Content Schemata and Reading Comprehension

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Abstract:
Reading comprehension means reading and understanding, an active process which can be seen as a kind of dialogue between the reader and the text or the author. We often hear our students say that they can read the words but don’t know what the words mean. This paper focuses on schema theory with special attention to content schemata, analyses the reasons of the students’ failure in reading, points out that the presence or absence of the content schemata will affect the reader’s reading comprehension because of the characteristics of the content schemata in terms of culture and topic area, and puts forward ways to help the students construct new and appropriate content schemata.

Key words: schema theory; content schemata; reading comprehension

1. Introduction
For students of non-English majors in China, reading ability has been considered as one of the most important skills that they should acquire. However, teachers of English often complain that students reading in English seem to read with less comprehension and slower speed than expected. It is a true that their failure is due to inadequate knowledge of vocabulary and grammar, but it has also been found that some students who don’t have language problems, including difficulty with vocabulary and grammar of the text under study, are still unable to comprehend what they read in English. Just as Widdowson (1978) says, the acquisition of linguistic skills does not seem to guarantee the consequent acquisition of communicative abilities in a language. Then usually neither the teacher nor the students have any clear idea of what actually goes wrong, and so are unable to decide on the proper remedies. In order for the teaching of reading to be effective, it is important for teachers to take stock of their perception of the nature of the reading process itself regularly so that appropriate reading activities may be adopted.
2. Schema theory and content schemata

Traditionally, foreign language reading was viewed as nothing more than the recognition of a sequential string of linguistic symbols or as a process which included the decoding of symbols via recognition of the printed letters and words. This “bottom-up” approach to reading has been challenged by a “top-down” view of reading. One theory that represents this approach is Schema Theory, which is based on Goodman’s psycholinguistic model that reading is a guessing game (1967). The basic idea of the theory is that human memory consists of high levels of structures known as schemata, each of which encapsulates our knowledge about everything connected with a particular object or event. We use general knowledge schemas to make bridging inferences about what utterances and texts are referring to; we use story schemas to infer themes and plots; we use schema representations of goals and plans to interpret the speaker’s intention (Greene, 1988). In brief, schema theory is a theory about knowledge--- a theory about how knowledge is represented and about how that representation facilitates the use of knowledge in particular ways (Rumelhart, 1984).

Schema theory consists of linguistic schemata and content schemata. Linguistic schemata refer to the knowledge of grammatical, syntactic and semantic systems, while content schemata refer to the prior experience and background knowledge. Anderson et al (1977) have defined the three functions of the content schemata. First, schemata provide the basis for filling the gaps in a text: no message is ever completely explicit and schema permits a coherent interpretation through inferential elaboration. Second, schemata contain the reader’s interpretation of an ambiguous message. Third, it is by establishing a correspondence between things known, as represented by schemata, and the given in a message, that readers monitor their comprehension and know whether they have understood the text. Perhaps the central function of schemata is in the construction of an interpretation of an event, object, or situation. Nuttall (2002) also describes the role of the schema, saying that the kinds of assumption we make about the world depend on what we have experienced and how our minds have organized the knowledge we have got from our past experiences. Nunan(2001) thinks schema theory suggests that our knowledge will strongly affect our ability to understand new information by providing a framework within which that new information might fit. The basic principle behind schema theory is that texts themselves, whether spoken or written, do not carry meaning. Rather they provide signposts, or clues to be utilized by listeners or readers in constructing the original meanings of speakers or writers. Reading comprehension is thus an interactive process between the reader and the text, in that the reader is required to fit the clues provided in the text to his or her own background knowledge.
3. Reasons for students’ failure in reading comprehension

Over the years, more importance has been attached to the linguistic schemata and less attention has been paid to the construction of the content schemata in the teaching of English in China. This, to some extent, has affected the development of the students’ reading ability, and many failures in comprehension are believed in part to be the result of the lack of previous knowledge on the part of the reader. For example, when we mention the Cultural Revolution in China, only those who are over forty can understand its implication because they have the relevant schemata or background knowledge of that special period. Therefore, content schemata are considered to be the foundation stone of cognition, on which all information is processed. A text provides only directions for readers as to how they should retrieve or construct meaning from their own previously acquired knowledge. In general, the greater the background knowledge a reader has of a text’s content area, the more likely he or she is to concentrate his or her mind on the content rather than the form of the language.

According to the content schemata, there are at least three possible reasons to account for the students’ failure in comprehending a passage. For one thing, students may not have the appropriate schemata the author anticipated. So, they simply cannot understand the concept being communicated. For another, students may find a consistent interpretation of the text, but may not find the one intended by the author. In this case, students will understand the text, but will misunderstand the author. Finally, students may have the appropriate schemata, but the author does not provide sufficient clues in the text for them to effectively utilize a bottom-up skill to activate the content schemata the reader may already possess.

In the course of reading, the reader obtains content schemata by means of linguistic schemata. When the reading is completed, it is the content schemata rather than the linguistic schemata that leave a memory trace in the reader’s mind. If we mention “the spirit of Lei Feng” to a foreigner, he or she can understand the literal meaning, but will have trouble understanding its implication for the simple reason that his or her linguistic schemata can not make up for his lack of the content schemata which exist in the Chinese context only.

4. Content schemata interact on reading

Psycholinguistic research into the comprehension of a text has demonstrated, among the other things, that the presence or absence of content schemata or background knowledge can dramatically affect the way the reader interprets a piece of discourse. Even the same text can lead to different interpretations on the part of the reader. Now let us consider the following sentence:
Look at that lady all in white walking at the head of the procession!

Probably this is a scene of a Chinese funeral, whereas for Westerners maybe it is a wedding ceremony, because the bride is usually dressed in white at the wedding ceremony in the West. In this case, readers from different cultures bring different systems of background knowledge to the comprehension process.

As is mentioned above that one reason for the students’ failure in reading comprehension is that students may not have the appropriate content schemata the author anticipated. They simply cannot understand the concept being communicated. A reading passage entitled Angels On A Pin (Unit Nine, Band Two, College English) is a case in point. In this passage the last sentence in particular causes much confusion among students. It reads as follows:

With this in mind, he decided to revive scholasticism as an academic lark to challenge the Sputnik-panicked classrooms of America.

What is Sputnik? Why are classrooms of America Sputnik-panicked? Without background knowledge, students can hardly understand the message conveyed even with the help of translation into Chinese. In fact, “Sputnik” was the name of a satellite launched by the former Soviet Union on October 4, 1957, an event which surprised the world as it was the first man-made satellite sent into the orbit around the earth. Soon afterwards, the Russians were making a series of progress in space technology by putting animals into space and completing the first manned space flight in 1961. What the Russians achieved in the field of space research really made Americans panic, who were then left behind especially in science and technology. In the U.S., President Kennedy responded by launching a program to put a man on the moon. This dream was not realized until 1969 when Neil Armstrong became the first man to set foot on the moon. With this explanation students were able to have a better understanding of the passage.

The two examples cited above suggest that the content schemata are specific in terms of both culture and topic area. Thus, we can see why the same message can be interpreted by readers in different ways. They also show that the reader-author communication can not be achieved effectively when the reader has no content schemata even if he has the linguistic schemata, and language difficulty is a necessary but not sufficient guide to the problems that readers might have with a text.

5. Construction of the content schemata

The content schemata can improve reading comprehension, and reading, in turn, can help readers build new and correct content schemata. This means a teacher of reading can do something to construct or activate the appropriate schemata which then assist in overall comprehension.
5.1. Word comprehension

The knowledge of English words is one of the basic factors for the mastery of the language, as every word has denotation and connotation. The denotation of a word is its actual meaning as defined in the dictionary, while connotation of a word is what suggests or implies in addition to its standard dictionary definition. Take the word “dog” in the following sentence for example.

…. if she (a bag lady) chooses your doorway as her place to sleep in the night, it is as morally hard to turn her away as it is a lost dog. (from Lady Hermits Who Are Down But Not Out, Unit Four, Band Three, College English).

To many Chinese students “a lost dog” is a derogatory phrase meaning a worthless or bad-tempered dog, but in the eyes of the author, a lost dog is the dog who was separated from its master and cannot find his way home. By comparing bag ladies to lost dogs, the author shows his understanding and deep sympathy for this peculiar homeless population in the hope of arousing the public care and attention to this group of people in New York. In order for students to have a full understanding of the message, the teacher must make students well aware of the different responses that different cultures have for the same word. In Western culture “dog” conjures up an image of a furry, domesticated family pet. People consider dogs as man’s friends and companions, hence the phrase “a lucky dog” in English. In the Chinese culture, however, the implied meaning of a dog is usually pejorative, as in gou zhang ren shi (be a bully under the protection of a powerful person). Ignorance of the cultural differences will lead to misunderstanding of the author. Just as Carrel (1988) points out: “After all, the problem of vocabulary development in a second language is not simply a matter of teaching new labels for familiar concepts; it may also involve teaching new concepts.”

5.2. Questioning

A type of top-down processing activity is asking questions. The purpose of this approach is to activate the students’ previously acquired knowledge on a given topic. Before reading Big Bucks The Easy Way (from Unit One, Band Four, College English), a story about two college students doing part-time jobs, the teacher may generate some questions as the following:

1). Do you depend on your parents financially?
   Or: Are you financially dependent on your parents?
2). Do you work part-time?
3). What kind of part-time jobs have you done?
4). Is it easy to earn money by working part-time?

As many students have the experience of working part-time, these questions not only serve as a prediction of the text, but also call into mind any experiences and associated knowledge that students already have about the topic of the text.
5.3. Pre-reading

Williams (1987) gives an interesting three-phase approach to reading, with particular attention to the pre-reading phase, the aim of which is also to activate the students’ previously acquired knowledge and enhance their motivation to read further. The approach begins by introducing the topic of the passage that students are going to read. Once the topic is presented, students are asked to work in groups and write a list in two columns. The first column lists things about the topic that they are sure of, and the second lists things that they are not sure of or don’t know of. It is suggested that each member of the group in turn volunteers a fact or question. Then the teacher asks a representative from each group to write one or two items on the board so that some interesting items, which other groups may not have thought of, can be included. When dealing with texts that provide factual information, this approach proves quite effective.

There are, of course, many other activities that can be used for the purpose of effective reading, such as topic-related vocabulary teaching, prediction, photographs, illustrations and so on, to name just a few. Besides, the introduction of some reading skills and knowledge of foreign cultures is also necessary. In a word, helping students build new schemata is not only the objective requirement of teaching reading, but also the students’ psychological needs for reading, because the comprehension of the total meaning of a text occurs only when the linguistic meaning is fitted into a social framework of organized information.

6. Conclusion

Based on the above analysis, we can come to the conclusion that a good reading involves at least three factors: the students’ grasp of the subject matter of the reading, their understanding of the cultural content implicitly or explicitly expressed, and their ability to cope with the unknown words and grammatical structures in the passage. Armed with the content schemata, however, we put more emphasis on the interaction of the three factors, and background knowledge in particular, which goes far beyond linguistic knowledge. Therefore, teachers of English must be particularly sensitive to reading problems that result from implicit cultural knowledge presupposed by a text. In a reading class relevant background knowledge and language should be discussed concurrently. Some pre-reading activities should be used to activate students’ existing background knowledge related to the text in question. Only by doing so, will our students have an opportunity to build new and culture-specific schemata that will be available to them outside the classroom.
References


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