



# Integrated Exploration of Design Thinking and Children's Art Education

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**Abstract.** Children's art education is an important link in their growth process and the reasonable art education is conducive to their physical and mental development. The children are rich in imagination, but the common art education lacks the guidance of innovative thinking. Hence, the integrated exploration is carried out by reference of the innovative education mode of the design thinking and children's art education. It will provide the practical case for integration of design thinking theories and practice based on the practical experience in children's art education. Besides, the authors also respond to the policies of "improving the aesthetic education and promoting the students' beauty appreciation and humanistic quality" that is proposed in the Third Plenary Session of 18th CPC Central Committee. They wish that the importance of integration of the design thinking and children's art education could attract attention of the public.

**Keywords:** Design thinking Children's art · Aesthetic education teaching

## 1 Introduction

The childhood is the most immature period and it is also an important starting point for children education. Picasso, the founder of modern arts and west painter, once said: "it is easy to paint as a master, I would like to paint as a child in the whole life." The imagination and creativity in the childhood could not be compared with the adults and it is a key period for the development and guidance. As an organic component in the comprehensive development of the quality-oriented education, the children's art education is a general, popular and basic art literacy education [1]. Hence, the integration of design thinking in the art education is an effective way to enhance the development of children's creative thinking and abilities.

## 2 Relation Between Design Thinking and Art Education

### 2.1 Overview of Design Thinking

Actually, the design thinking is a methodology system that guides the innovative exploration with the comprehensive analysis abilities. The concept is firstly proposed by

Stanford University and it consists of five stages: Empathy, definition, conception (brainstorming), design and test. In recent years, some teachers connect the “design thinking” and children’s study, so that the children could give full play to their imagination and creativity, think and attempt to solve the problems with knowledge in the field of science and art.

## **2.2 Difference and Connection Between Design and Painting**

Obviously, the children’s art education could not be carried out without painting. The “painting” generally belongs to art and its essence is plane thinking, showing more individual spirits and consciousness. “Design” focuses more on the three-dimensional thinking and it solves the group demands and service through practice. Meanwhile, compared with the painting, the design innovation will be achieved with knowledge integrating more media and fields and it is the innovation’s value in the design. It is generally considered that the design is different from art in the schools’ art education, but the design interacts with the painting. The aesthetic works are associated with the personal artistic accomplishment; The design thinking is applied in the picture conception. Therefore, the design thinking is integrated in the children’s painting. It will guide the children to complete the picture effect, conduct the conscious creation and thinking and motivate the children’s comprehensive competence from various dimensions.

## **3 Domestic and Overseas Children’s Art Education**

### **3.1 Insufficiency of the Domestic Children’s Art Education**

Pattern teaching mode on art education. The attention to children’s aesthetic education should first affect the children in kindergartens. However, most kindergartens adopt the pattern teaching and they focus on the demonstration teaching. The children in the bottom class draw from dots, lines and planes to the painting; The children in the middle class learn from the teachers’ demonstration; The children in the senior class determine the theme and draw it freely. The traditional form does not improve the children’s creativity, but limit their imagination. The works are the patterned paintings in the batch mode and it could not give the play to children’s unique personality.

Insufficient emphasis on children’s art education. Based on the interview of the children, it is found that the school attaches less attention to the children’s art education and the art class is often replaced by the major courses. It will lead to that the students could master the knowledge of fine arts well and prevent the development of the aesthetic education to some extents, so the all-round development could not be achieved.

One-sided understanding of the parents on children’s art. At present, most parents believe that the children learn to draw in the art education, but its contents have been diversified, including colored clay, handwork and other forms. These courses are as important as the painting and it may develop the children’s creativity and imagination in a diversified mode compared with the painting, such as combination of colored clay and painting. The children could shape the three-dimensional picture effects through pinching and kneading of colored clay, which trains the children’s manual dexterity and shaping ability.

### 3.2 Diversified Overseas Children's Art Education

The art education in the west existed in the ancient Greece, and the early art education is "free". The west art education has been developed to form the system and it is necessary to adopt the comprehensive materials. The features of different materials are applied to guide the children to combine the design thinking with art painting. In the teaching, it breaks the traditional plane painting mode, and attracts the attention on fine arts with the teaching interests.

In Asia, Japan started early for innovative practice of children's art education and it will integrate the manual courses or comprehensive materials in the early art education. Their goal and core are to give full play to children's imagination and creativity. The courses of children's art education are extensive in Japan, including knitting, powder painting and other comprehensive materials and appreciation activities, etc. In the courses, the teacher would lead the students to create and paint freely as a guide, so that the children's hands and brain could be exercised in the concrete practice. They pay attention to the self-observation, emotion and the process of thinking and imagination of children. They will guide the children to motivate the creativity and develop the aesthetic perception in the self-experience process, so as to promote the children's cognition, skills and social development. In Japan, the schools attach the importance to the art training. Its teaching is aimed at improving the overall quality and breaking away from the "pure art" education, so that the students could obtain the aesthetic experience in the artistic creation and nurture of beauty, and their creation enthusiasm will be aroused.

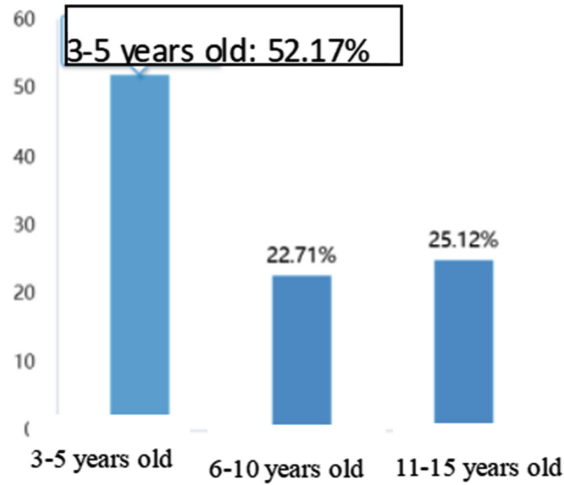
## 4 Importance of Design Thinking on Children's Art Education

In a broad sense, its fundamental purpose is to promote the all-round development of the students, rather than training the art practitioners. Thus, the children's art education is an important component of that. From the perspective of the art psychology, the art exists as a creative world [2]. With the social development, more and more parents attach high importance to the artistic training.

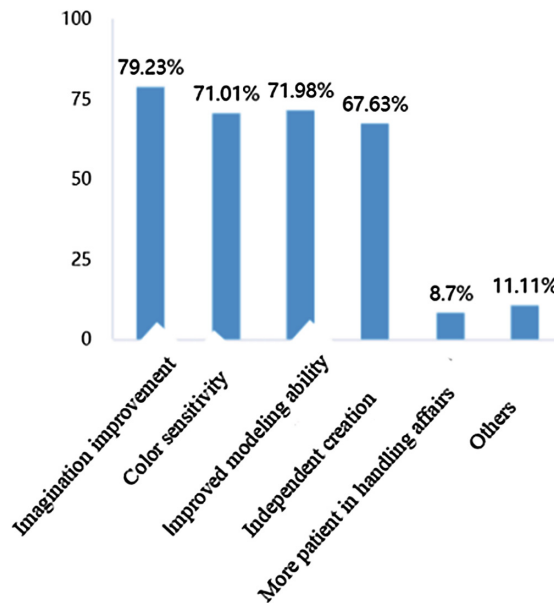
Based on one and a half years of practical experience, the design thinking is integrated into the classroom to form the new creative art course. Besides, a questionnaire with 10 simple questions was conducted to 207 parents and the results showed that most of the children studying creative art are 3–5 years old (Fig. 1). Meanwhile, it could be found from the parents' feedback on the students' courses that, the improvement of imagination, color sensitivity, modeling ability ranks top three and the rates are 79.23%, 71.01% and 71.98%, respectively (Fig. 2). In addition, the parents' expectation on the art class indicates that the pure painting, the pure handwork and the combination of handwork and painting account for 33.33%, 15.46% and 51.21%, respectively. It also shows the parents' attention to the comprehensive competence of the children (Fig. 3).

### 4.1 Practice of Design Thinking in Children's Art Education

Combined with the personal teaching experience, there is certain exploration and thinking for children's fine arts and the design thinking is inevitable for the promotion of children's art education.

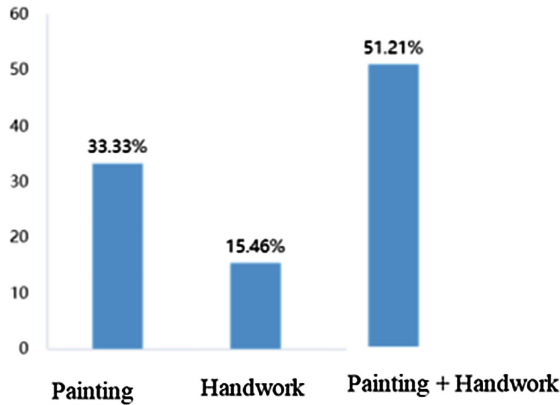


**Fig. 1.** Age of Children



**Fig. 2.** Parents' Feedback after Class

It breaks the limitation of the traditional plane thinking. The design thinking is introduced to the traditional art and it guides the children to think from more dimensions and extend the painting possibilities. The children are accustomed to painting the daily items in a two-dimensional plane with different painting tools, so the teachers will guide them to show that in a three-dimensional mode in the teaching practice. For example,



**Fig. 3.** Parents' Expectation on Courses

the teachers will guide the children to adopt the clay and other materials to carry out the three-dimensional shaping of a tiger. The eyes are no longer the cycles, but a three-dimensional eye by the clay adding and shaping, which contributes to the training of the sense of space and creativity.

Transformation from unconsciousness to conscious creation. The design thinking enables the students to paint with its purposes, rather than completing the works. In the course setting of rose description, the wet tissue is selected as the creating materials. The problem is proposed: "How to change wet tissues to a rose". It helps the students to connect life to actively consider to transfer the plane painting to the three-dimensional expression. Finally, the teacher will rotate and fold the wet tissues to a rose and the students could observe consciously and re-think it in this process.

Motivate the development of imagination and comprehensive competence. The creativity promotes the ability to solve the problems comprehensively. The artistic designing focuses on training of the students to think independently and logically, solve the problems, coordinate and integrate that in the problem-solving process [4]. In the daily life, the common things will be re-born under the guidance of the design thinking. For example, the eggs are connected to a smart carp, etc. During this process, the teacher adopts the freshness of new materials to develop the creativity and practical ability to promote the children to better master the aesthetic education.

## 4.2 How to Integrate the Design Thinking in Children's Art Education

The design thinking is integrated in the children's art education, to provide children with more spaces and opportunities for thinking and innovation. The children could combine the items based on their experience and guidance of the teachers. Combined with the personal experiences, the following points shall be noted:

Respect the dominant position of children. Every child shall be respected in the creation process. The children's ideas may be unrestrained and unrealistic. During this process, the teacher shall play his/her role as a guide. The knowledge instruction shall be combined with the creativity training, and the children could show their imagination

without limitation [3]. The important perceptual experience of shall not be denied and deprived. When they draw the world in the mind, their thoughts are pure and it is their essence to describe their world, which could not be replaced by the adults and are pursued by the painting masters.

Learn to guide children to observe the life actively. Teachers and parents shall encourage the children to observe life more. Most of the children's imagination comes from life and they think through observation and show the experience under perception in the painting. For example, how to present the sound of wind and rain.

Learn to cultivate the children's interests on innovation. Interest is the best teacher. The design thinking is to encourage the children to develop their imagination without restriction. During this process, the creation of comprehensive materials is integrated to enable the children to explore more unknown realms and maintain their freshness on the art education. Piaget proposed that "children's wisdom comes from operation", and the operating activity is one of the interesting art activities for children. During the operating activity, the children combine the materials with the subjective experiences to produce the novel works. Hence, the children gain new knowledge and experience, while improving the creation interests.

## 5 Conclusions

China is deepening the education reform. It has the increasing demands on the innovative talents and the children's comprehensive qualities are paid with high attention. In *Dictionary of Education*, the art education refers to the talent training through the modeling activities. It is aimed at imparting the basic knowledge of fine arts, guiding and improving their appreciation level on the artistic works, leading and training the healthy and sound aesthetic ideas, as well as simulating the students' love on beauty and life [5]. The childhood is a key stage to train and guide the imagination and creativity. The integration of design thinking is conducive to promote the children's creative thinking and ability, and the implementation of children's aesthetic education teaching [6]. Hence, it is crucial to combine the design thinking and children's art education.

### Questionnaire

Link: <https://www.wjx.cn/vm/ew7MjRo.aspx>.

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