



Practical Exploration of Teacher Support Strategy in the “The 24 Solar Terms” Project Course by Taking the ‘Competing with Eggs in the Beginning of Summer’ Program Course in Senior Class of Kindergarten as An Example

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Abstract

The 24 solar terms are one of the jewels of our Chinese civilization. In order to pass on and develop the culture of the solar terms, our school uses a project-based curriculum to implement “the 24 solar terms” activities. Teachers use various forms and dimensions of support strategies to help children understand the solar terms through observation and discussion, problem solving, and hands-on exploration. In this paper, the author use the “competing with eggs in the beginning of summer” course project as an example to explore the teachers’ support strategies in the project curriculum.

Keywords

The 24 Solar Terms, Project Course, Teachers’ Support Strategy, Senior Class of Kindergarten, Competing with Eggs in the Beginning of Summer

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1. Introduction

Kindergarten project-based curriculum is a long-term, broad-based, in-depth exploration of things or phenomena that are of interest and worth learning about in their immediate environment. Its essence is that children engage in inquiry-based learning activities in the form of problem solving. The Guidelines for Learning and Development of Children Aged 3-6 years states that in the process of exploring natural things and solving real-life problems, children not only gain rich perceptual experience and develop imaginative thinking, but also try to categorize, sort, judge, reason, and gradually develop logical thinking skills. The “24 Solar Terms” activity in the form of project curriculum meets the curiosity and growth needs of young children, conforms to the learning characteristics and developmental rules of young children, and can lay a solid foundation for the long-term development of young children.

As children's interest in learning is affected by their age and developmental level, they can easily be diverted or their interest cannot be sustained, so it is especially important that teachers' support strategies help children to continue their learning inquiry. With the support and assistance of teachers, children observe and discuss things that interest them, make plans, ask questions, and, with the help and support of teachers, find answers to problems and generate new questions to continue their inquiry until they understand the content of the festival or until their interest is completely lost. The following is an example of how teachers use strategies to support children's deeper exploration in project-based curriculum activities.

2. Characteristics of teachers' support in "The 24 Solar Terms" project activities

Teachers' support strategies in "The 24 Solar Terms" project activities are, in short, "teaching for the future". It focuses more on the process of exploration, the methods and strategies used to solve problems, and the transfer of experiences and their enhancement. This requires a higher level of professionalism and comprehensive literacy: teachers must do prior research, form high-quality interactions with children through multiple forms and dimensions of support strategies, guide children to think, ask questions, practice, and reflect, and analyze and evaluate children's representations in a rational and comprehensive manner.

3. The key points of implementing teacher support strategies in the "24 Solar Terms" project curriculum

3.1. Child-centered, random infiltration

In the project curriculum, teachers' support should be child-centered, and the same theme may show different directions and results due to children's interests, developmental levels, and actual experiences, which requires teachers to observe, analyze, and think more during the activities, and give appropriate support according to the different problems encountered by children's performance. During the activities, children's exploratory behaviors are highly random and uncertain. Teachers need to observe and understand children's dynamic performance in project exploration activities, such as children's use of language, form, level, and direction of interaction, etc. They should always give children encouragement and appreciation and support strategies to help children maintain their interest in project content, motivate children with strong abilities to challenge themselves, create special opportunities for children with difficulties or lack of motivation to learn, etc. The children are encouraged to create special opportunities for children with difficulties or lack of motivation to learn, etc., so that each child can effectively improve their abilities and develop accordingly in the activities.

3.2. Environmental support throughout

3.2.1. Create a functional environment to meet children's needs for interactive learning with the environment

Teachers need to use concrete things and various ways to help children understand and feel the specific meaning of festivals. In kindergarten, teachers create functional environments related to the solar terms, such as solar term tables and solar term corners, to attract children's interest and promote catalytic events, so that children can develop an interest in inquiry and form a theme of inquiry.

3.2.2. Present a display environment to show the process and stage results of children's exploration

In the process of exploration, children will use some drawings, schematics, and plans to record their exploration process, ideas, and results. These are proofs of children's experience development and ability enhancement. By displaying these, teachers not only promote children's desire to continue exploring and enhance their sense of achievement, but also provide teachers with a valuable reference material for analyzing children's experience development.

4. Work together to develop resources

Family education activities can consolidate, supplement and extend the exploration activities of kindergarten, and can meet the individualized practical experience of children, bringing another possibility for the exploration of activities. Therefore, we should make full use of family educational resources and encourage parents to participate in children's exploration activities, so as to broaden the channels for the development of the festival project and improve the quality of parents' accompanying children while fully utilizing family and social resources.

A practical study of teachers' support strategies in each stage of the "24 Solar Terms" project (taking the summer festival of the older class as an example).

4.1. Preliminary preparation stage of the curriculum

The teachers studied the contents of the 24 solar terms: they sorted out all the contents of the “summer” solar term, thought about the points that might be interesting to the children, and distilled the contents that the children could see and touch.

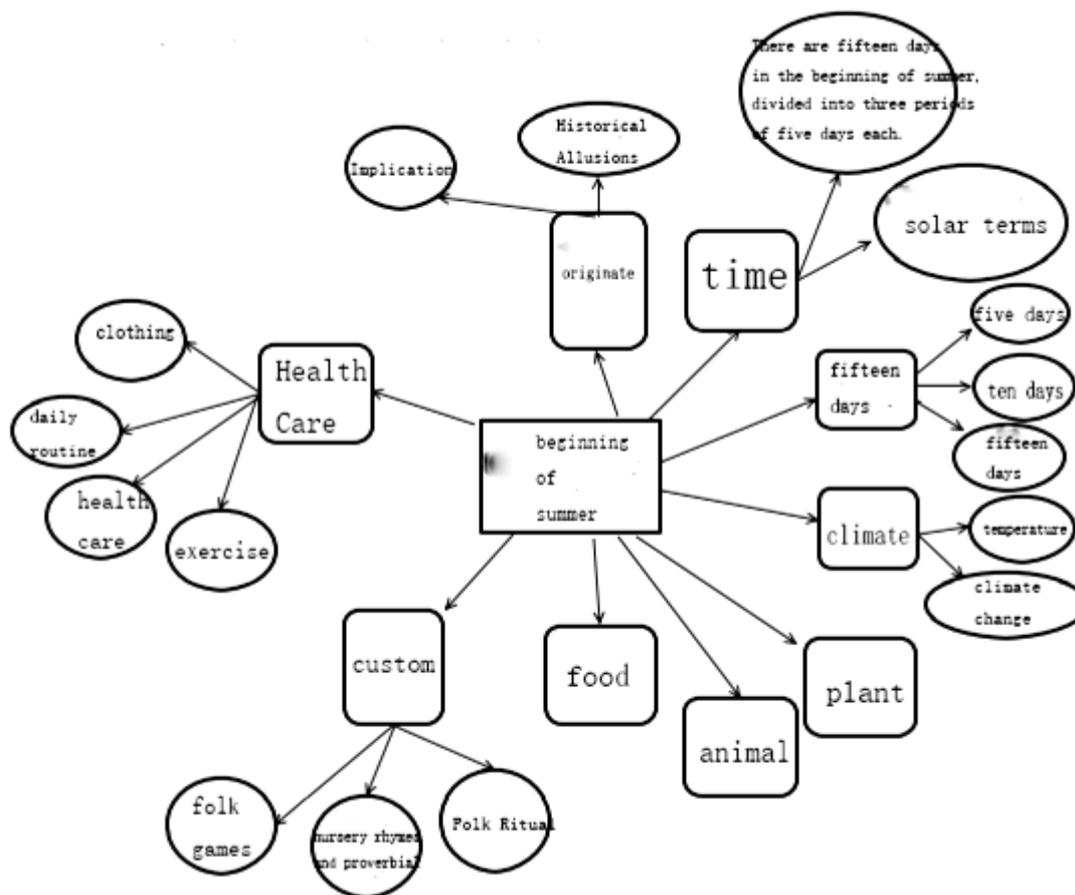


Figure 1. The Beginning of Summer network map.

Based on the above (as shown in Figure 1), teachers select appropriate materials to create a summer festival table or festival corner, use the environment to stimulate children’s interest in the summer festival, and display pictures (such as Sanhou), objects (Sanxin: cherries, plums, wheat, plants, etc.), and objects related to humanistic customs (weighing, hanging egg pockets, displaying materials for the introduction of summer rice, etc.).

4.2. The initiation phase of the course

In the initiation phase of the curriculum, teachers need to assess children’s level of understanding and their interest in the content of the program, and help children transform their interest into motivation through their discussions, determining their points of interest, and understanding their prior experience. At the festival table, children make observations and express themselves. The teacher records this process and organizes and displays the children’s interests and concerns, guiding them to unify their opinions in a variety of ways (e.g., by conducting a vote) to form a project theme (this time, because the vast majority of children were interested in the summer egg fight, the children proposed using the principle of minority rule).

4.2.1. Teachers sorted out core knowledge and core experiences based on the theme “Summer Egg Fight” selected by the children

Core knowledge

1) Competing with eggs is one of the folk customs of the summer festival, the significance of competing with eggs in

the summer, and other physical changes and human customs in the summer

- 2) The size and type of eggs, and the thickness and hardness of the egg shells differ from one egg to another
- 3) How to protect the eggs
- 4) The rules of competing with eggs
- 5) Whether the angle, speed and strength of competing with eggs have an effect on the result
- 6) The effect of the growing environment and diet of the ovipositor on the hardness of the eggshell

Core experience.

1) Through various ways to experience the custom of competing with eggs at the summer festival, to understand the significance of competing with eggs at the summer festival and other physical changes and human customs.

2) Learn about the differences in egg size, egg shell thickness and hardness through observation, measurement, characterization, practical work and finding information.

3) Explore with family and peers how to protect eggs and make your own egg protection devices.

4) Understand the meaning of rules in the process of game exploration and consciously abide by the relevant rules; feel the competition with peers and accept the result of losing or winning openly; discuss, think, practice and test the rules related to competing with eggs in the process of game play and try to derive new games and transfer the application of rules.

5) Observe, guess, practice, test and analyze whether the angle, speed and strength of competing with eggs have an effect on the result.

6) Understand the influence of the growth environment and diet of oviparous animals on the hardness of eggshells by asking adults and consulting information.

4.2.2. Teachers should guide children to ask questions: What do we know about the summer egg fight?

What else do we want to know? (Help the children to record the presentation of their questions so that they can proceed to the next stage of research)

4.3. Developmental stages of the curriculum

Teachers should support children in problem solving and idea validation by providing the appropriate environment and materials and stimulating their interest in deeper exploration by encouraging, giving appropriate advice or questions, guiding them about access to information or providing tools for research. They can also support the development of children's experiences by analyzing their representational work to understand their prior experience and development; working with or helping them to develop a research schedule; and focusing on the changes in the development of children's experiences before and after the activity to prepare them for the next step of inquiry.

4.3.1. Guide children to characterize the competing with eggs game in the form of drawings about their existing play experiences in the elementary and middle school classes

Teacher support strategy: From the children's drawings, it was found that the children's understanding of the game of competing with eggs was "two people fight against each other, colliding with each other with egg shells, and the one whose egg shells are broken loses", and the experience of the game was relatively single. In order to promote the exchange and sharing of experiences, the teacher guided the children to discuss and exchange their experiences and ideas about the egg fight with their peers in a free group, and then characterized them again. In future activities, teachers need to consciously provide guidance and support in terms of cooperation awareness and ability.

4.3.2. Teacher Support Strategies for Incidental Events - Egg Guardians

The children prepared eggs before the egg fight, but before the competition began, some of the eggshells broke or cracked... So a discussion began about how to protect the eggs:

"I can wrap the eggs in cotton and put them in a small box, they won't rot."

"You can buy a tiny bag for the eggs."

"If you bring two eggs you can open them separately."

I found that the children came up with a lot of strange ways to protect the eggs based on their own life experiences.

4.3.3. The first competition

During the egg fight, the children found cracks on the participating eggs and suggested that "it is not fair to have a cracked egg"; while watching the competition, the audience was a bit noisy and some of them even stood up and surrounded the contestants, which affected the order of the competition.

Teacher support:

Organize children to discuss the work of the referee, one is to check whether the egg is broken before the competition.

The second is to tell the audience to keep quiet and observe the order of watching; to throw the question of “how to arrange a fair competing with eggs game” to the children, who will think and analyze according to their experience of the game and propose solutions to some problems of the game; to provide opportunities for the children to test their proposed methods and measures in practice.

4.3.4. Make a new plan for competing with eggs and play a second game

(1) The teacher should guide the children to make a “plan for the egg fight” in groups according to their own experience, including the rules of the game and the arrangement of staff and participants. (At this point, the teacher should guide the children to work together to make the plan and pay attention to the children's communication and experience changes at this point)

(2) The children bring their eggs to the park for the second time according to the plan. The teacher finds that they use many materials to protect the eggs, some wrap them in a lot of paper towels, some put a new sock on them, some wrap them in a piece of cloth, and some put the eggs in a box lined with grits and paper towels...

(3) During the egg fight they acted as judges and counters according to the plan and participated in the competition according to the planned order, making significant progress in their ability to coordinate and plan as well as their ability to divide and work together. After the two competitions, the children continued to improve the application of competing with eggs methods and rules through games, discussions and post-competition reflections, and summarized the secrets of success in terms of the parts, angles, strength and speed of egg collisions during competing with eggs. (For example, when fighting eggs, you have to open your eyes wide to scare your opponent and quickly fight when he is not paying attention, so that you can win. (This time the king of eggs is a goose egg, next time we should find an egg harder than a goose egg.)

4.3.5. Collect information to understand the cultural background of competing with eggs in the summer festival

“Why do we have egg fights at the summer festival?” “Why are his eggs harder?” “What is contained in the eggshell to make it hard?” “Are eggshells just hard when they are in the mother chicken's belly?” Collect the children's questions and guide them to find answers in a variety of ways (asking adults, consulting books, searching on cell phones and computers).

The teacher asks the children to share the information they have found. The children learn that competing with eggs is a folk game played at the beginning of the summer season, which is the beginning of the hot summer and eating eggs can prevent resistance to summer. The eggshell is soft in the mother's belly and hardens when she is about to lay.

4.3.6. More generative exploration activities after the competing with eggs game.

(1) Recently, children especially like to observe the thickness, color and hardness of eggshells when they eat eggs. The teacher proposed to collect eggshells each time and provided materials such as grinding tools, magnifying glasses, test tubes, and water and vinegar for children to explore by manipulating them. (Children found that “this eggshell powder how I stir it is still in the water, I use the magnifying glass to see tiny things.” Through the experiment, children know that eggshells contain calcium carbonate, which is insoluble in water, and also found that eggshell powder placed in vinegar will produce bubbles, which will disappear after a while)

(2) Encourage and guide children to transfer their experiences and design the game “Fun with eggs”.

As the children's interest in competing with eggs gradually began to dissipate, the teacher guided the children to design new ways to play the competing with eggs game and let them transfer their experience to the competing with eggs game.



Game name: egg bowling

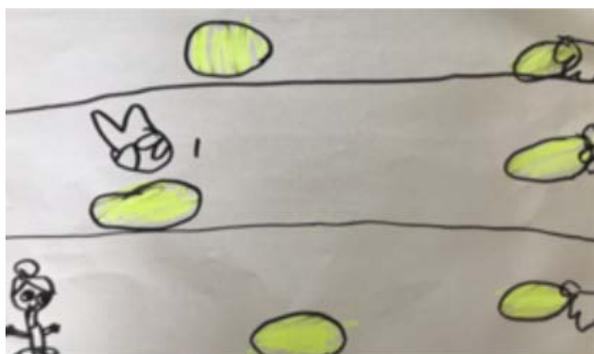
How to play: build a track with blocks, put a few empty mineral water bottles on one side, the participants in the game on the other side, roll over with eggs to knock down the water bottles.



Game name: egg throwing contest

How to play: Before the game, protect the eggs by wrapping or wrapping them, then stand up high and drop them from a height to see whose eggs are not broken.

Some children think that “we can tie a balloon to the egg, and the egg will fly up and land, so we will definitely win.”



Game name: egg rolling game

How to play: Build three tracks on the table with blocks, three people will participate and push the eggs with their hands to see whose egg rolls the farthest.

4.4. Closing stage of the course.

The teacher helps the children to sort out the results for display.

1) Ask the children to draw their own secret of competing with eggs (the combining representation of the winning formula)

2) Teachers help children design and organize a large-scale activity - the Egg King Competition (a large-scale competition with other classes).

5. Practical considerations of teachers’ support strategies in the “24 Solar Terms” project.

5.1. The influence of teachers’ professionalism on the effectiveness of support.

In the project activities, teachers need to use their professional knowledge to understand the festivals, to observe and analyze the children, to understand the core knowledge of the activities, to grasp the direction and level of children’s experience development, to reflect on each activity, and to support each step and each link. The teachers need to continue to learn and improve their professional skills in order to better support the children in developing and enhancing their experiences.

5.2. Integrating local resources with festive activities.

The culture of the 24 solar terms originates from the Yellow River Basin, which is geographically different from that of Guangdong, and this difference is not only reflected in the climate change of the four seasons, but also in the differences in regional culture, people’s habits and diet, changes, human customs, dietary characteristics, etc., from the actual life of children, the natural and social life to be the content of children’s exploration and learning.

6. Conclusion

In the “24 solar terms” project, teachers should focus on each child, pay attention to their interest in the topic, their learning ability and experience development, consider the developmental needs of children at the present stage and in their nearest developmental zone from the perspective of children’s long-term development, respect children’s subjects, focus on children’s representations, and support them according to their developmental rules. The developmental rules of the child support them to observe, express, think, imagine, analyze, verify, reflect, draw developmental energy from the living education of nature, and better promote individualized development.

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