

# An Exploration of the Teaching Model of English Multi-text Reading in Senior High School Driven by Question Chain

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## Abstract

**This study delves into the teaching model of English multi-text reading in senior high school, which is propelled by the question chain approach. It aims to enhance students' linguistic competence and critical thinking skills. The research is grounded in constructivist learning theory and the input hypothesis, offering a fresh perspective on educational practices. The study outlines the principles for designing effective question chain and demonstrates their application in stimulating student interests, organizing and integrating information, and fostering thinking quality. Findings suggest that this teaching model significantly boosts students' language proficiency and deep learning capabilities, highlighting its potential to revolutionize English language teaching in senior high school settings.**

## Keywords

**Question Chain; Multi-text Reading; Senior High School; Thinking Quality.**

## 1. Introduction

This chapter is the introduction of this study, which is divided into two parts. The first part is the research background, highlighting the role of multi-text reading in enhancing students' language proficiency and critical thinking skills. And the second part explains the theoretical and practical significance of this study in detail.

### 1.1. Background of the Study

Reading education is a crucial component of the English curriculum in senior high school, aiming not only to enhance language proficiency but also to cultivate critical thinking skills among students (Chen & Shen, 2018). Multi-text reading, which involves engaging with multiple texts on a related theme, effectively helps students develop comprehensive language abilities. It allows students to make connections between different sources, deepening their understanding of the subject matter and stimulating critical thinking.

The effectiveness of this approach is significantly enhanced when combined with strategic questioning techniques, particularly cluster questioning. This method encourages students to answer interconnected questions that deepen their comprehension and analytical abilities. Effective questioning guides both teachers and students in navigating the complexities of text analysis, promoting a more interactive and reflective reading experience. However, current research identifies key challenges in reading instruction, including the lack of clear teaching objectives, the difficulty of texts that may overwhelm students, and the superficial quality of questions that do not adequately challenge students' critical thinking.

Enhancing critical thinking skills is essential in today's educational landscape, as it enables learners to evaluate information, recognize biases, and formulate reasonable arguments based on textual evidences (Liu, 2018). Promoting a culture of inquiry through targeted questioning can transform students from passive recipients of information into active participants in their learning process. This shift is vital for developing learners who can navigate complex information in an age where critical analysis is increasingly important.

Research indicates that effective reading instruction, especially when coupled with structured questioning, significantly improves educational outcomes. Teachers who integrate question chain into their reading lessons not only enhance comprehension but also prepare students for the complex academic challenges they will encounter in the future. This underscores the importance of developing both language skills and critical thinking abilities to ensure students' future success.

Therefore, exploring the teaching model of English multi-text reading through question chain is both timely and necessary. It equips students with the skills to engage deeply with multiple texts, fostering their critical thinking and preparing them for the demands of the 21st century.

## 1.2. Significance and Purpose of the Study

The significance and purpose of the study is multifaceted. Theoretically, it seeks to broaden educational frameworks by incorporating critical thinking and inquiry-based learning into English education, thereby challenging conventional teaching methods and promoting a more interactive and student-focused classroom. It also explores the utility of question chain in enhancing students' comprehension and analytical skills across multiple texts, aligning with constructivist learning theory.

Practically, this research aims to boost student engagement and comprehension skills, which are vital for academic success and navigating complex information. It also looks to develop critical thinking, a key skill for decision-making and communication. The outcomes of this study could guide curriculum development, improve teacher training, and provide a basis for assessing student learning in multi-text reading contexts. Overall, the study holds the potential to revolutionize English teaching in senior high school by establishing a theoretical basis and practical methods for a question-chain driven approach, thereby improving educational experiences and outcomes.

## 2. Definitions of Key Terms and Theoretical Basis

This chapter begins by defining key terms of this study including "question chain" and "multi-text reading", which are essential for understanding the research context. Then it explores the theoretical basis of this study, namely "constructivist learning theory" and "input hypothesis".

### 2.1. Definitions of Key Terms

#### 2.1.1. Question Chain

Scholars have diverse yet overlapping definitions of question chain. Barr and Johnson (1991) first proposed the concept of a question chain, which refers to a series of consecutive questions asked by teachers to students for specific concepts. Internationally, Fayadh (2016) view it as a questioning technique crucial for educational objectives and enhancing student cognition. Bulent et al. (2016) highlight its role in fostering active learning through Bloom's Taxonomy-based questions, emphasizing students' reflections.

Domestically, question chain is seen as instructional methods guiding independent thinking and problem-solving, linked to teaching objectives and student cognition. Pei (2011) initially defined it as transforming textbook knowledge into a structured series of questions based on teaching goals and student knowledge. Question chain involves central, sequential, and progressive questions designed to stimulate classroom participation and deep thinking, aiming for knowledge transfer and creation.

Despite variations, the consensus is that question chain aims to develop clear and logical classrooms that meet teaching objectives and improve thinking skills. They advocate for student-centered teaching, converting knowledge into interconnected questions. The common thread is the transformation of knowledge into a series of broad and contextual questions that

drive student engagement and deep understanding, rather than trivial, disjointed inquiries. Dai (2022) encapsulates this, viewing question chain instruction as a scaffold for guiding students toward deep reading and critical thinking development.

### 2.1.2. Multi-text Reading

The concept of multi-text reading has not been explicitly proposed for a long time, but there has been a long history of practical exploration related to multi-text reading, and academics generally regard the Japanese “group book reading” as an early prototype of “multi-text reading”. In the late 1920s, Sato, a Japan professor, first proposed the concept of “group book reading” from the perspective of receptive aesthetics, which can be regarded as one of the sources of “multi-text reading” in China. The concept of multi-text reading was introduced earlier in Taiwan by Zhao Jingzhong (2010), a professor of linguistics, who proposed that multi-text is a way of reading teaching combining multiple texts. In discussing the changes in reading instruction following the curriculum reform in Taiwan, Zhao (2010) noted the term “multi-text reading”, the approach leads to an increase in the amount of students’ reading. Although teachers are accustomed to single text teaching, the introduction of integrated curriculum concepts has prompted them to explore multi-text reading activities. The design of activities is based on the reading materials from textbooks and extracurricular books. There are two main definitions of “multi-text reading teaching” agreed upon by the current academic community. One is defined by Professor Yu (2013) scientifically and rationally: multi-text reading involves selecting a collection of articles centered around one or more topics. The teacher and students then collectively read and construct these articles, engaging in constructive discussions to reach consensus around the given topics. The other is defined by a famous teacher, Jiang Junjing, who believed from a practical point of view that “multi-text reading teaching” refers to the teaching and learning activities of selecting multiple texts around a topic in a unit of time (Liu & Jiang, 2016).

## 2.2. Theoretical Basis

### 2.2.1. Constructivist Learning Theory

Constructivist learning theory, as highlighted by Chen & Zhao (2016), emphasizes that learners actively construct knowledge through interaction with their environment and prior experiences. This theory suggests that when faced with complex learning tasks, teachers should construct a conceptual framework to aid students’ understanding of knowledge, decompose complex tasks, and enable learners to form meaning through information processing activities, thereby deepening their comprehension of learned knowledge. The question chain method is a process where teachers guide students to construct the self-meaning of language and jointly achieve an in-depth understanding of text content (Zhao, 2017). This approach is designed to develop students’ ability to actively acquire knowledge and construct their own knowledge framework, rather than passively accepting fragmented knowledge. By employing question chain, teachers facilitate a learning environment that aligns with constructivist principles, where students engage with the material, build upon their pre-existing knowledge, and create new understandings.

The study aims to demonstrate how question chain instruction can operationalize constructivist theory in the context of English multi-text reading. It seeks to show how this method can enhance students’ ability to engage with complex texts actively and construct knowledge in a meaningful way, which is a core tenet of constructivist learning theory.

### 2.2.2. Input Hypothesis

The input hypothesis proposed by Krashen is derived from the Second Language Acquisition Theory. It’s one of the hypotheses in Krashen’s Monitor Model. The main idea of the language input hypothesis is that a key factor promoting second language acquisition is a large amount

of effective language input. This input should be comprehensible, engaging, and slightly above the learner's current proficiency (i+1), without an overemphasis on syntax and grammar (Krashen, 1985). Successful acquisition hinges on abundant comprehensible input and the learner's language acquisition device. If input is too easy or too difficult, it fails to activate the acquisition device or leads to skepticism and loss of interest (Ellis, 1989). In this study, the researcher selected theme-based multi-text reading materials that are comprehensible yet slightly challenging for students, aligning with the input hypothesis. These materials aim to provide sufficient input to advance students' language proficiency from "i" to "i+1". Through guided multi-text reading and question chain, students consolidate their understanding of themes and enhance their reading skills, demonstrating the practical application of Krashen's theory in promoting language acquisition.

### **3. The Designing Principles for Question Chain in English Multi-text Reading Instruction**

In English multi-text reading teaching, the design of question chain is a crucial part that guides students to understand texts deeply and cultivates their comprehensive abilities. Reasonable and effective question chain design can stimulate students' thinking and promote the construction and integration of knowledge. The following will discuss the principles of question chain design in English multi-text reading teaching, including the directivity, systematic, logicity, and integrity principles. These principles provide important guidance for teachers to design high-quality question chain, which is helpful to improve teaching effects and promote students' active participation and in-depth learning in multi-text reading.

#### **3.1. Directivity Principle**

In the design of question chain, the directivity of questions takes precedence, which pertains to the ultimate teaching objectives. Generally, these objectives encompass three areas: addressing the key and difficult points in teaching and fostering students' thinking abilities. Teachers ought to peruse the relevant texts, ground themselves on the set objectives, comprehensively understand the text to precisely target the key points and circumvent aimless teaching. By zeroing in on the difficult parts within the materials, teachers can assist students in surmounting learning hurdles (Li, 2014). Additionally, the design should stimulate students' thinking, spurring them to partake in diverse cognitive activities and cultivate multifaceted thinking capabilities (Li, 2019).

#### **3.2. Systematic Principle**

Teachers are required to systematically organize the difficulty gradient of questions within the chains. Firstly, the design should advance from the straightforward to the intricate, taking into account students' proximal development zone to formulate moderately demanding questions. Secondly, the questions should correspond with Bloom's Taxonomy, transitioning from low-order to high-order thinking questions. Finally, in stratified teaching, ensure that questions of different levels are appropriate for different students (Feng, 2020). Knowledge and comprehension questions should be within the reach of all; application and analysis questions for intermediate and above-level students; synthesis and evaluation questions for a handful of advanced students or via group endeavors (Sun, 2021).

#### **3.3. Logicity Principle**

The design of the question chain should revolve around certain logical relationships such as causality, parallelism and progression. And these relationships precisely reflect how the question chain is interlocked and advances layer by layer. The design of the question chain requires each question to be independent while also taking the whole into consideration, thus

demonstrating the close connections among the questions. The question chain is a highly integrated organic whole and a systematic design, possessing both internal logic and obvious differences. In terms of form, the question chain should be interlocked; in terms of content, it should have its own focuses and be clearly structured (Liu, Wang & Zhou). The question chain with internal connectivity can carry special teaching value and is of far-reaching significance (Rong, 2018). Classified according to the logic of the question chain, the common types of question chain include the progressive question chain and the radiative question chain. There should be a hierarchical relationship among progressive questions, advancing layer by layer, gradually unfolding from the shallow to the deep, from the easy to the difficult, from the simple to the complex, and from the known to the unknown. The radiative question chain can diverge thinking from different angles around the core question, enabling students to master multiple solution directions for the same problem.

### 3.4. Integrity Principle

When devising a question chain, teachers must ensure that all questions are worthy of exploration. Good questions exhibit six characteristics. First, they are targeted, correlating with teaching and student circumstances, providing scaffolds around core questions, and dealing with cognitive errors and knowledge connections. Second, they are challenging, not readily answered. Third, they are interesting, approaching from novel perspectives to kindle interest. Additionally, they are relevant, linking to students' lives. Moreover, they are generative, resulting in the discovery of new problems. Finally, they are open-ended, lacking a single definitive answer, inspiring students to think divergently and expand their thinking scope (Hu et al., 2015).

## 4. The Application of Question Chain to English Multi-text Reading Teaching in Senior High School

In the practice of English multi-text reading instruction in high school, the core of question chain design should be directed towards the thematic meaning of the multi-text reading, which is the focus of the entire teaching practice. Under the guidance of the thematic meaning, each article needs to set up a hierarchical and logical group of sub-questions, which are progressively deepened to guide students to comprehensively and thoroughly understand the articles. Additionally, logical transition questions should also be set between texts, which not only connect the previous and subsequent content, stimulate students' desire to read, but also reflect the intertextuality between reading texts. The following will elaborate on how to lead students to achieve deep learning in the practice of multi-text reading instruction through question chain with specific teaching design cases.

### 4.1. Stimulating Students' Interests in Reading by Question Chain

Learning interest serves as the bedrock for deep learning. In the realm of high school English reading instruction, arousing students' interests is the most effective way to prompt their independent reading. Therefore, the design of a question chain should be firmly rooted in reality, closely tied to students' life experiences, and aimed at kindling their enthusiasm for reading.

Take a multi-text reading class centered around "The True Beauty" as an example. The teacher carefully selected three articles, shown in [Table 1](#). "Passage A" features a unique discussion where three young people express their diverse viewpoints on appearance, accompanied by expert evaluations. "Passage B" presents interviews with 50 "Most Beautiful People in the World" by *Celebrity* magazine, which also includes an explanation of "beauty". "Passage C" is an excerpt from *The Hunchback of Notre-Dame* by Victor Hugo, depicting the male protagonist's

pursuit of beauty and kindness and the female protagonist’s discovery of the sincerity and kindness beneath his unappealing exterior.

In the teaching process, the teacher artfully designs question chain. Firstly, centering on “Passage A”, the teacher poses the question, “*what attitudes do people have towards their appearances?*” This leads students to explore the text and find that people often pursue beauty through means like “editing selfies”, “making up”, and “losing weight”. However, the contrasting views of experts in the article trigger students’ confusion, giving rise to the second question, “*if such beauty is not ideal, then what exactly is true beauty?*” At this point, the teacher guides students to read “Passage B”. After reading, students learn that *Celebrity* magazine defines beauty as “self-assurance”, “intelligence”, and “good humor”. With a more profound understanding of beauty, the teacher then presents the third question, “*are people beautiful because of their looks or their characters?*” Although students start to form their own answers, they face difficulties in expressing them due to language limitations. The teacher then directs students to read “Passage C” for further contemplation. Through this reading, students witness the sincerity and kindness hidden behind the protagonist’s plain appearance, enabling them to reflect deeply on the distinction between external and internal beauty.

In this instructional approach, the well-crafted question chain continuously stimulates students’ reading interests and nurtures their thinking abilities, effectively facilitating their learning process.

**Table 1.** An Example of “The True Beauty”

Passage	Content	Question Chain
A	A unique discussion where three young people express their diverse viewpoints on appearance, accompanied by expert evaluation.	What attitudes do people have towards their appearances?
B	Interviews with 50 “Most Beautiful People in the World” by <i>Celebrity</i> magazine, which includes an explanation of “beauty”.	If such beauty is not ideal, then what exactly is true beauty?
C	An excerpt from <i>The Hunchback of Notre-Dame</i> written by Victor Hugo, illustrating the male protagonist’s pursuit of beauty and kindness and the female protagonist’s realization of the sincerity and kindness beneath his unattractive exterior.	Are people beautiful because of their looks or their characters?

**4.2. Obtaining, Organizing and Integrating Information by Question Chain**

In high school English multi-text reading teaching, teachers should regard cultivating students’ problem-solving abilities as a crucial teaching goal. This entails guiding students to proficiently obtain and organize information, as well as to summarize and integrate knowledge. To achieve this, teachers need to first conduct a profound analysis of the core content within the discourses. Subsequently, by constructing a question chain that adheres to the logical connections among the various texts, they can effectively steer students through the reading process, ensuring that students receive information in a structured, logical, and systematic manner, thereby facilitating the attainment of teaching objectives.

For example, in a multi-text reading class centered around the topic of “How to Deal with Water Shortage?”, the teacher selects three articles: Passage A “What’s the World to Do about Water?”, Passage B “Global Water Shortage”, and Passage C “China’s Water Situation”, all sourced from *China Daily*. In order to assist students in creating information structure diagrams more effectively, the teacher devises a question chain, shown in [Table 2](#).

Guided by this question chain, students can extract corresponding information from each passage. Through this approach, the three articles are transformed from independent texts into a hierarchical, logical, sequential, and closely interconnected multi-text set. The omission of any single article would undermine the teaching effect and impede the achievement of teaching

goals. Moreover, such a question chain can enhance students' reading proficiency, stimulate their thinking, and improve their capabilities in acquiring, sorting, and integrating information.

**Table 2.** An Example of “How to Deal with Water Shortage?”

Passage	Topic	Question Chain
A	What's the World to Do about Water?	What are the reasons that make water resources the most important resources in the 21st century?
B	Global Water Shortage	What are the impacts of water shortage on human beings and what are the solutions to address the water shortage problem?
C	China's Water Situation	What is the current water shortage situation in China and what measures has the Chinese government implemented?

### 4.3. Cultivating Students' Thinking Quality by Question Chain

The General Senior High School English Curriculum Standards (2017) emphasizes that key competencies are the central manifestation of the educational value of the discipline. These competencies include correct values, essential qualities, and key abilities that students develop during disciplinary learning. The curriculum aims to foster students' key competencies in four aspects: language ability, cultural awareness, thinking quality, and learning ability. Reading is a significant means to achieve this, particularly in enhancing students' thinking quality.

For example, in a multi-text reading class with the topic “Why Are They Admirable?”, the teacher selects two articles, “A Medical Pioneer” and “The Superhero behind Superman”, from Unit 6 of Book 2 of the BNUPG English textbook, along with the third additional articles, “Someone I Admire”, from outside sources. “Passage A” details how Tu Youyou conquered numerous difficulties to discover artemisinin, resolving the malaria medicine shortage and becoming China's first Nobel laureate in medicine. “Passage B” narrates the inspiring story of Christopher Reeve, who, after being paralyzed in an accident, fought bravely and returned to the screen. “Passage C” presents a student's gratitude for his mother's dedication.

Before the class, students are assigned to read the three passages and answer the following questions, shown in [Table 3](#).

These questions prompt students to extract, organize, and summarize detailed information based on their understanding of the texts. Through this exploration, students generally grasp the authors' intended outlooks on life and values. However, the cultivation of thinking qualities in reading teaching doesn't end here. The teacher then has students read “Passage C” and poses further questions to deepen the thematic understanding. Under the guidance of the teacher's question chain, students achieve a more profound comprehension of the thematic meaning through reading all three passages. In this reading class, students engage in in-depth thinking, gradually realizing the goal of cultivating their thinking quality and effectively reflecting the educational value of the subject.

**Table 3.** An Example of “Why Are They Admirable?”

Passage	Topic	Question Chain
A	A Medical Pioneer	Who are the protagonists in the first two passages, and what difficulties did they encounter?
B	The Superhero behind Superman	How did they overcome these difficulties, and what contributions did they make to society?
C	Someone I Admire	What outstanding qualities did they display?

## 5. Conclusion

In conclusion, this research thoroughly explored the teaching model of multi-text reading in senior high school driven by question chain. It systematically expounded on design principles, closely aligning with constructivist learning and input hypotheses. The model exhibits significant potential in enhancing students' language proficiency and thinking skills. However, continuous improvement is essential. Teachers should adeptly adapt question chain to various texts and students' proficiency levels. Future studies could further evaluate its comprehensive impact and expand its application scope in different educational settings, aiming to continuously optimize English teaching and learning outcomes in the long term. This teaching model thus provides valuable insights and a foundation for further advancements in English education.

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