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PSYCHOLINGUISTICS APPLIED TO READING INSTRUCTION

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Teachers who are doing their homework in the way of professional reading are meeting with increased frequency the word, psycholinguistics, especially as it relates to reading. One might assume that the very appearance of the word connotes some abstract body of knowledge having meaning only to language theoreticians. On the other hand it is possible that once understood, the word may be a label for a developing body of knowledge that has far-reaching implications for reading teachers. In fact, one might discover that for the most part psycholinguistic thinking puts into a new context much that has been accepted and applied by reading teachers.

Psycholinguistics - A Concept

Psycholinguistics, as the word itself connotes, is the alliance of two respected disciplines – cognitive psychology and linguistics, one dealing with the learning process and the other with language, so that one may say that psycholinguistics is concerned with the process of language learning. The union of the two disciplines is a fortunate one since it makes possible the application of concepts and understandings that were overlooked when each discipline was considered in isolation.

Within the limits of this paper it is impossible to elaborate on either the psychological or the linguistic concepts that provide the base for psycholinguistic thinking. One can say only that it is undergirded by a firm theoretical and empirical foundation. For example, only cognitive psychology emphasizes the place and importance of cognitive structures as the means by which information is acquired and organized in the nervous system, a concept which helps to explain the comprehension process. The inherent desire of an individual to make sense of one's environment relates to reading as an act of constructing meaning. The concepts relating to hypothesis testing, feedback, and redundancies have a direct bearing on word identification.

In like manner linguistics as a discipline deals with such concepts as phonemic and morphemic structures and semantic and syntactic patterns, thus contributing further to our understanding of word identification in reading. Linguistics offers an understandable explanation of a word and gives cues not only to word identification but to the place and use of words in the entire act of reading. The terms surface and deep structure (meaning) contribute immensely to our understanding and teaching of comprehension. Psycholinguistics puts concepts from the two areas together and supplies, thereby, insights and understandings that have major significance to what is involved in language learning and teaching.

One must hasten to point out, however, that there is no psycholinguistic *method* of teaching reading nor is there a psycholinguistic program of reading materials. Rather, it is a growing body of principles, insights, and understandings that a teacher may use regardless of the particular method or program of instruction being followed. In other words, psycholinguistics is not a panacea for all our reading problems. Unfortunately, however, what I seem to hear some reading people say is that most of what reading teachers have done in the past is now outmoded. If only one were to apply psycholinguistic constructs, reading success would be assured. If I am correct in this perception I greatly fear that psycholinguistics will take on all the characteristics of a cult, and like many cults of the past will be relegated to a page in a future history of reading instruction. It is the intent of this paper to point out some of the ways that psycholinguistic thinking may be woven into the fabric of what is already being done in reading.

Psycholinguistics   On The Pre-School Level

Psycholinguistic thinking attaches particular significance to the language development that takes place before a child enters school. In fact one could make a defensible statement that the development that takes place toward the reading process in the years prior to the learner's entrance into school is as important as that which takes place after school entrance. Evidence coming from studies of children who learn to read by themselves before going to school is convincing and substantiates this contention. For example, all aspects of oral language development have a bearing on the reading act. Children who can communicate orally only with simple sentences, are handicapped in comprehending written sentences showing coordination and subordination. If the child cannot *think* a sequence of ideas in logical order, or *reason* a possible conclusion from a given series of events, and demonstrate these cognitive abilities either by words or overt behavior, it is going to be difficult to *read* a story whose comprehension calls for these competencies. Reading is built on a foundation of oral language and as a consequence the pre-reading activities must be rich in all kinds of experiences that give children a chance to talk, to explore language, and to respond and react to the teacher and to each other.

Because psycholinguists contend that a human being demands meaning from environment, reading, then must be an activity where the overriding purpose is to construct meaning, assuming, of course, that a meaning relevant to the reader is present to be constructed. Because word symbols serve only as stimuli to meanings (concepts) that have been established in the nervous system of the reader, it is incumbent on all teachers, but particularly teachers in the prereading program, to assume as a major responsibility the building of concepts. First, are those concepts that teachers use in giving directions   *over, under, first, last, draw a line under,* etc. Teachers frequently fail to understand that many children do not have a clear idea of the meaning of commonly used words.

In addition to the concepts mentioned above are those that relate to stories read by the teacher and later the stories which the children read.

Examples of such concepts are *elf, wolf, party, friend, family, red, blue, apartment,* and *escalator.* Teachers must always remember that concepts are not built by giving definitions but through experiences and activities both direct and vicarious (pictures, films, etc.). Suffice it to say that unless listeners or readers have clear concepts to be "triggered off" by words, spoken or written, meaning will be either faulty or void.

Through informal activities children should also have the opportunity to experience written words and sentences as conveyors of meaning. Labels about the room—coat hooks, desks, supplies—tell children that words stand for meaning. Of course, for this purpose, nothing surpasses stories and poems read by the teacher with an opportunity for children to respond to questions which prompt recall of main ideas, the prediction of possible events, and active participation in all the thinking and reasoning processes that their own reading will demand eventually. Pupil-dictated teacher-written chalkboard "stories" and notices—the daily participants in housekeeping activities, the daily "newspaper," and the plans for the day contribute immeasurably to the growing concept of the reading process and an understanding of its importance. When all is said and done the success of the pre-kindergarten and kindergarten programs, along with the contributions made in the home, will determine the success that children will have as they move from Pre-reading to initial reading.

Psycholinguistics Word Identification

Once reading begins, one of the most important instructional tasks is that of developing competencies in the area of word identification. From the days of the Horn Book the assumption has been that word identification is the process of turning printed symbols into spoken words and spoken words into meaning. Since printed words are made up of letters which stand for sounds, the act of word identification became that of "sounding out." This "sounding out" required teaching all the letter-sound relationships along with the "rules" for determining the sounds for which letters stood, particularly vowels, as they occurred in words. Primary and elementary teachers know from experience that the teaching of phonics is not only a laborious process for both teacher and pupils but one having limited value since research shows that there are so many exceptions to the so-called phonics rules that the whole process becomes trying and confusing. Even if learned, clinics and special reading programs are filled with children who can sound out the words but still can't construct meaning.

Furthermore, psycholinguists point out that readers, young children included, bring to the reading act a group of understandings inherent in oral language which, when used for the identification of unfamiliar written words, make unnecessary the sole dependence on phonics. First, children are aware that words must go together in a prescribed order. Though the reader is unfamiliar with the rules of syntax or word order they know they must say, "The frightened boys hurried back to the tent," rather than, "Tent boys the back frightened hurried the to." They need no formal instruction on parts of speech to come to this conclusion. Yet they "know"

that adjectives precede nouns and that nouns precede verbs. Children know also that it would not make sense to read nor say, "The fried boys hurried back to the tent," or "The frightened boughs hurried back to the tent." Thus words must both fit the structure of the sentence and make sense. Such concepts about language, intuitively acquired in the process of learning to talk, may now be applied to the identification of unfamiliar words in the act of reading. Hence in meeting the sentence, "Jerry sat down on the _____ to his house." The strategy that the reader applies is, "What word would fit and make sense in the sentence." The word, *steps*, seems to meet both criteria, but the reader might conclude that the words *walk* or *porch* would also fit and make sense. A third understanding about words that the teacher will help children generalize is that words must also conform to the spelling-sound (graphophonemic) pattern of the word; therefore, noting that the word begins with *st* and the *st* sound eliminates *porch* and *walk*. Note that the reader did not "sound out" the unfamiliar word but combined three bits of information about language. Since so many words begin or end with consonants, simple graphophonemic information, chiefly in relation to consonants eliminates the necessity for learning and applying unreliable phonic "rules."

In developing the strategies to be used in the identification of unfamiliar words as described above, the teacher must permit, in fact encourage, the reader to take chances, to try out various possible words until one is found that meets the criteria: "fit, sense, and sound." "Read to the end of the sentence," the teacher suggests, "and see if you can figure out what the word must be." The teacher is asking the child on meeting something unknown in print not to randomly guess, but to infer on the basis of known language understandings.

In discussing strategies that the reader uses for the identification of unfamiliar words one might ask, "Just how important is it that the reader come up with the identical word that the author has used." If in the illustrative sentence above, the reader thinks *home* for *house* or *porch* for *steps*, have unpardonable reading errors been committed? Neither of the substitutions would change the inherent meaning of the paragraph which described Jerry's problem that he was trying to resolve. Hence sitting on the porch of his home makes as much sense as sitting on the steps to his house. Meaning is the important consideration in reading not word pronunciation!

Psycholinguistics Oral vs. Silent Reading

In talking about meaning as the important consideration in reading, the issue of oral vs. silent reading arises. The two types of reading serve two entirely different purposes. Silent reading is for the purpose of constructing meaning; oral is for transmitting the meaning to interested listeners. Since meaning is the primary consideration, as psycholinguists stress, more emphasis should be given to silent reading on all levels of instruction. Oral reading (interpretation) should be used when need arises to transmit to others an interesting part of the story or to dramatize an exciting incident.

But the teacher asks, "How am I to know if the child perceives the words if I don't listen to him read aloud?" The teacher is asking the wrong question. The question should be, "How do I know if the child is constructing the meaning?" To discover this the teacher might ask the reader questions about incidents in the story or ask him to tell the story. If the teacher *must* find out if the reader knew the word, *steps*, when he said that Jerry sat on the *porch* to try to solve his problem, all that is needed is to ask the child to read aloud the one sentence in which the word appears. Now that the reader's attention is directed to a particular sentence, the chances are strong that he will say the word as it was written. But again the important matter is not where Jerry sat but whether he solved his problem.

Psycholinguistics - Voluntary Reading

It may appear unprofessional to say that good readers are not so much the result of what the teacher does during the reading period as to the amount of voluntary reading that the children do. As adults most of us could attest to this generalization. It was not the thirty minutes spent in a reading class that contributed to our growing proficiency in reading, but the amount of reading we did on our own from books and magazines in the home or school library. Psycholinguists contend that all individuals have an innate drive to make sense of their environment, to discover, to find answers to relevant questions, to attain a "state of equilibrium." Reading, then, becomes one of the major avenues through which problems are resolved, interests are met, and predictions verified. Accordingly teachers' responsibilities are to raise questions, create interests, and see that books and magazines are available to meet them. Children learn to read by reading!

Psycholinguistics - In The Content Areas

Creating a need, or in psychological terms creating a state of disequilibrium, has relevance for all kinds of reading, but particularly for reading (study) in the content areas. Frequently an assignment is made: "For the next time take to the end of the chapter." The only purpose for "taking" is to meet the teacher's requirement. No real need for information is created and motivation for problem solving is not developed. Contrast that assignment with this one: "In the last few days we have been studying life in colonial times - how people lived and worked. For tomorrow we will be studying about crime in colonial times and the types of punishment that were administered. Our problem will be to compare the kinds of crime committed and the kinds of punishment used in colonial times with those of today. In particular, 'why do you think the method of punishing criminals has changed?' " With this assignment a need is created and a problem is faced. Students use the textual material to think their way to a solution and to compare their judgments with others in the class. Study-type reading should be problem solving. Merely regurgitating the details of an assignment or telling the facts of a story is neither study nor a demonstration of comprehension.

Psycholinguists – The Nature of Words

One other psycholinguistic concept with implications for reading relates to how words are taught and learned. Words, psycholinguists contend, have relevance only as they appear in context with other words. A word is only a symbol that stands for meaning, and meaning can be attached to it only as the reader can perceive its relation to other words. Frequently words have been taught in isolation with word drill as a teaching practice. Regardless of any other consideration the teacher is giving pupils an extremely difficult task to perform since the readers must rely on sheer rote memory alone, and rote memory can be very unstable. In the second place, it is not until the word appears in context that it becomes a meaning unit. So the least the teacher can do if she feels impelled to give word practice is to place the word in a short contextual sentence or phrase. The word *from* may be confused with *farm* or *form* until it appears as, "The bird fell from its nest." The teacher will be amazed to discover the number of words, unknown in isolation, that will be known when placed in context. Words are not learned through repetition but by being met in predictable situations in content that has relevance and meaning to the reader.

Psycholinguistics And Meaning

Possibly one might summarize the relevance of psycholinguistics to reading in one sentence: Reading is the act of constructing meaning, first, foremost, and always. Whatever is done in reading should be done with that end in mind whether it is on the pre-school, primary, elementary, or secondary level. So on Monday morning it will not be necessary to make a radical change to a new reading program to capitalize on psycholinguistic concepts. One needs only to ask "Am I helping readers enjoy the plateau of meaning or am I requiring them to struggle through the underbrush of words?"

SUGGESTED REFERENCES FOR ADDITIONAL READING

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