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ABSTRACT

Since the time of E. B. Huey (1908), there have been clear indicators that oral language as a reflection of a child's linguistic ability has been clearly related to his or her reading achievement or comprehension. P. McKee (1937) and W. S. Gray (1937) both speculated that reading difficulties might parallel language deficiencies. G. Hildreth (1949) saw "linguability" as critical to the reading process. R. W. Shuy (1969) called for a new system of language arts instruction based on the child's language facility. Following E. L. Thorndike's study (1917), which found that reading comprehension was influenced by the relation of elements within a sentence, other researchers have found much the same evidence. Even with direct relationships established, researchers throughout the decades have found distinct differences between speech and reading modes. Nevertheless reading specialists have continued to stress the critical importance of oral language to reading acquisition. A number of researchers have all stressed the absolute necessity of basing reading instruction on strong oral language development. Nonetheless, coming decades will have to resolve many unanswered questions, such as: What skills are essential to oral language growth? Are quantity and quality synonymous with general language ability? and, Is there a hierarchy of language skills? Until these questions are addressed, reading theorists have a good way to go before a language-based reading model may be developed. (HOD)

ORAL LANGUAGE AND READING COMPREHENSION:

A Review from Huey to the Proliferation of the '70's

presented by

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at

Annual Meeting of the National Council of Teachers of English

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During the past decades one of the most frequently discussed factors in the examination of reading acquisition is a child's oral language. Interestingly enough, however, the direct relationship between a child's oral language and his reading achievement is not always varified or clearly understood. Logical assumptions which relate speaking to reading often are not supported in language theory or verified by empirical data. An examination of the past decades of research leads to some clarification.

As early as the 1900's Huey (1903) observed the close relationship between written language and speech. He encouraged early reading to be taught by parents reading to their children. The natural process of learning to read, Huey thought, was the same as learning to talk. He felt the early reading texts were inane because they were not written in the natural language of the child. Thorndike (1917), in his theory of over-potency and underpotency, saw reading as an elaborate procedure involving the weighing of each element in a sentence and synthesizing these elements into right relations for comprehension. Relational words such as pronouns, conjunctions, and prepositions played an important part in this comprehension process.

The 1920's and 1930's brought in-depth studies of language by both Piaget and Bloomfield. Piaget (1926) studied children's speech while they were at play and discovered egocentric speech patterns. After age seven more socialized speech in the form of real dialogue and question - and - answer interaction developed. Piaget felt language ability was determined by the level of the

child's cognitive development. Bloomfield (1933) postulated that the listener extracts phonemes from speech and from these forms morphemes and sentences and decodes the message. The reader follows much the same procedure with visual stimuli. Bloomfield felt reading pedagogues must learn this relationship between speech and reading; as more knowledge of linguistics developed, he felt the structure of language would be applied to reading.

From this increased knowledge of reading, specialists such as McKee and Gray began to relate language development directly to reading improvement. McKee (1937) observed that no school could obtain efficiency without utilization of a well-organized functional course of language. Reading disability might have been fundamentally caused by disabilities in use of language. McKee recommended increasing the facility in oral expression, expanding the familiarity with spoken symbols for concepts, and teaching sentences as thought units as essentials to reading instruction. In the NSSE Yearbook of 1937, William S. Gray listed one of the prerequisites for reading as a reasonable command of simple English sentences. Experience showed fluency in the English language and a wide vocabulary brought greater ease in reading. Gray suggested spontaneous expression, conversation, free discussion, and formal opportunities for speech as part of a complete reading program.

During the 1940's and early 1950's prominent writers in the field of reading began to place more and more emphasis on the relationship between language and reading. Emmett Betts stated emphatically:

Speech, reading, and writing (including spelling) are facets

> of a larger whole called language. No one of these facets can be viewed or dealt with in isolation from the other facets of language because language is these means of communication. (Betts, 1942, p. 226)

An understanding of language acquisition from responding to language through listening, producing speech sounds, associating oral speech with writing, and learning to read was basic to Betts' description of the reading process. Betts felt the 1930's reading programs were at a low ebb because they did not provide for general language development to be included in all areas of the curriculum. Buckingham (1940), in his research, also saw too much preoccupation with reading as decoding. For him reading for meaning resulted from basing reading instruction on the foundation of language. If reading deficiencies were evident, basic language abilities might be lacking. Buckingham pointed out many children who seemed deficient in reading were primarily deficient in the use of the mother tongue and needed training in oral communication.

In further examination of school settings, Betts' (1949) discovered language arts was being broken into separate subjects which had the serious consequences of ruling out the sequence of language development. Little attention was given to oral language achievement as a prerequisite for initial reading instruction. In addition, reading became a separate subject unrelated to content materials. Betts was convinced the foundations of the reading program should be based on semantics, pragmatics, and syntactics. He saw experience and language as providing meaning cues to reading. "Reading is a very active, or dynamic, process or reconstructing the experience

behind the language." (Betts, 1949, p. 535)

Various specific research studies during these times began to find a relationship between elements of language and reading achievement. Gibbons (1941) found at the third grade level a high correlation between the ability to see relationships among parts of a sentence even after intelligence was partialled out. Gibbons concluded from this investigation that reading problems will not be corrected by eye movement or emphasis on speed reading as long as a possible relationship exists between reading and language abilities. She concluded:

> A possible relation between reading and language abilities exists, and ... appropriate instruction in language as well as reading may help to develop the ability to see the relationships between parts of a sentence and thereby bring about desirable achievement in reading. (Gibbons, 1941, p. 46)

Francis Robinson (1947) found vocabulary was not the only determinant of paragraph comprehension. Language structure and intelligence were also seen to affect the facility of reading. Trabue (1944) in an article in the NSSE Yearbook, however, firmly stated that the basic study of language did not relate to reading.

In the late 1940's Gertrude Hildreth (1949) postulated that reading can scarcely advance faster than the child's ability to think with words and to express ideas competently through the medium of language. She introduced the concept of linguability as a measure of language proficiency. The following area were critical:

1. Comprehension of spoken language
2. Use of oral language expression
3. Comprehension of written language (reading)

4. Skill in context writing

(Hildreth, 1949, p. 567)

For Hildreth (1959) oral language was the foundation of learning to read and in turn reading reinforced a child's linguistic development. She even went so far as to speculate that lack of oral fluency impairs retention of new words and expressions and prevents the child from making use of inner speech during silent reading. From this background, Hildreth suggested that a child's first years in school should be spent more in oral language development; more time should be devoted to language work; language development should be taught simultaneously in reading, oral language and context writin. "Every reading lesson should, in fact, be a language lesson." (Hildreth, 1959, p. 568)

Helen Robinson (1955), in evaluating factors which determine success in reading, clearly stated that language was basic to reading achievement. Knowledge of language and progress in language must constantly keep pace with the increasing difficulty of reading materials in order for comprehension skills to develop.

Early in the 1950's A. Sterl Artley (1950) provided an extensive review of the interrelationships among the language arts. Complexity of language structure was found to be crucial in determining the difficulty of the text material. Achievement in reading showed a relation to other language arts and general growth in language ability. Reading also was significantly related to an ability to see relationships among parts of a sentence. He cited

research studies which indicated significant differences in oral language evaluated in terms of average sentence length, number of complete grammatical sentences, number of different words, number of elaborated sentences, and number of nouns and conjunctions used between high reading achievers and low.

Unfortunately, Artley (1953) observed that many schools were not developing oral language facility which hindered greatly reading of complex sentences, following the organization of the story, and reading with expression. "A child can read no better than he can organize his ideas and express them." (Artley, 1953, p. 321) A child, therefore, should not enter a formalized reading program until language development is sufficient to assure the child will be successful. Those lacking in language development should have enriched experiences, opportunities to talk with others, and frequent contact with literature. All students should be instructed in a developing awareness of oral words as language units, enriching oral vocabulary, strengthening meaning associations, formulating sentences, organizing ideas into language units, using narrative espression, improving articulation, developing sensitivity to inflectional variants, and developing awareness of sentence structure.

Even with this wealth of knowledge about language and reading in the 1950's Artley, (1950) pointed out some pertinent unanswered questions. What specific skills are needed for oral language growth? What prooedures should be used? To what extent does the

quantity and quality of oral language affect the acquisition of reading? Are quantity and quality of oral language synonymous with general language ability?

Simultaneously with the work in reading and oral language came more detailed studies of children's language and language acquisition. Carrol (1953), Deboer (1955), and Berko (1958) are only a few representative researchers who began to study language from linguistic, sociological, and psychological viewpoint. Working in the field of linguistics Noam Chomsky * developed estensive theories about language. Within a decade the revolution this research initiated resulted in an explosion of reading-related investigations and literature. The most pertinent of these ideas will be reviewed in the decades of the 1960's and 1970's.

This thorough investigation into language development continued into the 1960's with the work of Vygotsky (1962), Fries (1963), Carroll (1966), Bruner (1966), Piaget (1967), and Carol Chomsky (1970). Vygotsky, whose work was actually done in the 1920's and 1930's but went unpublished in English, described a highly original and thoughtful model of the relationship between language and thought. He saw two stages of language development. The first being the spontaneous and unconscious followed by a gradual control of language by

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* The nature of children's language and language acquisition is beyond the scope of this paper. The concept of linguistics and psycholinguistics that resulted from the Chomskian revolution can be reviewed in a previous paper by this author entitled "Psycholinguistics and the Process of Comprehension." October, 1982.

the learner. For Vygotsky the ability to objectively analyze language structures lags behind the speaking and listening performance of a child because additional cognitive skills are demanded. Language development and cognitive growth, however, could be enhanced by dialogue between adults and children.

Fries concluded "Learning to read ... is not a process of learning new or other language signals than those the child has already learned." (Fries, 1963, p. 106) The language symbols, according to Fries, were the same but the medium to be processed was simply different. "The process of learning to read is the process of transfer from the auditory signs for language signals which a child has already learned, to the new visual signs for the same symbols." (Fries, 1963, p. 115)

Carroll (1966), on the other hand, pointed out the differences between learning to speak and learning to read. Speech is acquired informally while reading must be taught. Reading must be broken down into components of the task and abstracted while speech is experienced in its full complexity and remains situational according to Carroll.

For Piaget (1967), language was not enough to explain thought. He believed the structures that characterize thought have their roots in action and in sensorimotor mechanisms that are deeper than linguistics. The more the structures of thought are refined the more language is necessary for the achievement of developed concepts. "Language is thus a necessary but not a sufficient condition for the construction of logical operations." (Piaget, 1967, p. 98)

In 1966 the work of Bruner somehow bridged a gap between Piaget and Vygotsky. For Bruner (1966) language serves as a stimulant to cognitive growth; however, there must first be sufficient developmental opportunities and successful cognitive experiences to warrant use of language. "Teaching is vastly facilitated by the medium of language, which ends by being not only the medium of exchange but the instrument the learner can use himself by bringing order into the environment." (Bruner, 1966, p.6)

Concurrent with the conceptualization of language theories in the 1960's came some careful landmark research into children's use of oral language and their subsequent reading development. The work of Kenneth Goodman (1963, 1967), Frank Smith (1971), Ellen Ryan (1969) and others * brought forth a whole new field of psycholinguistics which based reading on the actual structure of language.

Strickland (1962) studied and analyzed the oral language structure of first through sixth grade students and compared these findings to the language levels of books they read. In beginning readers the language was less advanced, and she suggested there might be difficulty in reading the shorter less familiar language of the basal. In analyzing the language structure of elementary pupils, Strickland studied syntactic structure of sentences, frequency of the occurance of certain patterns of syntax, amounts

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* This burgeoning material is reviewed extensively by the present author in previous work and is beyond the scope of this particular investigation.

and kinds of subordination, length of sentences, and the flow of language. At the sixth grade, though not at the second, Strickland found that high-achieving readers employed most common patterns of structure, longer utterances, greater average use of movables and elements of subordination, and greater mean sentence length. She also found a high correlation between oral reading interpretation and the structure of a child's oral language. There was a higher degree of listening comprehension also with children who used more movables and subordinate elements. Strickland concluded:

> The quality of a child's speech appears closely related to the quality of his oral and silent reading. The more clearly the reader understands the patterning of his language the better will be his oral reading interpretation and silent reading comprehension." (Strickland, 1962, p.34)

Walter Loban's (1963) longitudinal study from 1952-1963 proved to be the classic to this point. He set out to study the language of children by examining their use and control of language, their effectiveness in communication, and the relationship among oral, listening, reading, and written uses of language. He hoped to answer the following questions: Are there predictable stages of growth in language? Can sequence of language development be identified? How do children vary in language ability and how do they gain proficiency?

Loban's research consisted of language samples of a mean group, an extremely low language ability group, and an extremely high language proficiency group. The test consisted of an examination of vocabulary and use of relational words, use of oral and

written language, proficiency in reading and listening, teacher's judgement of students's skill in language based on vocabulary, amount of language, skill in communication, organization, purpose and control of language, wealth of ideas and quality of listening, and background information on the health and home of the child. The study of language was based on the phonological unit, the communication unit, and mazes which were defined as confused language or tangled words including many hesitations, false starts, and meaningless repetitions. From this research Loban charted the interrelations of oral language with written language, oral language with reading, reading with written language, and health with general language ability. By the third grade subjects who ranked high in oral language read well. For the average or poor reader there did not seem to be a clear relationship to oral language. Loban speculated that perhaps this was a result of not differentiating instruction or that poor reading is perhaps not directly related to oral language. By the beginning of fourth grade, however, Loban found a widening gap in reading achievement from year to year between those rated high and low in language ability. Mazes in oral language decreased in the high and average groups while the total number of words per maze increased in the lower subgroup. Those who read well wrote well and those who read poorly wrote poorly. Finally in conclusion "Apathy, lassitude, and low vitality appear concomitants of low language . . ." (Loban, 1963, p. 71)

Robert Ruddell (1965) studied the effect of the similiarity of oral and written patterns of language structure on reading

comprehension. Using a cloze test with fourth graders, he found reading comprehension of high frquency language patterns greater than with infrequent patterns. From this research Ruddell (1970) concluded that facility in oral expression, particularly vocabulary knowledge and understanding of sentence structure, was basic to the development of comprehension. Ruddell (1970) recommends further research in developing a detailed map of children's developmental language performance, their grammatical performance and lexical control, the relationship between comprehension ability and grammatical and lexical performance, how meaning is interfered with when language is manipulated, and the effectiveness of language enrichment.

Marion Monroe's (1964) textbook on the Foundations of Reading set the basis of reading as "building a set of more refined and complex language skills based on the language experiences children already have." (Monroe, 1964, p. 3) The teacher's job consists of bridging the gap from speech to print. Since the child's language constitutes one of the most important avenues through which the teacher can learn about the student, a knowledge of each student's language ability is crucial. The teacher must hear how the student uses language and observe how he learns words he uses and what kinds of ideas he tries to express, and how successfully he is able to express them. In order to do this in some consistent pattern, Monroe proposes classifying a child's language in the following manner:

1. How a child thinks, which is revealed by the quality of

his ideas.
2. How a child thinks, which is revealed by the nature of his definitions of words
3. How a child uses words, as revealed by his ability to verbalize ideas
4. How a child uses words, as revealed by his command of sentence structure. (Monroe, 1964, p. 26)

Each of these categories is then evaluated on a four-step scale to determine a child's language maturity.

Following the increasing interest in oral language's relationship to reading achievement, Marquerite Brougere (1969) attempted to find which language measures predicted beginning reading achievement. Rather surprisingly there was a high intercorrelation among syntactic measures of language proficiency, but the Metropolitan Readiness Test was a better predictor of reading achievement than the language evaluation. There were also few significant correlations between sex, intelligence, and social-economic status and language scores. From these findings Brougere concluded, "There is a need for continuing search for more specific knowledge of relationships between oral language and reading, so that the components of language competency prerequisite to success in reading may be more clearly identified and understood." (Brougere, 1969, p. 34)

Other researchers, nevertheless, supported many of the previous conclusions. Lefevre (1964) found basically poor reading came from lack of basic sentence sense. He felt more research was definitely needed into the nature of language processing. In his work, Robinson (1968) found pupil's understanding of connectives

such as however, thus, although, which, and, yet, etc. signigicantly correlated to mental age, listening, reading, and writing ability. R.C. O'Donnell (1967) found there was a developmental sequence of syntactic language acquisition. At grade three oral language seemed superior to written in transformational complexity while by fifth and seventh grade this relationship was reversed. Marquardt (1964) went so far as to indicate that a child's familiarity with and facility in the informal conversational mode might interfere with reading. This difficulty might arise from the differences between spoken language and the formal mode used in writing.

From a review of this information gleamed during the 1960's, Shuy (1969) called for a new system of language arts instruction which would stress the innate language abilities of students and use of texts that would reflect children's oral language.

With the call of the 1960's for more specific research in oral language and reading achievement came a profusion of studies in the 1970's. The NSSE Yearbook of 1970 was devoted to linguistics in the schools. Stauffer's (1970) work with the language experience approach became even more well known. Reading specialists such as Gibson (1972), Pflaum (1974), Athey (1977), and Hall (1978) began to pull together information and develop models that clarified somewhat the practical language-reading relationship.

Gibson (1972) maintained that competence in spoken language is an essential first step in learning to read. The role of grammar in reading is still not clearly understood. How do spoken and written language make contact with one another? How are already

learned speech rules put to use or activated in reading? It, nevertheless, seemed clear to Gibson that the acquisition of written language is parallel to but independent from spoken language. At some point transfer learning takes place, and though written and spoken language are independent, the beginning reader needs to discover there are useful relationships between the two.

Pflaum (1974) emphatically stated that the language and thought processes cannot be separated. "Language develops in concert with cognitive growth: language both reflects and promotes thought." (Pflaum, 1974, p. 3) Furthermore, research indicates ability in language tends to influence reading achievement. More research is still needed, however, in what causes this influence and what kinds of variance exists in children's syntactic comprehension of reading. Pflaum concluded that strategies used in language acquisition such as use of syntactic patterns or use of context to comprehend are helpful in learning to read. Instruction in word order, function words, and inflectional endings help cue meaning. Vocabulary and oral language development are essential. Children need to learn the communicability and meaningfulness contained in the written message.

Athey (1977) felt that, in general, theorists can accept that a child's understanding of syntax in written language and the level of syntactic complexity exhibited in his oral and written language production is related to reading comprehension. Whether comprehension of syntax or production is more imp tant depends perhaps on the level of reading whether it be primary or intermediate. Athey

again cautioned, however, that language and reading acquisition are different. There is evidence that the development of syntax is much more protracted than once was assumed by transformational grammarians. There seems to be a hierarchy of difficulty for processing certain types of syntactic structures and researchers need to begin to study here.

Mary Ann Hall (1978), in her work of the late 1970's, perhaps best summarized the current linguistic view of reading by stating "To learn to read a child must learn to process language presented through the medium of print." (Hall, 1978, p. 21) The nature of language, the reader's behavior in processing strategies, a knowledge of the reader's oral language performance and competence, a consideration of the language patterns included in the reading materials, and an identification of the teaching behaviors all must be present before reading acquisition can be evaluated. Hall further points out that though linguistic information relating semantics and syntax to the information processing task of reading is available, more information is needed. What is the effect on achievement when a child is taught to maximize clues for processing language by drawing on the relationship between oral and written code? (Hall, 1978, p. 42)

Even though the whole language approach seemed worthy of application, instructional materials did not seem to become readily available. In fact little research became available which would evaluate a strongly based oral language and reading approach in the 1970's. The Peabody Language Development Kit (Sheldon, 1973) was

created for practical use. Donald D. Hammill and Phyllis L. Newcomer (Newcomer, 1977 and Hammill, 1982) created a Test of Language Development (TOLD) which measures several semi-independent aspects of language development including spoken language, listening, speaking, semantics, and syntax. This particular test seems to have potential for correlation with language related reading problems.

From several studies, it became evident that language acquisition and reading acquisition were perhaps not as similar as once assumed. Wardhaugh (1971) ascertained from an extensive study, that reading instruction is formal and deliberate while speech is a more natural process. Reading offers vague reinforcements while speech is immediate. Visual discrimination interfers with reading. Writing is not simply speech written down. It is more abstract in content and functions differently in the lives of the recipient of the message. In addition, Wardhaugh felt that if language development is complete before reading instruction begins, it can have little effect on the reading process.

In 1971 a conference entitled "The Relationship between Speech and Learning to Read" was held to compare speech perception and reading. It was concluded by Mattingly (1972) that the relationship between these two modes was much more devious than assumed. Speaking and listening are primary linguistic activities while reading is a secondary and rather special sort of activity that relies critically upon the reader's awareness of these primary activities. The speaker's ability to follow the rules of his

language is not equivalent to a conscious knowledge of these rules. This metalinguistic awareness, nevertheless, may be necessary to learn how to read. Reading and listening are not simply the same processes in different modalities. In all languages listening is a natural way of perceiving speech. Until recent centuries few languages were written. Mattingly pointed out that Steven's and Halle's analysis-by-synthesis which describes how a listener understands speech is not the same as Goodman's psycholinguistic guessing game which details a reader's steps in processing print. (Mattingly, 1972, p. 134) Reading can be more speeded and go directly to the deep level of language while speech is a much slower process and requires an intermediate stage of processing. Many elements of oral language are not a part of written language. There are differences in the form of the input information, differences in its linguistic content, and differences in the relationship of form to content. Reading is a much more difficult process in that linguistic awareness varies from person to person, the alphabetic system demands greater linguistic awarenoss, written texts are far less redundant, and if the reader reads too slowly, he cannot keep up with the process of linguistic synthesis.

Numerous other researchers during this time, however, found various specific aspects of language do relate to reading comprehension. Tatham (1970) found rewriting passages using patterns that frequently occur in children's speech aided comprehension even if the vocabulary, sentence length, subject matter and content remained the same. Sauer (1970) found noun-verb-noun or noun-verb-object

sentences easier for fourth graders to comprehend than noun-verb-indirect object or complement. W. L. Smith (1971) discovered in his research that children read with more facility materials written at the same level of syntactic difficulty as they use in their oral language. Siler (1973)) found that with second and fourth graders when syntactic violations were introduced into prose, deleterious effects occurred on oral reading. Silva (1977) found three oral language variables - mean length of communication units, the number of subordinate clauses, and the number of clauses per communication unit - correlated significantly with comprehension of six year-old-children who differ markedly in linguistic competence. Clark (1977), in his extensive language work, found parsing sentences into meaningful phrases and clauses was essential to language comprehension. He speculated that lack of parsing in written language may contribute to reading difficulties.

Other researchers began to uncover reading failures that develop from a mis-match of oral language and reading. Jerry Johns reviewed Downing's concept that a confusion often exists in young children between phonemes, syllables, and long words. He concluded young children do not have an adequate concept of what constitues a spoke word. This "state of cognitive confusion may explain why some children have difficulty making sense out of instruction aimed at helping them to process print." (Johns, 1975, p. 242) Olson found that even though children come to school with great facility in oral language, reading is an encounter with something completely foreign. (Olson, 1977) Schallert (1977) analyzed the various speaking and reading tasks and reported diverse differences in the two processes. A speaker has a

specific listener in mind; he receives feedback from the listener; he uses less complicated syntax, less diverse vocabulary; he uses intonation for prosadic cues. Readers, on the other hand, require more comprehensive knowledge of schemata than listeners, who need greater knowledge of syntax and vocabulary and have to have increased skill at understanding another's perspective. Samuels and La Berge (1974) concluded that to decode effectively, syntactic and semantic information must also be processed. Below-average readers never get past processing decoding to reach comprehension. This problem does not exist in listening because the decoding is not involved. Bormuth, Carr, Manning, and Pearson (1970) studied the reading comprehension of between and within sentences syntactic structures and found

> by far the most startling result was the fact that large proportions of students were unable to demonstrate a comprehension of the most basic structures by which information is signaled in language. (Bormuth, 1970, p. 355)

A hierachy of difficulty ranged from sentence structure as the easiest, to anaphora second, to intersentence structures as the most difficult. Patricia Cunningham's (1975) work tended to support the previous researcher's by delineating problem areas as those with relative clauses especially containing appositives with "wh" words, nominalizations, complements, and subordinate clauses linked by connectives to main clauses. Pearson (1974) ascertained readers had problems with inferring causal relationship from two juxtaposed sentences in which the relationship is unstated. Pearson pointed out the direct implications this might have for work in

the social studies and science areas. Berger and Perfetti (1977) working from an interdependence model of reading and language comprehension found less-skilled readers generally have a reduced ability to comprehend language. Further support was found for comrehension difficulties of less-skilled readers that are attributable "to their localized language processing, i.e. encoding the linguistic information of a single sentence and not purely to differences in global organizational s...ls." Even with these discoveries, Giordanot (1979) concluded that "all persons with oral language competence should be able to transfer that aptitude to the problem of processing visual language." (Giordano, 1979, p. 19)

Unfortunately, there is still a shortage of classrorm materials to initiate instruction in developing oral language proficiency as a prerequisite to beginning reading instruction. Research of Birch (1980), Rush (1980), and Buswell (1980) continues to present differing views of the relationship between oral language competency and reading achievement. Buswell (1980) finds no relationship at the second and third grade levels. Rush (1980) finds case-related variables using Kintsch's propositional analysis are not significantly related but spoken discourse in terms of average sentence-utterance length is. Birsh (1980) in a longitundinal study finds early language acquisition deficiencies are developmental precursors to reading difficulties. Ryan (1980) in a recent IRA publication summarizes that metalinguistic knowledge or this ability to deliberately control language is crucial to the reading task because of the abstract nature of written language. The

natural language setting of speech and listening is not the same and does not require this necessary control.. Ryan further concludes that children develop at different rates in their ability to analyze language structure. Less mature readers tend to treat all language stimuli equally while more mature readers have greater ability to supply language strategies to deviant utterances. Donald J. Richgels has done a superb job of analyzing the state of the arts by stating

> The conclusion seems to be that teachers of reading must proceed with care. They must be aware of elements of language competence, but cautious about assuming direct carryover to reading tasks...they ought to be sensitive to individual differences among children with respect to their level of development. (Richgels, 1980, p. 11)

Summary

It is safe to summarize that since the time of Huey (1908) there have been clear indicators that oral language as a reflection of a child's linguistic ability has been clearly related to his reading achievement or comprehension. McKee (1937) and Gray (1937) both speculated that reading difficulties might parallel language deficiencies. Hildreth (1949) saw "linguability" as critical to the reading process. Surprisingly enough, Betts (1949) regrettably observed that language development was not being considered a prerequisite for reading instruction in the classrooms across America. A decade later Artley (1953) found this lack of instruction was still evident. Shuy (1969) called for a new system of language arts instruction based on the child's language facility.

Following Thorndike's study (1917), which found reading comprehension was influenced by the relation of elements within a sentence, researchers such as Gibbons (1941) found much the same evidence. Artley (1953) found average sentence length, number of complete grammatical sentences, number of different words, number of elaborated sentences, and number of nouns and conjunctions all related to reading achievement. Strickland (1962) ascertained similar findings and also found elements of subordination were important to reading comprehension. Loban's classic study (1963) once again brought to light this close relationship between elements of oral language competency and reading achievement. The work of the 1970's by Pflaum (1974), Athey (1977), Tathan (1970),

Siler (1973) and others all substantiated the crucial importance of syntactic structures to the act of reading. Bormouth, Carr, Manning, and Pearson's research began to show a hierarchy from sentence structure to anaphora to intersentence structures as important in reading comprehension. Olson's (1983) recent work indicated psyshological verbs also play a crucial part in language comprehension.

Even with these direct relationships established, researchers throughout the decades have found distinct differences between speech and reading modes. Carroll (1966) found speech informal. Reading, a much more complicated task, has to be broken down and then abstracted for comprehension to take place. Wardhaugh (1971) concluded that reading is vague and lacks the reinforcements of speech. Visual discrimination also complicated the process of translating language. Mattingly (1971) stated that because of different input and linguistic content, metalinguistic awareness was essential to reading while perhaps not to speech. Schallert (1977) found less complicated syntax and vocabulary were evident in speech while reading lacked intonation clues.

Even with these differences reading specialists have continued to stress the critical importance of oral language to reading acquisition. McKee (1937), Gray (1937), Betts (1949), Hildreth (1949), Robinson (1955), Arley (1953), Monroe (1964), and Hall (1978) have all stressed the absolute necessity of basing reading instruction on strong oral language development. Nonetheless,

forthcoming decades will have to resolve many unanswered questions. What skills are essential to oral language growth? What are the procedures to enhance this development? Are quantity and quality synonymous with general language ability? Is there a hierarchy of language skills? Why is there a difference between the effect of language sophistication on primary and intermediate readers? How do spoken and written language contact one another? How are speech rules activated in reading? Is comprehension of syntax or production more important? What is the effect on achievement when a child is taught to maximize clues for processing language by drawing on the relationship between oral and written code?

Until these questions are addressed, reading theorists have a good way to go before a language-based reading model may be developed.

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