The Application of Schema Theory in Reading Comprehension in High School

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ABSTRACT: *Reading is an important activity in human society. English reading ability has always been paid attention to in foreign language teaching in China. Reading Comprehension as an extremely important part in foreign language teaching, how to cultivate students the ability and skills of reading comprehension have always been a problem that the linguistic workers both at home and abroad have been thinking. In China, an empirical study of the English reading process started with Yu Luxia and Wang Chuming under the guidance of schema theory. This should be a major achievement in the study of schema theory and English reading teaching. Thus, this study demonstrates the positive role of reading teaching by analyzing the different roles played by the schema theory in the process of reading and comprehension which will play a profound role in reading teaching reform.*

KEYWORDS: *Schema, Schema theory, experience，reading comprehension*

1. Introduction

Since 1970s, many linguists and psychologists have tried to explain the mental process of second foreign language reading, forming the modern schema theory. The theory describes how the knowledge acquired in the brain is stored in the brain and how to form a complete information system in interconnections. The focus of learning is to recite words and grammar, but reading problems, much language knowledge itself is the readers' schema. Schema theory provides practical implications and principles for the teaching of reading, but research has been limited to more two aspects of theory, less experimental researches have been majority in the University, the middle school English Reading Teaching in the experiment has not been seen.

Reading is the most basic method of the modern human cognitive society. English reading ability has always been paid attention to in foreign language teaching in China. According to "English curriculum standard" experimental draft " different styles can be identified and middle school students can understand the sentence structure through the analysis of the difficult sentences and long sentences can understand the opinions and attitudes of different reading materials according to

the need of learning tasks from a variety of media access information processing and appreciate the simple English literary works except textbooks with the help of the teachers, the amount of extracurricular reading should reach more than million words." And the reading ability of high school students is evaluated from four aspects, that is, reading strategy, language knowledge, discourse competence and pragmatic competence. In fact, the target of reading in the reading teaching is the concrete embodiment of all kinds of schema knowledge that the students must have.

2. Methodology

2.1 The definition of schema theory

Modern schema theorists believe that the schema is by variables, using data structure to characterize the general concept of storage in memory, its basic activity is driven from the bottom up material-driven. British psychologist Bartlett believes that schema is a positive organizational of the previous reaction or experience, that is to say the schema is past reaction or experience and active combination of past experience, Widdowson believes that schema is the cognitive framework, it makes the information stored in the long-term memory of everything in good order and well arranged. Rumelhart interpreted schema as a set of interacting knowledge structures stored in long-term memory hierarchically, or "the building blocks of cognition".

2.2 Previous Study of Schema Theory at Home and Abroad

Schema theory is first put forward by a German psychologist. Its purpose is to refer to the product of transcendental imagination and the transcendental time stipulation. The modern schema theory is made by German psychologist Bartlett, based on Gestalt psychology and finally established by American artificial intelligence expert Lou Mo Hart. In 1932, Bartlett first proposed and applied schema theory to the theory of Gestalt psychology in his book memory. The reader's reading ability is determined by three schemata: language schema, content schema and rhetorical schema. In the process of reading, these three schemas in the reader's mind interact with the language, content and rhetoric of the reading material respectively, which results in the reader's understanding of reading materials.

In China, an empirical study of the English reading process started with Yu Luxia and Wang Chuming under the guidance of schema theory. This argument seems to confirm the findings of T. Hudson's study in 1982. However, Hudson's meaning is "As a factor of (impact) understanding process, schema is more important than language ability. "In English reading teaching and research, empirical studies or theoretical applications inspired by schema theory took place between 1995 and 1999. Since then, Xu Yongqian (2000), Zhang Yina (2001), Liu Dandan (2003), Xu Fei (2003) and Fu Jing (2004) have pointed out the shortcomings of this study. Actually, Chinese students mainly learn English through

reading. To a large extent, English reading teaching has been promoted so that it has a profound influence on English teaching. This should be a major achievement in the study of "schema theory and English reading teaching."

3. Function of schema theory

3.1 Optimization of language cognition

In high school English reading teaching, combined with schema theory, to enhance students' language recognition skills. Cognitive psychology thinks that students cognitive process of knowledge, which is also a process of information processing. In English learning, according to the pictorial theory, students can recognize the hierarchical structure of English reading teaching. They can also internalize the language through English reading illustrations and interpret English reading teaching activities.

3.2 Improving the students' reading comprehension skill

In order to keep students' active thinking, teachers must use schemata theory to carry out reading teaching process. And must be motivated by personal inquiries and use the illustrations to make difficult and complicated questions so that students at all levels can gain English language skills.To make students dare to explain their views in class, we cannot ask students to give up all active thinking and blindly believe in some theories. "In English reading teaching, schema theory guides readers to understand text information according to their knowledge, and readers can understand the content of English reading according to schema information. If students have the ability of schematic interpretation, we can better finish the English reading comprehension according to the schema that can input information

3.3 Improving the students' ability to excavate the content of the text

In senior high school English reading teaching, we think that the guiding ideology of English reading instruction is that we should regard English reading teaching as a comprehensive education for developing intelligence and penetrating ideas. The application of Schema Theory in English reading teaching can show the context of English reading articles, and also embody the hero's individuality on paper, improve students' cognition level of people, things and objects, and gradually develop students' good quality and sentiment. In senior high school English reading teaching, schema theory is applied in the process of English reading teaching, giving full play to the advantages of schema theory, strengthening the teaching of English reading for senior high school students, and improving teaching level。

3.4 Influence on the processing and understanding of the selection of information in the reading material

One reading material may include a lot of information, and the main points, and detailed. How to catch the focus depends on the schema in the reader's mind. In reading, the existing schema serves as a model for the ingestion and arrangement of information. Research shows that readers with rich schemata rely mostly on rhetorical schemata and discourse analysis when reading materials, and find the key content of the article quickly, and are most related to the existing content schemas. The existing schema plays the role of anticipation, supplement and inference in the interpretation of reading materials.

In the reading process, the reader is not completely passive acceptance of material stimulation, but according to the existing schema to actively construct material. The existing schema plays the role of anticipation, supplement and inference in the interpretation of reading materials.

Inference function: Information in the reading is sometimes directly stated, the information meaning is clear, easy to explain, sometimes implicitly, may obscure chaos, is not easy to make the reader ready to accept either course, sure. At this time, it is necessary to deduce and deduce and explain the information according to the appropriate language, content and rhetorical schema.

Expected effect: During the reading process, after the reading material presents a sentence or a passage, the information in the reading material will activate the relevant schema in the mind. So as to anticipate the underlying content of the material and do not need to be exposed to all aspects of the information In the ensuing reading, the information in the text is matched to the schema activated here, continually enabling the expected to be confirmed, rejected or refined , To predict the follow-up information.

Supplemental effect: Reading comprehension is the exchange of information between the reader and the author's work. The smooth progress of this communication depends on the common psychological schema between the author and the reader. First of all have a common symbol system, the language schema. At the same time, readers and authors must also have a certain degree of background knowledge, namely content schemas. If the author has a big difference between the content schema of the reader and the content schema actually possessed by the reader, the information needs to be supplemented by readers according to the existing content schema during the reading process.

4. The application of schema theory in the teaching of English reading comprehension in middle school

4. 1 The principle of promoting middle school students' reading comprehension teaching by schema theory

A poor reader is likely to be flawed in knowledge, because what one already knows is the primary decision-maker for what he can understand. Therefore, we must constantly enrich students' knowledge in normal reading teaching, not only to enable students to understand the knowledge in books, but also to make them understand the knowledge in real life.

In the process of reading teaching, just as we give a large amount of input to the main body of learning in the mother-tongue learning environment, we should broaden the horizons of students and increase the input of background knowledge so as to enrich the original schema in students' minds and establish new Schema. Therefore, in the process of reading teaching, first of all, we should build rich language schemas with vocabulary and complex sentence learning, and have abundant vocabularies and sentence patterns, which are the prerequisites for barrier-free reading, thus reducing the need for English sentences meaning of the random guess. General reading comprehension must have approximately 3,000 phrases, or in other words, 5000 words, because this vocabulary covers 90% -95% of the words in any language. Below this level, any reading strategy or technique is ineffective. Therefore, some scholars refer to 3000 words or 5000 words as a "threshold" and also a turning point in reading comprehension. In addition to vocabulary factors that affect reading comprehension, there are also complex sentence patterns. To understand difficulties in reading a foreign language is often due to the breakdown of sentences encountered trouble, unable to establish propositions. Therefore, it is necessary to summarize complex sentences in reading teaching. In short, attention should be paid to vocabulary, grammar and usage. Second, first of all, we should expand the reading of students to create a rich content schema. Content schema includes text information, context and cultural context and other aspects of knowledge. Students' knowledge of the humanities, history, geography, science and technology, sports, health, environment, life, customs and local customs and practices directly affect their level of reading comprehension. Finally, first and foremost, we should help students build and enrich their rhetorical schemata and discourse analysis theory. All articles are organized according to a certain mode of thinking. The content of the texts determines the type of texts to be constructed, while the type of texts restricts the reader's interpretation. Thus restricting a person's reading comprehension is not only the language and content of discourse material, as well as the structure of discourse material. If our teachers can help students to establish and enrich their rhetorical schemata and discourse analysis theory, and can guide students from the whole to the local, from the discourse to the statement, from the summary to the minor details, the full call skeleton schema and each corresponding to the next level of graphics, the use of language to build the full text of the semantic image, and then use the semantic image to understand paragraphs, sentences. So as to help students integrate the language schemas, content schemas and structural schemas organically and organically, not just to help them build rich language schemas, so as to really solve their difficulties in reading comprehension.

4.2 The specific application of schema theory in the teaching of English reading comprehension in middle school

In a sense, the reading process is a process of constantly selecting information, testing information and affirming or excluding information. According to the schema theory, teachers' reading teaching is divided into three stages.

Stage1. Pre-reading

Activating the point of view should be based on the content of the article and subject to different choices. Before reading, teachers deliberately carefully selected the key words, let students discuss, give play to their imagination, their ideas lead to the context of the article.

Stage2. While-reading

Guide students to understand the content of the article, develop reading skills. When reading teaching, teachers can guide students to establish the corresponding discourse schema, which helps students to clarify the context of the article as a whole, making it easy for students to remember, understand and reason, and can fully integrate the new knowledge of the text into the students' original Some schema knowledge and form their own new schema.

Stage3. Post-reading

At this stage, teachers should create a free, relaxed and lively atmosphere for discussion among students, allowing students to argue in order to fully mobilize the enthusiasm of students and to use new schemata to expand and export. In teaching, clever schema theory in junior high school English reading teaching in the use of schemata, we can achieve effective reading teaching effect. The mode is as follows:

(1) Introduce the background knowledge, activate the schema, and import the text.

(2)Audio-visual –import the overall input text information, build a text frame schema.

(3)Intensive reading - deepen the understanding of the meaning of the text, to build the semantic schema of the text.

(4)Extensive Reading - deepen understanding of the meaning of the text to further enrich the semantic schema.

(5) The use of schema, knowledge as a skill.

(6) After-school review, consolidate the schema.

a. Pre-reading prediction method

The pre-reading stage is the best stage to create and activate a background in the student's brain. It must be a good predictor, pre-reading predictive activities can help students elicit the appropriate background knowledge, activate the necessary schemata, and the activated schemas are more easily enhanced and supplemented by new knowledge so that students can learn more knowledge.

b. While-reading activation method

How to make use of the students 'own schema to explain and explain the speech information in the text properly is how to make the various variables in the schema concrete, which requires teachers to take various measures to the students' own minds Activate. A better understanding of the article can be achieved by using key words to fully activate existing schemas in the mind.

c. Post-reading consolidation method

The content of teaching materials is very rich, so we must consolidate and reconstruct the knowledge of each unit after the teaching of three aspects, including language, content and rhetorical schemata or text analysis to the students' original schema Here are some specific ways to elaborate.

Write abstracts or rewrite the text .Writing abstracts or rewriting the text not only allows students to re-think of their learned vocabulary, phrases and sentences, but also allows them to recall what they have learned and discourse structure has been the organizational model,.

After-class discussion is actually an effective way to classify and differentiate the language schema, content schema and rhetorical schema in the text so that we can achieve the internalization of the real knowledge. The content of the discussion can include many aspects, and the form of the discussion can also be varied.

5. Conclusion

5.1 Major Findings

Reading is a complex psychological activity. Reading ability is a high-level psychology that is influenced by many factors. Schema theory and the use of discourse analysis theoretical knowledge in reading comprehension are also influenced by emotional factors such as anxiety, interest, motivation, and learner personal factors such as cognitive style and personal reading habits. This research only makes some exploration from one aspect of teaching. There is no or not enough consideration for the expectant effect of teachers' personal experimenter, learner's personal factor, affective factor and natural growth and so on, and it needs to be comprehensively explored in the future.

According to modern language teaching theory, the primary condition for learning a language is to ensure that there is enough comprehensible input of language information. Therefore, listening and reading are the keys to learning English successfully. In the high school stage, due to the existing conditions, reading is the most important way that most students absorb English language materials and increase their knowledge of the language. However, this reading input is confined to the classroom. Therefore, standards are clearly defined to "in addition to teaching materials, extracurricular readings should be accumulated to reach more than 10,000 words." We can see that improving students' reading ability is the top priority of high school English teaching tasks, but to find effective ways and means to guide reading teaching, to change its over-current status quo is the top priority. The main

reason is that there is no relevant schema theory to guide practice and fail to guide students to analyze from multiple level, understanding and mastering the content of the article, cultivating their logical thinking and language practice ability, failing to build rich content and rhetorical schema knowledge and activating them in reading, thus failing to improve the reading comprehension ability better. Therefore, we must closely follow the English syllabus and English curriculum standards, using schema theory to guide school teaching of reading.

In a word, this article only makes a preliminary study on the problems encountered by high school students in reading comprehension teaching and their solutions.

5.2 Limitations of schema theory

Although current pre-reading activities are quite common, these activities have many limitations in the teaching process and in many cases these activities do not function as expected. Carrell discovers that context does not improve reading memory and does not even alter the reading of senior English readers, suggesting that their schema has not been activated (Carrell, 1988: 105-6). This process of reading has been described as "a psycholinguistic guessing game" (Goodman, 1983:74) in which highly efficient readers minimize their dependence on visual detail by using contextual knowledge to predict or examine these Differences from the original [4]. This "top-down" reading mode provides the English reading teacher with the wrong message that they think English reading teaching is to provide learners with "the correct background knowledge and encourage them to use the correct background knowledge in the decoding process take full advantage of this knowledge "(Eskey, 1988: 97). However, a lot of research now shows that "language is the main problem and obstacle in first language reading" (Cook, 1997: 86).

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