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Research on Teaching Theory of Promoting Students' Core Literacy Development Based on Existing Knowledge and Experience

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Abstract: Students' existing knowledge and experience has always been the core of various educational and teaching theories. The key to promote core literacy development is to study students' already-known knowledge and experience comprehensively, systematically and deeply. Students' core literacy is positively correlated with the level of existing knowledge and experience, knowing from the teaching theory of cognitive structure and constructivism.

Keywords: Existing knowledge and experience; Core literacy development; Teaching theory; Teaching suggestions

1. Concept Review

Psychological theories have greatly accelerated educational studies, since Herbart first introduced psychological principles into the field of pedagogy. Students' existing knowledge and experience belong to the term of cognitive psychology, while core literacy belongs to the category of educational purpose. In order to study how to promote students' core literacy based on their existing knowledge and experience, two concepts of knowledge and experience and core literacy must be defined.

1.1 Existing knowledge and experience and their development level

In most fields of cognitive psychology, the concept of knowledge experience includes the following attributes: The collection of relevant information that individuals obtain from an experience by effectively thinking about the event. This information is the starting point of educational and teaching works, and the key of student analysis. The development level of knowledge and experience is the cognitive level that the cognitive subject can or may achieve based on the existing knowledge and experience, which depends on the structure of existing knowledge and experience, and its essence is the original psychological level of students.

1.2 Students develop core literacy and the development level

The study results of Chinese students' core literacy development divided the development of core literacy into 1 core, 3 aspects, 6 qualities and 18 elements, which published in Beijing Normal University， September 2016. The Ministry of Education has formulated and issued curriculum standards based on this study results, which has laid the foundation for promoting students' core literacy development. Since the beginning of the 21st century, curriculum reform in basic education in China has been comprehensively promoted. Chinese teaching plan of future-oriented curriculum has been gradually improved. It can be said that China's basic education has followed up the great changes in world education in the century[1]. The development of Chinese students' core literacy system is proposed and formulated around the educational purpose of "well-developed person", with the key point of promoting human development.

None of knowledge or ability or knowledge plus ability are equal to Literacy. Literacy is certainly one of the manifestations of intelligent behavior. Enhancing literacy is inseparable from the basic support of knowledge and ability. Human literacy is comprehensive and multi-dimensional, core literacy is only the core. The educational purpose of core literacy shows the necessity and importance of turning the educational and teaching works to focus on the development of students and cultivating the development of core literacy. The essence of human development is more reflected in the change of existing knowledge and experience. According to the stages of human development, each level of existing knowledge and experience corresponds to an appropriate level of psychological

development, that is, the level of psychological development based on core literacy.

2. Teaching theory based on existing knowledge and experience to promote the development of students' core literacy

There are different levels of students' core literacy development and their existing knowledge and experience. It can be concluded from the relationship between education and teaching and student development that there is not only a positive correlation between them in terms of level division, but also a similarity in their evolution. The level of students' core literacy development is corresponding to the level of existing knowledge and experience, which influences and determines the development of students' core literacy through students' cognitive structure, construction background and knowledge significance.

2.1 Existing knowledge and experience and cognitive structure theory

Structuralism theory holds that cognitive structure determines cognitive ability. Teachers should consider students' original cognitive level, and gradually enhance students' cognitive level through teaching[2]. Therefore, the cognition based on thinking needs corresponding existing knowledge and experience, and the reconstruction of students' existing knowledge and experience also needs corresponding level of thinking to complete. The development of existing knowledge and experience and the perfection of cognitive structure restrict and accelerate each other at the same time. In the view of cognitive psychologists, the essence of education is to construct students' cognitive structure through cognitive processes[3]. The construction process of cognitive structure cannot be separated from existing knowledge and experience system of students, especially experiential knowledge based on experience (concrete experience). This experience is not only crucial for elementary learning, but also plays a role as a formal operation carrier for high-level learning, which can assist the smooth completion of high-level cognitive psychological activities. In addition, students' existing knowledge and experience also have quantitative and qualitative changes during evolution. Qualitative change above through new exercises to expand the new high level of quantitative change, the new quantitative change then leads to new qualitative change, and so on. The cycle promotes the students' existing knowledge and experience level of continuous improvement, and also marks the continuous improvement of students' cognitive structure.

2.2 Existing Knowledge and experience and constructivism teaching theory (taking the zone of proximal development theory as an example)

Constructivism learning theory emphasizes the important role of students' existing knowledge and experience[4].Vygotsky put forward the zone of proximal development theory when discussing the relationship between teaching and development[5]. To be exact, the zone of proximal development is the bridge between teaching and development. Teaching promotes the development of students through the zone of proximal development. Teaching can truly promote the cognitive development of students within the zone of proximal development. The zone of proximal development should not be a "dot" or a "surface", but a three-dimensional, all-round area based on the existing knowledge and experience system, which can improve the development level of students. According to the influence of knowledge and experience on students' development, the zone of proximal development is the gap between two levels of not only existing knowledge and experience but also core literacy. Urgent needs for cognitive re-development above the cognitive level corresponding to students' existing knowledge and experience motivate psychological development. The activeness and constructiveness of students' original psychological structure development and students' existing knowledge and experience cognitive level development are closely related. Original psychological structure is a cognitive development level based on students' existing knowledge and experience. Essence of teaching and learning is the process of promoting a sustainable development of students' knowledge and experience cognition level. And the core is that teachers help students complete the self-construction of knowledge and experience.

3. Teaching suggestions to promote development of students' existing knowledge and experience

Teaching is a process in which teachers guide students to develop their cognition level of knowledge and experience independently and actively. To promote the development of students' knowledge and experience, understanding, extracting and constructing students' existing knowledge and experience is the key link of education and teaching. How to use existing knowledge and experience to promote the development of students' core literacy?

3.1 Organizing problem chain to achieve teaching within the development zone

According to Ausubel's theory of advance organizer, advance organizer is a kind of guided learning material presented before

the learning task. Advance organizer that derived from existing knowledge and experience has a higher cognitive level than existing knowledge and experience, showing by the role of advance organizer. The zone of proximal development theory also holds that cognitive level of advance organizer is higher than the "existing cognitive development level" of students and close to the "forthcoming cognitive development level". The results show that using problem chain as advance organizer is most efficient.

3.2 Enhance knowledge and experience system of students by carrying out the embodied practice of teachers and students community

Embodied cognition emphasizes the importance of practice for learning. How to acquire embodied cognitive experience and carry out embodied cognitive teaching? The answer is "do" science. Researches on science education show that linking "do" science and "learn" science closely and simultaneously will improve learners' understanding of scientific concepts and scientific practice ability[6]. In actual teaching, both "do" science and "learn" science is to connect student' actual life and teachers' guiding role to play. Breaking away from students' real life also is out of most of the existing knowledge and experience. Students won't get more valuable knowledge and experience without teachers' actively guide. Therefore, teachers and students' community participation in practical activities plays an important role in developing students' existing knowledge and experience.

4. Conclusion

Many teaching theories emphasize that students' existing knowledge and experience is the basis of educational and teaching works. Students have knowledge and experience from real life, and higher than real life. In actual teaching, implementing goal of students' core literacy development, focusing on improving level of students' core literacy, correctly guiding and rapidly promoting development of students' existing knowledge and experience, constructing students' existing knowledge and experience, can effectively promote students' core literacy development.

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