

Research on optimization strategies of high school English reading teaching based on Deep Learning theory

Zeyuan Tian

Xi'an International Studies University, Xi'an, Shanxi, 710128, China

ABSTRACT

Based on the concept of deep learning, this paper takes the design of high school English reading teaching as the research object, and explores the practical problems of combining the concept of deep learning theory with the teaching of high school English reading. Starting from the connotation of the deep learning field, this paper analyzes the shortcomings of the current English extracurricular reading teaching design in high school. Finally, it puts forward some suggestions and optimization strategies for English reading teaching in senior high school.

KEYWORDS

Deep learning theory; High school English; English reading teaching; optimization strategy research

1 Introduction

With the rapid development of multimedia technology and information technology, foreign language teaching has become diversified, and teachers can obtain information through various channels. In the information age, learners have difficulties in deep understanding and internalization of knowledge, whether it is socialized teaching in foreign language classrooms or independent learning through Internet and other media. Deep learning theory, also translated as deep Learning, is an experiment conducted by American scholars Ference Marton and Roger Saljo based on students' reading, which aims at isolated memory and Surface Learning of non-critical acceptance of knowledge. It is a concept of learning hierarchy first proposed in 1976.

This concept pays attention to the integration and construction of new and old knowledge, pays attention to stimulating students' interest in learning and enriching students' emotional experience, pays attention to the cultivation of higher-order thinking ability such as analysis, evaluation and creation, and the transfer and application of knowledge, pays attention to solving practical problems in reality, and emphasizes self-reflection and advocates active learning.

In the field of education, the introduction and application of deep learning theory has also become a research hotspot. Deep learning plays an important role in English teaching, especially in reading teaching. As one of the key skills in English learning, reading plays an important role in improving students' language ability and learning skills.

The traditional teaching methods of English reading mainly focus on the study of vocabulary and grammar, but neglect the cultivation of context understanding and inferential ability. On the other hand, deep learning emphasizes the understanding and processing of semantics and pragmatics through the cultivation of higher-order thinking abilities such as analysis, evaluation and creation. Through the training of large-scale corpus, deep learning can carry out feature extraction and pattern recognition in language processing, helping students better understand and apply English.

Therefore, in the field of high school English reading teaching, the study on the application of deep learning theory can help optimize teaching methods and improve students' reading ability. By introducing deep learning model and related technical means, teachers can better guide students in English reading and cultivate their semantic comprehension, reasoning and critical thinking ability.

At the same time, deep learning can also help personalized teaching by providing personalized learning content and feedback according to students' learning needs and ability differences.

Therefore, the research on deep learning theory in the optimization of high school English reading teaching can provide guidance and reference for educators, and promote the innovation and improvement of English reading teaching.

This paper takes the design of English reading teaching in high school as the research object and deep learning theory as the theoretical basis to explore the practical problems of combining the concept of deep learning theory with the teaching of English reading in high school.

2 Existing problems in senior high school English teaching

2.1 Limitations of teaching contents and methods

The teaching content is relatively simple. At present, English reading teaching in senior high school generally has the

phenomenon of single teaching content. This kind of teaching method emphasizes knowledge inculcating often ignores students' interests and emotional needs, and then affects the enthusiasm and effect of students' learning. The selection of textbook content is too traditional and lacks the elements of keeping pace with the times, which makes it difficult for students to resonate. In the information age, students are exposed to very rich information and knowledge, and their expectations for the content of textbooks are getting higher and higher. Therefore, if the content of the textbook is short of the times, it is difficult to meet the needs of students.

The arrangement form is relatively fixed. At present, the teaching content of "department edition" or "FLTRP" textbooks in high school is still arranged according to the theme of unit, which is mainly classified according to the basic knowledge points, and does not pay attention to the personalized interests and needs of students. This arrangement makes it impossible for teachers to carry out targeted teaching according to students' individual differences, and fails to fully satisfy students' curiosity and desire to explore new things. The arrangement of textbook content is easy to lead to mechanical teaching and can not adapt to students' learning needs. Therefore, the existing arrangement of teaching materials should be reformed. To meet the needs of the development of the times has become a top priority.

The teaching method is relatively obsolete. Many teachers still adopt the traditional lecturing teaching. This one-way communication of ideas or information makes students passively accept information and lack the opportunity to actively participate and think. The lack of interaction and discussion in class is not easy to exert students' initiative and enthusiasm, which is not conducive to teaching students according to their aptitude. At the same time, the lack of teachers' ability to use modern teaching technology makes the classroom atmosphere dull and students are easily distracted or lose motivation to learn. On the whole, the teaching contents and methods of junior middle school Chinese do not conform to the concept advocated by the new curriculum standards.

2.2 Significance of the subject

By adopting effective teaching methods, students can improve their reading skills with high engagement and interaction.

Students can improve their reading skills by adopting effective teaching methods that are participatory and interactive, and optimizing teaching methods for reading can help students improve fluency, accuracy, and confidence in both oral and written expression. This prepares them for future academic, professional and personal communication in an increasingly globalized society.

Effective methods of teaching English reading encourage students to think critically, analyze and evaluate literary works, and come up with different ideas. Through careful reading, discussion, and continuous writing activities, students develop the ability to interpret texts, form opinions, and support arguments with evidence. Effective teaching methods promote cultural awareness and develop empathy and understanding for different societies and individuals. This helps to build a more inclusive and tolerant society, enabling students to interact with people from different backgrounds. The learning of strategy and problem-solving.

Optimizing high school English reading teaching methods is crucial to providing high school students with the knowledge, skills, and competencies to achieve academic success, personal growth, and future employment opportunities. Continuous improvement and adjustment of teaching through deep learning theory. Educators can help students become effective communicator, critical thinkers, and lifelong learners.

3 Review of research status at home and abroad

Many current researches in English teaching focus on cultural differences and the cultivation of cultural awareness in intercultural communication. By understanding the values, beliefs and etiquette of different cultures, individuals can better understand and respect the cultures of others, so as to carry out cross-cultural communication more effectively.

At the same time, there are still some difficulties in online English teaching. Starting from the connotation of the deep learning field, the deep learning field of online teaching is formed based on the analysis of the elements that constitute the deep learning field of online classroom. (TingyuJiao, 2021) Language is an important tool for intercultural communication. By learning foreign languages. and non-verbal communication methods, such as body language and facial expressions, one can improve one's cultural literacy. At the same time, English learners learn English through games, which can improve students' acuity of thinking and promote language learning (Daron,2012).

3.1 Research on English reading teaching in domestic theoretical circles

The current domestic research from the perspective of learning situation by understanding the starting point of learning situation analysis to awaken reading expectations, analysis of learning situation link study fulcrum to enrich the

reading experience (Zou Jiajing, 2024), combining the state of learning situation to promote learning to improve reading literacy, tracking learning situation to pay attention to the results of learning to promote reading growth, effectively promote English reading teaching, develop students' core literacy, focus on training students' listening, speaking, reading and writing ability, and better carry out English teaching from senior high school English graded reading teaching. Reform of the education system and cultural education: Some domestic studies focus on how to reform the education system, such as the combination of the core quality of the new curriculum and English classroom (Wang Yanpeng, 2022), and improve the English teaching and English classroom (Chen Cheng, 2020), based on practical observation and analysis.

Emphasis on education, improvement of reading teaching effect and quality, exploration of practical teaching many schools through the organization of public.

The opening of classes and other practical activities provide practical opportunities for excellent teachers with innovative ideas in education to carry out innovative depth.

Research on cross-cultural conflict resolution ability: Researchers are also concerned about how to cultivate individuals to solve cross-cultural conflicts in English classrooms. The ability to resolve cross-cultural conflicts. Use case studies and practical experience to explore strategies and methods for effectively dealing with cross-cultural conflict. (Yang Ziqi, 2024)

Overall, domestic and foreign research in the field of English teaching has achieved some important results for the development of the field, and valuable experience and enlightenment have been provided. However, in the foreign literature that the author has consulted, there are some gaps in the combination of English reading teaching and deep learning theory. At the same time, there are some common problems, such as the theoretical system is not perfect, and the application in practice is certain to be selective. Therefore, it is still of great significance for the in-depth research and exploration of the combination of deep learning theory and English reading teaching.

3.2 Current status and problems of reading teaching

There are some obstacles to be overcome in the process of optimizing the design of senior English reading teaching.

3.2.1 Large class teaching challenge

High school classes are usually large in size, making it difficult for teachers to provide personalized guidance and feedback for each student during the teaching process. This is especially important for teaching English reading because of the differences in students' reading abilities and needs.

3.2.2 Differences in students' English proficiency

In a class, students' English proficiency varies greatly. Some students may have a high level of English proficiency, while others may still be at the beginning stage. Such differences require teachers to reasonably adjust teaching strategies and content to meet the needs of different students.

3.2.3 Lack of adequate selection of reading materials

Effective English reading teaching requires rich and diverse reading materials, including articles of different topics, difficulties and styles. However, in actual teaching, teachers may face limited material resources, which is a challenge to provide adequate practice and expand reading opportunities.

3.2.4 Lack of students' interest in reading

For some students, English reading may not be attractive, they may be bored with the reading task or lack of motivation. This requires teachers to be able to stimulate students' interest and initiative in reading by selecting interesting and suitable materials for students' interests, as well as designing innovative teaching activities.

3.2.5 Selection of teaching strategies and methodologies for teachers

In English reading teaching, teachers need to choose appropriate teaching strategies and methods, how to balance the teaching focus of overall understanding and detailed analysis, how to cultivate students' reading strategies and skills, and how to integrate them with other language skills, etc. These are all challenges that teachers need to face and solve.

In response to these challenges, teachers can take the following measures to optimize senior high school English reading teaching.

(1) explore the use of technology tools and online resources to provide personalized learning support and critical feedback.

- (2) create a positive, interactive learning atmosphere that inspires student interest and engagement.
- (3) provide a variety of reading materials and differentiate teaching according to students' English level and interests.
- (4) Teach students reading strategies and skills, such as prediction, reasoning, main idea understanding, etc., to help them better understand and apply what they read.
- (5) Integrate interdisciplinary learning, combine English reading with other subject content, and enhance students' interest in reading and meaning cognition.

4 Teaching optimization strategy

Vocabulary expansion: Before introducing a new reading material, discuss the title and read it. Help students predict the content and stimulate their interest in reading by drawing pictures or asking questions. Encourage students to use roots, prefixes, suffixes and other skills to predict the meaning of new words, help them expand their vocabulary. Focus on developing students' ability to get the main ideas of the text by guiding students to find the key points information, headings and key sentences to help them understand the topic. Train students to extract and integrate text to help students deepen their understanding of the details of the passage through questions and abstracts.

Sharing of reading strategies: situational subject teaching, in which teachers combine English lessons with actual situations to stimulate students' interest and love for knowledge, and cultivate students' creativity and problem-solving ability. Guide students to infer the author's writing by means of analysis, comparison, reasoning and extension intentions, attitudes, or opinions. At the same time, teaching students various reading skills, such as scanning, skimming, underlining, taking notes, etc., to help them acquire and understand information more effectively.

In the thematic teaching of English reading, teachers can guide students to explore and think actively by designing challenging and inspiring thematic and situational tasks, and encourage students to use existing knowledge to solve problems and put forward innovative ideas. This approach encourages students to share and discuss their own reading strategies to learn and inspire each other.

Organizing activities: choose a rich and varied reading material, including articles on different topics, difficulties and styles, to meet the needs and interests of different students. Organizing students to participate in reading projects, such as reading clubs, book review writing, speech competitions, etc., encouraging them to actively participate in and share the reading experience. Create a learning environment that encourages student participation and communication, including group cooperation, discussion, role play, project learning, etc., in order to stimulate students' interest and enthusiasm. Individualized teaching according to students' needs and characteristics, understanding students' learning styles, ability levels and interests, and designing differentiated and personalized teaching content and activities according to their needs. After class, students' information can be collected through questionnaires, study notes, classroom observations, etc. Use the Internet and multimedia resources to enrich teaching content and activities, such as online dictionaries, learning platforms, virtual LABS, etc., to provide interactive and hands-on learning experiences. Teachers can use a variety of teaching methods, such as teacher-lecturing, group cooperation, role playing, case analysis, etc., to promote students' thinking and cooperation ability.

Stimulate students' ability of independent learning: Guide students to learn independent learning, such as cultivating their reading skills, writing skills, self-assessment and goal setting, so as to improve their learning ability and autonomy. Provide timely and effective feedback after class, teachers give timely targeted and specific feedback after students complete tasks or assignments. Help students to recognize their shortcomings, and provide suggestions for improvement, in order to improve the learning effect of students. Regularly assess students' learning outcomes and teaching effects, and adjust teaching strategies and activities according to the assessment results to ensure the effectiveness and proficiency of teaching.

5 Conclusion

The implementation of the above optimization strategies requires teachers to have corresponding knowledge, skills and awareness. Teachers can improve their teaching ability through professional training, teaching seminars, classroom observation and other ways. At the same time, active cooperation and communication with students and parents are also key to implementing optimization of teaching strategies to understand their expectations and feedback and adjust teaching practices in a timely manner. Teachers can also refer to educational academic research and teaching practice cases to continuously improve and innovate teaching strategies to enhance student achievement and learning experience.

However, in the process of optimizing the deep learning concept in high school English teaching, the author has also found some possible problems and shortcomings. First, some students may lack initiative and enthusiasm in the process

of inquiry learning. Students may not be interested in the topic content, or lack confidence and dare to express their own opinions. This requires teachers to pay more attention to teaching design and focus on stimulating students' interest and enthusiasm in learning.

Secondly, the effective use of teaching resources by teachers is not enough. Reading teaching needs to integrate a variety of teaching resources, such as textbooks, extracurricular English newspapers and periodicals, various kinds of network resources and so on. Some teachers may not be able to make full use of these resources due to their lack of teaching experience or limited access to resources, This requires teachers to strengthen their training and learning to upgrade their teaching abilities.

Finally, the teaching evaluation and feedback mechanism needs to be further improved. At present, some schools or teachers may pay too much attention on students' test scores and neglect the evaluation of students' learning process and ability, As a result, teachers do not have a comprehensive understanding of students' learning conditions and needs, and cannot adjust teaching strategies in time. Therefore, schools need to establish a more scientific and perfect teaching evaluation and feedback mechanism to better guide students' learning and teachers' teaching.

References

- [1] Liu Fangjun, Research on the cultivation of vocational college students' intercultural communicative competence under blended teaching, *World of public relations*, 2024(13):52-54.
- [2] Ma Lulu, Research on the cultivation of multiple language competence in college English teaching, *Shanxi Youth*, 2024(11):151-153
- [3] Shi Jingyao. A survey of cultural teaching beliefs and practices of international Chinese teachers: Based on the cultivation of students' intercultural communicative competence, 2024:9.
- [4] Yang Ziqi. A study on the current situation and cultivation of intercultural communicative competence of college students majoring in Chinese as an international Language education. *Knowledge library*, 2024, 40(11):156-159.
- [5] Zhou Ting. An analysis of teaching strategies for cultivating cross-cultural communicative competence in higher vocational English. *Overseas English*, 2024(10).
- [6] Yang Ying, Experimental research on deep learning-based question chain teaching model in senior high school English reading teaching. 2024.
- [7] Bai Qiaoling. Research on design and application of high school English reading teaching based on deep learning, 2024.
- [8] Wang Shuang. An empirical study of junior high school English reading teaching based on deep learning, 2024.
- [9] Yang Qing. Research on mixed teaching mode of Chinese reading in middle school for deep learning, 2024.
- [10] Xiao Yuhao, Zhao Xiahong. An analysis of high school English reading teaching strategies based on deep learning concept, 2024, 45(5).
- [11] Zhang Qi, A discussion on teaching strategies of English reading in senior high school from the perspective of deep learning. *Overseas English*, 2024(1):188-190.
- [12] U.S. State Department Launches Online Game to Aid English Learners By Mahnaz Daron December 20, 2012.
- [13] The Dilemma and Countermeasures of Online. English Teaching Based on the Deep Learning Field Theory Tingyu Jiao* Department of Basic Education, Luxun Academy of Fine Art.