

English Reading Teaching in Junior Middle School based on Schema Theory

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Abstract

English reading teaching has always been a key link in English teaching, which is not only related to the accumulation of students' language knowledge, but also related to the cultivation of students' reading ability. Schema theory, as an effective cognitive psychology theory, provides a new perspective and method for junior high school English reading teaching. This paper starts from three types of schemata, namely language schemata, content schemata and formal schemata, and uses middle school textbooks to illustrate the importance and practical significance of schema theory in middle school English classes, aiming to provide reference for middle school English teachers. Only by activating and expanding the readers' existing schema consciously, can the readers think actively in the process of reading, and then improve their comprehension abilities and reading effects.

Keywords

Schema Theory; Junior High School English; English Teaching.

1. Introduction

Reading is an indispensable part of language learning, and the position of reading teaching in English classroom is self-evident. Modern schema theory holds that when language learners understand new things, they match and integrate the new things with the existing knowledge structure, thus forming a new cognitive structure, which also constitutes the process of reading comprehension. The English Curriculum Standards for Compulsory Education (2022 Edition) (the Curriculum Standards) emphasize that in the process of reading teaching, teachers should pay attention to stimulating students' interest in participating in activities, mobilizing their existing experience based on the topic, helping them to construct and improve new knowledge structures, and deepening their understanding and knowledge of the topic of discourse (Ministry of Education 2022). However, at present, many teachers only explain vocabulary, grammar and other fragments of language knowledge in isolation, while ignoring the role of schemata in promoting students' reading comprehension. In the English teaching classroom, the application of schema theory to junior middle school English classroom is conducive to solving the problems encountered in reading teaching, such as students' low enthusiasm to participate in class, reading is divorced from real life, slow reading speed, and weak reading comprehension ability. Therefore, it is of great significance to explore the effective application of schema theory in junior middle school English classroom. This paper starts from three types of schemata, namely language schema, content schema and formal schema, and uses middle school textbooks to illustrate the importance and practical significance of schema theory in middle school English classes, aiming to provide certain reference for middle school English teachers, so as to improve the students' reading interest and reading ability, and thus improve the English reading effect.

2. Overview of Schema Theory

Schema theory, as a psychological theory, is mainly based on the representation and storage of knowledge organized around a certain topic. It describes how an individual stores their knowledge and experience in a structured form in the brain for activation and application in subsequent cognitive activities. According to the application of schema theory in reading comprehension, readers' reading ability is mainly determined by three kinds of schemata: linguistic schema, content schema and formal schema.

2.1. Language Schema

Language schema refers to the reader's previous knowledge of language, that is, the knowledge of pronunciation, vocabulary and grammar. It is the basis of reading comprehension and plays a vital role in grasping the connotation, content and overall context of an article. A solid knowledge of grammar is the prerequisite for reading. Only by mastering basic language knowledge can readers extract text information according to words and sentences in text materials. Only by establishing a solid language schema, students can quickly and accurately obtain text information and understand the text content in the process of reading, so as to achieve the best reading effect. Therefore, both teachers and students should attach importance to the construction and activation of language schema to lay a solid foundation for reading comprehension. In English teaching, teachers can use language schema to help students construct and activate phonological schema to improve vocabulary learning efficiency and comprehensive English ability. For example, teachers can use phonics rules to help students remember the pronunciation of words, and schema to explain the relationship between polysemous words and words, so as to deepen students' understanding and memory of words.

2.2. Content Schema

Content schema, in short, is the background knowledge of the article. Understanding the background knowledge of the article plays an irreplaceable role in promoting the reading of the full text. When facing a difficult passage, the understanding of the background knowledge such as the topic, field and event involved in the passage often directly affects the reading effect. The importance of content schema is not only to help understand the text, but also to stimulate the reader's interest in reading. This means that when teachers teach students to learn a new text for a new unit, they should first use titles, pictures or videos to trigger students' existing schemata to help them understand the text. When students find that they have some understanding of the topic covered by the text, they are often more willing to invest time and energy in reading and exploring more information. Content schema provides a shortcut to understanding and a psychological framework for absorbing text information. In the process of reading information, students have an expectation of the development process, links, language materials and the content involved, which makes the content in the text and the knowledge schema in students' mind more easily integrated into a new and more specific schema, thus improving the efficiency of reading comprehension.

2.3. Formal Schema

Formal schema refers to readers' understanding and cognition of article genre, logical order of content organization and text structure. It helps readers to better understand and grasp the overall framework and context of the article, improve reading efficiency and comprehension. Formal schema requires readers to be able to identify different types of texts, such as argumentative, narrative, expository, news, prose, poetry, etc. Each genre has its own unique structure and expression, and identifying genres helps readers adapt and understand the text more quickly. In addition, the formal schema focuses on the logical order of the content of the article, such as time order, spatial order, causal order, etc. Knowing the logical order of the text

helps the reader to better understand the relationships and connections between the various parts of the text. The formal schema also involves the framework layout of the article, that is, the overall structure and organization of the article. This includes the beginning, middle and end of the article, as well as the internal connection and cohesion of each part. Mastering the framework layout helps the reader to grasp the content and intent of the article as a whole. By understanding and mastering the formal schema, readers can better understand and grasp the overall framework and context of the article, and improve reading efficiency and comprehension ability.

Schema theory provides a powerful theoretical support for our understanding of English reading. In English reading, content schema, formal schema and language schema interact and influence each other to promote readers' comprehension and absorption of text. Therefore, in English reading teaching, teachers should pay attention to cultivating students' schema awareness and help students establish and develop their own schema network, so as to improve their reading ability and reading efficiency.

3. Schema theory and English Reading: an Interactive Cognitive Process

English reading is not only a process of decoding text symbols, but also a complex interaction between readers and texts. The graph theory provides a powerful theoretical framework for us to understand this interaction.

In English reading, schema theory, as a cognitive structure, plays a vital role in influencing readers' comprehension and absorption of texts. Schema can provide a psychological framework for readers to absorb text information, help readers to use the existing cognitive structure to realize the derivational play of text information, and realize the derivational reconstruction of text content. Reading comprehension is not a simple, passive process of deciphering, identification or decoding, but a complex cognitive ability and cognitive process. It is necessary to build a cognitive interactive relationship between reading texts and readers. In this process, unknown or new knowledge needs to be associated with the reader's existing cognitive structure and knowledge structure, and then activate the reader's existing schema (language schema, content schema, formal schema), and finally realize the decoding of knowledge and the output of information.

Firstly, schema theory holds that readers' reading ability is determined by three kinds of schemata: linguistic schema, content schema and formal schema. Language schema refers to the reader's language ability, including vocabulary, grammar and syntax, which are the basis for interpreting the surface structure of text. Content patterns, on the other hand, contain the reader's background knowledge about the topic discussed in the text. Formal schema concerns the reader's familiarity with the rhetoric and organizational structure of different types of texts, such as narrative, discourse, and argument.

Schema theory holds that there are both bottom-up and top-down information processing in English reading. In bottom-up processing, readers start with the most basic linguistic units (such as words, phrases) and gradually build up higher-level structures (such as sentences, paragraphs). This approach relies heavily on linguistic schemata. Instead, top-down processing involves readers using their prior knowledge and expectations (content and formal patterns) to predict and interpret the text. By combining these two processes, the reader can construct meaning from the text more effectively and accurately.

In addition, schema theory emphasizes the activation and reconstruction of schema in reading process. When readers encounter new information, they activate relevant schemata in their long-term memory. These schemata provide a framework for interpreting the text, directing the reader's attention and facilitating comprehension. If new information does not match existing patterns, readers may need to modify or refactor their patterns to accommodate the

new information. This process of schema reconstruction is essential to enhance readers' understanding and deepen their knowledge.

In addition, schema theory is of great significance to English reading teaching. Teachers can use schema-based strategies to help students develop and refine their linguistic, content, and formal schemata. For example, teachers can encourage students to activate their prior knowledge before reading an article, using techniques such as brainstorming or previewing the title and title of the article. In addition, teachers can provide clear guidance on how to identify and use linguistic features, such as contextual cues and word families, to construct linguistic schema. Finally, teachers can guide students to analyze the structure and organization of the discourse and form their formal schema.

To sum up, schema theory provides a comprehensive framework for understanding the complex cognitive processes in English reading. By incorporating schema-based strategies into reading instruction, teachers can help students develop the linguistic, content, and formal schemata necessary for successful comprehension, ultimately fostering a deeper and more nuanced understanding of texts.

4. English Reading Teaching Analysis in Junior Middle School Based on Schema Theory

Based on schema theory, English reading starts from the content schema, usually triggered by titles, pictures, videos, etc., and then predicts and infers the passage according to the schema theory, and understands it during reading. Next, the paper will take The People's Education Press Compulsory English for Junior Middle School II as an example to illustrate the role of various schemata in reading comprehension.

4.1. Language Schema: Decoding Words and Overcoming Language Barriers

According to the textbook of The People's Education Press Compulsory English for Junior Middle School II, each unit contains a certain number of new vocabularies. By learning these words, students are able to continuously expand their vocabulary schema, laying the foundation for understanding more complex texts. For example, in learning Unit 1 "What's the matter?" First, teachers can provide a list of unit words and phrases containing core vocabulary and common phrases. Students will learn vocabulary related to physical health, such as "sore" (疼痛的), "stomachache" (胃痛), "headache" (头疼), "have a fever" (发烧), "lie down" (躺下) and so on. This can help students quickly know which key words and phrases are, to help them know and remember the words in the unit. In addition, teachers can also use flashcards, that is, write the words on one page of the cards, and put the definitions, examples or related pictures on the other side. Students can read more cards during class time or in their spare time to deepen their memory. In addition, there are many words about body parts in the first unit. Teachers can show students English sentences about body parts before class, so that students can find words related to body parts and transition to new words about physical health. Using this way to mobilize students' existing schemata before class can also stimulate students' interest in learning.

In the textbook The People's Education Press Compulsory English for Junior Middle School II, students will continue to study various grammar rules in depth, such as tense, voice, and clause. For example, students need to master the use of the simple past tense when talking about past events. In describing that an action is taking place, students need to understand the structure of the present continuous tense. When students learn the present continuous tense, they can be taught to look at some marker words to judge the tense of a sentence. For example, "now", "at the moment", "listen! ..." The appearance of these words means that the sentence is in the present continuous tense. After teaching the grammar rules, the teacher can assign exercises to

the students, for example “Look! The workers____ (dig) a well on the ground.” Through the example sentences and exercises in the textbook, students can gradually master these grammar rules and apply them in practical contexts. Language schemata help students understand and internalize grammar rules so that they can consciously apply these rules to construct sentences and paragraphs when reading and writing. At the same time, the study of grammar rules also provides students with important tools to analyze the structure of language and understand the meaning of language.

4.2. Content Schema: Understand the Background and Construct the Text Context

The most important thing of content schema is to help students understand the background knowledge. Only when the relevant reading background knowledge is established, can the whole text be familiar from top to bottom. The background of the article is also the text situation, for example, in the textbook The People's Education Press Compulsory English for Junior Middle School II, Unit4 "Why don't you talk to your parents? In middle school, students learning this unit will have a lot of feelings. Nowadays, students will encounter various emotional problems in the process of growing up, such as academic pressure, interpersonal relationships and so on. They crave understanding and support from their parents, but when these needs are not met, students may feel disappointed and frustrated, which in turn reduces communication with their parents. Therefore, when students learn the text of this unit, such as "a letter to a magazine and the reply from Robert Hunt, a school counselor", students can easily find resonance. After resonating, students are more willing to understand the topic context of this unit, so as to establish a cognitive framework in their mind, which is conducive to their learning of the content of the text. First of all, teachers can guide students to observe the title, subtitle, pictures and other information of the text, so that students can have an overall concept of the meaning and structure of the theme of the article. Secondly, teachers should guide students to grasp the logical relationship between paragraphs and sentences. By analyzing this logical relationship, students can form a schema for understanding the article, and improve their thinking and analyzing ability. In addition, you can pick out a specific part of the passage and ask students what they understand about this sentence. For example, in Unit4 "Maybe you should learn to relax!" Teachers can ask questions like, "Does Cathy Taylor think it's important for kids to join after-school activities? When the brain is asked to answer questions, it will process the information more actively, mobilize the existing schema in their brain, students can think more deeply and understand the information in the text, and form a new schema to help students understand the article.

4.3. Formal Schema: Analyze the Structure and Grasp the Text Logic

In the process of deconstructing formal schema, formal schema is related to the genre of the article, and different types of texts have different formal schema. The richness of preexisting schemata in students' minds will affect students' understanding of the text. The richer the schemata in students' minds, the stronger their comprehension of the text will be. Teachers can expose students to different texts to enrich the formal schemata in their minds. For example, In the textbook The People's Education Press Compulsory English for Junior Middle School I, the text Jane's diary entries about her vacation are a diary with a unique formal schema, which is different from the narrative essays that students usually understand. By leading students to analyze the format of the article, the function of each paragraph and the logical relationship between the language inside the paragraph, the teacher focuses on helping students internalize the new formal schema. First of all, the teacher guides the students to browse the title, date and beginning of the diary, predict the subject and content that the diary may involve, and stimulate the students' formal schema for the diary. Secondly, the teacher asked questions according to the content of the article and sorted out the structure of the article, as shown in Table 1:

Table 1. The teacher asked questions according to the content of the article and sorted out the structure of the article

Things Jane did or saw	Did she like it? (Yes/No)	Why or why not?
Tried paragliding		
		They were delicious
Walked around Georgetown		
Went to Penang Hill		
		It tasted great because she was hungry.

Students fill in the form to sort out the information of the article to conceive how to grasp the key points of the diary questions, to help students form a more vivid schema. To sum up, formal schemata play a vital role in reading comprehension. It not only helps students better understand and grasp the overall framework and context of the article, but also significantly improves the reading efficiency and comprehension ability.

5. Conclusion

The research shows that the application of schema theory to junior middle school English reading teaching can not only solve the problems of students' low participation, reading detachment from life experience, slow reading speed and weak reading comprehension under the traditional teaching mode, but also significantly improve students' reading interest and reading ability. By activating and constructing students' language schema, content schema and formal schema, teachers can help students establish a more perfect cognitive structure, so that students can quickly mobilize existing knowledge when facing new reading materials, and effectively match and integrate with text information, to achieve more efficient reading comprehension.

In addition, the application of schema theory also promotes the improvement of students' comprehensive literacy. In the process of understanding and analyzing the text, students need to use not only language knowledge and background knowledge, but also critical thinking, logical reasoning and summary and other abilities, which are conducive to the cultivation of students' comprehensive literacy and intercultural communication ability.

To sum up, schema theory provides a new perspective and method for junior middle school English reading teaching, which has important practical significance and application value. Junior middle school English teachers should fully realize the importance of schema theory and actively apply it in teaching practice. Through diversified teaching methods and strategies, they can help students to construct and activate schema, improve their reading interest and reading ability, and comprehensively improve the teaching effect of English reading. In the future, we expect more research and practice to further explore the application of schema theory in English reading teaching, to make greater contributions to cultivating talents with international vision and cross-cultural communication ability.

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