enrolled in a college remedial reading course and compared the effects of traditional tutoring with "Reading by Patterns." (MKN)
Remedial Reading: -- a Dialect-Free Alternative; Three Studies

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From near the beginning of this century to the present, a number of authors have fundamentally criticized conventional reading methods and materials that focus main attention on letters, sounds, syllables, and words; this approach generally assumes that reading must be learned through step-by-step mastery of a series of minute skills arranged in hierarchical order, beginning with memorizing the alphabet and proceeding by prescribed stages to reading comprehension. There is little statistical evidence supporting this approach and more that contradicts it. Beginning in 1908, such major critics as Huey, Fernald, Davis, Fries, Lefevre, Weaver, and Smith and Holmes have seriously challenged this received methodology of teaching reading.

Moreover, the major emphasis placed upon nonstandard dialect interference in learning to read that has dominated discussions of reading disabilities, especially in our inner cities during the past ten or fifteen years, hardly requires detailed documentation here; it should be noted, however, that this emphasis generally assumes conventional approaches to reading as described above. It has been generally assumed, for example, that what linguists call zero features in nonstandard English, such as the lack of the -ed past tense ending in verbs like worked, lack of the third person singular present tense ending in works, or lack of the singular possessive ending in a phrase like the boy mother, would interfere with learning to read and comprehend standard printed edited
English. This assumption has not been proved despite the best efforts of dozens of scholars. 8

An alternative to both concepts is embodied in a linear programmed textbook, Reading by Patterns: a Programmed Guide to Reading Sentences and Paragraphs. 9 The senior author explains the origin of the program as follows:

The original idea for the psycholinguistic approach embodied in Reading by Patterns developed as I came to realize the enormity of the problems, at all grade levels in our schools, variously called word calling, or word naming, or barking at the page. It struck me forcibly that students so afflicted have literally learned only what they have been painstakingly taught—nothing else: letters sounds, syllables, words. Other children somehow catch the trick of reading, but these unfortunates do not. Instead, they regard the task of reading printed English as the laborious identification of word after word in isolation, as in a list printed from left to right. Once a word has been more or less identified—called, named, or barked—the student moves across the white space between the words and attacks the next word. The internalized silent reading of such readers no doubt mirrors this procedure. 10

The major hypothesis of Reading by Patterns is that the most significant meaning-bearing patterns in English are sentences—qualitatively higher in level than letters, sounds, syllables, and words. Because it is intended for use as a supplemental secondary remedial reading program (grades 7-12) the assumption is made that disabled readers at that level have already been exposed to conventional methods and materials throughout their school years, and that further exposure would be counterproductive. Instead, through step-by-step linear programming, the learner is led first to see that sentences have certain main parts that generally occur in a certain order. But this is not grammar instruction: only five syntactical terms are used, and they are gradually learned, along with a variety of syntactically re-
lated comprehension skills, not by verbal definitions, but by association, repetition, imitation, and application throughout the exercises. The student associates his intuitive understanding of spoken English sentences with equivalent sentences in standard printed English as he hears them read aloud; this audio-visual experience helps him get meaning from the printed page.

Throughout *Reading by Patterns* the N V N sentence pattern, Noun part Verb part, Noun completer (or subject-verb-object) is used in all exercise materials, for two reasons: (1) N V N is the basic and most common English sentence pattern, and many other common patterns also have three main parts and (2) it seems simpler for remedial students to concentrate on one pattern at a time without fear of surprises. The student learns to associate the main structural parts with the semantic message or thought content of each sentence. The program begins with a fail-proof unit of twelve frames that presents the order of main sentence parts; then as instruction progresses, successive units call attention to distinctive elements within the main sentence parts, and to interrelationships and interdependences of sentences within paragraphs. The student moves a mask down the page to reveal correct answers and to cover frames still to be read.

Everything in the program is read aloud by a tutor or recorded on a tape cassette to be played back by the student; first the directions or instructions, followed by the exercise materials. The tutee is asked to follow the standard English text with his eyes while he listens with his ears. Excellent oral reading, with the right rhythm and intonation, is required of the tutor; this requires practice before tutoring or re-
cording, preferably using a tape recorder to verify accurate oral read-
ing beforehand. The student may respond to any task orally, but usually is required to write a response using some of the language he has just heard read aloud, and which he can plainly see on the page before him. The program is designed to provide the student with everything he needs to avoid making mistakes; the ideal of the program is to be error proof. Each unit should be completed once it is begun, because its effect is cumulative and usually leads to a significant generalization.

A unit includes between nine and sixteen frames—short enough to be handled by slow learners at one sitting. Some students do six or eight units at a sitting. The present program consists of fifty-four units of gradually increasing complexity, beginning at the pre-primer level (fail-proof), but progressing fairly quickly to a final unit that deals only with comprehension and pays no attention at all to structure. At the completion of the program, the learner has progressed from the simplest N V N sentence we could devise—*I saw Robert*—to a complex paragraph about wild animals around a water hole.

While the student is learning simultaneously to see and hear standard English—two receptive language processes—he must be permitted to translate standard English orally and in writing into nonstandard English equivalents, a productive language process. For example, "The runner sprained his ankle: may be accurately translated into nonstandard English as "The runner sprain his ankle;" "Everybody likes ice cream" as "Everybody like ice cream;" and "the car's engine" as "the
car engine." In time the student may learn to read standard English without translating, but this is a productive language process of much greater difficulty than translating into a nonstandard dialect equivalent, and it may require considerable time: receptive language processes first, productive language processes later. The aim of such instruction is to help the student relate his normal fluency in speaking his own dialect to the parallel ability of reading and comprehending simple printed English sentences. This is the essential trick of learning to read the edited English normally found in print.

Three studies directed by the authors investigated the effects of using this program in various ways with experimental class-size groups of subjects at three widely separated grade levels, and speaking various dialects. All three studies reported positive gains in reading comprehension as measured by various standard testing instruments, gains significantly greater than those made by control groups using other reading materials. The data for all three studies were collected and analyzed according to precise research designs and statistical methods.

The first study compared the effect of Reading by Patterns (R x P) as a supplementary tutorial program with the effect of supplementary instruction reinforcing the content of the Lippincott basal reading program (primarily a phoneme-grapheme correspondence approach to word identification). The Lippincott program was used by all students in the experiment in their regular reading classes, one hour daily, five days a week; the supplemental programs were administered in three one-hour periods each week. Sixty-two English-speaking Black, white, and
Puerto Rican students reading below grade level in three fourth-grade classes in a Philadelphia inner-city school were randomly assigned to two experimental groups and one control group. The control group received tutoring with material that reinforced the Lippincott basal program; the Reading by Patterns experimental groups were tutored in two different ways: the investigator trained twenty adult paraprofessionals from the community who tutored one group; the investigator also prepared tape cassettes of Reading by Patterns that were made available to the other group for individual use under supervision. The research was completed within eight weeks. The experimental treatment using Reading by Patterns with tutoring by adults proved to be effective with the children; because of circumstances beyond the control of the investigator, the children using the cassettes did not complete the program, so the positive results obtained with this group cannot be considered conclusive.

Each student was given a pre and post test, Metropolitan Reading Achievement; and a pre and post diagnostic test, Spache Diagnostic Reading Scales. A pre and post assessment of each student's attitude was made using the Attitude Toward Any School Subject Scale. Four specific null hypotheses related to reading growth and attitude change within each group and differences between groups were tested. The data was analyzed using \( t \) test for correlated means and 3 x 2 (Treatment x Sex) univariate analysis of variance. Pre test data were also used to determine the equality of the groups.

Highly significant growth in reading achievement \((p < .01)\) was found in the groups using R x P; boys reached higher levels than girls. The control group did not reach a significant level of growth; there were no significant changes in attitudes for any group. Results indi-
cate that: (1) the supplemental use of R x P proved effective with inner-city fourth grade children in mixed groups of Black, white, and Puerto Rican English speakers; (2) adult paraprofessionals were trained to tutor successfully with this program.

The second study compared the effects of Reading by Patterns with those of Basic Reading Skills, "Section Two: Comprehension" (BRS), both supplemented by Listening Progress Laboratory (LPL), on the reading and listening scores of seventy-one 10th and 11th grade students, mostly white, in a northeast Philadelphia high school in a predominantly blue-collar area, all reading below grade level as measured by the Adult Basic Learning Examination, Level II (ABLE). For comparative analysis, scores of the 10th and 11th grade students were merged to form two treatment groups: one for R x P and one for BRS. The study lasted ten weeks.

The ABLE, Form A and R, were administered as pre and post tests to determine achievement in reading comprehension; the LPL Pre test was administered as both the pre and post test in listening comprehension. Three null hypotheses concerned with reading and listening comprehension between and within treatment groups were tested utilizing t tests for correlated means, Sign Tests, and one-way analysis of variance and one-way covariate analysis of variance.

There were significant gains in reading (p < .05) and listening (p < .001) comprehension for the treatment group using R x P; the BRS group reached the .001 level of significant gain on listening comprehension only. In addition, the Sign Test indicated that there were significantly more positive changes in reading comprehension in the R x P
group (Z=4.80, p = 0.0001) than in the BRS group (Z = 0.0, p = 0.50). This study produced positive results using R x P under two special conditions: (1) when presented by a single teacher to entire classes rather than in one-to-one tutorial situations; (2) when used as the only reading program rather than as a supplemental element.

The third study dealt with "high risk" Black students in a Pennsylvania college summer training program. It focused on three areas: (1) reading achievement as measured by the Sounds, Comprehension I and II Tests of the Educational Skills Test (English -- College Edition); (2) syntactic maturity of written compositions as measured by the average length of T Units (Hunt's Instrument to Measure Syntactic Maturity); and (3) attitudes toward eight college-related stimuli as measured by Osgood's Semantic Differential Technique.

Forty-two students in a traditional remedial reading course were randomly assigned to one of two supplemental tutorial treatments. College students were trained to tutor these two groups. The control group was tutored in the content of the traditional reading course; the experimental group was tutored by R x P. The subjects were individually tutored for one hour on each of fourteen afternoons during the four-week course.

Four null hypotheses dealing with reading achievement, syntactic maturity, and attitudes with and between groups were tested. Hypotheses I, II, and III dealt with the comparison of post-test scores between the two treatment groups; Hypothesis IV dealt with the differences between pre and post tests within each group. Pre and post test data on fourteen variables (three measures of achievement, three measures
of syntactic maturity in written compositions, and eight attitude measures) were collected and analyzed. The Cooley and Lohnes MANOVA (multiple analysis of variance) program was used to test Hypotheses I, II, and III, and the t test for correlated means was used to test Hypotheses IV; the Cooley and Lohnes Correlation Reduction Program was also used.

Hypotheses I, II, and III were not rejected, but Hypotheses IV was rejected for two variables in the control group and for six variables in the experimental group. In addition, the correlations indicated that the experimental group did not function in the same way as the control group. Black high-risk College Freshmen who received supplemental tutoring by R x P increased their reading achievement, increased their syntactic maturity in written composition, and improved their attitudes toward selected college related stimuli substantially more than those who received supplemental tutoring in the content of a traditional college remedial reading course. That is, the R x P group generated more significant t ratios than the control group.

All three studies indicate that R x P had significant positive effects on subjects interacting with the program. These positive results from small groups cannot be generalized, however. Nevertheless, it is unmistakably clear that something of positive educational significance occurred when three greatly different groups in entirely separate studies interacted with this psycholinguistic program. Such positive results challenge us to conduct additional experiments with larger populations to yield generalizable conclusions. Such results also dic-
state the need for further and more complex controlled studies of psycho-
linguistic and sociolinguistic approaches to reading, where they are
designed to be used -- in the schools.

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