

Exploration of high school English reading teaching strategies based on the Deeper Learning Cycle (DELIC)

Rihuo Wuga

China West Normal University, Nanchong, Sichuan 637001, China

Abstract: Deeper learning is an important way to implement English subject key competence and improve English teaching. The Deeper Learning Cycle (DELIC) provides specific steps and feasible strategies for the achievement of deeper learning in English teaching, overcome the existing problems in senior high school. Combined with the actual teaching situation and students' needs, this paper expounds the specific strategies based on the Deeper Learning Cycle in high school English reading teaching based on the teaching framework of the Deeper Learning Cycle.

Keywords: Deeper learning; The deeper Learning Cycle (DELIC); High school English reading.

1. Introduction

The English Curriculum Standards for Senior High Schools (2017 edition, 2020 revision) (hereinafter referred to as the "New Curriculum Standards") points out that the English curriculum for senior high schools has an important educational function, aiming to develop the core qualities of English subjects such as language ability, cultural awareness, thinking quality and learning ability of students, and implement the fundamental task of building virtue and cultivating people. (Ministry of Education, 2020) As one of the basic English courses in senior high school, reading class plays an important role in helping students expand their language knowledge, improve their thinking quality and improve their learning ability. However, in the actual teaching of reading, many problems such as shallow thinking level, rigid teaching model and utilitarianism following the test questions keep coming up. The depth of students' learning directly affects the development of students' thinking ability, the validity of learning and the attainment of key competence in English reading teaching (Fan Xiaojing, 2020). Based on the concept of deeper learning and the teaching model of the Deeper Learning Cycle (also known as the Deeper Learning Loop) proposed by American scholars Eric Jensen and LeAnn Nickelsen, this paper propose related teaching strategies to improves students' reading skills and abilities, and further develops students' language ability and enhances core discipline literacy.

2. Deeper learning

The concept of deeper learning originated from the research of multi-layer neural network machine learning in the field of artificial intelligence. in 1976, Marton and Saljo first proposed deeper Learning in the field of education in their book: On Qualitative Differences in Learning: I-Outcome and Process. The study found that students usually have two tendencies when understanding the content of the article: some students try to grasp the article as a whole, and summarize the main idea of the article by transferring old and new knowledge and thinking deeply; Some students focused on passages that might be asked questions and tried to memorize and retell the text. Based on this, they divided the way students learn to acquire and process information into

"Deeper Learning" and "Surface Learning" (see Table 1). Since then, deeper learning theories have been enriched and developed. The William and Flora Hewlett Foundation has proposed the "Basic framework of deeper learning literacy" through systematic analysis and synthesis of existing studies. It is interpreted as the development of six core competencies, including mastering core academic content, thinking critically and solving complex problems. In the process of learning, we should pay more attention to the connection between the contents, pay attention to understanding, and emphasize the meaning.

Table 1. Difference between deeper learning and surface learning

characteristic	Deeper learning	Surface learning
motivation	Internal motivation, willingness to learn	External motivation, product-oriented learning
aim	Comprehend-oriented	Complete learning task
Knowledge structure	Relate the previous knowledge with new knowledge	Non-systematical structure
Learning manner	Comprehend the whole problem, and find the relationship from the part in the learning material.	Memorize the material in mechanical way.
Thinking manner	Focus on the authenticity of the content with critical thinking.	Learning in isolated way
Transfer ability	Learning with transfer	Non-transfer
metacognition	Learning with metacognitive skill	Non-metacognitive skill

Resource: Dinsmore D. L. & Alexander P.A. A critical discussion of deeper and surface processing: what it means, how it is measured, the role of context, and model specification [J]. Educational Psychology Review, 2012, 24(4): 499-567.

The research on deeper learning in China started relatively late. He Ling and Li Jiahou (2005) first defined the concept of deeper learning. They pointed out that deeper learning refers to learners' critical learning of new ideas and knowledge on the basis of understanding, integrating them into the original cognitive structure, making numerous ideas related to each other, and transferring existing knowledge to new situations, so as to make decisions and solve problems. AnFuHai (2014) argue that deeper learning is a kind of based on the understanding of learning, refers to learners in the development of the higher order thinking and solve actual problem as the goal, to integrate the knowledge as the content, actively and critically learn new knowledge and ideas, and put them into the original cognitive structure, and existing knowledge migration to the new situation of a kind of learning. Liu Yuexia and Guo Hua (2018) defined the nature of deeper learning and pointed out that deeper learning is a meaningful learning process in which students actively participate in, experience success and achieve development under the guidance of teachers around challenging learning topics. Based on this, five characteristics are proposed: 1. Association and structure: the mutual transformation of experience and knowledge; 2. Activities and experiences: students' learning mechanism; 3. Essence and variation: deeper processing of learning objects; 4. Transfer and application: simulating social practice in teaching activities; 5. Value and evaluation: the implicit elements of the growth of "human".

3. Teaching strategies based on Deeper learning Cycle

The Deeper Learning Cycle is a teaching model that includes brain research, standards (grades and subject standards that teachers expect students to meet), and individual learning differences, Originated in the 7 Powerful Strategies for In-Depth and Longer Lasting Learning (Jensen & Nickelsen, 2008), Based on the desire to make teachers and students become a successful learners at deeper level, the teaching mode of deeper learning Cycle (Deeper learning cycle) is proposed and 45 effective teaching strategies are proposed, Help the students to deeply understand the knowledge, Develop students' critical thinking and the ability to solve complex problems, Let the students understand the teaching content in a more meaningful way, make them have the willingness and to learn. The Deeper Learning Cycle includes seven basic teaching steps (see Figure 1). Based on the deeper learning Cycle, this paper puts forward reasonable teaching suggestions to promote students' deeper learning ability.

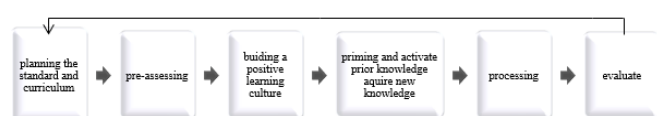


Figure 1. Frame of deeper learning cycle

3.1. Design standards and curriculum

In teaching practice, teachers should actively try to formulate teaching objectives through integrated teaching of

units, follow the principles of operability and detectability, and reflect the accomplishment formed by students after completing a certain class period (Wang Qiang, 2021). This step requires teachers to always abide by the teaching concept and teaching objectives required by the "New Curriculum Standard", arrange teaching content reasonably, and design meaningful teaching units. In addition, the teaching objective of deeper learning should focus on higher-order thinking ability of "analysis, evaluation and creation" based on "memory, understanding and application" (An Fuhai, 2014).

3.2. Pre-estimate

Through pre-assessment and analysis of learning situation, A comprehensive understanding of students' learning level and learning needs will be possessed, and teachers would collect information in a variety of ways to select strategies for activating advance knowledge and processing knowledge. In teaching practice, the specific strategies of pre-assessment include questionnaire assessment, unit pre-test assessment. It is a powerful guarantee to promote the integration of old and new knowledge, guide students to study deeply and improve the teaching effect.

3.3. Create a positive learning culture

This book focus on three aspects: 1) The sense of safe, belonging, and friendly environment, 2) positive relationship - student to student and 3) positive relationship - student to teacher. Li Min and Ge Haili (2020) emphasized that a good learning environment should be created for students to solve problems in the community, which is more conducive to the development of students' deeper learning ability. In addition, teachers should pay attention to listening to students in class, and adopt cooperative learning and group learning in teaching activities to promote communication among students, so as to form a friendly, relaxed and supportive classroom environment.

3.4. Prepare and activate prior knowledge

If the new knowledge is compatible with the original knowledge, then the more previous knowledge, the easier and faster learning. However, if the new knowledge is inconsistent with the previous knowledge, then the existing neural network structure becomes a big obstacle that should not be underestimated. Deeper learning is a kind of constructive learning, which emphasizes the internalization of newly learned knowledge into the original knowledge structure and the construction of a more perfect knowledge framework for subsequent transfer and application. (Zhou Luhuan, 2021) In teaching practice, "the old brings the new" first, and then "the new merges the old". Teachers should pay attention to activating students' early knowledge, ensuring the real connection between the old and new knowledge, and guiding the occurrence of positive transfer in learning.

3.5. Learn new knowledge

The new knowledge referred to in this paper contains the background knowledge and the core knowledge to be learned. In the process of teaching new knowledge, teachers should pay attention to the allocation of time, can use the "10-80-10" rule, that is, 10% of the time to prepare a new unit; 80% of the time to teach a new unit; 10% of the time to review the old unit, establish the connection between old and new knowledge. For the learning of the core content, teachers can reasonably divide it into, reduce the input block, reduce the

number of interferences, clarify the order of the content arrangement, and estimate the reasonable teaching time.

3.6. Deeper processing knowledge

Deeper knowledge processing is the core step in the deeper learning Cycle. Which means students could process what they have learned in a variety of ways. Deeper learning is composed of four fields: 1) Awareness. Students' interest and knowledge will be enhanced when they are aware of the definition and basic background knowledge, so that they can better understand and absorb knowledge. The appropriate teaching strategies for awareness are: 2) Analysis and synthesis, an area where knowledge is separated and combined. 3) Application. Application belongs to the transfer of knowledge. Only by applying knowledge transfer to real situations and solving problems creatively. Discover, experience and acquire through active participation in specific social practice situations. (An Fuhai, 2014) 4) Assimilation. Assimilation means that students internalize information in a personal way and establish a connection between content and individuals. Assimilation is the emotional response of students to the learning content. Activities in this field can cultivate students' ability of empathy and empathy, which is the key to students' personal growth and transformation. Activities in this field take the form of writing, debating, and creating documentaries (Liman, 2021).

3.7. Estimate

Evaluation is also an important part of deeper learning. It is not only an evaluation of students' deeper learning ability, but also an evaluation of their deeper learning process and results, as well as a continuous reflection and revision of deeper learning goals (Zhang Hao and Wu Xiujuan. 2012). In the teaching of deeper learning, more attention should be paid to the teaching evaluation method of multiple feedback.

Combined with the deeper learning Cycle, high school English reading teaching focusing on deeper learning includes deeper reading goals that point to key competence (learning goals), cognition at the progressive level of deeper reading (thinking level), and digging deeper text highlights (learning content). Lead students to deeper participation in life (learning attitude) and form deeper natural generation (learners and knowledge) (Li Fei, 2020). Therefore, the teaching strategies of the deeper learning Cycle is conducted to solve the problems of shallow thinking level, rigid teaching mode, utilitarianism of closely following examination questions in traditional reading teaching.

4. Conclusion

The Deeper Learning Cycle (DELIC) provides a new

teaching perspective for teachers to improve the ability of deeper learning and the key competence of English subject. However, it has not been widely used in China yet. Therefore, its teaching and educational value urgently needs to be reflected and deeply explored in teaching practice.

References

- [1] An Fuhai."Research on Classroom Teaching Strategies of Promoting Deeper Learning ". Curriculum Teaching Material and Method,34.11(2014):57-62.
- [2] Eric Jensen,LeAnn Nickelsen."Deeper Learning: 7 Powerful Strategies for In-Depth and Longer Lasting Learning". East China Normal University Press,31.2(2008):54-55.
- [3] Fan Xiaojin." A Preliminary study on deep learning-based teaching strategies for Junior English reading ". Foreign Language Teaching in Schools,43.7(2020):25-29.
- [4] He Ling and Li Jiahou."Improve deeper learning of students. Modern Teaching",5(2005):29-30.
- [5] Li Fei ." Research and thinking based on English teaching from the perspective of deeper learning ". Northeast Normal University, (2020).
- [6] Li Man." Practice and exploration of deeper learning route in middle school English reading teaching ". Foreign Language Teaching in Schools,43.1(2020):13-20.
- [7] Li Min and Ge Haili ." Deeper Learning in Chinese Subject: Conceptual evolution and Into the future ". Contemporary Education and Culture,12.4(2020):39-44.
- [8] Marton,F.,Saljo.On Qualitative Differences in Learning: 1--Outcome and Process[J].British Journal of Educational Psychology,1000.
- [9] the Ministry of Education, PRC." English Curriculum Standards for General High School :2017 edition revised 2020 ". People's Education, (2020).
- [10] Torshizi,Mehdi.I explain, therefore I learn: Improving students' assessment literacy and deeper learning by teaching[J].STUDIES IN EDUCATIONAL EVALUATION, 2019,61:66-73.
- [11] Wang Qiang. Overall unit instructional design in senior high school English teaching: Towards deeper learning. Foreign Language Education in China,4.1(2021):17-25+87-88.
- [12] Wu Xiujuan ." About Deeper Learning Based on Reflection: Content and Process. e-Education Research,35.12(2014):23-28+33.
- [13] Zhang Hao and Wu Xiujuan." The Study on Connotation and Cognitive Theory Foundation of Deep Learning ". China Educational Technology,10(2012):7-11+21.
- [14] Zhou Luhuan." English reading teaching design based on deeper learning concept ". Foreign Language Teaching in Schools,44.21(2021):19-24.