

# *The Application of Schema Theory in English Reading*

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**Abstract:** English reading has always been an important part of English learning. However, many non-English major Chinese students do not pay attention to the cultivation of reading ability, but only passively learn with the goal of exams. At the same time, due to cultural differences, many difficulties arise in the process of English reading teaching. The development of schema theory provides language researchers with a good idea for studying reading behavior, and it also provides guidance for the teaching process of English reading for Chinese university students. Therefore, this paper uses a literature analysis method to study how schema theory works in English reading in different teaching methods, hoping to provide more teaching ideas for teachers. The study shows that currently, mind mapping and information technology teaching can effectively improve college students' English reading ability. In the teaching process, students use mind mapping to grasp different formal schemas and conduct top-down reading based on the mind maps they draw. At the same time, new media teaching and mobile learning also expand students' content schemas, promoting systematic learning of language knowledge for students.

**Keywords:** Schema Theory, English Reading, Teaching Methods

## 1. Introduction

The English reading ability of college students is not only an important literacy for them, but also a necessary skill. Good reading ability can help them quickly clarify the ideas of English literature, quickly grasp the main points of an article, and facilitate the smooth progress of research in their professional fields. Therefore, the quality and speed of reading are crucial [1]. Research on Schema Theory and English reading is already very extensive. Studies have shown that using Schema Theory in foreign language reading teaching can greatly improve students' level of understanding and reading speed of articles. In these studies, teachers have used many tools to assist teaching, and using different teaching methods can make students' content schemas richer and formal schemas clearer. Therefore, this article uses a literature analysis method, hoping to summarize the teaching strategies for college students' English reading guided by Schema Theory. Through research, the author hopes to enrich the diversity of teaching methods for teachers, enhance Chinese students' English reading comprehension ability, and explore the possibilities of Schema Theory in language teaching [2].

## 2. Schema Theory

### 2.1. Development of Schema Theory

In 1781, schema was first proposed as a philosophical concept by Kant. He believed that schema is a tool that connects intuition and concepts and is a way of constructing subject-object relationships [3]. Subsequently, the concept of schema developed in the field of cognitive psychology. Piaget proposed that 'schema' refers to the structure or organization of actions, which, due to repetition in similar environments, lead to transfer or generalization. In 1932, the renowned American psychologist F.C. Bartlett first proposed schema theory, suggesting that cognitive understanding of new things requires a connection with existing background knowledge or schema. With continuous learning and accumulation of knowledge, the schemas in the learner's mind expand and evolve. American AI expert D.E. Rumelhart further developed and refined schema theory, demonstrating that information itself is meaningless unless it aligns with the reader's existing schemas to create meaning. Information processing involves finding schemas that can explain all new input. When faced with new information, without activating corresponding schemas, understanding of new things is not possible. He also emphasized that schemas can be changed, as past experiences are constantly summarized and schemas are adapted, modified, and reconstructed [4].

Once created, schema theory has been valued by linguists. In foreign language learning and reading, the schema is the data structure that expresses universal concepts. In reading, readers actively use their mental schemas to process the information obtained. However, when the mental schema cannot interact with the information obtained, readers may misunderstand the information in the text, leading to reading difficulties [5].

Through the above literature review, it can be seen that schema plays an important role in English reading. It serves as a bridge connecting existing experiences and the information provided in the text. By continuously enriching and revising the schemas in the reader's mind, the reader's reading level will improve. The lack of schema is also a cause of reading difficulties.

### 2.2. Classification of Schemas

From the perspective of linguistics, schemas can be divided into three categories, namely content schema, language schema, and form schema. Language schema is the basis for readers to understand the text, including knowledge of vocabulary, grammar, syntax, etc. Form schema is related to the genre and structure of the text, for example, different types of texts such as politics, technology, drama, etc., have unique structures. Narrative and argumentative texts also have different structures. Content schema refers to background knowledge related to the text, the richer the reader's content schema, the greater the chance of correctly understanding the text. Rich background knowledge can also compensate for the lack of language schema and deepen the understanding of the text [6]. Similarly, existing schemas that do not match the text can also lead to obstacles in reading comprehension.

## 3. The Current Situation of English Reading Learning Among Chinese Students

The current situation of English reading learning among contemporary Chinese university students is not optimistic. Many problems still need to be solved. To explore the role of schema theory in English reading, it is necessary to understand the learning status of English reading among contemporary Chinese university students.

### 3.1. Passive Learning

Most non-English major students set CET-4 and CET-6 as their English learning goals, without much emphasis on their own English reading ability. In terms of material selection, the articles appearing in the CET-4 and CET-6 exams are more accepted by students, and university students spend less time on English reading. This passive learning attitude usually leads to students not being able to truly improve their reading ability and inadvertently makes exam content the focus of teaching.

Classroom teaching for non-English majors mostly follows a traditional teaching model, where the typical procedure in university English classes is: explaining key difficult words, analyzing complex sentence structures, dissecting article structures, practicing key points. Teachers rarely teach theoretical knowledge and reading skills for English reading in class, leading to students lacking a comprehensive understanding of the text [7]. The traditional teaching model provides students with fewer opportunities and challenges, with teachers taking the lead in class, explaining articles in a translated form, and presenting a top-down reading approach. Students lose the opportunity to integrate their own schemata with the material, making it difficult for them to independently understand the text and exercise their reading abilities [8].

### 3.2. Cultural Background Differences

Research also shows that the reason why college students whose second language is English cannot understand English articles is due to cultural background differences. Pang Li's survey at Sichuan University of Arts and Science shows that among 200 students in the science and liberal arts departments, 92.5% of students believe that cultural background knowledge can enhance the understanding of articles; 91.6% of students believe that interest has a significant impact on reading. It can be seen that cultural differences have become the main factor affecting reading for the purpose of information acquisition [9]. Lu Shan and others conducted surveys on students from different regions and classified them into different English proficiency levels based on uniform test scores. The research found that for students with higher proficiency levels, background knowledge ranks second among the factors affecting their reading. This also indicates that in the case of basic similarities in language and form schemata, different content schemata will bring about different information processing structures, which may lead to obstacles in Chinese students' English reading [1].

## 4. Teaching Methods

### 4.1. Mind Mapping

Mind mapping presents concepts or article structures in a network diagram, which can help students quickly match the formal schema they have learned with the articles, and more effectively predict the content of each paragraph. Ning Jianhua and others proposed the use of mind mapping in reading class teaching design based on practice, combined with the second unit "My First Job" from the third edition of "Intensive Reading of College English". In this design, the main body of the class shifts from the teacher to the students. The teacher encourages students to draw the framework of the article themselves and read from top to bottom based on the mind map already drawn, through the teaching process of "problem-driven → find relevant answers → build article framework → summarize the main idea of the text", to improve the overall understanding of the article. In the summarizing part of the text, the author requires students to use the main themes and keywords of the mind map for summarization, and different expressions of words and sentences reflect different students' thinking processes. This process deepens the interaction between students' existing schema and article materials [10].

In Wang Yujiao et al.'s research design, mind mapping is involved in different aspects of the curriculum, affecting both the teaching and learning processes. Different mind maps are used to regulate teachers' teaching progress and change students' learning styles. Researchers used surveys to study students' subjective feelings, with 54.69% of students believing that mind mapping helped improve their reading and analysis skills, 78.13% of students believing that it made the knowledge structure of articles clearer, and 67.19% of students believing that it facilitated students in organizing the content of articles. At the same time, the research also found that many students believe that making mind maps takes up time. Researchers believe that this is an issue that needs to be improved in this teaching method [11].

## 4.2. Information Technology Teaching

Due to the expansion of content patterns in reading, it is necessary to enrich students' background knowledge. Many researchers have focused on the role of information technology in teaching. Zhou Libo conducted a feasibility study on cultivating college students' reading ability through mobile learning. He believes that suitable platforms, mobile reading repositories, high-quality courses, and WeChat group chats for feedback can all be used as mobile teaching resources in English reading teaching. Online learning can greatly contribute to English reading teaching [12].

In Huang Yue's empirical study, she explores the effect of schema theory on non-English speaking students' English reading interest and achievement under the perspective of new media teaching. In her research design, the experimental class used new media teaching strategies in different teaching environments, activating students' existing schemas with images and sounds, and expanding and modifying students' content schemas with the Internet. The study showed that teaching with new media can stimulate students' interest in reading [13].

## 5. Conclusion

This paper has studied the development and classification of schema theory, clarified the current situation of Chinese college students' English learning as well as the problems of teaching, summarized the application of different teaching methods in schema theory, and found that both the mind mapping method and the new media teaching have a lot of advantages and application values. Due to the limitation of time and space, the author has not carried out an empirical study to compare the advantages and disadvantages of different teaching methods, and the research method still needs to be improved. As the research on schema theory becomes more and more perfect, the author believes that it is possible to combine the schema theory teaching method with modern technological means to develop a more suitable procedure for reading training for college students.

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