



A Survey on The Observation Ability of Young Children in Planting Activities

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Abstract: Planting activities refer to the process in which children interact with plants, soil, and various tools. Children continuously observe and record the growth of plants, thereby promoting the comprehensive development of their overall qualities. Planting activities are also a comprehensive task, involving many different experiences, such as quantity, measurement, space, cooperation, planning, and so on. Observation is a fundamental skill in the process of scientific inquiry. The nature corner is a playground for children's exploration. In the nature corner, children can get close to nature, experience greenery, experience the joy of harvesting and interest in inquiry, and cultivate their ability to observe and discover in natural sciences. This study will adopt literature analysis and observation methods. Starting with children's observation abilities during planting activities in natural corners, observing the purposefulness, continuity, sequence, and ability to express observation results during planting activities

Keywords: observation skills, planting activities, young children

1 INTRODUCTION

"Observation" is an important means of scientific research; it is a scientific method of purposefully and systematically cognizing and describing the objective world, representing a higher level of perception. For children, observation is a very important way to understand the world; it is also the foundation and necessary condition for developing abilities such as thinking, imagination, and understanding. It plays an irreplaceable and important role in children's development. In scientific activities, observation is indispensable and fundamental. In the "Guidelines for Learning and Development of Children Aged 3-6," the guiding opinions on children's exploration suggest that children should be guided to observe, think, compare, and continuously observe on their own, consciously cultivating their observation abilities

Nature plays a significant educational role in children's growth. Planting activities satisfy children's curiosity and exploration of the natural world, providing them with a "perfect laboratory." Xu Xiying (2012) pointed out that planting activities are an important way to stimulate children's interest in exploring scientific phenomena. Deng Shubin (2019) believes that observation can develop children's scientific inquiry skills, and teachers should consciously guide children to observe their surroundings and support their observation. Other researchers believe that observation during planting activities can enhance children's self-service awareness and help them gain rich scientific experience. In 2017, Professor Yu Yongping proposed the concept of "full harvest" in the Early Childhood Education

Magazine. He pointed out that the "all" in "full harvest" refers to multiple levels, multiple aspects, and multiple subjects, indicating that planting activities can provide children with diverse experiences. Wang Xinni proposed: The kindergarten nature corner provides children with a "living textbook" for planting activities and is one of the important ways for children to improve their scientific literacy

By reading relevant research literature, it was found that several researchers have conducted multidimensional and multi-angle discussions and studies on improving children's scientific literacy in nature corners. However, these studies as a whole tend to have a single perspective, focusing on overall natural corner activities and general scientific literacy, while lacking research on children's observation abilities through planting activities in nature corners. Therefore, this article will observe the current state of children's planting activities in nature corners, raise issues arising from observation ability, and provide corresponding strategies.

2 RESEARCH SUBJECTS AND METHODS

2.1 RESEARCH SUBJECTS

2.1.1 SELECTION CRITERIA

Y Kindergarten is the first public kindergarten established in the district and serves as the main campus of the district's Early Childhood Education Group. The layout of the kindergarten



fully meets the requirements of modern kindergartens, equipped with spacious indoor natural corners, children's climbing areas, graffiti zones, and sandwater pools. The kindergarten adheres to the "child-centered" educational policy and the principle of "nurturing children's hearts with love, promoting joyful learning through joyful teaching," adopting small class sizes to create a relaxed and enjoyable learning atmosphere, based on games and hands-on activities, aiming to cultivate children's hands-on skills and overall qualities.

This study takes children in the junior class of Y Kindergarten as research subjects. In the kindergarten junior class, the average age of children is 3-4 years old. At this stage, children enjoy contact with nature and also enjoy labor, allowing them to observe things they are interested in carefully. They can make preliminary generalizations about things, have concrete and vivid thinking that can be summarized in abstraction, and are characterized by their physiological and age-specific abilities, providing feasibility for planting activities in the nature corner.

2.1.2 DETERMINE THE RESEARCH SUBJECT

This study will select all children from the junior class group of Y Kindergarten as observation subjects according to the actual needs of the paper. The junior class group consists of two classes: Grade 1 and Grade 2. Grade 1 has 19 boys and 17 girls, and Class 2 has 18 boys and 16 girls. There are a total of 70 children, with boys accounting for 53% and girls 47%. There are 5 children aged three and a half, accounting for 7.1%, 63 children aged three, accounting for 90%, and 2 children aged two and a half, accounting for 2.9%.

2.2 RESEARCH METHODS

2.2.1 LITERATURE REVIEW METHOD

The literature review method refers to a research approach in which researchers collect and organize relevant literature in their field to study literature and form new understandings. This article will utilize the Wanfang VIP database, CNKI database, and library databases. Select "Preschool Scientific Inquiry," "Preschool Children's Observation," "Nature Corner Activities," and "Selecting representative literature sources as keywords, reviewing the historical development of the selected issues and summarizing them, and based on previous research, gradually improving the theoretical viewpoints and practical tools for this project by combining the actual conditions of kindergarten children.

2.2.2 OBSERVATION METHOD

In this study, a representative kindergarten called Kindergarten Y was selected, and the children in the junior grade group were observed. By referring to Liu Xinxue's "Preschool Psychology" (2nd edition), the observation content was identified as the purposefulness, continuity, sequentiality of observation, and the ability to express the results during the planting activities in the natural corner, and the observation results were analyzed and analyzed. To gain a more complete understanding of the planting activities of the natural corner in the junior grade group of Kindergarten Y, the author will delve into the children's planting activities, using nature observation methods to conduct specific observations and record the planting activities in the

kindergarten's natural corners in detail. At the same time, according to the observation record sheet, each activity is recorded and described, and analyzed and summarized from multiple perspectives and levels. Comprehensively, comprehensively, objectively, and truthfully demonstrates the observation abilities of young class children in the kindergarten's natural corner planting activities, and identifies problems that arise during observation

3 PROBLEMS AND ANALYSIS OF OBSERVATION ABILITIES IN YOUNGER CLASS CHILDREN DURING PLANTING ACTIVITIES

3.1 CHILDREN DO NOT HAVE A CLEAR PURPOSE FOR OBSERVING PLANTING ACTIVITIES

The purpose of observation means enabling observers to actively arrange their sensory activities, ensuring that throughout the process, they obey the set observation objectives, making observation both selective and targeted. Children in small classes often cannot consciously and purposefully observe certain things, or easily stray from the purpose of observation. Therefore, the effectiveness of children's observation depends on whether the object is clear; the clearer it is, the more children can actively eliminate external distractions, making the observation more complete and clearer. Complete competence in observation purpose means children can actively eliminate interference and complete the observation task according to the observation objective and the teacher's requirements; Basic competence means the child can basically complete the observation task according to the observation purpose and the teacher's requirements, with reminders from the teacher or peers; Incompetence means the child cannot complete most tasks according to the observation objective and the teacher's requirements, despite repeated reminders from the teacher. For children in the younger class, throughout the observation activity, teachers need to present the purpose of observation step by step to achieve the desired effect. However, during the activity, the teacher did not clearly explain the purpose of observation to the children. During the observation process, the children were unclear about what they were observing and could not complete the task smoothly.



FIGURE 1: CHILDREN OBSERVING PURPOSE DURING PLANTING ACTIVITIES. DIAGRAM: 3 CHILDREN ARE FULLY



COMPETENT (WHITE HOLLOW COLUMN), 14 ARE BASICALLY COMPETENT (DIAGONAL SHADED COLUMN), AND 53 ARE INCOMPETENT (BLACK SOLID COLUMN).

OBSERVATION (DOT COLUMN), THIRD OBSERVATION (GRID COLUMN), FOURTH OBSERVATION (INTERSECTING COLUMN), AND FIFTH OBSERVATION (BLACK SOLID COLUMN).

From Figure 1, it can be seen that when teachers do not clearly explain the observation purpose to the children, only 4% of children can actively eliminate interference and complete the observation tasks according to the observation objectives and the teacher's requirements. 20% of children basically complete the observation tasks according to the observation objectives and the teacher's requirements, after reminders from teachers or peers. As many as 76% of children cannot follow the observation objectives and the teacher's requirements, and even after repeated reminders by teachers, they still cannot complete most tasks.

3.2 YOUNG CHILDREN LACK INTEREST IN OBSERVATION, AND THE DURATION OF OBSERVATION IS SHORT

Persistence of observation refers to the length of time the observer maintains a steady view of the object being observed. Young children in the younger class have shorter observation periods and tend to focus their attention on different directions and goals. However, for things children like or are interested in, the observation time can be extended. The duration of observation is related to the object of observation. Teachers need to select plants that interest children to carry out observation activities, and also maintain children's interest in the plants they are planting during their growth. During the first observation activity, children gather around the plants they are observing, carefully observing with observation tools and exchanging observations with the children nearby. They show some interest in new things, but in subsequent observations, because the plants grow slowly and cannot be seen with the naked eye, children gradually lose interest in the plants they are observing. After three minutes, they start playing with the observation tools nearby, and the duration of observation gradually shortens.

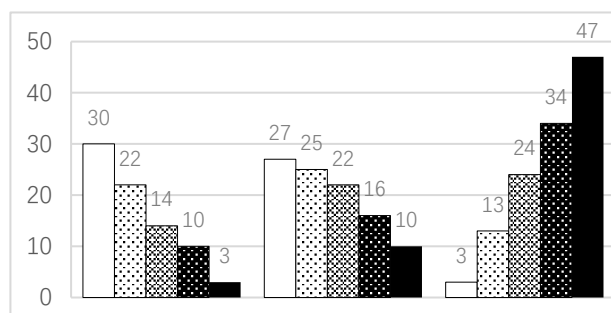


FIGURE 2: CHANGES IN OBSERVATION DURATION DURING THE ACTIVITY OF PLANTING VEGETABLES: DIVIDED INTO THREE GROUPS: CONTINUOUS OBSERVATION FOR MORE THAN 6 MINUTES, CONTINUOUS OBSERVATION FOR 5-6 MINUTES, AND CONTINUOUS OBSERVATION FOR LESS THAN 4 MINUTES. EACH GROUP INCLUDED THE FIRST OBSERVATION (WHITE HOLLOW COLUMN), SECOND

As shown in Figure 2, during the first observation, 50% of children could continuously observe the object for more than six minutes, 45% for 5-6 minutes, and only 5% for less than 4 minutes. However, as time passed, the duration of observation dropped significantly. By the third observation, only 23.3% could observe the object continuously for more than six minutes, 36.6% continued for 5-6 minutes, and those observed for less than 4 minutes rose to 40%. By the fifth time, only 0.05% of children could continue to observe for more than 6 minutes, those who observed for 5-6 minutes dropped from 45% at the start to 16.6%, and those who observed for less than 4 minutes rose from 5% at the start to 78.3%. From this, it can be seen that after children lose interest in observing plants, their persistence gradually weakens.

3.3 CHILDREN ARE IN A DISORDERLY STATE DURING THE OBSERVATION OF PLANTING ACTIVITIES

The sequence of observation refers to the sequence in which the observer observes the object according to its characteristics and purpose. Objective things and their development processes follow certain rules of order, so we can observe in a certain order. The order of observation can be based on orientation and sequence, or from point to surface or from surface to point. When children observe objective things, teachers need to guide them to observe from far to near, then from top to bottom, following their characteristics. The ability to observe in sequence means children can observe in a certain sequence; Basic order means children can observe in order under the teacher's guidance; Not orderly means children observe in order during observation. During planting activities, children do not follow a fixed order when observing. When observing plants, the teacher leads them to start observing from the roots, then the stems, leaves, and flowers. However, the children alternate between observing flowers and stems, making their observations chaotic, jumping around the subject, glancing east and west

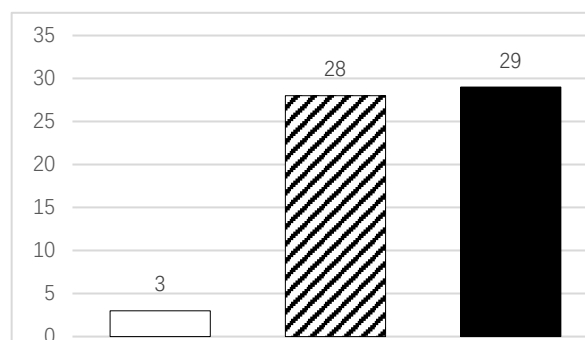




FIGURE 3: CHILDREN'S SEQUENTIAL ABILITY DURING PLANTING OBSERVATION: DIVIDED INTO SEQUENTIAL (WHITE HOLLOW COLUMN), BASICALLY SEQUENTIAL (DIAGONAL SHADED COLUMN), AND NON-SEQUENTIAL (BLACK SOLID COLUMN).

From Figure 3, it can be seen that only 5% of children can observe in a certain order, while 68.3% observe in a chaotic or disorderly manner. Even under the teacher's guidance, only 46.6% can observe objects in a certain order. From this, it can be seen that very few children can observe in order during observation activities; most children rely on teacher guidance to observe in a certain order, and even most children observe in a disorderly order under teacher guidance.

3.4 CHILDREN HAVE WEAK ABILITY TO EXPRESS OBSERVATION RESULTS DURING PLANTING ACTIVITIES

The ability to express observation results refers to the observer observing the object to extract the common and essential features of the same type of thing, then summarizing or connecting multiple things to draw conclusions about the internal connections between things. Young children in the lower class cannot grasp the essential features of the object they observe; what they observe are usually scattered features and isolated phenomena. Teachers need to guide children in observation to form a relatively complete and systematic impression of the observed object, thereby inducing the essential characteristics of the object. Smooth expression means that after observation, children can smoothly express the obvious characteristics of the plant; Generally smooth expression means the child can basically and smoothly express the obvious characteristics of the plant; Poor expression means the child cannot smoothly express the obvious characteristics of the plant. Although children have some understanding of how to observe plants in the middle of school, they still cannot accurately express the observation results verbally. When teachers ask children to share the growth status of the plants they observe, they often remain silent, not knowing how to express their thoughts.

As shown in Figure 4, only 3.33% of children can successfully express the obvious features of the observed plants, while only 20% can basically express these obvious features, and 76.6% cannot do so. This shows that the children's overall ability to summarize observation is weak, and they cannot effectively combine the obvious features of the observed object.

4 STRATEGIES FOR CULTIVATING OBSERVATION SKILLS IN YOUNGER CLASS CHILDREN DURING PLANTING ACTIVITIES

4.1 CLARIFY THE PURPOSE OF OBSERVATION DURING PLANTING ACTIVITIES

Observation should have a purpose, a center, a scope, and focus on the object being observed. Determining the purpose of children's observation greatly affects the results of their observation. When children's observation goals are clear, their attention will focus on what they are observing, enabling better observation results. Therefore, teachers should set observation goals for children and not let them observe aimlessly or randomly, as this can lead to wasted opportunities and time. Before the observation activity begins, teachers should present specific tasks and requirements to the children, reasonably arrange the observation content, and develop detailed plans, so that children observe in problematic situations with questions in mind and clear objectives. Teachers can adopt phased and layered activity methods to guide children to move from shallow to deep, from surface to deeper when observing plants. First, children should be made aware of the characteristics of plants, then observe when problems arise, so that their observation is no longer just a visual experience. Finally, guide them to observe differently, focusing their observations on different areas according to the plant's growth status. In addition, due to children's age characteristics, their accumulation of knowledge and experience is limited. If the observation goals are too high or too low, or do not match reality, their interest in observation will be dampened, ultimately leading to failure in the observation activity. Therefore, when choosing the purpose of observation, teachers should pay attention to appropriateness and ensure it matches the children's age and physical and mental development level.

4.2 CULTIVATE CHILDREN'S INTEREST IN OBSERVATION AND IMPROVE THEIR PERSISTENCE IN OBSERVATION

Observation is based on attention, and observation can spark children's interest in various things, which in turn leads them to deeper observation. Young children in small classes are easily distracted, so only when they are interested in something or something will they become very focused. Because children are relatively young, it is extremely difficult for them to continuously observe the growth process of plants on their own. Therefore, the main motivation for continuous observation relies

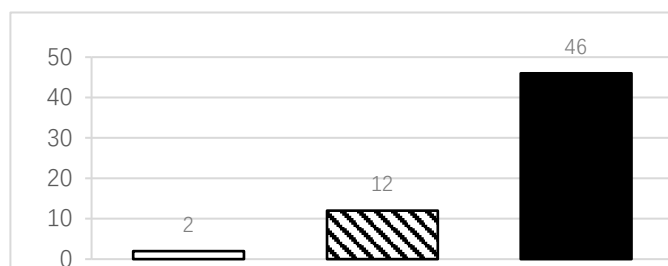


FIGURE 4: CHILDREN'S ABILITY TO EXPRESS OBSERVATIONS DURING PLANTING ACTIVITIES: SMOOTH EXPRESSION (WHITE HOLLOW COLUMN), BASICALLY SMOOTH EXPRESSION (DIAGONAL SHADOW COLUMN), AND INABILITY TO EXPRESS SMOOTHLY (BLACK SOLID COLUMN).



on the guidance of interest. Based on this, teachers should use effective methods during planting activities to stimulate children's interest, leading them deeper into natural corners, encouraging them to extend observation time under the influence of interest, thereby improving the persistence of observation. Before the activity begins, teachers can survey the plants children are most interested in class. Based on the survey results, select plants with high feasibility and popularity. In this way, what children choose independently is often the content they are interested in, allowing them to fully immerse themselves in planting activities and train their observation skills through planting. During the activity, teachers need to pay more attention to children's points of interest in plant growth, guiding them to observe and think based on their interests, so that children maintain their curiosity about plants. Cultivating children's persistence in observation through interest prevents them from feeling bored, bored, or boring, making it an extremely effective way to cultivate their skills.

4.3 TEACH CHILDREN THE SEQUENTIAL METHOD, SO THEY LEARN TO OBSERVE IN A CERTAIN SEQUENCE

The same thing can be perceived from different angles, resulting in different feelings and results that can vary greatly. Therefore, to cultivate children's observation skills, besides clearly knowing their observation goals and cultivating their interest in observing plants, teachers should also teach them some observation methods, teaching them to observe in a certain sequence, thereby improving their sequential observation process and further enhancing their observation skills. In observation, the sequential method refers to observing the object in a specific sequence. Observe from the whole to the part, from saliency to insignificance, from high to low, and so on. Different observation sequences yield completely different results. Orderly observation helps children master basic observation methods and gain a more comprehensive understanding of the object they are observing. Therefore, when observing children, teachers should guide them to follow a certain sequence. Use the object being observed as a reference for observation. During planting observation, teachers can guide children to observe roots, stems, leaves, and flowers in order. A good observation sequence allows children to gain a more comprehensive and deeper understanding of the objects they are observing, and through observation activities, children can also develop their own unique experiences. Therefore, in regular and daily observation activities, teachers should guide children to observe step by step in a certain sequence.

4.4 STRENGTHEN GUIDANCE FOR CHILDREN AND IMPROVE THEIR ABILITY TO EXPRESS OBSERVATION RESULTS

Children in the lower class are in the stage of concrete and visual thinking. At this stage, they use concrete images of objects to connect things with each other to solve problems. Although children at this stage have already moved beyond dependence on synchronized actions, they are still influenced by specific images and actions, and are not good at discovering the internal

connections and essential patterns of the objects they observe. Observation is often superficial, with poor generalization, making it difficult to effectively connect what they observe or grasp the essential characteristics of things. Being able to clearly describe the phenomena they observe is an important way to improve their observation skills. Therefore, to cultivate children's observation and expression skills, teachers should create opportunities for communication and sharing after observation, and, according to the age characteristics of the small class, play the role of a guide. After sharing, let children express their observations and demonstrate how to smoothly convey their observations, thereby improving their ability to express their observations. When observing, teachers can encourage and inspire children to ask questions, using hints, suggestions, analogies, and other methods to encourage them to observe on their own, allowing them to observe during problem-solving. After observation, teachers should use the children's existing knowledge and life experiences to develop their general experience and guide them to learn how to express their observations. Let children focus on the theme "How do you observe, what do you see?" and remind them to grasp the characteristics of the object during communication. At the same time, teachers should respect children's expressions, encouraging them to speak boldly and willingly. Teachers should also help children organize and demonstrate how to express themselves better. After a period of practice, children can boldly express their observations and develop a basic summary of the plants they observe.

5 CONCLUSION

In science education, nature education has a very important impact on young children. When conducting planting activities, teachers should pay attention to aligning with children's developmental characteristics and personal needs, in order to promote the development of children's observation skills, further broaden their thinking, and tap into their inner potential. During planting activities, children have more opportunities to interact with nature and freely observe the growth of plants, allowing them to cultivate their observation skills in a relatively free and pleasant environment. This study studied literature review and observation methods, observing the observation activities of selected children in the natural corner planting activities. This study analyzed the current behavior of the small class during observation through field observation. On this basis, the observation ability of young children in the small class was studied, and cultivation strategies were proposed

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