

# Implementation Dilemmas and Breakthrough Pathways of the Pre-K PBL Curriculum

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**Abstract:** Taking the Pre-K project-based curriculum *Making Shelter for Stray Small Animals* as an example, this paper explores the practical dilemmas and breakthrough paths in the implementation of project-based curricula in kindergartens. Based on practical reflection and theoretical reference, the paper proposes a five-dimensional breakthrough path: the teacher dimension, the parent dimension, the child dimension, the group dimension, and the evaluator dimension, so as to promote the optimized implementation and sustainable development of project-based curricula in kindergartens.

**Keywords:** Project-based curriculum; Curriculum implementation dilemmas; Breakthrough paths; Action research

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## 1. Introduction

Projects are the core of the curriculum<sup>[1]</sup>. Project-based curriculum is a co-constructed teaching model between teachers and children that starts from children's real needs and sets a specific goal or outcome as the purpose<sup>[2-3]</sup>. Research shows that this curriculum model has a significant positive impact on promoting children's metacognitive development<sup>[4]</sup>. In frontline practice, the author designed and implemented the project-based curriculum, *Making Nests for Stray Animals*, aiming to continuously identify problems and summarize experiences throughout the curriculum process, in order to explore methods and approaches to optimize the curriculum.

## 2. Curriculum design, implementation and dilemmas

The project-based curriculum *Making Nests for Stray Animals* originated from a theme activity about "map". While exploring routes around the kindergarten, the children accidentally found a thin kitten. It was a rainy autumn, and the weather was getting cold. In this context, the children's interest instantly shifted to concern for the kitten's survival. "Where will it hide when it rains? Will it be frozen in winter?" Along with the children's lively discussions, the author began the initial conception of the curriculum. From planning, implementation, to the final achievement, the curriculum took nearly three months.

Throughout the curriculum, contradictions were found between theory and reality, which resulted in the depth of the course being insufficient. To identify the crux, the author reorganized and analyzed the curriculum and summarized the main contradictions into the following three aspects.

## **2.1. Contradiction between “Children-centered” and curriculum chaos**

Following the basic concept of “child-centered, following children’s interests and developmental needs”, the author guided children to independently choose materials, cut and assemble their ideal nests. However, in practice, due to some practical dilemmas, the curriculum once fell into stagnation and chaos.

### **2.1.1. First attempt: Children operated independently after making plans**

Individual differences among children were particularly evident in independent activities under the same theme. After several failed attempts at cutting and assembling, some children gave up their original plans and turned to other games. Even the noise of their chasing and fighting disturbed those who were still working on making shelters.

### **2.1.2. Second attempt: Children worked in groups based on their interest**

This collective form was adopted to solve the problems of scattered children’s attention and the teacher’s limited energy. The effect was remarkable in the first few days, and the overall order improved significantly. However, new problems emerged. As the curriculum progressed, more capable children could take the lead in working according to their own ideas. Other children, unable to understand their work and without clear tasks, began to show disruptive, competitive, onlooking, or socially withdrawn behaviors.

### **2.1.3. Third attempt: Inviting senior-class children to guide and cooperate**

To solve the above problems, the teachers discussed and worked out a solution. Several organized senior-class children were selected as “little teaching assistants” to guide the children in teamwork. With joint efforts, the nests for stray animals took shape. Unfortunately, in the process, some children’s subjective initiative was still not fully mobilized for the sake of completing the goal smoothly.

## **2.2. Contradiction between “Stimulating Creativity” and poor feedback on works**

The *Guidelines for Kindergarten Education* repeatedly emphasize that teachers should stimulate children’s creativity and imagination in a free and relaxed atmosphere<sup>[5]</sup>. In Sub-project 3, Decorating the Nests, children initially worked completely according to their own ideas. After a period of time, we saw unbalanced cat ears crafted from leaves, “little tails” stuck with wool balls and double-sided tape that would fall off at any time. When the three decorated shelters were shown to other teachers and parents, most gave negative comments due to aesthetic issues. Under pressure from multiple sides, teachers and children redesigned the decorations together. Applying the concept of “deep learning”, mathematical concepts such as regular ordering and symmetry were integrated into the decoration, fully reflecting educational and artistic values. Faced with the shelter, orderly and firm shelter decorations, parents and peers praised them constantly, but the original innocent and vivid beauty was lost.

## **2.3. Contradiction between “Home-Kindergarten Co-education” and parents’ time shortage**

After the shelters were finished, the children tried to place them where stray animals often appeared. After

a period of observation, the children found many problems: some shelters toppled, sank or deformed after wind and rain. Due to the large number of problems, the teachers were unable to discuss solutions with the children and find solutions efficiently at that time, so parents were invited to participate. However, parents showed hesitation when invited. Finally, the children voted for several of the most concerning problems. After consulting relevant materials, the teachers discussed solutions with the children in depth. By the end of the semester, the unsolved problems left an imperfect ending to the curriculum.

### **3. Breakthrough paths for the curriculum**

The project *Making shelter for Stray Small Animals* began with the children's curiosity and care and ended with gains and regrets. After reviewing the literature and systematic reflection, based on the seven design elements of project-based learning proposed by John Larmer et al. <sup>[6]</sup>, combined with reflections in this curriculum, the author summarized breakthrough paths for project-based curricula.

#### **3.1. Well-prepared teachers**

Looking back at the initial stage of Sub-project 2, the disorder of curriculum organization stemmed from insufficient preparation by teachers <sup>[7]</sup>. Starting a project hastily, only by seizing children's interests, would inevitably lead to various problems. To avoid such problems, teachers can be fully prepared for project launch in three stages.

First, the interest-attracting stage. Constructivist learning inspires us to fully mobilize children's learning enthusiasm and recognize their dominant position in learning <sup>[8]</sup>. Second, the method-guiding stage. Before the project, providing children with appropriate operation methods related to the project will greatly improve their sense of self-efficacy. Third, the pilot-project stage. Reasonably split the difficulties in the project, simplify or narrow them appropriately, then encourage children to attempt problem-solving. In the process, problems should be found in time and plans adjusted. This link effectively saves manpower, material resources and time costs, and is necessary to ensure the orderly and smooth progress of the project.

#### **3.2. Cooperative parents**

As mentioned in *Home-Kindergarten Co-education*, the essence of home-kindergarten co-education is "no parents, no teachers", and the core is "the art of human relations" <sup>[9]</sup>. Through various forms, teachers help parents fully understand the importance of project-based curriculum for children's growth, learn about the general content of the project, and recognize the urgent need for home-kindergarten cooperation. Only then will parents regard it as equal communication. Communication under the above three goals can greatly increase parents' willingness to cooperate. With the support of parents, the depth and final effect of the project-based curriculum will be better.

#### **3.3. Actively participating children**

The HighScope Curriculum advocates that "active participation is the main form of children's learning" <sup>[10]</sup>. Its basic operational steps of "plan-do-review" are worthy of reference and transfer in project-based curricula. Especially in curriculum implementation, children need to conduct a circular construction process of continuous inquiry, reflection, criticism and revision around goals in interaction <sup>[11]</sup>. "Planning" and "reviewing" can precisely help relieve teachers' helplessness caused by insufficient energy and experience

in curriculum implementation<sup>[12]</sup>. By guiding children to review difficulties in work against plans, analyze reasons for unfinished plans, and explore solutions, teachers help children visualize reflection step by step, so that they clearly know how to revise in the next step, thus achieving a positive cycle of active participation, in-depth inquiry and continuous revision.

### 3.4. Cooperative groups

Most kindergarten project-based curricula are carried out in groups or as a whole. Therefore, learning to cooperate is the key to completing the projects. Research shows that age 4 is an important turning point for the development of children's cooperative behavior and level<sup>[13]</sup>. Children at this age begin to infer others' thoughts, gradually "decentralize", and learn to think from each other's perspectives. In addition, Zhang Ying et al. used work analysis to observe that the longer the block game lasts, the more cooperative behaviors children show in the game<sup>[14]</sup>. In summary, children's learning to cooperate could not be accomplished overnight. Teachers should seize the critical period and guide appropriately, so that children can fully play their roles in the group, improve their sense of self-efficacy, and exercise various abilities.

### 3.5. In-depth, professional and multi-perspective evaluation

"Publicly displayed works" are the most intuitive achievement display in project-based curricula<sup>[15]</sup>, but by no means the only content of curriculum evaluation. As early as the early 2000s, the value orientation of kindergarten curriculum evaluation in China has shifted from focusing on children's knowledge and skills to focusing on children's development<sup>[16]</sup>. This shift means the kindergarten curriculum evaluation process has changed from static to dynamic, focusing on helping children's growth in the whole curriculum; the subjects of curriculum evaluation are more diversified. Besides kindergarten leaders, teachers and parents, children themselves should be the main evaluators. When the "perfect works" from children's perspective conflict with adults' aesthetics, children's views should prevail. Otherwise, works carrying adults' expectations will gradually wear away children's autonomy and self-confidence.

As this paper ends, the confusion, difficulties and setbacks in implementing *Making Nests for Stray Small Animals* emerge again. However, these "imperfect" memories make the author love project-based curriculum even more; it is real, vivid and full of vitality, fully grants children autonomy, and lets children experience the joy and pride of achievement after solving real problems again and again.

## Disclosure statement

The authors declare no conflict of interest.

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