

# An Analysis of English Reading Comprehension From the Perspective of Psycholinguistics

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## ABSTRACT

The improvement of reading skills and the mastery of reading ability are the key and difficult points in the learning process of English learners. Reading is an important means to acquire knowledge and improve skills, and the process of completing reading comprehension is also a complex psychological process. The construction of mental schema structure in learners' reading process affects the quality of reading. In this paper, from the perspectives of psycholinguistics, and through the research to the learners' reading psychological schema in the process of constructing discusses how to cultivate learners' relatively independent complete the reading process, how to construct psychological schema to achieve the overall understanding of reading comprehension, learning methods, thereby improving English reading comprehension to improve learners' English reading comprehension.

**Keywords:** *Reading comprehension, psycholinguistics, schema theory, reading mode*

## 1. INTRODUCTION

Reading comprehension refers to the process in which learners obtain the desired information by reading an independent discourse, and make a correct and reasonable information output according to the problem after their own thinking processing. Since the 1960s, many foreign psycholinguists and cognitive linguists have carried out a series of studies on the nature, process and methods of reading. Studies have shown that the process of reading comprehension also involves the construction of mental schema. A complete reading process requires learners to complete the construction of cultural schemata, linguistic schemata, content schemata, formal schemata and many other schemata. This article first briefly from the schema theory analysis of English reading comprehension, and expounds the main schema structure influence English reading comprehension, common three reading models listed abroad, psychological linguistics is the actual combination of schema theory and English reading comprehension, trying to explore out a can give full play to the learners to construct schemata structure in the way of the positive role in the process of reading, to better promote the learners' English reading comprehension skills.

### 1.1. The Current Situation of Reading Difficulties for English Learners

Reading comprehension is an important way for English learners to acquire knowledge. Due to the limited time to complete reading comprehension, long discourse, large vocabulary and complex sentence structure, it is difficult

to understand, which is undoubtedly a huge challenge for learners who need to complete the whole process of reading independently within a limited time. Therefore, it is difficult to complete the reading task with high quality. Reading has even become a soft spot in the whole English learning for many English learners. But a lot of learners in time to seek solution to this problem, more is the result due to reading methods, reading experience, reading, vocabulary one of reasons, but often ignore the learners finish independently into the process of reading comprehension in the psychological schema structure building also directly impact the quality of reading comprehension.

For learners, when they met in the process of reading comprehension questions to others for help or reference answer when parsing, if the lack of independent thinking and objective analysis, it is easy to cause yourself lose independent extract yourself from discourse of key information needed for opportunities, also lost the information processing process, using their own thinking passively accept others describe or reference the answer psychological schema structure, it is greatly repudiated the learners' main body effect, ignored the learners themselves build psychological schemata in reading comprehension in reading process.

### 1.2. An Analysis of English Reading Comprehension from Schema Structure Theory

According to psycholinguistics, learners need to construct several different mental schema structures in the process of reading. Schema theory holds that knowledge is mainly stored in the human brain in the form of schema structure,

and when people need to extract such knowledge, they need to construct different schema structures according to the different knowledge content, so as to complete the application of stored knowledge. Reading comprehension is a process in which learners make reasonable responses to the information obtained through reading a text. There are many factors that affect the process of reading and the quality of reading, such as reading methods, reading environment, reading time, reading strategies and reading materials, but these are objectively external factors. [1] In the process of finishing English reading, learners' mental schema-building ability is the internal factor that affects reading, which can also be understood as the psychological state and psychological process of learners in the process of finishing reading. These are the key internal factors that directly affect the quality of reading.

As mentioned above, reading is a process in which learners make self-selection and extract information based on the text. The process of reading is not a simple process of input information, but a process in which learners construct different mental schemas, extract the knowledge stored in their own memory, combine the input content after reading the discourse, and then construct the mental schemas structure to obtain a new knowledge understanding. Generally speaking, there are three kinds of reading schema structure: content schema, formal schema and linguistic schema. Content schemas are learners' grasp of the subject of the article and the author's subjective feelings. The language schema refers to the grammatical structure, vocabulary and phonetic knowledge of the sentence. Formal schema refers to the background knowledge related to the genre of the article.

## **2. TWO MAIN SCHEMATIC STRUCTURES THAT AFFECT LEARNERS' READING COMPREHENSION**

Reading comprehension, in essence, is a complex psychological process. There are many factors that affect reading comprehension, but among them, vocabulary and practical application are the two most critical factors, namely the linguistic schema and content schema mentioned above. Vocabulary, is just like is the key that opens the door to read, if you get an article, both mother tongue and a foreign language, if we don't know the words in the article, in the face of the text, cannot be must indeed to build language schema structure, extracted out of vocabulary knowledge reserve, so as we don't even have the key to open the door, don't mention opened the door. [2] Without the accumulation of vocabulary and the general understanding of the text, the other part of our practical application would be out of the question. Practice is in the basic vocabulary knowledge, by building the language schemata structure, to the understanding of the article about after, we in the details and the overall grasp on the purport, can according to their reading experience and ability, combined with specific context, for some

complicated thin section of speculation, inferences, identify the article type, structure, summarized chapter the effect and the authors personal feelings. There is no doubt that vocabulary and practical ability are the two key factors affecting reading ability.

### **2.1. Linguistic Schema**

As the main symbol of language meaning, the understanding of text vocabulary is largely inseparable from the understanding of text vocabulary. [3] According to psycholinguistics, the brain's processing of information can be divided into controlled processes and automated processes. The controlled process is a process that requires detailed processing of the reading content through the working memory of the brain, while the automatic process is a relatively simple processing process, and the two can be transformed into each other. [4] Here we can take a simple example. "He presents the ceremony", if the learner only knows that the word 'present' means 'gift' or 'present', then the learner will not have thought that the word means 'He was present', because He or she does not know that the word 'present' also means 'present'. If learners are unable to quickly and accurately construct the corresponding lexical language schema structure and extract accurate reserve knowledge of words, they will not be able to complete the reading process smoothly.

### **2.2. Content Schema**

If a learner to master enough vocabulary, he can build the language schemata structure, the article knowledge such as vocabulary, grammar, to have a clear grasp of the basic can understand the meaning of each word, but in the concrete process of reading comprehension difficult articles for the assurance of the whole body, it is difficult to guess the author's intention and emotion, it is difficult to build accurate content schema structure, indeed it is fatal flaws. Good comprehensive experience, to a certain extent, can also overcome the vocabulary barrier. The most important aspect of practical application ability is that learners process the text by constructing the content graph structure. The so-called psychological schema is the learner's existing knowledge reserve structure of the article. If the learner's psychological schema can conform to the author's psychological schema, then the learner can better and more accurately grasp the author's emotion, clear the author's thinking, and have a better understanding of the article.

However, when we use the practical application ability and construct the content schema structure, there are also some defects, that is when the learner's psychological schemata and the author's psychological schemata is different, even opposite, still stubbornly again if learners to use their own comprehensive experience of text information processing and processing, and so are bound to lead to the opposite, because in the learner itself has failed to appreciate the

author's psychological schema, then according to the experience of the comprehensive, force through their own psychological schema to guess the author's psychological schema, is bound to lead to learners' schema structure chaos, thus affect the reading process.

### **3. THE ORGANIC UNITY OF THE THEORY OF READING COMPREHENSION SCHEMA IS CONSTRUCTED BASED ON THREE FOREIGN READING MODES**

Foreign psycholinguistic scholars have summed up three models of psycholinguistic study of reading: "bottom-up model", "top-down model" and "comprehensive application model". The three models have different emphases. Among them, the organic unity of the theory of constructing reading comprehension schema represented by the "comprehensive application model" has been paid more and more attention and recognized by learners.

#### **3.1. Bottom-Up Model**

"Bottom-up model" refers to the learners in the process of reading, from the vocabulary of the text, understanding words, analysis of sentences, analysis of paragraph, etc., opened the dictionary to check met don't know the word, through this model to complete the reading process, to a certain extent can enhance learners' mastery of detail is, on the basic of founding, but essentially ignore learners in reading itself has reserves of the impact of knowledge structure. [5] In other words, the traditional construction of language schema is emphasized, and the construction of content schema is light. But in fact, we all know that when we're judging something, we usually make a decision based on the structure of our existing knowledge base. Obviously, this is not a reasonable solution.

#### **3.2. Top-Down Model**

The "top-down model", also known as the "concept-driven model", is based on the content schema structure and formal schema structure constructed by learners. Learners receive text symbols from the reading materials through visual organs, process them by their own brain, and try to recover the original meaning of the author from the deep mechanism. In this way, we can avoid the total consideration of the text in the reading process, and can directly have a better grasp and understanding of the text on a macro level. However, this process overnegates the actual meaning of the "bottom-up model" and breaks away from the actual meaning of the text. It is also not advisable to simply analyze the sentences captured by learners through fast scanning and draw the conclusion that learners think they meet the intention of the collaborators.

#### **3.3. Interaction Model**

The "interaction model" is a combination of the above two, emphasizing that learners' schematic guessing and inference in the "top-down model" need to be verified by the "bottom-up model" in the construction process of reading schematic structure. In other words, the ability to read depends on the hypothesis and the test of actual words and symbols. A high quality to complete the process of reading, to learners according to their own existing knowledge reserve put forward reasonable assumptions, speed up the speed of reading to complete, but also need to learners with actual discourse, according to the hypothesis, to find the right words in the text symbols, to capture the information processing, further verify the himself before the validity of the assumptions and help learners' schema structure further conform to the author's figure type structure, also is the further accurate grasp of the text. This is a very desirable mode of reading.

#### **3.4. Practice Of Schema Theory in College Reading Courses**

By listing abroad, compare the psychological linguists to study and put forward three kinds of theory in reading comprehension reading model, we can see that the bottom-up model, which is to build the language schemata structure, can help learners to lay the basic skills such as grammar, vocabulary, sentence structure, but is too inefficient and lack of bold speculation and the overall grasp; Top-down model, that is, to build content schema and form schema structure, can help learners to give full play to their existing knowledge reserve structure, put forward bold guess and try to guess the author's schema structure, but easy to lead to learners' schema structure chaos, wrong of the author's original intention, and ignore the training of basic knowledge; Interaction model is a more scientific, argues that the effective combination of top-down and bottom-up model, pay attention to the language schemata structure, form structure and so on the many kinds of structure to build at the same time, the mutual authentication, schema structure, pay attention to the importance to build language learners knowledge reserves, grasps the article specific details at the same time, also can boldly put forward his own speculation, through detail hold to further verify the veracity of its guess, reading mode, is a kind of be satisfactory to both for the learners to enhance the level of English reading comprehension has a great role in promoting.

### **4. APPLYING OTHER THEORIES OF PSYCHOLINGUISTICS TO IMPROVE THE TEACHING EFFECTS OF COLLEGE READING**

Psycholinguistics attempts to solve the problems related to language acquisition and the development of language

competence from the perspectives of perception, motivation, memory and intelligence. These theories should be used in reading teaching to improve the effect of reading teaching.

#### ***4.1. To Stimulate Students' Positive Emotions in Reading***

Strengthen the internal motivation of reading. Psycholinguists believe that in the process of language acquisition, students who learn with positive emotions learn more easily and quickly than students who lack enthusiasm and interest. Thus it can be seen that positive emotion and interest will effectively promote the process of reading. Goodman believed that reading was a positive psychological process and proposed a "top-down" model. He believes that the process of reading is a process of experience, prediction, confirmation and correction. The enlightenment from his viewpoint is that readers should selectively accept the information in the reading chapters, and in the process of reading, they should give play to their subjective initiative and take the initiative to predict the general idea of the articles, while teachers should stimulate students' interest in reading and guide students to carry out reading activities in a happy emotion.

#### ***4.2. To Be Clear about Reading Purpose and Enhance Reading Motivation***

In the traditional teaching mode of reading, due to the lack of the purpose of reading, the teacher is the leader of reading, and the teacher replaces the questions and information that should belong to the students to actively seek, actively think and try to answer. [6] If students are deprived of the opportunity to personally understand, analyze and judge, infer and compare, evaluate and summarize, it is difficult for them to develop efficient reading ability as soon as possible. Therefore, the purpose of reading plays a vital role in the process of reading. Without the purpose of reading, it is impossible to establish reading strategies and reading skills. Krash's "affective filtering parole" theory holds that emotion is a language filter, and learners' motivation will filter out part of the external language input. Reduce the quality of language learning. Therefore, students' reading motivation and reading efficiency have a positive relationship.

#### ***4.3. To Expand Vocabulary and Consolidate Language Foundation***

The Psychologist Treisman argued that the human brain exists in a multi-item vocabulary system in a huge network, the shorter the distance between the words in the network, the closer the relationship between the words will be, and the faster the activation. The experimental results show that word frequency effect and context effect are important

factors in word recognition. Words with high frequency are easier to be extracted. For readers, changing low-frequency words into high-frequency words can be realized by increasing the frequency of word repetition. The context effect refers to the context in reading comprehension. Combined with the above factors, the following aspects should be achieved in reading: ① break the method of learning vocabulary in isolation. In actual reading, we can memorize words according to the relationships among words, such as synonymy, antisense, hyponymy, etc. In addition should master certain word formation. For example, by adding derivative words formed by common affixes, readers can more easily grasp the meaning of derivative words while mastering the meaning of common affixes, so that they can guess the meaning of new words more accurately in reading according to their existing vocabulary and context. ② Increase the number of words to improve vocabulary. Reading a large number of materials related to the content of the text as much as possible to enhance the interest of reading and increase the frequency of new words, so as to eliminate the boredom in the traditional reading class, improve the interest in reading, so that readers can learn and remember the knowledge and vocabulary they should master.

#### ***4.4. To Pay Attention to the Transmission of Background Knowledge and Construct Schema Framework***

Rumelhart believed that understanding is the process of selecting schemas and variable constraints that can explain the input information. [7] The process of reading is completed as new information is gradually matched with the schema. Therefore, the more the reader knows about the background of the text, the more schemas he/she will have in mind. When the language ability of the readers is relatively weak, they can use the background knowledge to better solve the vocabulary and syntax problems. Conceptual schemata are divided into formal schemata and content schemata. Formal schema mainly refers to the readers' cognition of the whole textual framework structure, and the pattern of textual structure is different for different types of articles. If readers can grasp the overall framework from the text pattern, even if they do not read the whole article sentence by sentence, they can understand the author's writing thoughts, so as to understand the connotation and significance of the article. The content schema includes the relevant cultural background, political and historical conditions, local customs, etc. Language and culture are inseparable. When the reader and the author have the same or similar content schema, the obstacles brought by the text can often be easily overcome. Moreover, as the reader gets deeper understanding of the content schema, his/her understanding of the article will also be deepened. Therefore, teachers should pay attention to expand the selection of materials in reading and teaching. The

selection of articles covering politics, science and technology, culture, entertainment and other different themes can expand the reading range of students and enrich the content schema of students.

## 5. CONCLUSION

To sum up, psycholinguistics has a close relationship with English reading, and its development provides a new theoretical basis and thinking for English reading. As a complex psychological process, the improvement of reading comprehension involves many factors. From the Angle of psycholinguistics, this paper briefly explains the psychological process of reading, points out the main obstacle in the process of English learners in reading. It is more important to probe into the new mode of English reading from the perspective of psycholinguistics, put forward some methods to improve English learners' reading ability, and improve the traditional reading pattern. Psycholinguistics plays an important role in English reading comprehension. No matter the traditional methods of English reading comprehension neglect to let learners construct the reading schema structure; and from the perspective of psycholinguistics, the two schema structures that most influence reading are vocabulary and comprehensive experience. [8] Or the three models proposed by foreign psycholinguists for English reading, research are sufficient proof of the guiding role of psycholinguistics in reading comprehension practice. Of course, in order to solve the problems of Chinese English reading comprehension learners, further research on the combination of theory and practice is still needed. And further research on the organic unity of the construction of various schema structures is needed, so as to better guide reading comprehension and enable learners to better complete the reading process.

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