ENHANCING READING COMPREHENSION
THROUGH SCHEMATA

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How does one read? Reading theorists suggest that there is really more to reading than meets the eye, contrary to the popular belief that reading is a "passive" activity.

For complete recovery of the writer's meaning, early reading research saw the reader plodding through a text in the letter-by-letter, word-by-word fashion, and in a precise manner, from print to speech to comprehension. Comprehension was a matching of sounds and letters. If well processed, it led to comprehension (Gough 1972). Implicit in this view of reading is that meaning rests with the print and is the end product of the step-by-step processing of texts.

Subsequent research in reading, however, contends that the word-by-word decoding process does not necessarily effect comprehension. Widdowson (1978) argues that meaning can never be recoverable in its entirety due to the nature of discourse. The encoding process, being imprecise and approximate, is rather, thought to be the devising of a set of directions which indicate to the reader the need to rely on his conceptual world of his knowledge and experience for the encoder's meaning. The reader-decoder is successful in his comprehension to the extent that he understands the directions and is capable of carrying them out. This view of reading clearly underscores the interaction between the writer and the reader mediated through the text. Reading efficiency therefore cannot be measured against the amount of information contained in the text. This is incalculable as it depends on how much knowledge and experience the reader brings to the text, and how much he wishes to extract from it. In text processing, the reader truly has to "make sense of" and create meaning from what he sees before him.

Widdowson's view of reading has a lot in common with the views of reading put forward by Smith (1978a, 1978b) and Rumelhart (1977) especially where the contribution of the reader to obtain meaning is concerned. Smith highlights the importance of non visual information. He postulates that the reader does not read in the word-by-word manner, but makes predictions based on the redundancies of language : graphophonic cues, syntactic cues and semantic cues, all used simultaneously. On the basis of these cues, the reader actively samples the text and produces hypotheses about the message of the writer. The non visual information (text-relevant information which already exists in the reader's mind) enables the reader to make predictions about the text and to bring to the text implicit questions about meaning. The meaning obtained from the text is always relative to what he already knows and to what he wants to know. Smith's view of the reading process does seem to be consistent with that adopted

by Rumelhart (1977), one of the key proponents of the schema-theoretic view of reading. Schema theorists are of the opinion that human knowledge is represented in memory in the form of interrelated structures known as schemata. Schemata exist for generalized concepts underlying objects, situations, events, actions and sequences of actions, and each schema is believed to contain a network of interrelations. Anderson (1977), Anderson, Spiro and anderson (1977) cite the example of a schema for dining at a restaurant. This schema would encompass common knowledge about eating in a restaurant, being seated, selecting food, being served and paying for the meal. Each schema generates interrelated subchemata. The list of subchemata is really infinite, and varies from individual to individual, and is a composite of each person's learning, exposure and experience.

In text processing, the reader's schemata become activated by the incoming data, and a "chain reaction" is in turn set off, as interrelated subschemata are evoked. The activated schemata help the reader to structure the interpretation of new knowledge. Comprehension occurs when there is a match between relevant schemata and the givens in a text. It entails filling the slots or variables in the appropriate schemata in such a way as to jointly satisfy the constraints of the message and the schemata. Schema-theorists see reading as an interactive process which depends not only on the text but also the reader's conceptual knowledge-his schemata. How much the reader can derive from the reading task often depends on the amount of relevant knowledge he already has prior to reading. If he already has a lot of pre-reading knowledge, comprehension is facilitated. On the other hand, if he possesses very little relevant prior knowledge of does not possess any relevant prior knowledge at all, comprehension will be impeded. A number of studies have already demonstrated the importance of having the appropriate schemata. In a well-known study, Bransford and Johnson (1972) assigned subjects to different testing conditions: with prior knowledge, with partial prior knowledge and without prior knowledge. They found that comprehension ratings were higher for those who had been given full prior knowledge than those who had only partial prior knowledge and those without any prior knowledge at all. Bransford and Johnson speculated that appropriate prior knowledge had enabled subjects to comprehend better and recall a greater number of ideas. This finding that prior knowledge has a marked effect on comprehension has found further support in other studies (Steffensen, Joag-dev and Anderson 1973; Reynolds, Taylor, Steffensen, Shirey and Andersson 1982; Holmes 1983) using native and first language readers.

If prior knowledge is beneficial to native and first language readers, then it is even more important to those reading in a second or foreign language. Researchers working in the field of second and foreign language reading comprehension suggest that comprehension difficulties are primarily linguistic in nature. Readers with a low proficiency of the language of the text tend to be heavily reliant on the syntactic and graphophonic information and pay less attention to meaning (Cziko 1978; Clarke 1980;

Cooper 1984). Beginning research in the area of foreign and second langguage has shown that prior knowledge is beneficial to those with a low proficiency of the language of the text (Hudson 1982; Koh 1985; Chai 1989). In the studies, this category of readers could override their foreign/second language deficiency and comprehend as well as those readers whose proficiency in the foreign/second langauge was high.

The finding that prior knowledge of the text is beneficial to readers holds important pedagogical implications for the classroom teacher or anyone who is involved in imparting knowledge. Before introducing a topic or assigning a text, the teacher should attempt to find out how much the students know about the topic dealt with in the text. This could be done in several ways: through a multiple-choice test, quiz, oral questions and other informal methods. These activities will not only give the teacher an idea of how much his students know about a topic and prepare suitable "prior knowledge inducing" activities, but also make students interested. Students of low proficiency will find reading a meaningful and enjoyable expereince if they can relate to the ideas dealt with in the text. This is crucial especially with a group of poorly-motivated students and students frustrated by their poor command of the foreign/second language.

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