DOCUMENT RESUME

ED 102 515 CS 001 637

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TITLE Reading and Language: Current Linguistic Perspectives.
PUB DATE Jan 75
NOTE 20p.; Paper presented at the Annual Meeting of the Southwestern Regional Conference of the International Reading Association (5th, Phoenix, January 23-25, 1975)

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS *Language Skills; *Linguistics; *Literature Reviews; Reading; *Reading Research; *Reading Skills

ABSTRACT

This paper reviews the literature and research related to reading and language with an emphasis on linguistics. Topics covered in the paper include: a definition of language, phonology, dialects, oral language, cultural differences, reading materials, morphology, syllabic generalizations, syntax, readability, and the cloze procedure. (WR)

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READING AND LANGUAGE: CURRENT LINGUISTIC PERSPECTIVES

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The language of the reader and of the print which he is responsible for decoding, comprehending and interpreting are obviously significant determinants of the success, or lack of success, of that reader in his encounters with print. There is general acceptance of the principle that language is involved in the reading process. There is also increasing acceptance of the principle that more than language is involved. Reading is also a cognitive process, a process which includes affective responses, and proponents of one or another of the theoretical models currently in vogue would add still other dimensions to any broadly based consideration of the reading process. However, this is not to detract from the importance of language, only to suggest that the process involves more than purely linguistic factors. To acknowledge that reading is a visual process is not to deny that it is an auditory process as well.

Robert Ruddell[1] defined language as "a system represented by sound

[1]Robert Ruddell, Reading-Language Instruction: Innovative Practices (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1974), p. 20.

symbols with conventional meanings shared by members of a linguistic group." Each component of that system is of significance in the reading process, regardless of how one separates the components or the hierarchy in which they're arranged.

Language clearly involves a phonological or sound system. The nature of this system and the narrowness, or breadth, with which it's conceived have tremendous implications for the program in phonics, word analysis skills, word perception skills, whichever term is used to indicate a focus on decoding. It seems clear enough that problems will result when the phonological system represented in the dialect and ideolect of the reader is at variance with the keyed answers on a workbook page or the suggested activities listed as a teacher's guide or Self Instructional Packet. Disagreements about the appropriate representation of the final sound in baby ("short" i or "long" e?) do not seem very important to a teacher, and scholar, who is concerned with phonology in its largest context, involving pitch, stress, pause or juncture and the totality of the utterance, not just the single sound-letter co-respondences involved. One of the most obvious factors in dialect is that of phonology. Regional and social dialects vary in the sound systems employed, and these variations deserve more consideration than they typically receive in reading materials and instructional programs. How significant, in terms of reading achievement, is the dialect difference between /krik/ and /krĕk/, /ruf/ and /rŭf/? Results of a study reported by Carol Hockman[2] are of interest in attempting to

[2]Carol Hockman, "Black Dialect Reading Tests in the Urban Elementary School," The Reading Teacher, 26:581-583, March, 1973.

answer this question. Mrs. Hockman tested 128 Black and 138 White children enrolled in the third, fourth and fifth grades of several inner-city elementary schools. The California Reading Test was translated into black English, and additional items were included in standard English, transliterated from their original black form. Findings indicated no significant differences in test scores on Black Dialect items for either blacks or whites. If children could read, they found the questions easy to answer, regardless of dialect. Noting that her population consisted of children who had already been exposed to standard English in printed form, the investigator concludes: "There is a need for research on the influence of black dialect on youngsters beginning school. Studies investigating the speech of Black Head Start and grade school children indicate that they do speak a different dialect. However, the influence of programs and teachers using Black dialect with Black youngsters beginning school needs to be investigated further."[3]

Levy[4] reports a very interesting study designed to answer the question Hockman raised. She writes: "This paper is addressed to two questions: (1) Have first grade, inner-city black children developed oral langauge which is adequate for beginning reading instruction?

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[3]Ibid., p. 583.

[4]Beatrice K. Levy, "The Oral Language of First Graders Compared to the Language of Beginning Reading Texts," in Black Dialects and Reading, ed. by Bernice E. Cullinan (Urbana, Ill.: National Council of Teachers of English, 1974), pp. 29-40.

(2) How does the children's language compare, in vocabulary and structure to the language of instructional materials?"[5] Thirty minute samples of oral language of twenty monolingual inner-city blacks;first grade pupils;were analyzed for distinctive features, and for purposes of contrast with the reading texts assigned to the children. Levy concludes: "The answer to our first question, then, is that the population represented by these subjects does have knowledge of language which is adequate for reading instruction. Further, the literature which suggests that deficiency in linguistic competence is the primary cause for failures in reading achievement must be seriously questioned.

As for the second question, the study indicated that the beginning reading texts do not present language which corresponds closely to the children's. The sentences in the books lacked some of the children's usual utterances. On the basis of knowledge currently available, impediments to learning to read may be present."[6]

Both Hockman and Levy were interested in determining the effects of factors other than phonology on reading achievement, and both concluded that results were inconclusive and contradictory. Issues beyond the simple decoding process are clearly involved.

Before discussing other linguistic factors--components of a language system, it seems appropriate to discuss at least one report of non-language, or wordless language, at least, and the influence of non-verbal behavior on classroom achievement. Dumont has written a very poignant

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[5] Ibid., p. 29

[6] Ibid., p. 38.

and discomfiting chapter in Functions of Language in the Classroom.[7] He writes: "Over the years, beginning with our first study in Sioux classrooms in South Dakota to our most recent work in Cherokee classrooms in Eastern Oklahoma, we have found that student silence characterizes much of what goes on in the formal schooling of American Indian children. It is noticeably present as early as third grade and is fully and systematically put to use by the seventh and eighth grades."[8] Dumont discusses the language of silence which he characterizes as "a retreat from the word, intended to sever communication and to serve as a strategy in a network of student defense needed to deal with the conflict resulting from cultural differences. . . . Cultural differences are the unknown, the foreign, the strange, and if there are no words for this in either the student's or teacher's vocabulary there can hardly be any in the language they share."[9] He strongly urges that teachers learn the language their pupils use and speak it. Without this condition, Dumont contends, there is as total a breakdown of education as can take place without the school's closing. Whether or not silence is the Zuni's response to cultural differences is of less significance than Dumont's conviction that the pupil's language must be the language of instruction. Clearly, unless the language is native

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[7]Robert V. Dumont, Jr., "Learning English and How to be Silent: Studies in Sioux and Cherokee Classrooms," in Functions of Language in the Classroom, ed. by Courtney B. Cazden, Vera P. John and Dell Hymes (New York: Teachers College Press, 1972), pp. 344-369.

[8]Ibid., p. 344.

[9]Ibid., pp. 348-349.

to the teacher, not a very common circumstance, teachers run the serious risk of talking and writing in an unnatural and artificial manner. Perhaps the barrier this places upon pupil-teacher communication is less serious than the barrier of silence. Obviously, this is Dumont's belief. Determining and using the most effective language of instruction is a matter of serious concern to teachers of Mexican, Cuban, or other Spanish-speaking pupils as well as to those who teach blacks and/or American Indians. The issue deserves more careful and systematic study than it has received.

Language scholars, linguists, are almost unanimous in urging teachers to take into account both major and minor dialectical variations and to operate from a basis of awareness of the similarity, or lack of similarity, between the oral language of pupils and the materials they are expected to read. It is regrettable that Levy's findings regarding the relationship between textbook language and the oral language of children are so similar to those of Ruth Strickland and the researchers who worked with her and reported their findings in 1962. One might hope for more rapid change (progress?) on the part of textbook authors and publishers.[10]

It is perhaps easiest to identify the implications of linguists' work with the phonological aspect of language. Teachers regularly

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[10] Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children. Bulletin of the School of Education, Vol. 38, no. 4, (Bloomington, Ind.: Indiana University, July, 1962).

encounter divergent terminology ('unglided' or 'short'? 'open' or 'long'?) and variations in syllable divisions based upon phonological findings (Does the first syllable of entertainment end with the n or the t?). The advice, just repeated, to take o account children's dialects, regional and social, and their ideolects as well, is not presented here for the first time. Because structural linguists like Bloomfield believed so firmly in the primacy of speech, the relationship between oral language and certain aspects of the reading process have received considerable attention over a rather extended period of time. If the task of learning to read can, in fact, be reduced to learning the visual representations for the sounds the young child already knows then much of what is labeled as reading instruction is superfluous and unnecessary. In contrast to early linguists, who concentrated on the relationship between grapheme and phoneme, letter and sound, Carl LeFevre states: "The basic fault in poor reading (viewed as a crippled language process) is poor sentence sense, demonstrated orally in word calling, or in reading various non-structural patterns as units."[11] Although he is generally categorized with structuralists, LeFevre differs from others of that school in believing that effective, efficient reading demands the perception of units beyond the letter, beyond the word, and, in some cases, beyond the sentence, to include the unit essential for comprehension.

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[11]Carl LeFevre, Linguistics and the Teaching of Reading (New York: McGraw-Hill Book Company, 1964), p. 5.

Language scholars who are concerned about the reading process typically recommend adherence to the following principles in teaching decoding skills:

1. Use terminology which is accurate. The use of terms like 'long' and 'short,' 'silent letters,' etc., should be avoided, and are, in many of the better phonics programs.
2. Work with language units which are large enough to be comprehended, typically nothing smaller than a word. Acting on the basis of some understanding of the interrelationships of the components of language, not just phonology, narrowly conceived, is vital.
3. While language acquisition is not complete by age five—Carol Chomsky's research provides clear evidence of this[12]—children at the beginning stages of decoding print are not beginners in using language. Methods and materials selected should demonstrate acceptance of this fact.
4. This point has been stressed several times: Children's dialects and ideolects must be taken into consideration in planning and executing effective decoding skills programs.

Closely related to the phonological facet of language, in English, at least, is the morphological component, Goodman writes:[13] "Like the mole-

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[12]Carol Chomsky, The Acquisition of Syntax in Children from Five to Ten (Cambridge, Mass.: The M.I.T. Press, 1969).

[13]Kenneth S. Goodman, "Words and Morphemes in Reading," in Psycholinguistics and the Teaching of Reading, ed. by Kenneth S. Goodman and James T. Fleming (Newark, Delaware: The International Reading Association), p. 28.

cule, the morpheme is the smalles segment which has all the basic characteristics of the larger system. The morpheme's capability of carrying syntactic or semantic information distinguishes it from smaller segmental units, phonemes, that must be integrated into morphemes before they can really be considered linguistic units." Clearly, Goodman supports the position that "language-not words or morphemes--in its ordered flow is the medium of communication."[14] This is true whether the 'ordered flow' is spoken or printed.

Of specific interest to reading teachers is the high level of current interest in the value of syllabication as a reading skill. A very well-known reading authority asked a class ". . . after all, aren't morphemes and syllables the same thing?" As long as such ignorance is spread and as long as publishers search desperately for something to teach third, fourth and fifth graders, syllabication will probably continue to occupy a significant place in some lists of reading skills. In condemning a group of what he calls linguistically indefensable statements about phonics instruction, Wardhaugh writes: "Statements about syllabication which apply only to word breaking conventions in printing when these statements are made into rules of pronunciation as when butter is broken into but/ter and monkey into mon/key. There is only one medial consonant in butter, and its phonetic quality derives from its relationships to both vowels in the word, not just the first."[15]

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[14] Ibid., p. 28.

[15] Ronald Wardhaugh, "The teaching of Phonics and Comprehension: A Linguistic Evaluation," in Psycholinguistics and the Teaching of Reading, ed. by Kenneth S. Goodman and James T. Fleming (Newark, Delaware: The International Reading Association, 1969), p. 82.

Unfortunately, confusion continues to exist about the relationship between oral language and print, between morpheme and syllable. Wardhaugh, Shuy, Stoller, and Johnson and Merryman, to name just a few highly respected language and reading scholars, have repeatedly insisted that most syllabication rules have almost nothing to do with actual sound patterns, and have no significance beyond the typesetter's domain. In an article which appeared in a recent issue of The Reading Teacher, Dorothy Seymour concedes: "Actually, the term 'syllabication' itself is not a very apt one. The process might better be termed "word division for decoding" since the object is not to listen for syllables, or to count the number of syllables, but to decode by means of dividing it into more recognizable visual parts. These parts may or may not represent the exact auditory syllables of the word as we believe we hear them. Thus, the important object is the decoding of the word, not the number of syllables in it.

The purpose of word division for decoding then, is to give the pupil strategies for recognizing familiar words."[16]

Specifically, referring to the same word Wardhaugh used as an example, butter, Seymour responds to the advice to divide between the two t's as follows: "Why? Just because that is the way we divide a word at the end of a line of writing? And is that really a good reason? It is a little unsettling to realize how, especially in this case, decoding practices have slavishly followed the typesetter's conventions without their efficiency ever having been questioned. . . . English has some digraphs made up of different letters (sh, ck) and others made up of the

[16] Ibid., p. 280.

same letter (ss, tt). In both cases, only one sound is signaled, not two. The doubled consonant letter (ss, tt) called a geminate consonant, is, in fact, a clue to the kind of sound the preceding vowel stands for, not a signal that the consonant sound is pronounced twice in a row. (Pronouncing the same consonant sound twice is a part of some language systems, but not of the English system.)[17] One might ask Seymour how she would deal with accept and suggest, perfectly good English words.

Ruddell's position on teaching syllabication skills is not quite so negative as Wardhaugh's, Shuy's or others whose names were mentioned earlier. He writes: "The decoding value of syllabication lies mainly in the visual identification of pronounceable units that can then be tested for meaning as the reader uses letter-sound correspondences, letter pattern-sound pattern correspondences, and context clues. It is not unusual to find reading instructional programs of the past that rely heavily on the dictionary approach to syllabication for decoding purposes. In some cases, this required that the reader know how to pronounce the word before he could decode it, which resulted in substantial confusion for many children."[18] Ruddell may be more charitable in assigning programs with such characteristics to the 'past' than observation of current practices and materials warrents.

He notes that attempting to describe syllabic boundaries is frequently like trying to decide how much of a valley belongs to each of

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[17]Dorothy Z. Seymour, "Word Division for Decoding," The Reading Teacher, 27:275-283, December 1973.

[18]Ruddell, op. cit., p. 303.

the two hills the valley separates--or connects.

To summarize briefly, syllabic generalizations should account for meaning--be defensible in terms of context. It is probably best if the generalization can be induced from a list of familiar words, followed by application to appropriate decodable words which are in the pupil's listening/speaking vocabularies. Teachers can save time, effort and develop structural analysis programs which are linguistically sound if they will examine the activities specified in guides and workbooks and eliminate the work or syllabication which violates the principles specified by Wardhaugh, Seymour and Ruddell.

A final comment on the morphological system, designed to reinforce the concept that each facet of the total system called language interacts with each of the others. The letter 'b' at the end of bomb does not represent a sound, or, to state it differently, the letters m and b together represent the sound usually represented by the letter m. However, when a morphological change occurs, when 'bomb' becomes the root for 'bombastic' or 'bombardier' the sound-symbol relationship obviously changes. It is important that teachers understand this interrelationship among the several components of language which have, for too long, been treated independently.

The phonological and morphological components of language, and some of the implications of current linguistic knowledge about these systems for reading instruction have been discussed. Another significant facet of language is the syntactic system, the system of ordering the words of a language in utterances, sentences, for purposes of communication.

In English, the noun phrase usually precedes the verb phrase, and markers, modifiers, are typically not very far from the words they mark or modify. Teachers must be aware that Spanish-speaking children attempting to decode English may be more familiar with other word arrangement patterns.

The contribution of structural grammarians like Fries, Francis, and Sledd to our understanding of the sound system of our language has already been noted. The concept of the phoneme represents a major scholarly achievement, and it deserves recognition, despite the fact that its significance for reading instruction was overemphasized, and, perhaps, still is. As structuralists viewed syntax, they tended to categorize sentences by pattern types--from three to ten were typically identified, depending upon decisions made about 'to be' (whether or not to classify 'to be' sentences with similar sentences containing more 'regular' verbs).

In contrast, transformational grammarians, or those proposing a transformational-generative theory, have proposed a set of phrase structure rules which are useful in predicting or generating sentences which have not yet been spoken or written. Sentences can be observed in terms of deep or surface structure.The surface structure reflects the observable print or sounds, the deep structure refers to semantic relationships. 'Flying airplanes can be dangerous' is an ambiguous sentence from the point of view of deep structure, unless one learns, from total (other sentences) context, what role 'flying' plays in the sentence--is it a verb or a descriptor for airplanes?

The arrangement of words in a sentence almost certainly affects the ease with which the meaning of the sentence can be comprehended. There is some fairly clear evidence, although definitive research is lacking, that passive sentences are more difficult to comprehend than active sentences, and that questions are more difficult than statements. It seems that publishers are preparing materials for use in reading instruction which have moved some distance from the tightly controlled materials produced during the thirties, forties, and fifties, Levy's findings to the contrary. Natural, speech-like language is stressed and there is much less emphasis, even at primary levels, on controlling such factors as sentence length and rate of introduction and repetition of new vocabulary. As a result, text material is probably much more interesting and the selections in text books and trade books are almost certainly more compatible. However, the pupil with serious, or even moderate, reading, language, or dialect problems, is likely to be quite discouraged when he encounters idiomatic speech, sentences which are both long and complicated, and dialogue reflecting social or regional dialects. Is it possible to produce materials for reading instruction which are neither vapid and insulting nor impossible to decode and comprehend? One would hope that language scholars, authors, publishers and educators could accomplish this, each making his own significant contribution.

Comprehension affects, and is affected by, phonological and morphological factors. Syntax also plays a role. The varied difficulty levels resulting from active-passive transformations and statement-question transformations have already been noted. Comprehension is also affected

by the position of a word in a sentence and whether a proper noun or its pronoun from its referrent is a significant factor in comprehension, as are the number of embeddings. Certain conjunctions cause much more difficulty than others--'because' and 'although' are not understood, or decoded with comprehension, as easily as 'and' and 'or.'[19]

What does this mean? Should teachers avoid using materials which may be difficult to comprehend? Even pupils with moderate to severe reading problems will attempt to decode and comprehend material which is of high interest. One implication seems clear; a teacher who is aware of some potential language barriers to comprehension can help pupils anticipate the problem and solve it before it occurs. Obviously prediction, anticipating what word or phrase will come next, is an important part of the reading act, for mature readers particularly. Skillful teachers can help children win what Goodman calls the "Psycholinguistic Guessing Game."[20] It should be clear by now that psycholinguistics, in particular, are deeply involved in studying comprehension and do not view thinking or responding to language as beyond their purvue.

Because the issue of readability and how it is to be measured involves all three of the strands or components of language identified previously, the writer will conclude with a brief consideration of readability in general and cloze technique in particular.

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[19]William T. Fagan, "Transformations and Comprehension," The Reading Teacher, 25:169-172, November, 1972.

[20]Kenneth S. Goodman, "Reading: A Psycholinguistic Guessing Game," Journal of the Reading Specialist, 6:126-135, May, 1967.

Readability is defined as the sum of factors, and the interactive effect of these factors, which determine an individual's ability to comprehend what he reads. In the very thorough annotated bibliography dealing with comprehension compiled for the I.R.A., Green notes that none of the readability formulas in use today take "adequate account of style, symbolism, concept density, or quality of a work."[21] It might be added that neither do they take into account sentence complexity. However Green may have included this in his general term 'style.'

Factors typically considered in determining readability, are number of words in a sentence, number of syllables in a word and, frequently, an analytical comparison of words in a selection with those included on a standardized list of some type. Of the most widely used formulas, the Lorge formula is identified by Chall[22] as most appropriate for young children, although the Spache is the most widely used. The Dale-Chall is identified as best for materials written for older children and adults. The SMOG and Fry are recent additions to the list of readability formulas and they have the advantage of being both reasonably predictive (when compared with the more complex formulas) and quite easy to apply.

The cloze technique or procedure was developed by Taylor in 1953. Comprehension difficulty and, some would say, readability, is estimated by the random or patterned deletion of words from passages. Subjects are

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[21] Richard T. Green, Comprehension in Reading: An Annotated Bibliography (Newark, Delaware: The International Reading Association, 1971).

[22] Jean Chall, "Readability: An Appraisal of Research and Application," Educational Research Monograph (Columbus, Ohio: The Ohio State University, 1958).

asked to fill in the blanks with the exact words deleted. The difficulty rating for a passage is determined by counting the number and computing the percentage of blanks filled in with precisely the same word used by the original writer. It has been suggested that a 75% criteriaon be considered adequate for the so-called "instructional" level and 90% for the "independent" level.

It may be true that cloze tests do not constitute a readability formula in the narrowest definition of that term, they do have the advantage of taking into account the total linguistic structure of a selection, which the Lorge, Dale-Chall, etc. do not.

To summarize, some of the more significant points might be these:

1. Teachers of reading need to take into account all facets of the linguistic structures of our language--phonology, morphology, syntax and semantics. These relate best to the pupil who is reading and to the material he's asked to read.
2. These facets of language are closely interrelated and can, and should, be separated only for purposes of focus and independent analysis.
3. Linguists are viewing language in its broadest context. Sociolinguists are concerned with dialects and the impact of language on society and vice versa and psycholinguists have focused on the cognitive and affective dimensions of the language and language uses.
4. Linguists continue to contribute to our knowledge of language and educators are accepting responsibility for applying this knowledge through development of appropriate methods and materials.

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