

Discussion on Interactive Strategies in Children's Scientific Inquiry

Activities

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Abstract: Scientific inquiry activities are the process of children finding, analyzing and solving problems. Children's real inquiry begins with the search for answers to questions, which is actually the process of seeking answers to the questions they are interested in with direct perception, personal experience and practical operation. At the same time, in the process of children's SI, teachers should effectively use the interactive strategies of grasping the generation of questions, using questions to promote inquiry and using questions to revitalize inquiry, so as to support and promote children's in-depth learning and inquiry.

Keywords: Scientific Inquiry; Question; The Interactive Strategy

Introduction

The Guide tells us that scientific inquiry is a process in which children discover, analyze and solve problems. Children's real inquiry begins with the search for the answer to the question, which is actually the process of seeking the answer to the question of interest by direct perception, personal experience and practical operation. Therefore, it is of great significance to find "appropriate inquiry questions", that is, questions that children are really interested in and can find answers through inquiry. Then, how to make the "question March" play effectively in scientific inquiry activities?

1. The prelude to the question March -- the use of questioning to capture generation

Children are curious and inquisitive, this is the nature of children, they have a strong desire for knowledge, but if the lack of adult attention and guidance of the spark of knowledge, often flash out. Therefore, teachers should timely grasp the problems generated by children, judge whether children's problems are valuable, grasp the valuable problems raised by children, in order to trigger children's thinking, so as to promote the in-depth development of activities.

1.1 Learn to Listen

When children ask questions to discuss with each other, the teacher should calm down and listen carefully to their conversation, take some notes, and capture the valuable questions. As in the case of "Earthworm" :

It was one day in April. It had just rained, and the breath of spring was already very strong. The children who were doing outdoor activities suddenly found that there were a lot of things like piles of shit on the grass.

The teacher asked with mock curiosity, "What is this?"

"It's worm poop."

"It's a worm's hole."

"No, I know it came loose."

"Why didn't they have them before?"

"Where is the home of an earthworm, and how does it breathe in the mud? ..."

So the children became very interested in earthworms, and began to talk about them and ask questions of their own. At this time, in the face of the children you a sentence, I a sentence, no matter right or wrong answer, teachers should be patient to listen, encourage children's curiosity to ask, mobilize their enthusiasm to explore the habits of animals.

1.2 Learn to observe

Not all children are good at language expression, and not all problems can be heard from the language, sometimes from children's movements, expressions, etc., can also be found valuable problems. Therefore, when teachers grasp children's problems, sometimes they can listen attentively, sometimes they can also take the initiative to ask. What part of a strawberry can germinate?

One afternoon in the living room, the children made fruit salad with bananas, strawberries and kiwi fruit. As they cut, the children compare the shape, color, softness and firmness of each fruit and what the fruit looks like inside. Suddenly a child asked: "teacher, banana, strawberry, kiwi these fruits have no nuclear, that their seeds where? How do they grow?"

Hearing this, the teacher asked the children, "Yes, where are their seeds?"

Some say, "Strawberries are seeds."

Some say, "A leaf is a seed."

And said: "Above the black grain is the seed."

Seeing that the children were arguing, the teacher suggested that the children bring a few strawberries back to class and plant them in the soil from different parts of a natural corner to see what would sprout. The proposal received an enthusiastic response from the children. People drew and voted on their guesses before the experiment, and then watched the strawberry seeds they cared for each day to see how they changed. At the same time, the teacher also observed with the children, and continued to ask the children in the observation of different ways of planting strawberry changes, found the problem timely answer, so that the children have a strong interest in planting, enhance the children's observation and practical ability.

1.3 Value Judgment

Only by finding valuable questions can we find opportunities to promote the development of activities. Whether the "question" of inquiry plays a role in promoting the development of children, whether it is the needs and interests of most children, whether it is in line with the existing experience level of children, whether there is the value of inquiry and space conditions, these are the basis of teachers' value judgment. In the case of earthworms, the teacher found that the spring rainy season was when the earthworm appeared. Earthworms were around the children, unfamiliar as they were, but they were interested. Taipan theme Animal World - "Special skills" also happens to have about "earthworms" content. Therefore, the educational goal of this activity is to arouse children's attention, explore the animals around them, and understand the relationship between the living habits and abilities of earthworms and human beings. To grasp the problems generated by children, the exploration of animals is carried out along the trend.

2. Main theme of Question March -- Use questioning to promote inquiry

When children have unconscious exploration behavior, teachers should encourage children to find problems in activities, put forward questions, and then explore and solve problems. In teaching, if we do a kind heart, we will find many problems generated by children, often reflect the interests of children. Teachers can capture valuable information, seize the opportunity, education. How to make children give full play to their initiative, enthusiasm and willingness to explore and discover in scientific activities? In the process of guidance, it is difficult to know when teachers need to ask reasons and when they need to find out. Therefore, in order to ask questions to the point, teachers use questioning to promote inquiry, and use "why" to promote the performance of "question march".

2.1 Don't ask questions randomly

Teachers are eager to know more about children's thinking process, grasp more feedback information, and push children to further interact with the material, so there will be frequent problems. Teachers fully think that their problems will trigger children's thinking, will inspire the collision of different ideas, will inspire children to produce new exploration methods. However, questions beyond children's cognitive level or inappropriate will often become the biggest weapon of destruction for children to interact with materials. Therefore, teachers should think carefully before raising questions, never ask questions at will. At the same time, they should follow children's existing cognitive level and experience, and choose activities suitable for children's age characteristics and exploration

interests to match. Only in this way can good results be achieved, otherwise it will backfire.

For example, when the children are dividing up different animals in the "zoo", the eager teacher wants the children to be able to explore more about the different habits and characteristics of animals, so he starts to interact with the children: "Why do they all have black and white patterns?" But when this question is asked, the children are suddenly confused and unable to answer the scientific reason. The middle class children in the tangram individual activity, with different pieces of the puzzle to create different robots, the teacher asked: "why use a triangle to form the head, with a square to form the feet?" The child could not answer his real reason for the choice of the two shapes, but felt like it. Therefore, teachers want to test the "why" ask is not reasonable, may wish to stand in the children's point of view to ask yourself and answer, experience the reasons for the children's confusion, and then gradually guide, find out the solution to the problem, so that the problem can be solved smoothly.

2.2 Clear Positioning

The common question statement "why", in fact, in the process can not be presented alone. It either foreshadows the question before or supplements it after the question. The "why" must be pointed clearly, so as to play a role in pointing the direction of children's thinking. When teachers want to use the "why" to further promote the inquiry process, they must be clear about the orientation, when to point to the discovery process and when to point to the explanation of reasons, otherwise the children will be ambiguous in the interaction, and it is difficult to answer the point.

In the "Drink Change Change" material interaction, the teacher began by showing a purple cabbage and asking, "Does purple cabbage have water in it? Why is there water?" The point of this question is the explanation of reasons. Children have difficulty focusing when answering, because they can hardly understand the relationship between "water" and "purple cabbage", so this question is difficult to trigger children's further operation and verification. The teacher might as well ask another question on this basis: "Why is there water in the purple cabbage, and is there any way to know?" Now the kids will have something to do. They'll find all kinds of tools, try out all kinds of ways to make purple cabbage come out of the water, and the interaction will be rich and vivid.

It is not difficult to find from this example that if teachers simply ask questions with the help of "why", it is difficult to achieve the purpose of teacher guidance, because "why" more points to the explanation of a cause, and children's age characteristics determine that they are good at intuitive description and operation of phenomena, in the mining of cumulative comparison and operation perception of phenomena, the cause can slowly surface. Therefore, when the teacher's "why" makes the children do not know how to manipulate the material, we might as well try to supplement the question, so that the question is more focused, so that the "why" of the question, the positioning is clearer, and the operation purpose of the children is more clear.

2.3 Setting Up Steps

Children's nature is inquisitive and curious. How to skillfully use their nature to fully mobilize their interest and enthusiasm for scientific inquiry? Unimaginative problems are higher than children's life experience, and their vitality will not be short, but the state of isolation will wear out children's enthusiasm for exploration, and children will retreat with the accumulation of problems. Therefore, before and after each question should be set up for the child, so that the child can climb step by step along the teacher set up the ladder. Such steps may be words of encouragement and recognition, may be behavioral help, may be material support. In short, teachers are busy after questions are thrown out. Gradients make teachers busy observing children's thinking direction, observing children's exploration process, and giving children a helping hand in time. The erection of these steps is an essential booster and power in the process of children's scientific inquiry.

3. Variations on the Question March -- Use questioning to bring life to you.

Questioning may be the essence of scientific activity. Its rational use and proper treatment can not only better trigger children's speculation, stimulate children's operation, promote the interest in inquiry, but also enable children to find more methods in the continuous in-depth solution of problems, accumulate more experience, experience more fun, which is the real meaning and connotation of scientific activities to bring children. Therefore, clever questioning can make scientific activities full of vitality.

3.1 Stimulate the desire to know

In the implementation of scientific inquiry, it is mentioned in the Guide that children should be encouraged to make guesses and

hypotheses and explain the reasons, so the window of guesses and hypotheses is the teacher's questions. In the conjecture, children will be unconstrained to put forward their own views, in the face of teachers' problems, they will combine their own practical operation to verify the view, into the process of exploration, their "want to know" step by step decryption. In this process, analysis, anticipation, design and solution are the important links of inquiry, and the questions put forward by teachers to stimulate children to "want to know" can become a golden key to stimulate children's real brain, deep thinking and problem solving.

In the "Balloon Up" personalized materials interactive activity, the teacher showed a balloon and asked, "If the body does not touch the balloon, how to make the balloon move? Why does the balloon move?" As the teacher's question situation is thrown out, the focus of the children's observation is brought to the "get the balloon moving" challenge. They used all their tricks to try to get the balloon moving, blowing with their mouths, fanning with their hands, fanning with the sides of their clothes, and running back and forth with their bodies. In the process of exploring, and in the successful experience of feeling the balloon move, a single question led them to observe and compare the methods they and their partners used, and finally to find the common characteristic of all the methods -- the wind. Therefore, the teacher throws out a suitable question, can help the child reach the want to know more targeted, find the best way to solve the problem.

3.2 Extension Unknown

The guidelines also state: "Encourage young children to engage in a variety of scientific activities in their lives". The one-day activities of kindergarten are only for children to discover the world and explore a corner of the world, so whether the exploration that can make the kindergarten, family and society form a joint force can also be realized with the help of questions? Through the expansion and extension of a scientific phenomenon, can we dig out more children's unknown areas?

In every organic infiltration as far as possible, teachers deliberately leave more space for children to think and operate: why the same hole, the same balloon, the same fan, but the balloon flying height is not the same? Why does the same amount of purple cabbage, added to different drinks, some of the color out of blue, some red? ... With these questions, our exploration activities have been extended and expanded. Our scientific activities can not only be in the classroom, in the outdoors, but also extend to every family, so as to arouse children's interest and enthusiasm in exploring more lasting and more extensive. Therefore, teachers should try their best to extend children's unknown areas by means of diversified means and arouse children's curiosity and interest in exploring the unknown.

Children's age characteristics determine that their exploration in the initial stage is mostly casual exploration behavior. In the process of exploration, if teachers can provide a "challenging" exploration platform on the basis of "questioning", interact and communicate with children consciously, and guide the growth of hair, then the spark of children's exploration may be more lasting. Therefore, the role of education is how to gradually transform children's unintentional behavior into intentional behavior, make their exploration interest deeper and more lasting, and lay a solid foundation for the formation of children's exploration ability in the process of constantly improving exploration consciousness and cultivating exploration spirit. At the same time, the application of "Questions" trilogy can effectively promote scientific inquiry activities, arouse children's interest in learning, stimulate meaningful interaction between children and children, between children and materials and environment, and help children to develop further inquiry questions, so as to effectively support and promote children's in-depth learning and inquiry. Let children grow up healthily and happily in a thick learning atmosphere and persistent exploration context!

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