

# RESEARCH ABOUT CHILDREN'S PAINTING EDUCATION METHOD BASED ON HOUSE TREE PERSON TEST

Lan Yu

Japan Advanced Institute of Science and Technology, Japan

Yukari Nagai

Japan Advanced Institute of Science and Technology, Japan

## Abstract

Human behaviors are cultivated from childhood. People's aesthetic habits and creativity are cultivated through the creation of children's painting works. Unlike the other art activities, painting is an art activity that is very easy to implement and not constrained by the surrounding environment. Creating a painting work is an art activity that everyone can participate in. Anyone can use painting works to express their own thoughts and feelings. As for some introverted personality children, they are shy to share their ideas. Researchers can search children's growth environment, psychological state, aesthetic habits and their painting habits from these children's painting works. Aesthetic cognition and concept are the most important factors that compose a painting work. Children's aesthetic habits and painting habits will directly affect children's creativity and imagination after adulthood. There are 471 children aged 7-13 participated in this study. This research focus on seeking children's painting education method. In addition, using House Tree Person (HTP) test to find children's preference and habits while creating the paintings works.

**Keywords:** Children's painting education, House Tree Person experiment, children's painting cognition, children's painting habits

## 1. Introduction

In the painting works, children's cognition of objective things can be reflected. Art can trigger people's positive and negative emotions (Silvia, 2011). Painting works can convey a specific range of emotional experiences (Shiota et al., 2007). The emotions expressed in the paintings are related to the theme and the scenes of the paintings. People's previous knowledge and experiences make contribution to emotional responses to painting (Andrei C.Miu et al., 2016). Children's personality, interpersonal and psychological state can be revealed in the painting works. The painting work is the representative of the creativity and concept of its creator. Drawing is not a spontaneous action but rather an intentional process involving projection and introjections by the individual (Machover, 1949). The painting is the representative of the creativity and concept of its creator, and the painting is the image of human thinking (Horst, 2010). Different people have different painting styles, painting contents and forms of paintings. Each person's paintings have individual symbolic features. The style, content and form of the paintings are important factors in the content of the paintings. Art is both the means by which people understand the world and a way people communicate and share personal and collective experiences (Ngai Serin, 2006). Children express their inner world through the expression of painting. At the same time, paintings with children's characteristics are also formed.

Paintings, patterns, marks, lines, colours and the other things that people can be seen by eyes will transformed into specific imagination information (Yingmei Wang, 2016). When people create paintings they can convert this information into visual forms of images. This visual form of images has individual symbolic features. People use these visual symbols to express their emotions and share their joy and sorrow. For some children, they are afraid or unwilling to express their experiences in words (e.g., school bullying, domestic violence, sexual assault), because these children are afraid of revealing their personal and family secrets in the process of communicating with others in language (Cathy A, 1998). Thus children would like to hide their emotions in the details of the painting content, lines, colors, and the layout of objects. Drawing can transcend language and properly communicate people's sub-consciousness (Yingmei Wang, 2016). Painting as a means of psychological counseling to help children alleviate restless emotions and keep healthy mental condition (Ahmad Beh-Pajoooh et al., 2018).

## 2. Background

Painting provides children with the opportunity to express their emotions and learning knowledge freely through colors and lines (Bozcuk et al., 2017). Before children express their own things and events in painting works, there must have been some fixed patterns in children's minds. The formation of such fixed patterns is the life experience and common sense of life. It consists of cultural connotations and individual aesthetic preferences. In the process of continuous learning and innovation, children will extract orderly rules from the natural environment, which invisibly guide children's life behaviors and cognitive styles. Previous studies have shown that paintings have the positive impact on children than adults. It can effectively help children express their abilities and creativity (Flood & Phillips, 2007). The process of painting creation is one of the way for children to healing themselves. It also can help children to alleviate emotional conflicts and understand themselves (Lu Yaqing, 2009).

The HTP personality test is one of the methods to test the personality characteristics of the people in psychology. This kind of test is standardized and objectively describes the graphical representation based on quantitative methods (Kerstin Schoch, 2017). Recent research mainly studies HTP test by using psychology theories as a theoretical background. However, the research from the perspective of art psychology is lacking. Psychology is different from art psychology. Psychology mainly research people's pattern of behaviors. Art psychology mainly focus on the aesthetic judgements.

People's cognition is the perception and understanding of an object. The common sense, cultural connotation, and belief are the basic factors that constitute human cognition. The formation of cognition is completed through four steps of information input, coding, storage and extraction (David H. Dodd & Raymond M. White, 1980). People's cognition of the outside world comes from people's initial understanding of things. After being delivered to brain, cognition information can induce consciousness and emotion or even affect connection between brain and various parts of the body (Nongfu Shen, 2009). Experiments prove that the content of the art work related to its creator's personality and preferences (Gridley, 2013). Different perceptions are generated according to each person's different understanding. Each person's choice tends to make each person have different aesthetic abilities. The different cognitions of different people also determine the difference in the content, form and style of each person's paintings.

## 3. Goals

This paper mainly researches children's painting through questionnaires and HTP personality test. Drawing is an inexpensive, noninvasive, and easily administered tool because papers and pencils are readily available in school settings (T Skybo, N Ryan-Wenger, Y Su, 2007). It is also very easy to conduct research in school by means of painting. Children at different ages have different abilities to learn new knowledge. Therefore, when fine art teachers guiding children to finish painting works, they should give children targeted guidance according to children's age and children's psychological characteristics. The main purpose of this paper is to research children's painting habits and children's painting characteristics from the perspective of painting through questionnaires and painting experiments. In addition, the experimental methods in this research can help children's art teachers better understand children's thoughts, feelings, beliefs, and perceptions of their surroundings. By using these methods, teachers can help the children to solve their troubles and help students get out of trouble.

## 4. Method

### 4.1. Content for the research

This paper mainly studies through two aspects. One is the questionnaire survey, the other is the HTP test. In the questionnaire survey, there are two copies of questionnaires (Fig.25, Fig.26). One of the questionnaire was conducted in conjunction with the HTP test (Fig.25). The purpose of this questionnaire is to understand the student's painting works content, students' preferences for color, cognition of object form and student's painting habits. The other questionnaire (Fig.26) is mainly to research the children's performance about painting, the feeling of children while creating painting works and the attitude about their own painting works. In the process of the experimental research children should complete the HTP painting test first. The children involved in the HTP test need to draw house, tree and person on the paper. These three things are often seen in children's daily lives. Children are really familiar with these things. So children will not have pressure when creating painting works. Before the house tree painting test, children will be told that they can freely create their own painting works. In order to avoid the similar problems of children's painting composition children without any guidance and examples during creating their painting work. Lastly, ask children to answer the questions in the questionnaire.

## 4.2. Participants

The people involved in the research were children between the ages of 7 and 13. Professor of art education Viktor Lowenfeld divide children's painting development into six stages, namely "Scribble (2-4 years old)", "Preschematic (4-7 years old)", "Schematic (7-9 years old)", "Dawning realism (9-11 years old)", "Pseudo realism (11-13 years old)" and "Period of decision (adolescent period)" (Viktor Lowenfeld, 1947). The style of children's painting works from development to fixation during the child's 2 to 13 years old. But considering that children at the age of 2 to 6 years old can't complete the questionnaire independently. And the graphical features of the children's paintings at this stage are not obvious. So the main research object of this paper is children between the ages of 7 and 13 years old. There are 471 people that participate in this research including 259 boys and 212 girls. These children participating in the experimental survey have the ability to read and write, the ability to judge things, the ability to distinguish the difference between things and the ability to understand the question we ask. Before conducting the questionnaire survey and the HTP experiment, the child will be asked if there is any incomprehensible question in the questionnaire. The purpose of this is to ensure that children can successfully complete the test, to prevent children from misunderstanding the content of the questions and affect the results of the experiment.

## 4.3. Data preparation

All data of this research were analyzed by SPSS. The options of all questions are coded as follows.

In Questionnaire 1 (Fig.25) all questions are freely filled by the children participating in the test. There is no stable answer in this questionnaire. Therefore, the options for these questions are based on the answers filled by all the children participating in the test. After the answers filled out by the children are completed, the coding of all the options is encoded according to an option corresponding to a variable.

Questionnaire 2 (Fig.26) is mainly a child's painting cognitive test. This questionnaire is a structured questionnaire. The main contents of the questionnaire are divided into three parts: children's performance about painting works, children's own painting works and the effect of color on children's emotions. The questionnaires were given 5 points for strongly agree, 4 points for agree, 3 points for neutral, 2 points for disagree, and 1 point for strongly disagree.

## 4.4. Data analysis

Questionnaire 1 (Fig.25) is an unstructured questionnaire, so it is mainly based on frequency analysis. Checking the selection of each option through the descriptive analysis. Questionnaire 2 (Fig.26) is a structured questionnaire. First, the questionnaire first carries out the effectiveness analysis and reliability analysis. Then an independent sample T test is used to analyze whether there is a significant difference between boys and girls in the attitudes of painting works. Finally, paired sample T test was done to detect if there were significant differences between different variables.

### 4.4.1. Result of HTP test

Through the collation and analysis of HTP painting works, statistical graphs of houses, trees and people in children's paintings are obtained (Fig.1, Fig.2, Fig.3). Figure 1, Figure 2 and Figure 3 are the result of HTP test. Figure 1 is a statistical chart of the location of the house in the child's work. According to statistical results, 59.9% of children have drawn a house in the suburb. In the HTP test, the house represents the relationship between the creator and the family. The house reflects the physical aspects of the drama (Robert C. Burns, 1987). So the results of the survey indicate that children prefer a free living environment. And most children have positive emotions. Figure 2 is a statistical diagram of the types of trees in children's painting works. It can be seen from the statistical results that the apple tree is the most frequently seen in children's painting works. In drawing a tree, the drawer reflects his or her individual transformation process (Robert C. Burns, 1987). The appearance of fruit in the canopy is generally a feeling of self-affirmation (Ji Yuanhong, 2011). However, some paintings show that fruits have fallen to the ground (Fig. 4). This type of painting works should pay attention to the fact that children who paint these works may be under the pressure or feel sad. If the fruits in painting works are small (Fig.5), these children may lack confidence when doing some things (John N. Buck, 1966). Figure 3 is a statistical chart of people's identity in children's works. In creating a person, the drawer reflects the self or ego functions interacting with the tree to create a larger metaphor (Robert C. Burns, 1987). The children aged 7-9 lack the painting composition ability (Fig.6) and the control ability of the object size (Fig.7). For example, the painting work (Fig.8) paint by the child aged 8. This painting work is the case that stand for children cannot control the size and position of the objects while drawing. The Fig.9 shows that the child aged 7 lack of the composition ability. It also proved this child does not have the ability of arranging the objects. According to children's works participating in this study these problem also exists among the Schematic stage children's paintings. On the contrary, the children aged 10-13 can arrange the all the objects in the proper place

(Fig.10 and Fig.11). All objects in their painting works are well connected. In the HTP test, painting works mainly reflects the painter's mental state and physical condition. People who appear in paintings other than the painter generally reflect the relationship and impression between the painter and the characters in the painting.  
Fig.1.

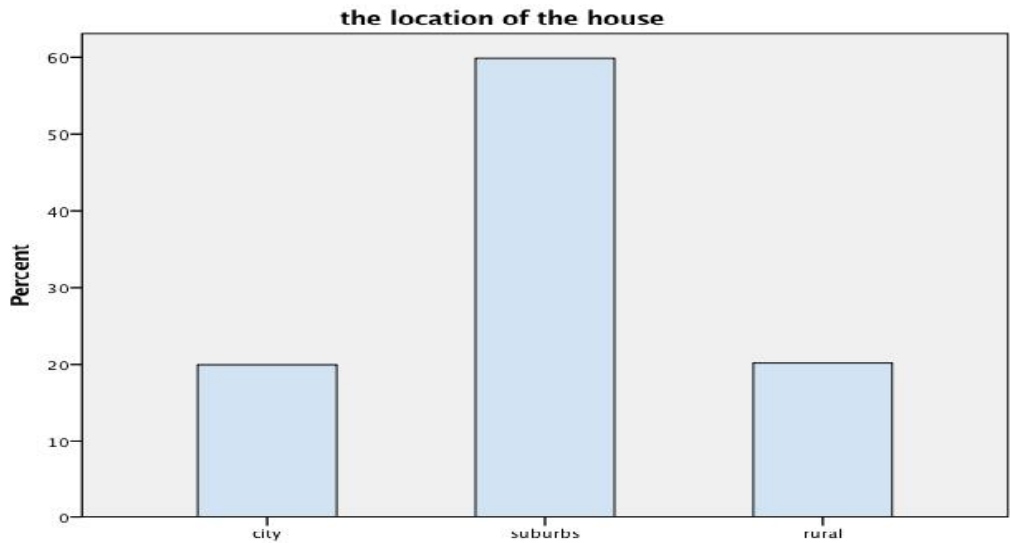


Fig.2.

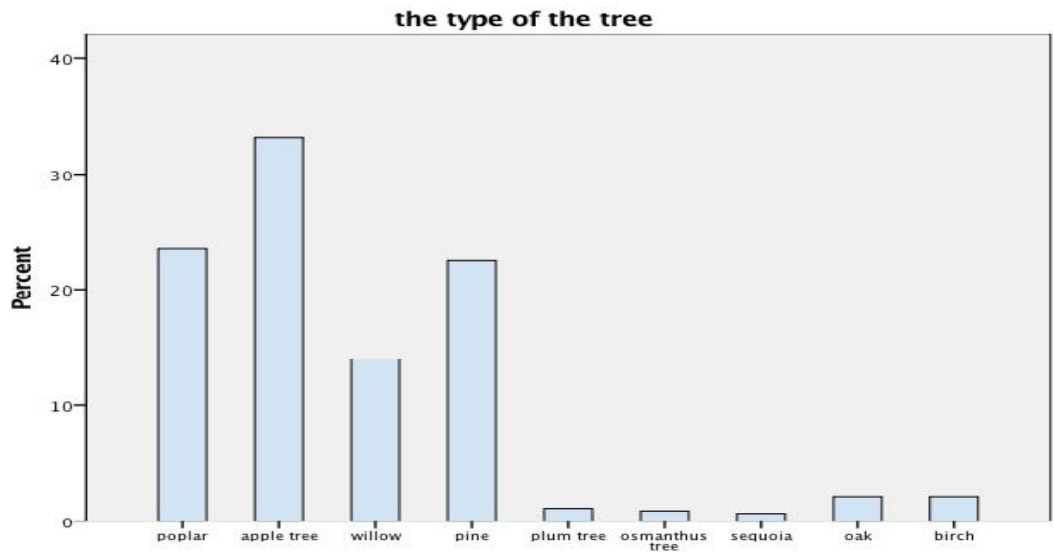


Fig.3.

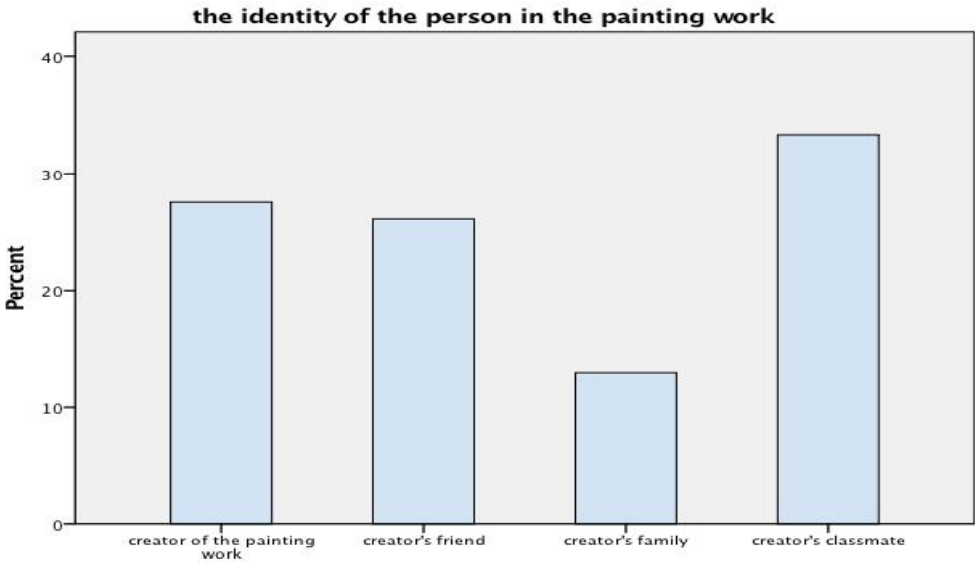


Fig.4.

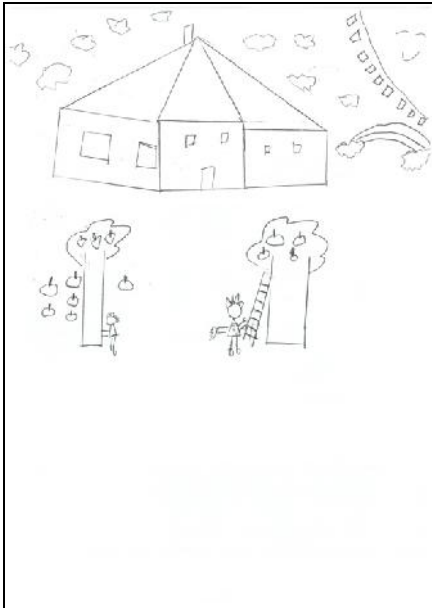


Fig.5.



Fig.6.

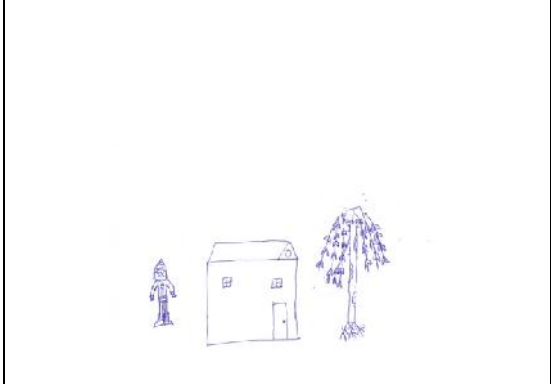


Fig.7.



Fig.8.

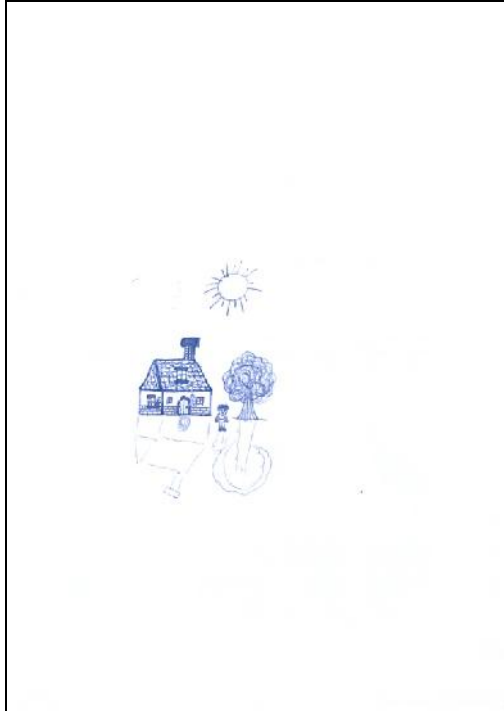


Fig.9.



Fig.10.

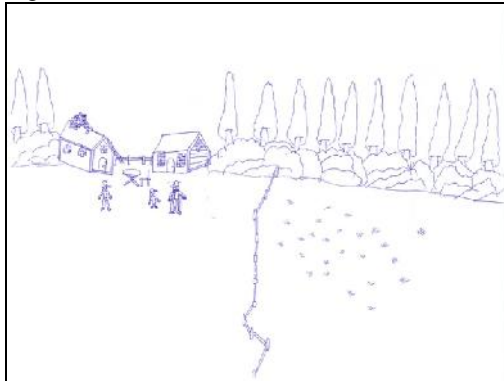


Fig.11.



#### 4.4.2. Result of Questionnaire 1

Questionnaire 1 (Fig.25) is mainly research the use of color in children's painting works, children's cognitive ability in pictures and children's observation. Fig.12, Fig.13, Fig.14, Fig.15, and Fig.16 show the results of frequency analysis participating in the test. The results of Fig.12 and Fig.13 show that the color children like to use in their painting process is blue. The color that children dislike to use in the painting is gray. The third question in Questionnaire 1 is mainly to require the children who participate in the test to find out the missing part of a painting work. The purpose of this test is to study children's overall perception of a painting. According to the results shown in Fig.14, 73% of the children think that people is the missing part in the picture of Question Three. There are four things, the sun, the mountains, the tree and the house in the picture. Under normal circumstances, houses and trees should have a shadow under the sunlight. But in the picture of the third question, there is only the shadow of the house but the shadow of the tree is missing. So the answer to the third question is the shadow of the tree. From the results in Fig.15, only 14.6% of the children answered correctly. Therefore, at the age between 7 and 13, children have weak cognitive ability in light and shadow of painting works. The fourth question of the questionnaire mainly tests children's cognitive ability and observation ability on objects. According to the results shown in Fig.15, 89.38% of the children have a better understanding of the shape of the character. The fifth question in the questionnaire is to arrange the pictures in order. This question is mainly to test children's observation ability. Fig.16 shows that 91.93% of the children arranged the pictures correctly. Therefore, children have good observation ability at the stage between

7 and 13 years old.

Fig.12.

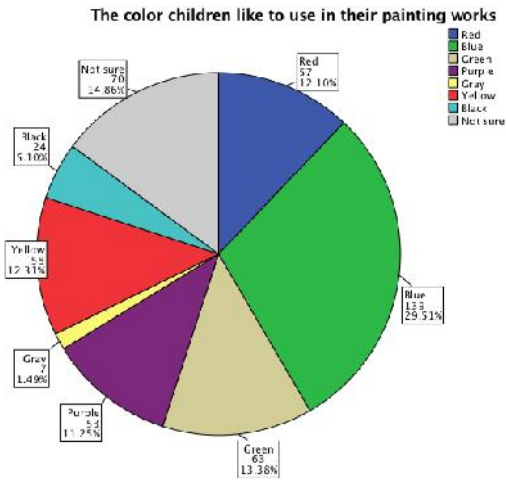


Fig.13.

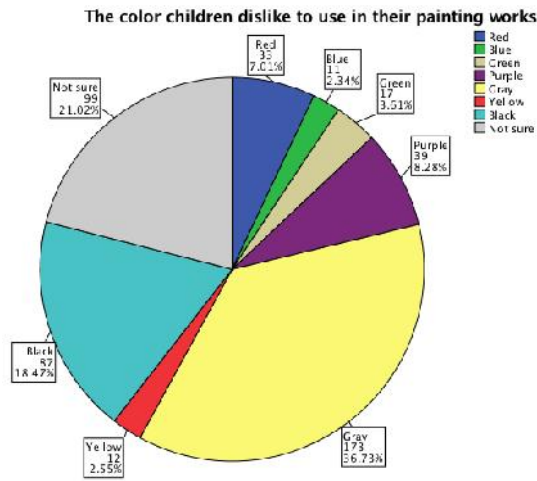


Fig.14.

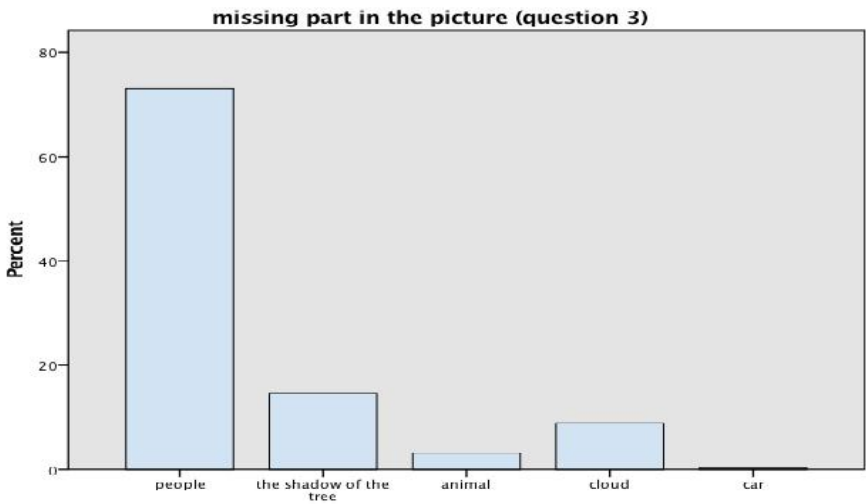




Fig.15.

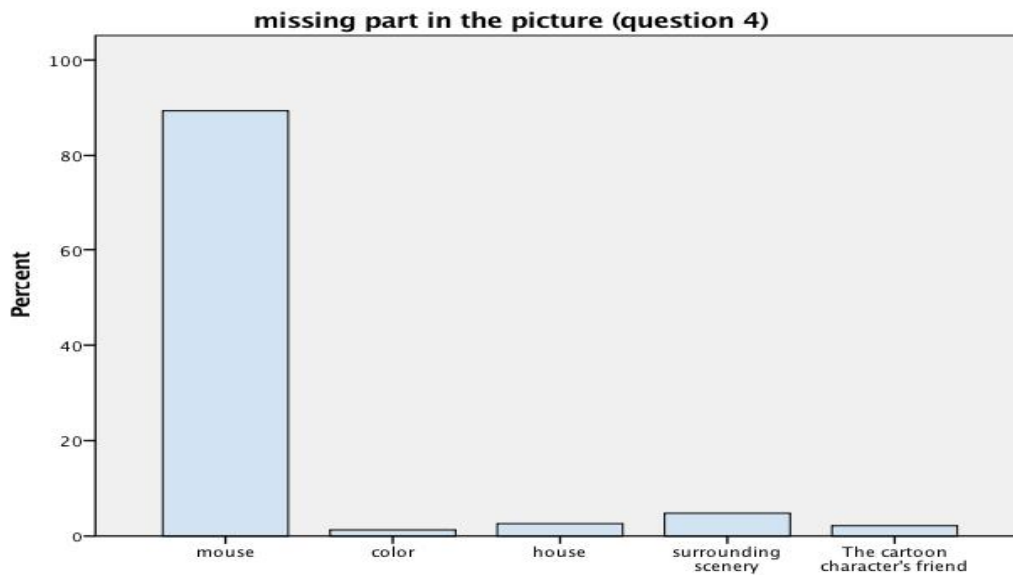
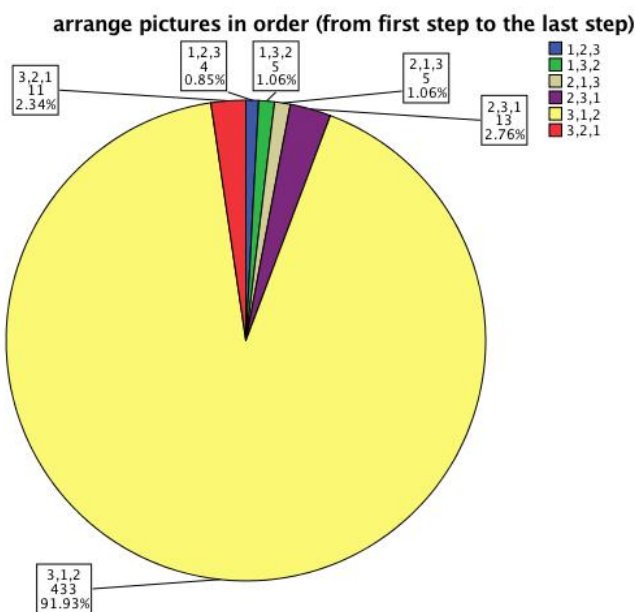


Fig.16.



#### 4.4.3. Result of Questionnaire 2

In order to test whether the results of the six questions in Question 2 (Fig.26) are reliable or not and whether the children participating in the test answer the questions according to their own real situation or not. The reliability statistics results of the questionnaire are shown in Fig.17. According to the value of 'Cronbach's Alpha' in Fig.17, it can be seen that all the children participating in the questionnaire answered the questions according to their own real situation, and the results of the questionnaire were reliable. Besides, in order to test whether the six questions of Questionnaire 2 actually express the characteristics of each variable. The analysis results of the questionnaire are shown in Fig.18. According to the values of 'Kaiser-Meyer-Olkin Measure of Sampling Adequacy' in Fig.18, it can be seen that the six questions of Questionnaire 2 can express the characteristics of the variables which we research in this paper.



Fig.17.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.916	6

Fig.18.

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.917
Bartlett's Test of Approx. Chi-Square	1865.263
Sphericity df	15
Sig.	.000

In order to test whether there is a significant difference in the preference of boys and girls to create paintings and painting works in Questionnaire 2. So the Independent Samples Test was performed on the first and second questions in Questionnaire 2. Fig.19 and Fig.20 are the results of the Independent Samples Test for the first and second questions. The results of Sig. (2-tailed) for the first and second questions were  $<0.05$ . So there is a significant difference between boys and girls in their preferences for creative paintings and paintings. From the results of Mean, girls' preferences about creating paintings and painting works are higher than boys'.

Fig.19.

**Group Statistics**

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Question1	boy	260	3.94	1.149	.071
	girl	211	4.28	.987	.068
Question2	boy	260	4.08	1.123	.070
	girl	211	4.27	1.005	.069

Fig.20.

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Question1	2.714	.100	-3.372	469	.001	-.337	.100	-.534	-.141
			-3.426	467.493	.001	-.337	.098	-.531	-.144
Question2	1.804	.180	-1.994	469	.047	-.198	.099	-.393	-.003
			-2.017	464.488	.044	-.198	.098	-.391	-.005

The third and fifth questions in Questionnaire 2 are intended to research whether children of different ages have different attitudes towards showing their paintings to others. Fig.21, Fig.22 and Fig.23 are the results of data analysis for the third and fifth questions. The Fig.22. shows that the P(Sig.) value is 0.000. According to the data analysis,  $P < 0.01$ , the attitude of the three groups of children in showing their paintings to their families is significantly different from the attitude of showing their paintings to others. According to the results of the tests between-subjects effects ( $\text{Sig.} = 0.000 < 0.025$ ) (Fig.23.), children of different ages have significant differences in their attitudes towards showing their paintings to others. There is also a significant difference in the attitudes of children of different ages to show their paintings to their family ( $\text{Sig.} = 0.000 < 0.025$ ).

Fig.24 is the data analysis result of the sixth question in Questionnaire 2. The result shows 42.46% of children think that color can represent children's mood, and only 4.46% of children think that color does not represent children's mood.

Fig.21.

Descriptive Statistics				
	Age	Mean	Srd. Deviation	N
Question3	7 and 8 years old	4.24	.855	34
	9 and 10 years old	3.90	.992	182
	11,12 and 13 years old	3.50	1.143	255
	Total	3.71	1.093	471
Question5	7 and 8 years old	4.76	.554	34
	9 and 10 years old	4.40	.921	182
	11,12 and 13 years old	3.88	1.302	255
	Total	4.14	1.163	471

Fig.22.

Multivariate Tests <sup>a</sup>					
Effect		Value	F	Hypothesis df	Error df Sig.
Intercept	Pillai's Trace	.897	2032.299 <sup>b</sup>	2.000	467.000 .000
	Wilks' Lambda	.103	2032.299 <sup>b</sup>	2.000	467.000 .000
	Hotelling's Trace	8.704	2032.299 <sup>b</sup>	2.000	467.000 .000
	Roy's Largest Root	8.704	2032.299 <sup>b</sup>	2.000	467.000 .000
Age	Pillai's Trace	.072	8.773	4.000	936.000 .000
	Wilks' Lambda	.928	8.924 <sup>b</sup>	4.000	934.000 .000
	Hotelling's Trace	.078	9.074	4.000	932.000 .000
	Roy's Largest Root	.078	18.199 <sup>c</sup>	2.000	468.000 .000

a. Design: Intercept + age

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Fig.23.

Tests of Between-Subjects Effects						
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Question3	27.480 <sup>a</sup>	2	13.740	12.040	.000
	Question5	42.078 <sup>b</sup>	2	21.039	16.573	.000
Intercept	Question3	3486.159	1	3486.159	3054.791	.000
	Question5	4381.162	1	4381.162	3451.216	.000
Age	Question3	27.480	2	13.740	12.040	.000
	Question5	42.078	2	21.039	16.573	.000
Error	Question3	534.086	468	1.141		
	Question5	594.105	468	1.269		
Total	Question3	7034.000	471			
	Question5	8726.000	471			
Corrected Total	Question3	561.567	470			
	Question5	636.183	470			

a. R Squared = .049 (Adjusted R Squared = .045)

b. R Squared = .066 (Adjusted R Squared = .062)

Fig.24.

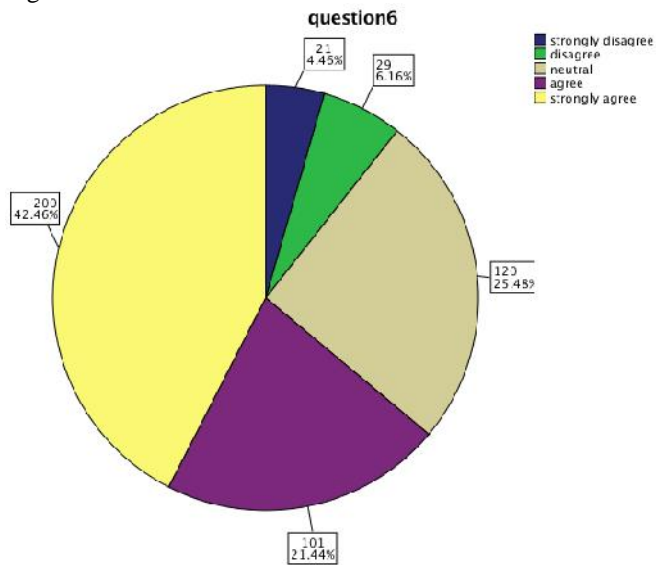


Fig.25: The content of Questionnaire 1.  
Questionnaire 1

- Which color would you like to use in your painting work? ( )  
A. Red B. Blue C. Green D. Purple E. Gray F. Yellow G. Black H. Not sure
- Which color do you dislike? ( )  
A. Red B. Blue C. Green D. Purple E. Gray F. Yellow G. Black H. Not sure
- Please find the missing part in the following picture? ( )



- Please find the missing part in the following picture? ( )



- Please arranged the following ①②③ three pictures in order (from first step to the last step) ( )



Fig.26: The content of the Questionnaire 2

Questionnaire 2

**Questionnaire about pupil preference in painting**

1. I like painting ( )

A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree

2. When I finish a painting work, I feel very happy and have the sense of achievement ( )

A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree

3. I would like to show my painting works to others and share my painting concepts ( )

A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree

4. When I am drawing, I feel depress ( )

A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree

5. I would like to show my painting works to my parents ( )

A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree

6. I think color can represent my mood ( )

A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree

**5. Conclusion****5.1. Result**

According to the results of the children's HTP test, it can be concluded that the children between 7 and 13 years old would like to draw the things that are familiar with the children. Therefore, children's paintings reflect children's psychological status, physical status, children's family status and the relationship between the people around them. Children's teachers and parents can know children's emotions and living conditions through children's painting works. And helping children solves their troubles through painting works. When the art teacher conducts painting teaching, the art teacher can select some paintings based on the children's favorite colors according to the results of the children's color preference. By this way, children can be better attracted to learn painting and help art teachers to better complete teaching tasks. Besides, in the test of the children's cognitive ability and observation ability in Questionnaire 1, it can be seen that the child's cognitive ability to the shape of the object is strong but the cognitive ability of the light and shadow in the painting is weak. Therefore, art teachers can add some training about light and shadow when children create painting works.

According to the results of Questionnaire 2, girls are more interested in painting works than boys. In the process of teaching, art teachers can find some art works that boys like, in order to improve the interest of boys in painting. The last question in the questionnaire is that most children think that color can represent their mood, and only a small percentage of students think that color can't represent their mood. Therefore, we can combine the results of the survey on children's likes and dislikes of colors in Questionnaire 1 to help art teachers refer to the above conclusions in the process of art teaching. In the process of teaching, we should use children's favorite colors to attract children's attention and let more students participate in art learning.

**5.2. Limitations and future work**

First, the options for children in questions about children's performance about color have the limitation, because only the primary colors are listed in the options. However, some transitional colors, such as color hue and shade classification, are not listed in the options. And the color named after the object is also not listed in the options. So the results of the questionnaire can only prove that children like or dislike using one sort of colors. Second, in the HTP painting test children are required to paint house tree and person. The fixed painting themes may limit children's imagination. The content of children's painting works will be formatted. Besides, this paper lacks graphical analysis based on children's painting works. There is only an analysis of the picture content of children's paintings in the paper.

This paper is based on the HTP test to analysis the content of children's painting works and the children's preference while creating painting works. The conclusions of this paper will help fine art education. By using the research conclusion, the fine art teachers can give the children targeted guidance according to children's gender, age and painting habits to better achieve the purpose of teaching.

## References

- Ahmad Beh-Pajooh, Abbas Abdollahi and Simin Hosseinian (2018). The effectiveness of painting therapy program for the treatment of externalizing behaviors in children with intellectual disability. *VULNERABLE CHILDREN AND YOUTH STUDIES*, 11 January. doi.org/10.1080/17450128.2018.1428779
- Andrei C.Miu, Simina Pi ur and Aurora Szentágotai-T tar (2016). Aesthetic Emotions Across Arts: A Comparison Between Painting and Music. *Front. Psychol.*, 05 January. doi:10.3389/fpsyg.2015.01951
- Bozcuk, H., Ozcan, K., Erdogan, C., Mutlu, H., Demir, M., & Coskun, S. (2017). A comparative study of art therapy in cancer patients receiving chemotherapy and improvement in quality of life by watercolor painting. *Complementary Therapies in Medicine*, 30, 67–72. doi:10.1016/j.ctim.2016.11.006
- Cathy A. Malchiodi (1998). *Understanding Children's Drawings*. New York: Guilford Press. ISBN: 9781572303720
- David H. Dodd & Raymond M. White (1980). *Cognition, Mental Structures and Processes*. U.S. : Allyn & Bacon Inc. ISBN: 0205071201
- Flood, M., & Phillips, K. D. (2007). Creativity in older adults: A plethora of possibilities. *Issues in Mental Health Nursing*, 28(4), 389–411. doi:10.1080/01612840701252956
- Gridley, M. C. (2013). Preference for abstract art according to thinking styles and personality. *North American Journal of Psychology*, 15(3), 463.
- Horst Bredekamp (2010). *Theorie des Bildakts*. Berlin: Frankfurter Adorno-Vorlesungen , ISBN: 3518585169
- Ji Yuanhong (2011). *Tree-Personal Projection Test*. Chongqing, Chongqing Publishing Group. ISBN:9787229124076
- John N. Buck (1966). *The House-Tree-Person Technique: Revised Manual*. U.S.A.: Western Psychological Services. ASIN: B00476NBOK
- Kerstin Schoch, Thomas Ostermann and Harald Gruber (2017). Measuring art: Methodical development of a quantitative rating instrument measuring pictorial expression (RizbA). *The Arts in Psychotherapy* 55, 13 May, 73-79
- Lu Yaqing. (2009). *Art Therapy*. Chongqing, Chongqing University Press, 20-21. ISBN: 9787562449560
- Machover, K. (1949). *Personality projection in the drawing of the human figure*, Springfield: Charles C. Thomas.
- Ngai Serin. (2006). Painting over the Arts: How the No Child Left Behind Act Fails to Provide Children with a High Quality Education. *Seattle Journal for Social Justice*: Vol. 4: Iss. 2, Article 37
- Nongfu Shen (2009). Magical Visual Sense Therapy of Painting. *Journal of Friends of the Science*. Shanxi Association of Science and Technology (A). China, June(6):29
- Shiota, M. N., Keltner, D. and Mossman, A. (2007). The nature of awe: elicitors, appraisals and effects on self-concept. *Cogn. Emot.* 21, 944–963. doi: 10.1080/02699930600923668
- Silvia, P. J. (2011). "Human emotions and aesthetic experience: an overview of empirical aesthetics," in *Aesthetic Science: Connecting Minds, Brains, and Experience*, eds A. P. Shimamura and S. E. Palmer (New York, NY: Oxford University Press), 250–275.
- T Skybo, N Ryan-Wenger and Y Su (2007). Human Figure Drawings as a Measure of Children's Emotional Status: Critical Review for Practice. *Journal of Pediatric Nursing*. Volume 22. Issue 1. February, 15-28
- Viktor Lowenfeld. (1947). *Creative and Mental Growth* (New York: Macmillan), 45-50. ASIN: B009JY91YY
- Yingmei Wang, Jiankang Xu, Chunli Wang and Junli Zhang (2016). A Quality Software System Designed for Mental Disease Treatment through Artistic Painting. *International Journal of Education and Management*. Vol 1. No.1. March, 9-14