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# The Application of Problem Chains in the Teaching of English Reading to Develop Students' Critical Thinking Skills

# Yu He

China West Normal University, Nanchong, Sichuan, China

**Abstract:** This article explains how teachers use the problem chain to help students develop critical thinking skills in the teaching of English reading in high school, in which the problem chain is used as a tool and the critical reading strategy is used as a path to cultivate students' critical thinking ability. Taking the national high-quality observation class as an example, this paper explains how to use the problem chain to develop students' critical thinking ability in the critical reading strategies of prediction, analysis, questioning, inference and evaluation.

Key words: problem chains; reading instruction; critical reading strategies; critical thinking skills

#### 1. Introduction

National English Curriculum Standards for General High School (Ministry, 2017 Edition) emphasize that the development of students' thinking qualities and critical thinking skills is an important part of thinking qualities. However, in our daily classroom teaching, facing the pressure of the college entrance examination, teachers pay attention to the explanation of knowledge points, and when teaching reading, they often stay in using teacher-student interaction problems to detect whether students grasp the factual information, rarely use open questions to develop students' thinking quality, cultivating less critical thinking. Emphasis is placed on the use of the teacher-prepared problem chain for teacher-student interaction and understanding of the text, while there are very few dynamic problem chains that run through the classroom, and teachers lack the ability to ask questions in a timely manner based on the answers of the students.

This paper will use the problem chain as a tool for teacher-student interaction, apply it to the teaching strategy of critical reading, and try to cultivate students' critical thinking ability.

#### 2. The Application of Problem Chains in Developing Students' Critical Thinking Skills

2.1 Use the problem chains to help students develop the ability to analyze articles

Analysis in reading comprehension refers to the identification of inferential relationships between statements, concepts, descriptions, or other forms of expression that attempt to express beliefs, judgments, experiences, reasons, information, or opinions. Analysis is an important part of cultivating critical awareness, and when setting up the problem chains, teachers can analyze the author's writing intentions, the author's views, arguments, attitudes, and conclusions in the article. In reading, teachers can use inquiry-based problem chains to motivate students to think positively and achieve the ability to exercise analytical thinking. The inquiry problem chain is regarded as the "core of effective teaching". The

inquiry problem chain is to find problems and solve problems through teacher's guidance and students' autonomy, so as to achieve the purpose of in-depth analysis of articles. For example, in the 11th National Quality Course Observation Competition, a teacher taught a reading class called "Life in a Violin Case", and after reading, the teacher used an inquiry-based problem chain to allow students to find problems and cooperate to solve problems. The instructor designed the following problem chain:

Q1: What's the meaning of the title? (Individual work)

Q2: Do you think the title is appropriate? Why? or why not? (Group work)

Q3: what was the author's purpose in choosing this title?

Q4: Can you come up with a more suitable title than this? Why?

Q5: What tips of choosing a title have you learned from this passage?

When answering Q1, combined with full-text analysis, students can give their own views, but different students have different ideas, which leads to Q2. Allowed to make decisions in their own groups, students express their views and then return to the article to find evidence to prove their points. Both sides can debate, and students can find their own answers to the question, and then work together to decide an answer that is presented in groups. Q3 analyzes the author's intentions, so that students can learn the author's writing techniques, leading to Q4. Students can find their own problems when choosing topics and learn from each other's strengths. Q5 is a summary of the first four questions, so that students can learn knowledge skills in solving problems and finding problems. Such an inquiry-based problem chain allows students to analyze problems by returning to the article alone, find problems, and finally cooperate with classmates and teacher to solve problems, which is conducive for students to actively applying what they have learned, building new knowledge, mastering methods, and cultivating the ability of independent analysis and cooperative analysis.

2.2 Use the problem chain to help students develop the ability to question the article

In English teaching, questioning is the reader's application of seeking common ground while reserving differences in the reading process, and reverse thinking is to find problems and ask questions from multiple angles and aspects of the text reading. In the era of information technology, we are faced with a large number of information input every day. When screening information to make decisions, we must have the spirit of questioning for the authenticity, validity, credibility, and even authority of information, so we must have the spirit of bold questioning. In the teaching of English reading in high schools, especially in the discourse of the news genre, we need to look at the information in the news to judge whether the content of the article is true and credible. In teaching, teachers can use diagnostic problem chains to detect how well students are handling the information. The diagnostic problem chain revolves around the doubts and errors in the teaching content, carefully designs some targeted problem chains, and then according to the symptoms analysis, teaching consultation is carried out, so that students can gain true knowledge and skills in the error, fingering, error correction. For example, in the 11th National High School English Observation Competition, a teacher taught the reading topic "Wildlife Protection". In order to train students to question the timeliness of information, the following problem chain was designed:

Q1: How much of the dream is real?

Q2: The antelope is now an endangered species, is it real?

Q3: What kind of process is required to come up with a good idea?

Q4: From the new government report that we have just analyzed, do you think the antelopes are still endangered species? Why?

By answering Q1, the teacher leads to Q2. By connecting the two questions, the timeliness and authenticity of the information are questioned, and students' ability to question based on text information will be diagnosed, which is also an

error-prone problem that students are easy to ignore when reading articles. When the students answer the questions according to their own views, the teacher throws out Q3, guiding students to analyze the problem evidence, and reflect on their own solution ideas. On the basis of Q3, the teacher throws out Q4, and again tests the students' ability to question the information and make conclusions. The diagnosis problem chain has carefully designed some targeted problem chains around the errors, difficulties and questions that are easy to appear in teaching, and students take the problem chain as a clue to enter the textbook, then analyze, question and reflect. In this process, students develop questioning skills and problem-solving skills.

2.3 Use problem chains to help students develop the ability to infer articles

When readers read critically, it is necessary to infer the unspoken meaning through reasoning, fill in the blank parts of the information, and draw logical conclusions. In the college entrance examination reading comprehension, the proportion of questions that examine students' ability to infer judgment is very large. It is often used to infer the author's writing intentions, the qualities of the characters in the article, the author's position, opinion, attitude, and the meaning of new words, or implicit cultural phenomena and values, in conjunction with the context of the article. This shows the importance of inference in reading. In teaching reading, elastic chains of problems can be used to develop students' inference skills. The elastic problem chain mainly refers to the design of the problem group, which should be designed for teachers and students to exert initiative and creativity in the classroom teaching process, leaving sufficient time for the dynamic generation of the classroom. When designing a problem chain, the teacher consciously presupposes the problems that are generated by the possible dynamics. Teachers should guide students to reason, and when students come up with answers, adjust the questions immediately and appropriately according to the students' answers. When asking questions, it is necessary to consider the differences of students' personalities, look at students' answers more inclusively, and also allow students to generate dynamic problem chains on their own, and cooperate in learning to reason about the article. For example, in the 11th High School English Teaching Observation Class, a teacher taught the reading topic "Life in a Violin Case", and in order to let students deduce the reasons for the protagonist's success and the qualities he possessed, the following question chain was designed:

Q1: What attitude does the author hold toward the job which Mr. Smith did?

Q2: Will readers be affected by the author if they want their hobby to be their career? (dynamic problem chains)

O3: What does the author mean?

Q4: Do you think Mr. Smith will be successful in his career? why?

Q5: What kind of good qualities does he have? (dynamic problem chains)

Q6: If you want to succeed, what qualities do you need to develop? (dynamic problem chains)

Q1 is an analysis on the reading of the article, and the students are asked to infer the author's attitude, that is, the implication. Q2 asks questions on the basis of Q1 in time, and students make inferences. This leads to Q3, which allows students to return to the article and make analysis and judgment using the information given. Q6 is based on Q5, which is based on the student's answer, while Q5 is a follow-up on Q4. Ask students to infer the qualities behind Mr. Smith's success and think about what qualities they need to develop if they want to succeed. In the above problem chain, the settings of these problems are linked and connected step by step, so that students can make inferences based on the article, make up for the gap in the article information, which can better help students understand the article in depth, and finally return to themselves, to realize the teaching concept of taking students as the main body.

# 3. Conclusion

The use of problem chains to cultivate students' critical thinking focuses on the development of students' core literacy in the discipline, which is in line with the development concept of students as the main body in the new curriculum standards. The problem chain is an effective control means to promote students' understanding and mastery of knowledge, develop students' thinking ability, evaluate teaching effects, and motivate students to achieve their desired goals, and is a teaching strategy to improve the efficiency of classroom learning. Different types of problem chains play an important role in cultivating students' critical thinking skills in different dimensions, providing teachers with an effective means to let students participate in the classroom, help students better interpret texts, and improve their ability to build a platform.

# **Conflicts of Interest**

The author declares no conflicts of interest regarding the publication of this paper.

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