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Reading--Do We Need to Know What it is Before We Try to Teach it?

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If, for a brief moment, we could look into a child's mind while he or she were reading, would we find the child's approach to reading compatible with the teacher's approach to teaching? The answer would probably depend upon how the teacher views the reading process. If the teacher believes that reading is a process of identifying individual letters or individual words, then the teacher will probably not be inclined to teach in the way that the child is inclined to read.

Reading is not a process of identifying individual letters or individual words. To understand why children and adults do not read in this manner, let's carry out an experiment suggested by Frank Smith (1975). Look at the line of letters below for just one second, and then try to recall as many letters as possible.

B P R E I L Q U X C G J O S V A H M T Y F K N S D

Chances are you were able to remember four of five letters. If reading is a process of identifying individual letters and we can only identify four or five letters in one fixation, then we would read at a rate of about one word (four or five letters) a second, or sixty words a minute. Adults read about 250 words a minute, while second graders read about 115 words a minute (Harris and Sipay, 1975).

Continue with the second phase of the experiment glancing at the next line of print for just one second. Try to recall as many letters as possible.

L I S T W A L K F L O U R R I C H P U T S T I L L

Most likely you were able to recall nine to ten letters. How is it possible that you were able to see twice as many letters this time? The same amount of visual information was available to your eyes for the same amount of time (Smith, 1975). You must not have identified each individual letter, for if you had focused on individual letters, you would only have been able to identify four or five letters. Reading is not a process of identifying individual letters.

Try the last phase of this experiment. After looking at the next line of print for just one second, see how many letters you can remember.

M E N F O U G H T B R A V E L Y F O R F R E E D O M

This time you probably could recall all the letters. How is this possible? You must not have tried to identify each individual word, for if you did, you would only have been able to identify about two words, not five words. If,
when we read, we focused on words one at a time, we would identify about two words per second, which would equal a rate of about 120 words per minute. But our typical reading rate is about twice that speed. Reading is not a process of identifying individual words.

What was the difference between the three phases of this experiment? Why were you able to process more information with each successive line of print? When we read (and when children read), we rely on two sources: visual information, or the symbols on the page, and nonvisual information, or all the knowledge and experience we have (Smith, 1973: 1975). As we read we use the information we receive from the page in conjunction with the information in our head. During each part of our experiment the amount of visual information remained the same but the amount of nonvisual information increased. This was an important difference because the more nonvisual information we can use, the less visual information we need (Smith, 1973: 1975).

One aspect of nonvisual information is knowledge of how our language operates. Although we may not consciously think about it, we probably all know that letters in the English language are combined in certain ways. A participant on a quiz show, asked to guess the next letter of the secret word which begins with "t," is unlikely to guess such letters as "p," "f," or "e." In fact, over half the letters of the alphabet will probably not even be considered, because we have nonvisual information of how letters are joined into words (Smith, 1973).

When you glanced at a line of random letters you could identify four or five letters. When the letters were combined into words, you could recognized nine or ten letters. You processed twice as many letters in the same amount of time because you used nonvisual information, which in turn enabled you to use less visual information per letter. You recognized the words without having to separately distinguish the individual letters. Reading is not a process of identifying individual letters.

Just as we know something about how letters are combined, we have nonvisual information about the way words are combined in our language. If words appeared randomly, reading would indeed be a difficult task. But we know (and children know) that words do not appear at random (Smith, 1975). For example, try reading the following paragraph:

The ___ ran through the ___. ___ was trying to __ the ___. The ___ ran so ___ that ___ got ___.

Even though about one out of every three words was omitted from the paragraph, you were probably able to read these sentences with understanding. You must have used nonvisual information since you obviously can't be relying only on visual information. You must not have identified each individual word, since the words weren't there in the first place. Likewise, you must not have identified each individual word during the last phase of our experiment. When you glanced at words combined in a meaningful way, you made maximum use of nonvisual information which
allowed you to use less visual information per word. You recognized the entire sentence without having to separately distinguish the individual words. Reading is not a process of identifying individual words.

If reading is not a process of identifying individual letters or words, then how can we define reading? Reading is a process of prediction. When we read we use nonvisual information to make predictions about the visual information. Smith (1975) offers some examples that illustrate this point. First, read the next two sentences aloud: “She winds her watch while she reads the train schedule.” “She read yesterday that the winds would die down.” How were you able to identify the words “read” and “wind” correctly? Most likely you did not read each sentence twice, first trying one pronunciation and then the other. Instead, you used nonvisual information about the way words are combined to predict the visual information.

Next, try to read this sentence where the visual information is wrong: “The none tolled hymn she had scene a pare of bear feat inn hour rheum” (Smith, 1975, p. 181). You were probably able to comprehend this sentence, not because you relied on the visual appearance of the words, but because nonvisual information enabled you to predict the correct words. Once prediction began you merely sampled the print and consequently processed more information in the same amount of time. Reading is not a process of identifying individual letters or individual words. Reading is a process of prediction.

When we read, we predict and then use as little or as much visual information as is necessary to confirm our predictions. For example, see if you can predict this word:

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c__n__v__t__n
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You might not have enough visual information. Note what happens when nonvisual information is provided: “The president will soon propose an energy c_n_v_t_n plan.” When you could predict the word, this limited amount of visual information was sufficient to confirm that the word was “conservation.” When we read, if the words we predict are congruent with the meaning we are comprehending, we continue to read, to predict, sample, and confirm. If our predictions are not confirmed and meaning is disrupted, then we will use more visual information to try to generate meaning.

Children can and do make predictions when they read, in the same manner as adults. Even beginning readers know a lot about their language, and children can apply this knowledge (nonvisual information) to the reading process. For example, think of how a first grader would read this sentence: “The boy rode his b_____.” It’s unlikely that the child would predict such words as “been,” “big,” or “busy” even if those words were included in yesterday’s flash card drill. Instead, the child’s knowledge of language will intuitively trigger such predictions as “bike” or “bus.”

The beginning of this paper posed an important question: Do we need to know what reading is before we try to teach it? The answer is yes. How else can we make judgments about our teaching strategies? We need to
evaluate materials and techniques to complement the reading process.

The teacher who believes that reading is a process of prediction will always use words in context, adapting any instructional activities which call for using words in isolation. When a teacher presents words in isolation, he or she is making the task of word identification unnecessarily difficult for the child. When presented with an isolated word, the reader has a restricted amount of nonvisual information, which limits prediction. For example, when shown an isolated word on a flash card that begins with the letter “h,” how can the child efficiently eliminate all the thousands of other words that begin with “h” in order to make a reasonable prediction of what this word might be? Remember, during our experiment, how much more efficient you were at processing visual information when the words appeared in context. Why not give children the same opportunity to use what they know about language? In the natural reading situation, one does not have to identify words in isolation, and the effective reader makes use of nonvisual information to make predictions.

The teacher who views reading as predicting will make a concentrated effort to teach students to use context clues. Activities adapted from the cloze procedure (Bormuth, 1975) might be used. Certain words are deleted from a reading selection, and students are asked to supply words that would make sense within the context. Random deletions can be made, where every fifth word is omitted, or selective deletions can be used, where only verbs, nouns, or just function words are omitted.

Informal procedures will be used regularly by the teacher who emphasizes context clues. When confronted with an unknown word, the teacher might encourage the child to skip the word and read to the end of the sentence. The teacher would then ask, “What word that begins like this word would make sense here?” Words that would not likely be in the children’s sight vocabulary can be written on the board while students are encouraged to guess the words, based on an oral context which the teacher provides. Students should be continually reminded to ask themselves these questions while reading: “Does this sound right?”, “Does this make sense?”

The teacher who believes that reading is a process of prediction will promote the goal of reading as understanding, not word-perfect oral reading. If we didn’t predict when we read, we wouldn’t be able to sample the print. We would have to concentrate on individual words, one word at a time. This would probably overload our short-term memory and we would forget the beginning of the sentence before reaching the end of the sentence. When children are made to feel they must read every word perfectly, they will be forced to focus carefully on individual words, making both prediction and comprehension difficult.

If the teacher believes that efficient readers predict, sample, and confirm, then the teacher realizes that mistakes will be made, since predicting and sampling are not precise processes. But the teacher also realizes that not all errors, or miscues, are the same. If the reader’s prediction was not a perfect match to the visual information (what some people might call an error), but the predicted word or words were
congruent with the meaning of the passage, there would be no cause for the reader to self-correct. Likewise, the type of error which does not disrupt comprehension, should not be corrected by the teacher or by classmates.

The teacher who places importance on understanding rather than perfect oral reading will teach children how to determine if a miscue should be corrected. Selections can be prepared which contain different types of errors. The teacher can help students make sound judgments about which mistakes should be corrected and which should not.

The teacher who believes that reading is a process of prediction will employ teaching techniques which emphasize comprehension. The language-experience approach to teaching reading might be used. Beginning readers may find prediction difficult when confronted with the artificial language patterns of some basal readers. Through the language-experience approach, children are provided with reading material that matches their oral language. This can promote prediction. The Directed Reading-Thinking Activity (Stauffer, 1969) might be used for its emphasis on comprehension and prediction. The DRTA operates on the assumption that comprehension facilitates prediction, which in turn facilitates word identification. New vocabulary words are not introduced prior to reading, but rather students are encouraged to predict the words through context clues. During DRTA students are not quizzed with comprehension questions but are repeatedly asked to predict, read, and confirm their own predictions regarding story plot.

A definition of reading and teaching strategies which complement this definition have been described. The way a teacher views the reading process can play a crucial role in promoting effective readers. The teacher who believes that reading involves prediction will be easily recognized. He or she will not emphasize individual words, but will place priority on the meaning readers can generate from print.

REFERENCES


