

SCHEMATA ON THE TEACHING OF READING TO EFL STUDENTS

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ABSTRACT

Research on the theory of schema had a great impact on understanding reading comprehension in first and second language. Most research agrees that if the schemata are activated, students may have the greater chance to get a better understanding of written text. However, students might have sufficient schemata, yet unable to comprehend the text if such schemata are not appropriately activated. Teachers of reading have the responsible in activating students' schemata in order to help the students comprehend the reading text easier. This involves providing students with appropriate strategies and activities to facilitate their reading comprehension.

Key words: *reading, schemata*

INTRODUCTION

Most foreign language reading experts view reading as an interactive process. One important part of interactive process theory is "schemata," which are the reader's prior knowledge about the world and about the text. Background knowledge includes all experience that a reader bring to a text: life experiences, educational experiences, knowledge of how texts can be organized rhetorically, knowledge of how one's first language works, knowledge of how the second language works, and cultural background and knowledge, and many more (Anderson, 1999). When the reader reads new textual information that does not fit into his or her schemata, the reader misunderstands the new material, ignores the new material, or revises the schemata to match the facts within the passage (Barnett, 1988).

Research on the theory of schema had a great impact on understanding reading comprehension in first and second language. It made clear the case that understanding the role of schema in the reading process provides insights into why students may fail to comprehend text material. Most, if not all, research in this area seem to agree that when students are familiar with the topic of the text they are reading (i.e., possess content schema), aware of the discourse level and structural make-up of the genre of the text (i.e., possess formal schema), and skillful in the decoding features needed to recognize words and recognize how they fit together in a sentence (i.e., possess language schema), they are in a better position to comprehend their assigned reading (Al-Issa, 2006). However, students might have sufficient schemata, yet unable to comprehend the text if such schemata are not appropriately activated.

Weaver (no year) states that activation of prior knowledge is important to the reader because he or she can then make predictions about what is going on in a text. The reader makes predictions and actively seeks to confirm his or her schematic sense of what is taking place in a reading passage and if what was predicted is not confirmed, the reader can refine his schema thus making it even more elaborate. When a reader read a text, it activates a particular schema in the reader's mind; the reader makes logical predictions about the text based on his schematic knowledge; the reader tries to confirm his predictions; and, finally, the reader refines his schema of the event based on what the text actually provides.

Teachers of reading have the responsible in activating students' schemata in order to help the students comprehend the reading text easier. This paper will give a brief overview of some of the literature that deals with schema theory and will discuss the implication of the schemata in the teaching of reading for EFL students including strategies that teachers can use relating to the activation of schemata.

FORMAL AND CONTENT SCHEMATA

Two types of schemata most often talked about in reading research are formal schemata and content schemata (David & Norazit, 2004). *Formal schema* is the knowledge a reader has about the "rhetorical organizational structures of different types of texts (Carrell, 1987)." Formal schemata defines reader expectations about how pieces of textual information will relate to each other and in what order details will

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appear. Is it a particular text a persuasive essay? Or is it an informal letter from a friend? Letters, essays, poems, etc all have their own structural and semantic idiosyncrasy. When a reader recognizes that a piece of writing is a persuasive essay and not a descriptive essay, he or she is using formal schema. In accordance with Carrel, Hudson (2007) wrote that formal schemata relevant to the reader's background knowledge related to how syntax is used to structure text, cohesive relations, and the rhetorical organization of various text types. Of course, it is necessary for readers of English as a foreign language to have formal schemata when encountering different types of texts.

However, important as formal schemata may be to the EFL reader, empirical evidence in second language reading research suggests that "content schemata affects reading comprehension to a greater extent than formal schemata (Carrel, 1987)." *Content schema* is the background knowledge "a reader brings to a text." According to Hudson (2007), content schemata deal with the content area and cultural knowledge. Such content schemata help the reader to understand and recall more than do readers less familiar with text content (Carrell, Devine & Eskey, 1988 cited in Hudson 2007). Content schemata are all the pieces of information a reader has gained through a lifetime of direct and indirect experience.

Talking about content schemata means that cultural background is also discussed. Content schema refers to the familiarity of the subject matter of the text. It includes an understanding of the topic of the text and the cultural-specific elements needed to interpret it. The difference between first language culture and the second language culture may affect not only reading comprehension, but also what is considered important in reading passage (Hudson, 2007). The study by Steffensen, Joag-Dev, and Anderson (1979) cited by Hudson (2007) shows that readers read the text reflecting their own culture faster than the text about the other culture. They also recalled a larger amount of information from the familiar text than from the others, and made more culturally appropriate elaborations of the readers' native culture passage than the less familiar culture passage. It was clear from the study that cultural knowledge affected what was attended to as important in the reading passage.

Reading is easy when both content and form are familiar and that reading is the difficult when both are unfamiliar. When either form or content was unfamiliar, it was revealed that unfamiliar content schemata affected reading comprehension to a greater extent than formal schemata (Carrel, 1987). In other words, reading familiar content even in an unfamiliar rhetorical form is relatively easier than reading unfamiliar content in a familiar rhetorical form. However, rhetorical form played a significant role in the understanding of event sequences and temporal relations among events. Based on this result, Carrell suggests that in the ESL reading classroom, content is very important. Therefore, ESL reading teachers should be facilitators of the acquisition of appropriate cultural content knowledge to exemplify the schemata-embodying background knowledge which helps students comprehend, learn, and remember well. Carrell also suggests that ESL reading teachers should be aware of the rhetorical organization of texts in addition to teaching students how to identify and utilize top-level rhetorical organization of text for better comprehension and recall.

IMPLICATIONS FOR TEACHING READING TO EFL STUDENTS

EFL teachers can apply the knowledge from the schema theory research to classroom reading instruction. Strategies discussed below can be utilized by teachers to facilitate students reading comprehension ability.

Activation of Students' Schemata

There are several classroom activities which can be used to facilitate the activation of prior knowledge. First is **pre-reading activities**. "Pre-reading" activities introduce students to a particular text, elicit or provide appropriate background knowledge, and activate necessary schemata. Previewing a text with students should arouse their interest and help them approach the text in a more meaningful and purposeful manner as the discussion compels them to think about the situation or points raised in a text. Pre-reading discussion allows students to recall what they know about the topic and what other students may know. This activity can be very helpful since sometimes students may not realize that they have prior knowledge on a certain topic, but as they listen to other students share information, they become realize that they actually know something about the reading topic (Anderson, 1999).

The prereading phase helps students define selection criteria for the central theme of a story or the major argument of an essay (Barnett, 1988). Prereading activities include: discussing author or text type, brainstorming, reviewing familiar stories, considering illustrations and titles, skimming and scanning (for structure, main points, and future directions).

Another way to activate students' background knowledge is to use semantic mapping or brainstorming (Anderson, 1999). The readers are asked to generate words and concepts they associate with

the key word given by the teacher. Semantic mapping gives the opportunity to students to link ideas and concepts they already know to the new concepts that will be learned. Similar to Anderson, Weaver also suggests that the students can explore connections between details and the overall structure of a particular schema in class before students do any reading. The technique can be as simple as brainstorming on the blackboard. The teacher writes a keyword on the blackboard and then elicits associated words from the students. If all goes as planned, lines are drawn on the blackboard between words and a network of connections becomes apparent to the students as they participate in the brainstorming activity. While doing this, the teacher has a chance to gauge the students' level of schematic knowledge about the topic. After the blackboard is full of networked information, the teacher can draw the students' attention to the student-generated associations that are most relevant to the reading that will follow. This simple activity need not be limited to words. Photos and drawings can be used too. This procedure provides a visual representation of the important schematic associations needed to comprehend a story; it allows for cultural differences (if any) between the reader's mother culture and the reading passage's source culture to be identified and discussed before any reading is done.

Pre-reading is an excellent classroom activity, but it does not guaranty that reading will be successful. It may be that a particular text is simply too difficult for a group of students; the text may require schematic knowledge beyond the students' current understanding.

In activation students' schemata, Krashen (1993) suggests two ways different from what have been discussed above. The first, Free Voluntary Reading, is to have the students select and read texts that are of interest to them, with no need to worry about accountability. In other words, reading itself will help build the familiarity necessary to read more advanced books. His second suggestion is to have them read in their first language so as to build up the knowledge base necessary to understand the material in the second language. A student, for example, who has no familiarity with the subject of computers will have trouble understanding a book about computers in the target language (and may, through lack of familiarity with the subject matter, even have trouble understanding it in his/her first language). If, on the other hand, this same student has read a lot about computers in his/her first language, then, since the material would be familiar, the selection in the target language would be easier to understand.

Narrow Reading

Narrow reading is extensive reading in *one area* of the reader's choice. Krashen (2004) maintains that this technique will help students develop richer vocabularies and more elaborate schemata. Kweldju (2008) has done a research in narrow reading, where the subjects took Extensive Reading class were asked to read novels written by one writer only. The study shows that narrow reading helped them develop their reading skill, general knowledge, literary skills, vocabulary, speaking skill, and even writing skill. This means that students did not only develop their language proficiency but also broadened their experience with literature and a single writer's style, theme and philosophy. Students doing narrow reading are encouraged to read about content that is already familiar to them. Thus the EFL learner can develop fluency in English language reading without being burdened by a text full with unfamiliar content.

Instruction in Text Structure

Several researches at different level of instruction have proved that first language instruction in text structure can be effective in teaching discourse organization. Teaching text structure means that teachers of reading should increase the students' awareness to recognize that a text actually has a reasonably predictable structure. Using the knowledge of the text structure may have a positive effect on comprehension (Hudson, 2007). Singer and Donlan (1982) as cited by Hudson (2007) claims that applying the teaching text structure can help students in comprehend the reading text. The findings of the study done by Taylor and Beach (1984) suggests that developing hierarchical summaries may be more advantageous in preparation for reading unfamiliar reading materials (Hudson, 2007). In conclusion, it appears that there is evidence that EFL students can be taught to be aware of text structure, and use it, through direct instruction.

Recognizing And Implementing Effective Second Language Reading Strategies

According to Barnett (1988), when teachers of second language reading recognize that each reader brings to the reading process a unique set of past experiences, emotional and mental processes, level of cognitive development, and interest level in the topic, they also recognize that not all teaching strategies will be effective for all students. When isolating the most effective teaching strategies to use with a group of

students, the second language teacher must also consider those strategies that are not necessarily related to content schemata. Such strategies include the following:

- using titles and illustrations to understand a passage,
- skimming,
- scanning,
- summarizing,
- guessing word meanings,
- becoming aware of the reading process, and
- taking risks.

All of these strategies can be targeted for use with foreign language materials. Another step in effectively teaching students how to read materials written in a second language is helping the individual reader to identify effective reading strategies based on text variables. One important part of this step is alerting the readers to significant aspects of text variables that will affect second language reading. For example, pointing out the differences between a fairy tale and a newspaper article helps the reader to recognize the different text types and to prepare for the uncomplicated sentence structure, high-frequency vocabulary, and, in most cases, happy ending that typically characterize a fairy tale. On the other hand, the same reader would need to prepare very differently to read a newspaper article about the technicalities involved in negotiating a disarmament treaty. In this case, the vocabulary would be very specialized and the sentence structure is more complicated.

Selection of Texts

These are factors needed to consider in selecting a text (David and Norazit, 2004):

- ***Text Organization***

Texts which follow temporal order, of which narratives are a common example, are easier to read, so by selective use of writing genres such as autobiographies, ethnographic studies or oral histories, reading can be facilitated. As a genre, narratives are the most familiar and possibly the most engaging for readers, and life stories make for interesting reading. Further, Hudson (2007) claims that narratives are read more quickly because people acquire knowledge of story structure prior to other text structures. Because narratives are commonly encountered in any language, readers' formal schema for this genre should be adequately developed.

- ***The Effect of Structural Features on Interest***

Interest is important in reading but is difficult to assess beforehand. What the teacher finds interesting may not interest the student and vice versa. The interest level of a text can be partially assessed in terms of its structural features. He suggests that the number of personal words (e.g. pronouns and people's names) and personal sentences (spoken sentences, etc.) within a text contribute to its interest level (Flesch, cited in Burmeister, 1978).

- ***Readability***

It is generally assumed that the shorter the sentence, the simpler it is to decode. Similarly, word difficulty is usually determined by word length (in terms of number of syllables) and, again, shorter words are regarded as being simpler. A text can be subjected to a general analysis of vocabulary and sentence level variables that can give the teacher an idea of how difficult it will be to read. At the sentence level, most of the sentences are fairly simple in structure as would be expected in a text that is basically conversational in style. Clauses are joined by simple connectors such as "and" and "but" or connectors like "because" which indicate basic relations such as cause and effect.

- ***Physical Presentation of the Text***

The physical presentation of the text itself, such as the size of print and presence of illustrations, also affects how readers perceive the difficulty of what they are reading, or about to read. Not only does it serve to awaken interest in the content of the book, it also suggests that the book itself would not be too difficult to read. The rest of the text is not overly illustrated but the print is a comfortable size to read. There are clear sub-headings and, because a substantial part of the text consists of reported conversation, the book has more the appearance of a selection of short stories, which in a way it is, than an authentic non-simplified anthropological text.

- ***Motivation to Read***

A factor that plays a significant role in reading is motivation. All of the factors cited above can increase motivation to read. Still, it is well known that the best way to create motivation for reading is by the choice of an interesting and readable text. A potentially motivating and interesting text can

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give readers motivation to continue their efforts to overcome a lack of content schema for a particular text.

CONCLUSION

As discussed earlier, few studies have been conducted to show the importance of prior knowledge of the world on ESL/EFL learners' reading comprehension. These schema theory studies emphasized the fact that the ability to understand a text is based not only on the reader's linguistic knowledge, but also on general knowledge of the world and the extent to which that knowledge is activated during processing. Schema theory suggests that EFL teachers need to be aware of the content and embedded cultural cues in texts and the potential difficulty they cause to the EFL learner. While traditional approaches to teaching reading have focused almost primarily on the text, schema theory includes both the text and the reader's background knowledge.

Although it is proved by some researches that readers will find it easy to read more familiar reading material, it is sometimes helpful for students to be given reading material on unfamiliar topics, particularly if we want them to see reading in a foreign language as a purposeful and interesting activity which can enable them to gain knowledge of the world beyond their own experience (David & Norazit, 2004). However, teachers of reading are responsible in selecting appropriate texts for the students and as well as applying the right strategies in activating the readers' schemata. The reading teacher can make use of texts which are of fairly interesting and simple written genre as in oral discourse or autobiographies. In addition, the reading teacher can make use of other aspects of the text itself, such as text organization and presentation to help the readers decode the text. This involves providing readers with appropriate schemata by developing information during pre-reading activities and also attempting to activate what readers may already know about the more general aspects of the topic or other related topics. By recognizing the similarities and differences which exist between what the readers find in the text and what they already know, the teacher may facilitate the reading process.

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