Conceptional Reconstruction of High School English Teaching from the Perspective of Deep Learning

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Abstract: Achieving the all-round development of students remains challenging, as senior high school English teaching theories lag behind societal and national demands. Consequently, there is a need to adopt new teaching theories. Deep learning, which emphasizes the acquisition of English language skills, values cultivation, and comprehensive student development, serves as a complementary approach to traditional education. It also holds enlightening significance for reforming English teaching in senior high schools. This paper utilizes a literature review methodology to provide practical examples of how deep learning can be applied in senior high school classrooms. Notably, deep learning stimulates students' learning initiative, guides them towards correct values, and enhances their profound humanistic qualities. Therefore, deep learning plays a critical role in fostering the all-round development of modern language talents in senior high school English teaching.

Keywords: deep learning, teaching theory, values

Introduction

Deep learning, originally rooted in computer technology and later embraced by pedagogy in the 1970s, has become a focal point of educational research. With the current advancements in information technology, deep learning research has kept pace with the times. Both domestically and internationally, big data and information technology have been employed in education to investigate the effectiveness of deep learning. Scholars have particularly focused on the application of deep learning in teaching through the use of technology. Furthermore, deep learning research encompasses a wide range of learning stages and disciplines. However, the majority of domestic and foreign research on deep learning has primarily focused on higher education. This research predominantly concentrates on deep learning strategies, methods, and evaluation, paying little attention to the cultivation of students' values and humanistic qualities. Nonetheless, deep learning in senior high school English teaching holds great significance for the all-round development of modern language talents. Deep learning facilitates students' deep understanding, transfer, and application of English knowledge, fosters high-level thinking skills, and enables them to flexibly solve complex problems. Additionally, it promotes the development of students' core literacy and the establishment of correct values, thereby cultivating individuals who possess talent and moral character. This paper centers on the conceptional reconstruction of senior high school English teaching from the perspective of deep learning theory. It explores the positive impact of deep learning on improving students' English learning initiative, fostering humanistic qualities, and shaping their values.

Drawing on the relevant literature on deep learning, this paper proposes and analyzes two teaching models from a deep learning perspective. Subsequently, it delves into the influence of conceptional reconstruction of teaching on students' learning initiative, humanistic qualities, and values, aiming to achieve quality education and promote the all-round development of students.

Literature Review

There were four teams that first carried out deep learning research in the field of pedagogy: the Swedish team, the Lancaster team, the Australian team and the Richmond team. All four teams mainly focused on deep learning methods. Marton and Saljo from the Swedish team first proposed the basic concept of deep learning. They put forward that deep learning emphasizes the understanding of the learning content and the ability to connect the learned knowledge. Entwistle and Ramsden were the leaders of the Lancaster team. [1] They expanded the connotation of deep learning from simple information processing to complex cognitive and meta-cognitive process. Learners also need to monitor their own cognitive development in their learning process. Biggs from the Australian team emphasized the importance of learning strategies for understanding the learning material. Pask of the Richmond team identified the learning methods of operative learning and comprehensible learning adopted by students. In the 80s, these four teams began to influence each other and developed together.

The research of other foreign scholars on deep learning mainly lies in the application research of deep learning, the research and development of deep learning technologies and resources, and the research of deep learning projects. In

recent years, the SDL (Study of Deep Learning: Opportunities and Outcomes) program established by the American Institutes for Research covers a wide range, comprehensive research methods, and remarkable research results. The SDL program reports that deep learning is an ability of a deeper understanding of core academic content, an ability to apply that understanding to novel problems and situations, and a range of competencies related to human interaction and self - management.

In China, He Ling and Li Jiahou proposed deep learning is that "on the basis of understanding learning, learners can critically learn new ideas and facts and integrate them into the original cognitive structure. Then learners can transfer knowledge to new situations, get the ability of decision-making and problem-solving." [2] In addition, there are many other scholars who have different definitions of deep learning based on their own insights and research. Deep learning's definition in the field of pedagogy involves many aspects, and there is no accurate, universal or official definition of deep learning. Though the definitions are different, all those connotations involved three common features: learners could have a deep understanding of learning content; learners develop higher-order thinking and can flexibly handle various problems; learners should take their initiative and achieve all-round development.

Ⅰ Conceptional Reconstruction of the Paths of High School English Teaching from the Perspective of Deep Learning

1.1 The Reform of Teaching Models

Teaching model is the teaching procedure and teaching method adopted under the guidance of a certain teaching theory and teaching idea. There are still backward teaching models in high school English teaching today that hinder the education, such as "duck-stuffing" type of teaching and so on. What deep learning advocates are to make those models that are conducive to students' deep learning more routine and standardized, and really use them in teaching. There are mainly introduce two teaching models to promote deep learning.

First, inducing-mode teaching. Guo Hua wrote that "In deep learning, it is not to translate, transmit, or instill knowledge to students, but for teachers to lead students into the context and process of the knowledge discovery and development, and guide and help students become 'participants' in the knowledge discovery rather than 'bystanders'." [3] In teaching and learning process, questions play a critical role.

The problem setting in deep learning needs to pay attention to: 1. The quality of questions. The best question design is the combination of difficulties and easy, easy questions lay before difficult questions. Thus, teachers can lead students to think step by step. 2. The location of the question. Only when the problem appears where it should appear can it play a good role in guiding students to deep learning. A large number of questions can bore students, and make them unable to distinguish the key points. 3. Diversity of questions. On the basis of mastering the basic knowledge, students should be guided to think more broadly and could ask questions independently. Questions without fixed answers, questions that can express students' own views, and questions that choose positions and express reasons all play a huge role in cultivation of students' deep learning. Problem-based teaching enables teachers, students and knowledge to be highly integrated.

Taking Unit 3: The Internet in Compulsory English for senior high school (Book 2) (PEP) as an example. The first article is Stronger Together: How We Been Changed By The Internet. Before the study, teachers could pose a question:

Q1: What does the text will say according to the title?

Before learning the first paragraph, teachers could pose a question and let students share their ideas freely:

Q2: According to our daily lives, what benefits does the internet bring us?

Therefore, linking the article with life. And then, these three questions can be set to straighten out the storyline:

Q3: What happened to Jan Tchamani at first?

Q4: How did Jan Tchamani use the internet to help others?

Q5: What does the biggest benefits brought by the internet through this article?

Teachers can also expand that topic:

Q6: What's your opinion about "the Internet is a double-edged sword"?

(Has the Internet only brought benefits to our lives? If not, give examples.)

(Do you think the Internet has brought us more good or bad? Give your reasons.)

The other teaching model is knowledge construction. "Once ideas are presented and recorded in public spaces, they are endowed with social life that can be further explored and developed". [4] Knowledge never exists in isolation in a particular time and space. In the process of learning, high school students' knowledge of English is increasing, and connecting the knowledge they have learned to form a huge system is crucial for students' lifelong development.

Knowledge construction pays attention to logic and relevance of knowledge. Teachers can use mind maps to help students construct a body of knowledge. If teachers introduce mind mapping tools into the knowledge construction teaching mode, the process and results of knowledge construction would be explicit.

1.2 The Expansion of Relevant Reading Materials

"Only in reading can students cultivate their ability to collect, process and solve the information, and can they further diverge their own English logic and expression from English reading. The language of high school textbooks is called 'flowers in the greenhouse', which is an intermediary adapted to suiting Chinese tastes." [5] Most of the reading materials in textbooks often "disconnected from students' real life, and it is difficult to reflect the psychological needs

of students' continuous development and to adapt to students' development." [6] So, students need to read a richer and more diverse range of English reading materials.

As a supplement to the relevant reading materials in the classroom, the difficulty of reading could be raised to a certain extent. According to the theory of "zone of proximal development", reading materials should be challenging, but not unacceptable thus they can motivate students to learn and stimulate their learning potential. It is also necessary to provide reading materials of different difficulties of different levels of students.

The subject matter of the reading materials should be broad, including culture, current affairs, legends, biographies and much more. After all, one of the purposes of reading is to expand students' horizons and accumulate profound humanistic literacy. When providing materials to students, teachers need to give students some guidance and provide them with some reading strategies to help them master the core content more accurately. Providing audio and video materials related to reading materials can also improve students' reading ability through watching, listening and other ways. At last, after those materials were distributed to students, teachers should take some small checking measures to check whether the reading materials are effectively used.

In fact, the provision of relevant reading materials is very flexible, which can be provided as introduction materials before class, extension materials after class or relevant materials in class. Teachers can not only provide materials, but also provide ways to obtain more materials. As the main body of learning, students can give full play to their role, so that students can share reading materials with each other. After all, sometimes, students know students best.

1.3 The Self-directed Learning in the Context of Big Data

In this era, big data is both an opportunity and a challenge. On the one hand, high school students have a huge number of English learning resources, on the other hand, excess resources have new requirements and cause new problems for the English learning strategies used by students. How to guide students to use big data? 1. Provide students with the right channel to learn a variety of materials. For example, China Daily application, Duolingo application and so on. 2. Lead students to choose appropriate learning materials and lead them to absorb those materials into their own. First, the input of language information for high school students should follow Krashen's "i+1" theory. Second, every learner's knowledge structure needs to be structured according to his or her background, environment and experience. Students are encouraged to connect new knowledge with existing knowledge and incorporate a large amount of new knowledge into their own knowledge system by using a mind map.

Self-directed learning is one of the indispensable abilities, and teachers need to teach students how to learn on their own in high school English classrooms. 1.Cultivation of subjectivity. According to the inducing-mode based on deep learning, teachers could help students to cultivate logical thinking and critical thinking, and help students to understand that they are the mainstay of learning. When their consciousness of main body is gradually developed, they will gradually be free from the bondage of intermingled big data materials, and they will be more likely to know how to use those materials and let big data serve their study. 2. Cultivation of learning enthusiasm. Through the effective and diversified English reading materials, some of them will find the English interesting, and they will be more willing to learn and explore more novel content. The improvement of learning enthusiasm and their own English level can also promote the independence of students' learning.

Ⅱ Deep Learning and Course Education in High School English

Dong Wei said "Course education is a social practice activity in which society or social groups use certain ideological concepts, political views, and moral norms to exert purposeful, planned, and organized influence on their members, so that they can form ideological and moral qualities that meet certain social requirements." [7] Course education integrates the elements of ideological and political education into each course and subtly affects students' ideological consciousness and behavior. The content of course education is not only the theoretical knowledge of national politics and current affairs and various political thoughts, but also includes the ideological and emotional education, the guidance education of the three views and so on. As *People's Daily* wrote, "Ideological and political work is fundamentally a work of people, but in fact it is a process of dispelling doubts and confusion, and it is necessary to help students understand where they should exert their efforts in life, who they should use affection for, how to use their hearts, and what kind of people they should be." [8] Education should also serve the development of the country when realizing the free development of the individual. Deep learning is conducive to the cultivation of new talents needed by the country and the implementation of course education.

Course education guides the direction of deep learning and is one of the purposes of deep learning. The conceptional reconstructing of the path of high school English teaching from the perspective of deep learning could realize the requirements of course education. The development of course education points the way for deep learning and further promotes the implementation of deep learning of high school English.

2.1 The Stimulation of Learning Initiative

Reconstruction of teaching mode of inducing-mode and knowledge construction under deep learning has a promoting effect on the improvement of students' learning initiative. Problems will stimulate the need and internal motivation to solve problems. Problem-based teaching can turn those abstract core knowledge into specific questions that contain quality goals for students development, can present knowledge to students in an orderly manner, and can lead students

to think logically. So that students feel that English is not so boring or difficult and they will be less resistant to learning English and more motivated to learn.

In addition, the use of mind mapping knowledge construction can promote the understanding of new knowledge and the revision of old knowledge. It can also help students deal with the large amount of knowledge they continue to acquire, which is more conducive to the absorption of students' knowledge. Truly turning the knowledge they have learned into their own knowledge has a positive effect of maintaining and improving students' confidence in English learning.

Learning initiative is closely related to course content. According to a research by *Guangming Daily*, the highest popular proportion of information feature selections among millennials is novel ideas, accounting for 60.56%. Extended reading materials under deep learning have diverse topics and more novel contents. Giving students a rich reading material according to their preference for content can raise students'interest in reading and subtly improve their English.

In conclusion, the updated teaching model of deep learning could help high students more active and more confident in English learning. They are conducive to students forming a correct English learning attitude, learning English more actively, and conducive to students' lifelong English learning.

2.2 The Accumulation of Profound Humanistic Qualities

Humanistic literacy includes three aspects: humanistic knowledge, humanistic spirit, and humanistic behavior. Humanities knowledge refers to the basic knowledge in the field of humanities, covering a wide range, such as historical knowledge, literary knowledge, country profile knowledge and so on. Humanistic knowledge is the foundation. Humanistic spirit is a universal self-care, which embodies concern for the meaning and value of human existence. Humanistic behavior refers to the behavior of cultivating humanistic knowledge and humanistic spirit formed by people through the experience and perception of humanistic knowledge and humanistic spirit. Humanistic behavior refers to the behavior that shows comprehensive quality, which is an external representation of humanistic knowledge and humanistic spirit.

For high school students, the most basic thing is the accumulation of humanistic knowledge. First, English itself as a language is part of humanistic knowledge, and the learning of English is also the learning of humanistic knowledge. Second, English also carries huge cultural knowledge, social background, etc.. Guiding students to grasp the core meaning of English learning content and mining the connotation of learning materials are the accumulation of humanistic knowledge. A wide range of reading materials further plays a role in promoting the accumulation of humanities knowledge.

"The humanistic qualities of students also from the interaction between students from different family backgrounds, and the dissemination and penetration of the community and social media." [9] When high school students interact with others in English, telling and spreading their own stories, it is also the transmission of cultural knowledge, the exercise of their English ability, and the accumulation of humanistic qualities. In the era of big data, learning resources are abundant and learning channels are diverse. Learning a lot of rich knowledge under big data is an expansion of humanistic knowledge; learning diverse value views to promote the cultivation of values is the development of humanistic spirit; the acquisition of independent learning ability and the cultivation of learning styles is the improvement of humanistic behavior.

2.3 The Establishment of Correct Values

The cultivation of values includes two parts: "First, 'cultivation of normative', which is to instill specific values and value norms to students. The second is education aimed at arousing students' intrinsic values and forming their healthy values, which involves many aspects such as human social values, spiritual significance and moral content." [10] For students, those beneficial norms are mostly instilled by teachers in teaching and required of them to follow. As for the students' intrinsic values, teaching provides guidance and subtle influence.

When students think critically, they will have strong value conflicts and value judgments. Questions without fixed answers, questions that can express students' own views, and questions that choose positions and for debate can inspire high school students to learn about multiple values and reflect on their own values. The evaluation methods and strategies designed by teachers for deep learning problems also guide the formation of students' values. What's more, when students read, their goal is to understand the ideological information that the author wants to convey in the text, and to resonate with the author in the reading process. Through reading, students' thoughts collide with the thoughts of different people, so that students' values are diversified and developed. It's just that the information under big data is uneven, and teachers need to constantly check the information materials and control the general direction.

In fact, the process of learning high school English in deep learning is the process of establishing good values. Students develop good learning methods, develop correct learning attitudes, and learn multiple values in English learning. Gradually, they could develop their own values.

Ⅲ Conclusion

Exploring the application of deep learning in English teaching holds significant guidance for both English learners and teachers. It emphasizes the incorporation of students into the learning process, enabling their active participation in knowledge formation and development, and fostering the integration of teachers, students, and curriculum. Within the

context of deep learning, the research on conceptional reconstruction of senior high school English teaching yields noteworthy outcomes, including the stimulation of students' learning initiative, the guidance towards proper values, and the promotion of profound humanistic qualities. Deep learning not only advances students' learning progress but also plays a crucial role in cultivating well-rounded modern language talents. It nurtures not only talent but also moral character.

The essence of deep learning lies in its practical development and improvement. The widespread adoption of deep learning has a long way to go. Moving forward, it should align with the progress of time and technology, integrating deep learning with science and technology to maximize its impact on education. Moreover, it should be implemented in collaboration with other subjects and courses, enabling comprehensive deep learning throughout the students' learning journey. Additionally, since every student possesses unique characteristics, the cultivation of deep learning should prioritize individuality. Tailoring teaching to students' aptitudes ensures that each student gains valuable knowledge and fully utilizes their strengths. This, in essence, embodies the true purpose of deep learning.

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