

Strategies of Thinking Visualization Tools in Reading Teaching

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Abstract: The word "visualization" originates from the English word "visual", which means "visual and intuitive". Generally speaking, visualization is the method by which we can transform abstract things into directly observable graphics and images. In teaching, especially in reading teaching, the use of thinking visualization tools is very helpful to realize the ordering of disordered knowledge and the concretization of abstract knowledge. It can not only improve students' interest in learning, make classroom knowledge more specific, but also improve teaching efficiency and optimize teaching effect.

Keywords: Thinking Visualization Tool; Reading Teaching; Teaching Strategies

1. Introduction

Cultivating and improving students' thinking ability has always been one of the teaching goals we pursue. With the deepening of our understanding of the function of reading to educate people, we find that reading is the main form and important means for schools to impart knowledge and cultivate skills. Integrating thinking visualization tools into reading teaching can not only bring significant changes to classroom teaching, but also further improve students' thinking ability and optimize teaching efficiency. Thinking visualization tools pay special attention to the participation of both teachers and students. Both students and teachers will become the research object of this deep integration strategy. [1]Aiming at the current application status of thinking visualization tools, this paper puts forward some strategies, such as cultivating students' learning autonomy, scientifically designing the teaching process, and constructing the efficiency evaluation mechanism of thinking visualization.

2. Analysis of the application status of thinking visualization tools

At present, many teachers have begun to apply visualization tools to their classroom teaching, but the current degree of application is not wide enough and is still in the introductory stage. The application of thinking visualization tools in teaching will mainly reflect three characteristics: first, students take their own learning objectives and knowledge reserves as the starting point, and make rational use of thinking visualization tools to realize the internalization of knowledge content under the condition of mastering them skillfully, so as to enter a higher level of independent thinking. Second, thinking visualization tools should guide students to use independently, attract students to use, and make their thinking ability get rid of the mechanical memory mode, in order to expand and use their thinking, and further improve their ability to solve problems independently. Third, thinking visualization has a certain creativity, which has the thinking mode of building understanding memory into structured learning content.[2] In the process of using thinking visualization tools, students' logical thinking ability, critical thinking ability, creative thinking ability and so on can be further enhanced, so that students' independent inquiry ability and problem-solving ability can also be improved.

In a word, the application of thinking visualization tools requires students' high participation and innovation ability. In terms of the current situation of the use of thinking visualization tools, more situations are controlled by teachers rather than students themselves. At the same time, students are often too passive in the application of thinking visualization tools, which makes it become a presentation tool for teachers in the classroom, but they do not really use it to help them think and generate their own content, which leads to the loss of the main functions of visualization tools and is not conducive to the goal of cultivating students' reading ability[3].

3. Strategies of integrating thinking visualization tools into reading courses

3.1. Cultivate students' independent use of thinking visualization tools

In the reading class, teachers should first let students sort out the trivial knowledge points in the article, understand the overall structure of the article, list and discuss the key words of the article, in order to analyze its writing characteristics, and express thoughts and feelings. Then through thinking visual tools, it can help clarify the ideas of the article, analyze the characters, and achieve a more comprehensive and in-depth understanding of the content of the article.

In order to integrate thinking visualization tools and reading teaching organically, students should first have a full and in-depth understanding of thinking visualization tools, have a sufficient understanding of their characteristics and functions, and understand the relationship and application scenarios between various visualization tools such as thinking map, thinking map and concept map. Let students understand that thinking visualization can help break the barriers in reading teaching and further realize the optimization of learning methods. At the same time, students should master the drawing method, scope of use and operation steps of various thinking visualization tools. In the process of teaching students the operation steps of thinking visualization tools, teachers should clarify the teaching objectives. They should not only set the teaching objectives from the perspective of teaching plans and teaching resources, but also analyze the learning objectives from the characteristics of students' learning situation. While teaching classroom knowledge, they should pay attention to the cultivation of students' thinking ability. Clarify the logical relationship between teaching contents, and help students sort out and refine knowledge points and expand theoretical knowledge by combining in class and out of class resources and thinking diagrams. Because visualization is to make the things that can't be seen or seen more clearly, we should often review the learning results.[4] After learning new knowledge, we should often connect it with the old knowledge, so as to achieve the organic connection between the knowledge of this course and other knowledge, promote the occurrence of meaningful learning, realize the fission of knowledge at the same time, and constantly improve our innovation ability. This depends on students' observation, thinking, revision and iteration in the whole learning process.

3.2. Scientifically designing the teaching process and effectively using the visual teaching method

For teachers, visualization tools are a new auxiliary tool for classroom teaching. When using thinking visualization tools to sort out or summarize knowledge points, teachers should reasonably arrange the relationship between basic content and advanced content, introduce appropriate teaching activities, and form a "student-centered" visual teaching classroom. In the classroom of reading teaching, teachers should guide students from multiple perspectives Interpretation at multiple levels makes students become the main body of classroom thinking activities, and also achieves the teaching objectives. The characteristics of students' independent and active participation in thinking visualization tools have also been fully reflected. On the other hand, when teachers use visual tools to teach, they need to think about how to set questions and follow-up questions. A good question design can effectively stimulate students' thinking, and the learning of knowledge points should be excessive from specific problems. Thinking cannot keep the direction without the guidance of problems. Teachers need to make students realize that the visualization of thinking can not only draw pictures for the sake of drawing, but should be purposeful and take solving problems as the starting point to draw pictures. Without the guidance of the problem, the thinking can not be effectively stimulated, nor can it be organized. If thinking visualization is carried out under the guidance of specific problems, its value will be reflected and the diagrams drawn will be meaningful. [5]For example, in the process of drawing concept map, students' knowledge is related to each other. If they lose the limitation of the problem, the drawing process will be endless. At the same time, the questions set by teachers should focus on guiding students to transform their thinking into high-level thinking development. For example, in the classroom of reading teaching, when teachers ask students to show the key points of each paragraph of the combed article, if students can use clear graphic tables to show them, it is actually more challenging than pure text. Through the training and exercise of such learning tasks, the breadth and depth of students' thinking have also been improved, so as to build an efficient classroom that allows students to learn more confidently and easily.

3.3. Building a thinking visualization efficiency evaluation mechanism to form a two-way and diversified thinking visualization work evaluation method

As a good means of teaching display, thinking visualization tools have attracted widespread attention

and praise since they were used. However, at present, thinking visualization works still do not have a reasonable and scientific efficiency evaluation mechanism to manage them. In the past, unreasonable evaluation mechanism will affect students' enthusiasm for learning. Although the thinking visualization tool attaches great importance to students' active participation, it also needs a reasonable evaluation method to highlight its ability to enhance the depth of thinking and reflect the characteristics of pluralism and two-way, that is, to establish a compound evaluation system that organically combines achievement display and curriculum evaluation, process evaluation and summary evaluation, teaching efficiency evaluation and learning efficiency evaluation, and teacher evaluation and self-evaluation, so as to make full use of the evaluation mechanism to gradually promote the application of thinking visualization tools to reading teaching, and effectively improve students' thinking ability and reading ability.

4. To stimulate and strengthen the students' thinking, so that the students have a cognitive conflict

The ultimate purpose of speculative reading teaching is to improve students' way and ability to think about problems, while the key and starting point of thinking development lies in cognitive conflict. The so-called cognitive conflict refers to the conflict or conflict between the original cognitive structure and the real situation when the students face the new knowledge points. To put it simply, the existing situation is compatible with the existing knowledge structure, which in turn leads to the generation of cognitive conflict, and stimulates the students' thinking and operation mode in turn. So that students can have corresponding cognitive conflicts on the basis of a certain reading experience. There are two main ways to produce cognitive conflict, one is that students in the primary stage of reading, their own reading experience is lack, students often have many problems at this stage, and will bring them to the classroom. Another way is for teachers to try to organically connect students' own ideas with the new cognitive problems they have generated in class, so as to induce cognitive conflicts. In short, the key to the development of students' thinking ability in reading teaching lies in to produce cognitive conflict and use two ways to produce cognitive conflict. The first is to make students come to the classroom with problems. The specific realization method is that in the guidance stage, the teacher provides the students with the basic framework of the mind mapping, and shows the students the connection line in the reading content framework and the phrases related to the main content to be filled in. At this stage, the teacher asks the students to fill in the relevant phrases in the reserved position. By filling in the phrases of the thinking map in the guidance stage, the teachers can not only understand the basic situation of the students' thinking and cognitive ability, but also expose the students' thinking defects. In addition, if students are resistance in the process of filling in the mind map, students' thirst for knowledge will naturally be stimulated, so that students can be more interested in exploring problems in class, and then promote the generation of cognitive conflicts. On the other hand, if students want to fill in the mind map in the reading guide stage, they need to read the reading materials carefully, which can also make students leave a deep impression on the reading content. Finally, the mind map prepared by the teacher to fill in for the students can also provide the students with an idea of reading guide. For example, the bubble chart is used to perceive the main things appearing in the reading materials, and then to inspire the students, to guide them to think from multiple angles, and to promote the comprehensive cultivation of thinking. In addition, when students show the specific structure of reading materials, it is more conducive for teachers to find and infer students' thinking ability, find students' thinking loopholes, and then can better adjust teaching ideas, improve teaching efficiency, and achieve educational goals. As mentioned above, the second way for students to produce cognitive conflict is for teachers to organically connect students' own ideas with the new cognitive problems that students have generated in order, so as to promote the generation of cognitive conflict. However, it should be taken into account that in the primary stage of reading texts, students often have certain reading disorders, which is caused by their lack of life experience and other reasons. The most obvious feature is the separation and incoherence of thinking. When students at the beginning of reading the text, they will think they understand something in a vague way, but they can not sort out a clear reading idea and accurately explain their reading feelings. In this process, the thinking visualization tool can play a role through the graphic technology to help students to visualize the thinking in their minds, clarify the writing thinking of reading materials, and better present the students' thinking results in the reading process. The thinking visualization tools are used to induce students' existing knowledge and express their own ideas more clearly and accurately. Teachers should prepare for organically connecting students' self-ideas with the existing cognitive problems in class on the premise of respecting students' personality differences. On the other hand, the mind map made by teachers in the guidance stage will become the reference object for students to learn in class. Students will compare the mind map before and after teaching in class, so that students can grow up in observation, find the changes in their way of thinking, and improve their interest in reading in progress. Teachers should pay attention to carefully choose the thinking visualization tools and thinking mapping used in the guidance stage to

stimulate students 'thinking, so as to suit students' existing cognitive ability and insert certain cognitive conflicts. Teachers can distinguish the key content of the reading text in advance, and draw the fill-in-the-blank template of the mind map accordingly.

5. Conclusion

The rational use of thinking visualization tools can better reflect the internal laws and principles of things and the deep mechanism than the pale written expression. The application of thinking visualization tools in reading teaching will inevitably improve its teaching effect. Under the activities of knowledge point extraction and generalization with thinking diagram as the medium, the reading classroom will move from the traditional educational mode of teachers instilling knowledge into students to the construction of thinking ability, and the teaching mode of innovative ability development will further improve students' learning efficiency.

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