

Measures to Cultivate the Higher-order Thinking Quality of High School Students by Discourse Reading

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Abstract: Developing students' thinking qualities, especially higher-order thinking ability, is an important goal of English teaching, and the English Curriculum Standards put thinking quality in an important position. Discourse teaching has its own advantages in cultivating students' higher-order thinking, and integrating high-order thinking into senior high school English discourse teaching is also the pursuit of English teaching values under the background of core competencies. This article identifies some problems that are not conducive to the development of students' high-order thinking ability in current high school English reading teaching, and probes into the strategies of discourse reading teaching design to promote the development of students' high-order thinking ability by integrating question formats from the College Entrance Examination English reading comprehension section with textbook materials.

Keywords: Discourse Teaching; Higher-order Thinking Quality; Reading Teaching.

1. Introduction

1.1. Background to the Research

Teachers in China attach great importance to discourse reading, while many English teachers emphasize the imparting of language knowledge and language skills, neglecting deeper exploration of students' thinking qualities or cultural connotations. According to Yu (2024)'s research, current English reading classes in China often only remain at the level of cognition and understanding. Students, guided by teachers, understand articles, extract information, and answer questions posed by teachers, without further exploration of the text. In this process, students achieve only superficial understanding of the text, lacking exploration of the article's themes, missing reflection on the article, and failing to question or innovate viewpoints. However, reading comprehension is a critical instructional type in high school English teaching and an important occasion for cultivating students' higher-order thinking. Lin and Guo (2018) argue that fundamentally, reading is a cognitive process, with thinking as the key ability. Thus, reading is not merely a passive process where students receive textual information, but rather involves active utilization of existing background knowledge to engage in active thinking, induction, analysis, and making judgments, as well as expressing viewpoints.

In order to integrate input and output and enhance students' higher-order thinking abilities in discourse reading instruction, this thesis will explore how teachers should consider improving and innovating teaching methods to activate students' higher-order thinking abilities and create instructional activities that facilitate the development of thinking qualities, thereby enhancing students' cognitive quality.

1.2. Purpose and Significance of the Study

According to the English Curriculum Standard, four core competencies are outlined for the English subject, one of which is thinking quality. The standard defines thinking quality as the ability and level of thinking manifested in logic, criticality, creativity, and other aspects. Logical thinking,

critical thinking, and creative thinking all belong to higher-order thinking abilities, involving mental activities at advanced cognitive levels. Nowadays, higher-order thinking is not only necessary for addressing complex tasks or problems but also responds to new requirements posed by the rapid development of information and knowledge in the new era and the primary trend of international informationization.

Although some researchers and teachers have realized the importance of high order thinking, most of the front-line teachers do not have the energy to dig into the deep connotations of the text and other intrinsic information due to the pressure caused by college entrance examination. Admittedly, some of the researchers have conducted some related studies, yet there are some limitations, such as fostering students' higher-order thinking through specific types of discourse or solely employing a question chain to cultivate students' higher-order thinking and so on.

In order to cope with these problems, the author integrates question formats from the college entrance examination English reading comprehension section with textbook materials to create teaching segments aimed at enhancing students' cognitive abilities and improving their thinking quality.

2. Problems Identification

2.1. Higher-order Thinking

In terms of the concept of higher-order thinking, various scholars offer differing perspectives and insights. Sternberg conceptualizes higher-order thinking as encompassing three elements of successful intelligence: analytical, creative, and practical abilities. Bloom (1956) categorized cognitive levels into six hierarchical stages: knowledge, comprehension, application, analysis, synthesis, and evaluation, from lower to higher order. Anderson & Krathwohl (2001) revised these cognitive levels to memory, understanding, applying, analyzing, evaluating, and creating, where the first three levels are considered low-order thinking and the last three levels are categorized as high-order thinking. Chinese scholar Zhong (2004) defines higher-order thinking as mental

activities occurring at higher cognitive levels or higher cognitive abilities. It manifests in teaching objectives as capabilities at higher cognitive levels, such as analysis, synthesis, and evaluation. Therefore, in English discourse reading, higher-order thinking demands that students apply scientific thinking methods to propose creative solutions to problems based on limited knowledge and experience. This is internalized within disciplinary teaching activities, reflecting core competencies, emotions, attitudes, and values in English, thereby achieving intended teaching objectives and learning outcomes.

2.1.1. The Relationship between High-order Thinking and Discourse Reading

Discourse is a linguistic unit that conveys meaning and serves as a primary vehicle for language learning. As one of the six essential components of English curriculum content, discourse holds equal importance alongside language knowledge, thematic context, language skills, learning strategies etc. Crawley and Mountain (1995), applying Bloom’s cognitive taxonomy, divided the reading process into three levels: literal reading, interpretive reading, and critical reading. Critical reading encompasses the stages of analysis, synthesis, and evaluation. In terms of cognitive activity levels, literal reading focuses on retrieving factual information from the text, representing a shallow understanding of the text. Interpretive reading involves applying information from the text, indicating a slightly higher level of understanding. Critical reading denotes a deeper understanding of the text, including skills in interpretation and evaluation, as well as the ability to infer logical conclusions (Liang et al., 2013).

Therefore, critical reading builds upon literal and interpretive reading, guiding readers’ thinking from lower to higher cognitive levels during the reading process. The cultivation of higher-order thinking skills facilitates students in achieving a deeper understanding of reading texts, and the development in thinking and discourse reading mutually reinforce each other and are inseparable.

2.2. Related studies home and Abroad

A large number of studies apply the development of higher-order thinking to the classroom and assess the development of students’ higher-order thinking through testing. For example, Zohar and Peled (2008) tested the learning status of low achievers in high-level teaching and learning processes through four different experiments. Mcloughlin and Mynard (2009) conducted research on online forums to promote higher-order thinking tools.

Also some educators focus on teaching designs to improve students’ high-order thinking. Cao (2019) elaborates on cultivating high-order thinking in high school English reading classes through three aspects: text interpretation, classroom activities, and questioning techniques. Yin (2021) focuses on high-order thinking by integrating specific teaching cases, proposing question design strategies tailored to different objectives during pre-reading, while reading, and post-reading stages. Special emphasis is placed on post-reading teaching designs to enhance students’ high-order thinking abilities.

Lu (2020), Yu (2024), and others identify various challenges in current secondary school English reading instruction that hinder the development of students’ high-order thinking skills, and explore instructional strategies aimed at fostering these abilities.

Admittedly, lots of the researchers have conducted some

related studies, yet there are some limitations. Few researchers have approached the enhancement of students’ higher-order thinking from the perspective of integrating college entrance examinations with textbooks. Therefore, the author integrates question formats from the college entrance examination English reading comprehension section with textbook materials to create teaching segments aimed at enhancing students’ cognitive abilities and improving their thinking quality.

3. Problems Solutions

3.1. Construct Core Concepts, Cultivate Logical and Analytical Abilities

In analyzing level of reading instruction, teachers can help students in constructing core concepts closely related to the text through various ways. Students can then use these specific core concepts to clarify the structure and coherence of the reading text, enhancing their understanding and internalization of the material, and fostering cognitive training. Teachers can draw on the questioning techniques used in the reading comprehension part of the College Entrance Examination, combined with textbook texts to cultivate students’ analytical abilities. For instance, teachers can create subheadings for each part of the article, use timelines or concept maps to organize the structure of the article, guide students to understand text features, and focus on genre, language features, and writing intentions. Questioning methods may include: “Can you give a title for the paragraph/passage? What is the main idea of the passage? What is the author’s attitude towards...?” Teachers can also utilize the outlines or mind maps of textbooks to guide students in extracting central ideas from texts combined with illustrations, and adding text to images. For example, comparative activities involve comparing characteristics of different characters, activities, or locations in texts, analyzing language use in different texts, or comparing causes and effects of phenomena or behaviors. Relevant questioning methods may include: “What are the differences and similarities between A and B?”

For example, in the Reading and Thinking section of Unit 1 Teenage Life from the PEP senior high school English textbook, the passage titled “The Freshman Challenge” introduces various challenges faced by a freshman named Adam at the beginning of his senior high school life. Below are specific teaching activities aimed at fostering students’ logical thinking.

Step1: Read the passage and work together with your partner to finish the outline as complete as possible. Then answer the questions below.

Table 1. The Outline the Freshman Challenge

Paragraph	Challenge	How Adam feels	Solution
1		Confused	
2			The school adviser...
3			He will find a way to...
4			He will...

Q: What is the main idea of paragraph 1/2/3/4?

Q: What is the author's attitude towards these challenges?

Q: Do you face the same challenges as Adam? How do you deal with them?

3.2. Design Speculative Questions, Enhance Evaluative and Questioning Abilities

Evaluation is a critical stage in cultivating students' critical thinking. Teachers should emphasize cultivating students' abilities to evaluate textual content and writing techniques. Teachers can achieve this by designing activities that encourage students to evaluate real-life phenomena and guide them in critiquing characters or phenomena within textual materials. Question formats include: "What do you think about ...? Would you want to do ..., if you were ...? Do you think the paragraph/passage is logical, and why?" Students need to apply certain criteria and use rational thinking to make reasonable judgments on acquired information or existing issues, moving from intuitive cognition to rational reasoning. In reading instruction, teachers should actively foster students' critical thinking abilities, enabling them to develop personalized reading assertions and viewpoints. (Lu, 2020) And this shift in cognitive processing modes can enhance students' thinking quality and prompt them to assess their own values from different perspectives while engaging with textual content, thereby fostering the healthy development of students' critical thinking abilities. Simultaneously, teachers should encourage students to engage in group discussions and intra-group exchanges to stimulate their thinking processes.

For example, in the Reading and Thinking section of Unit 1 Teenage Life from the PEP senior high school English textbook, the passage titled "The Freshman Challenge" introduces various challenges faced by a freshman named Adam at the beginning of his senior high school life. Below are specific teaching activities aimed at fostering students' critical thinking.

Step2: Based on the outline, discuss the questions below with your partner.

Q: What kind of person do you think Adam is? Why?

Q: Do you think the passage is logical? Would you want to write your experience like this?

Q: What are the differences between Adam's school life and your school life?

3.3. Create Problem Contexts, Develop Reasoning and Creative Abilities

At the inferential level, the reading comprehension part of the College Entrance Examination mainly assesses students' abilities to infer word meanings, textual content, characters' behaviors or attitudes, and predict future content. Teachers should cultivate students' awareness of not seeking a single correct answer, encourage active reading, focus on the implied meanings of texts, and develop diverse understandings of complex situations (Lewis, 1991). In the process of teaching design, teachers should delve into the content of textbooks, create contextualized questions, and foster students' abilities to infer word meanings, understand textual content, interpret characters' attitudes, and predict future developments, thereby stimulating deep thinking among students. During the inferential process, teachers can use pictures to assist students in predicting story plots, deducing reasons behind story events, imagining story developments within story segments, and inferring characteristics of objects or characters in texts to cultivate students' reasoning abilities. Inferential questions may

include: "What sort of information would you expect to find in ...? Look at the picture. What do you think might happen? What will probably happen to ...?" In teaching sessions aimed at fostering creative thinking, teachers can focus on certain actions within events or the author's viewpoints, allowing students to judge and evaluate based on their own background knowledge and values, thereby developing thinking and innovative expression.

For example, in the Reading and Thinking section of Unit 1 Teenage Life from the PEP senior high school English textbook, the passage titled "The Freshman Challenge" introduces various challenges faced by a freshman named Adam at the beginning of his senior high school life. Below are specific teaching activities aimed at fostering students' creative thinking.

Step3: Look at the pictures, describe the challenges that may happen and then choose one challenge to give your suggestions.

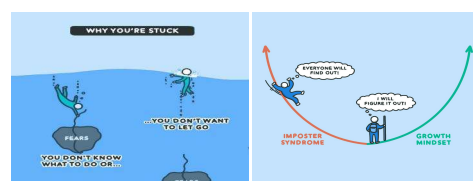


Figure 1. Challenge Examples

4. Conclusion

Integrating higher-order thinking into high school English discourse teaching is not only a requirement of curriculum reform but also one of the main objectives of English subject competence. Teachers should address current issues in reading classrooms by integrating question formats from the College Entrance Examination English reading comprehension section with textbook materials to create teaching segments. This not only promotes advancements in students' language abilities but also cultivates their higher-order thinking skills, with both aspects mutually reinforcing each other.

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