IN CELEBRATION OF CREATIVITY PLAY: AN EXPLORATION ON CHILDREN’S AESTHETIC SENSIBILITY AND CREATIVITY IN WALDORF EARLY CHILDHOOD EDUCATION

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In Celebration of Creativity Play:  
an Exploration on Children’s Aesthetic Sensibility and Creativity in Waldorf Early Childhood Education

Chou MEI-JU¹

Abstract

This study aims to explore the influence of parents-support creative play on Waldorf preschool children’s aesthetic sensibility and creativity. The purposive subjects were 30 preschool children in Waldorf Early Childhood Education in Taiwan. A pretest-posttest control group design was employed to randomly assign children into an experimental and a control group. The control group of 15 children remained the same Waldorf teaching for 20 weeks; while the experimental group of 15 children was exposed to the parents-support creative play. The per session 60 minutes creative play for 20 weeks includes four topics of trust, harmony, freedom, and peace. The quantitative instruments included “Torrance Tests of Creative Thinking, Figural Form B” and “Preschool Children’s Aesthetic Sensibility Measurement”. After the data was collected, it was analyzed and tested by independent t-test and one-way covariance. The qualitative instruments included “Educators’ Observation on Children’s Play” and “Children’s Drawings in any art form” before and after the treatment of creative play. The results revealed: (1) With the treatment of parents-support creative play for children, the results of “Preschool Children’s Aesthetic Sensibility Measurement” indicate a positive transformation in “Exploration and Awareness” and “Expression and Creation”; the results of “Torrance Tests of Creative Thinking” show a positive influence in “Originality”; (2) The educators’ observation on children’s play and their drawings reveal that children are willing to express free creativeness of colourful image and storytelling themes towards their drawing after receiving creative play.

Keywords: Aesthetic sensibility, Waldorf, creative play, preschool children.

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Introduction

Ideology of achievement and efficiency drives the children’s playful learning toward preparation for multiple tests. With the goal to advance the aesthetic competition and normal teaching and learning for children, Taiwan Education Bureau implements “Aesthetic Education The first Period Five Year Program” from 2014 to 2018. It proposed that early childhood education is the key period for enlightening children’s aesthetic sensibility, arousing their awareness, and elevating their sensibility. Moreover, with policies pay less emphasis on the organizing curriculum areas with discrete learning literacy, music, art, science, social studies, movement…etc. Modern early childhood educators realize the lives and abilities of young children can’t be so easily compartmentalized. Kostelnik et al. (2013) suggest that childhood is a different matter today, with knowledge is less formalized, children know about everything almost before they have chances to experience things by themselves, hence, the emphasis on “aesthetics” has created an access to perceive the world from the perspective of slowness (Lu & Chen, 2009), imagination (Richert et al., 2009), creativity (Pfeiler, 2007) and life aesthetics (Kazuyo, 2009). The aesthetic experience, the objects which could bring the five senses and mind enjoyment (Dewey, 1980; Ellen, 2008; Edwin, 2010) could be a significant source of children’s delight in exploring the world. Considering the aesthetic theoretical literature (Cold et al., 1998; Feeney & Moravcik, 1987; Locher et al., 2006; Hagman, 2011; Wilson, 2010) and aesthetic research on children’s music and drama (Cropley & Cropley, 2008; Pfeiler, 2007), little discussion focusing preschool children’s aesthetics within creative and playful learning recently, the research aims to fill the gap in exploring how creative play can influence preschool children’s aesthetic sensibility and creativity. The reason why Waldorf Education is adopted in the research lies on the educational philosophy of Rudolf Steiner proposed is highly consistent in the curriculum aesthetics in early childhood education. Felt troubled by the overly academic emphasis of schools, Steiner felt that the aesthetic side needs to be highly valued and developed along with the children’s intellectual development. (Steiner, 1995; Honeybloom, 2013). Especially for many of children are being raised in an increasingly pressured style that have limited the parent-child quality relationship, the research adopted parents-support creative play to experiment its effect on children’s sensibility and creativity.

Based on the above research background and motives, the three-fold objectives are organized as below: (1) To explore the fitness of creative play integrated into children’s aesthetic learning of Waldorf Education; (2) To explore the influence of creative play on Waldorf preschool children’s aesthetic sensibility and creativity; (3) To discuss in terms of theoretical and practical implications, and also provide some suggestions for creative play designing and for slowness of aesthetics curriculum.
Theoretical Framework and Hypotheses

Aesthetics Curriculum and Creative Play

The origin of the word ‘aesthetics’ in the Greek word means ‘to sense’ and ‘things that can be sensed’ (Cold et al., 1998; Tinmannsvik & Bjelland, 2009). Early childhood curriculum aesthetics research (Dewey, 2010; Tseau, 2009; Zhong, 2009; Lu & Chen, 2009) indicate that aesthetics curriculum consist of the following elements which share the same characteristics of children’s creative play—daily life aesthetics experience, abundant affections, active exploration, delighted enjoyment, dynamic and unexpected process, problem solving, and imaginative performance (Chou, 2010; Hon, 2008; Huah, 2013; Lou, 2008). With the integrating aesthetic arts into curriculum, early childhood educators (Fisher et al., 2011; Ginsberg, 2007; Hanley et al., 2009; Smith & Palmquist, 2012; Veitch et al., 2006; Wong et al., 2008) are in agreement that with the importance of play, especially with the combination of Nature (Fjortoft, 2001; Wilson, 2012; Woodward, 2013), eurythmic music, aesthetic art, storytelling, fantasy, and creative play (Bryson & Thorisson, 2000; Kanelopoulos, 2011) would allow children evoke their intrinsic learning motivation (Ellen, 2008; Frost et al., 2008; Gregory et al., 2009), emotions (Chessa et al., 2011; Frances et al., 2013), whole child development (Angeline et al., 2013; Samuelsson & Fleer, 2009; Lu et al., 2010), cognitive development (Lillard, et al., 2011). Research (Zhong, 2009; Lu & Chen, 2009; Huah, 2013) on children’s curriculum aesthetics summarize that the aesthetic characteristic of creative play as follows. 1. Play is free, autonomous, voluntary activity. 2. Children need to be involved with passion and concentration. 3. Aesthetic description including tension, balance, variation, rhythm and harmony are consistent with play. 4. Aesthetics is more than a delight feeling trigged by physical and psychological atmosphere feeling, and should be highly involved with imagination, creation and action. The role of parents in creative play in the research represent the wide range of caring and respecting more than restriction and authority. Ginsberg (2007) points that the interactions that occur through play make children believe that parents are fully paying attention to them and help to build enduring relationships. Parents who have more opportunity to participate in children’s school activity learn to communicate more effectively with their children. To summarize, creative play in school offers parents a wonderful opportunity to engage fully with children and their friends as well. Hence, these above arguments lead to the following hypothesis: Hypothesis 1. The treatment of parents-support creative play has a significant effect on preschool children’s aesthetic sensibility.
Waldorf Early Childhood Education and Creativity Play

Waldorf education was founded by Rudolf Steiner (1861-1925), with the balance among thinking, willing, and feelings, his theory of child development elaborated three cycles of seven-year stages. Before age 7, the Waldorf curriculum is multidisciplinary; children learn through imitation and doing, bodily exploration, imaginary play in which activities the child grows physically, intellectually, and emotionally (Gilbert, 2010; Honeybloom, 2013; Rosenbloom, 2013; Wilson, 2012). In creative play, the goal of developing concentration and motivation (McNulty, 2008; Woodward, 2013) could be carried out through singing songs, painting with water-colors, cooking, hearing a story told with puppets, going on a nature walk, working in the nature, or building with wooden blocks. Hence, the same characteristics both aesthetics within creative play and Waldorf education share are as follows. 1. The value of slowness learning is important than learning efficiency, 2. The need for the whole child development includes spiritual, emotional, physical, social, aesthetic, cognitive and intellectual development 3. The willingness to nurture intrinsic learning motivation could be achieved through life aesthetic sensibility. 4. The children’s integrated aesthetic experience will be elevated through the communication among family and schools (Blanning, 2010; Larsson & Dahlin, 2012; Taylor, 2011; Webber, 2013; Woodward, 2008;).

Ginsberg (2007) proposes that creative play allows children to use their creativity while developing their imagination, dexterity, and physical, cognitive, and emotional strength. It is through creative play that preschool children interact with the world around them. In creative play, children can explore and master their imaginative world. Naturally, creative play allows children to move at their own paces, discover their own interest, and continuously involve in the passions they love to pursue. Abundant research on children’s creative play (Frances, Anna & Elisabet, 2013; Hanley et al., 2009; Hirsh et al., 2008; Lu et al., 2010; Kostelnik et al., 2013) indicate that the curriculum design of creative play share the five elements—inspire, imagine, build, play and share. At the heart of creative play in Waldorf Education is that children are naturally creative and curious to sense the authentic experiences, and educators can foster this natural creativity by giving hints and support. These arguments lead to the following hypothesis: Hypothesis 2. The treatment of parents-support creative play has a significant effect preschool children’s creativity.
Methodology

Research Methodology

This study aims to explore the influence of parents-support creative play on Waldorf preschool children’s aesthetic sensibility and creativity. The purposive subjects were 30 preschool children, age 60-72 months. A pretest-posttest control group design was employed to randomly assign children into an experimental and a control group.

Research Framework

The variables adopted in the research included the independent variable—parents-support creative play, the dependent variable-preschool children’s aesthetic sensibility, and the control variable-time, place, children’s creative play experience, topic of creative play in class, and teaching quality.

![Framework](image)

Figure 1. Framework

Measurement of Variables

Based on the variables in the research framework, the quantitative instrument applied to Likert’s five-point scale included “Torrance Tests of Creative Thinking, Figural Form B” (Torrance, 1968) and “Preschool Children’s Aesthetic Sensibility Measurement.” The 12 characteristics of aesthetic sensibility measurement was conducted and adopted by the following literature (Chou, 2010; Dewey, 1980; Education, 2008; Hon, 2008; Huah, 2013; Lou, 2008; Wang, 2001) in Table 1.
Table 1. Factors of Preschool Children Aesthetic Sensibility

<table>
<thead>
<tr>
<th>Exploration and Awareness</th>
<th>Expression and Originality</th>
<th>Response and Appreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abundant Affections Involvement</td>
<td>Dynamic and Unexpected Process</td>
<td>Continuously Integrated Experience</td>
</tr>
<tr>
<td>Deeply Moved Feelings</td>
<td>Perceptual Cognition</td>
<td>The Linkage with Daily Life</td>
</tr>
<tr>
<td>Active Exploration</td>
<td>Problem Solving Ability</td>
<td>Reconciliation of Inter/Intrapersonal Harmony</td>
</tr>
<tr>
<td>Delighted Satisfaction and Enjoyment</td>
<td>Imaginative and Creative Performances</td>
<td>A whole Experience</td>
</tr>
</tbody>
</table>

With class educators’ familiar with the children, they mark the appropriate level according to children’s everyday characteristics, for 0-5 points, 5 means well-performed. The qualitative instrument of “Educators’ Observation on Children’s Play” was agreed by parents and then photographed and recorded by educators; for each group 5 randomly chosen “Children’s Drawing” before and after the treatment, they were evaluated by three aesthetic professions. The following 17 characteristics are adopted from the research (Huang, 2000; Chang, 2003) to evaluate children’s creativity in fluency, originality, essence, quality, openness, emotion expression, storytelling, dynamic, theme, integration, unusual vision, inner vision, boundary breaking, humor, colorful image, vivid image, and fantasy.

Experiment Courses of Creative Play

The main points of creative play include inspire, imagine, build, play and share, which was firstly conducted and adopted from research (Bryson & Thorisson, 2000; Ceglowski, 1997; Frances, Anna & Elisabet, 2013; Fjortoft, 2001; Frost, Mayesky, 2010; Wortham & Reifel, 2008; Lu et al. 2010) and then secondly revised from 5 professional educators in early childhood education, thirdly, parents leading the play need to be trained for educators before the formal treatment. During each week formal treatment of creative play, parents, educators and researcher are all participators.

Results

In this section, results are elaborated in the following parts, including analyses of reliability and validity, comparative analysis of pre-test and post-test of experiment and control group, covariance analysis, and qualitative results.

Analyses of Reliability and Validity

Preschool Children’s Aesthetic Sensibility Measurement. With Factor Analysis, three factors were abstracted, namely Exploration and Awareness (eigenvalue = 3.912, $\alpha = 0.81$), Expression and Creation (eigenvalue = 2.168, $\alpha = 0.76$), and
Response and Appreciation (eigenvalue = 2.839, \( \alpha = 0.75 \)). The commonly accumulated variance explained reached 75.942%.

Torrance Tests of Creative Thinking, Figural Form B. With Factor Analysis, four factors were abstracted, namely Influency (eigenvalue = 2.387, \( \alpha = 0.82 \)), Flexibility (eigenvalue = 2.813, \( \alpha = 0.84 \)), Originality (eigenvalue = 2.337, \( \alpha = 0.85 \)), and Elaboration (eigenvalue = 2.996, \( \alpha = 0.88 \)). The commonly accumulated variance explained achieved 78.884%.

**Comparative Analysis of Pre-test and Post-test of Experiment and Control Group**

![Figure 2](image1)

**Figure 2**

- Figure 2. Aesthetic Sensibility Measurement
- R=Randomly Assign
- X=treatment of parents-support creative play
- Y=Waldorf Education
- 01=Pre-test of Experiment Group
- 02=Post-test of Experiment Group
- 03=Pre-test of Control Group
- 04=Post-test of Control Group

![Figure 3](image2)

**Figure 3**

- Figure 3. Torrance Test of Creativity Thinking
- R=Randomly Assign
- X=treatment of parents-support creative play
- Y=Waldorf Education
- 05=Pre-test of Experiment Group
- 06=Post-test of Experiment Group
- 07=Pre-test of Control Group
- 08=Post-test of Control Group
Table 2. Comparative Analysis of Aesthetic Sensibility Measurement

<table>
<thead>
<tr>
<th></th>
<th>Aesthetic</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 &amp; 03</td>
<td>EA</td>
<td>0.881</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>EC</td>
<td>0.914</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>RA</td>
<td>1.643</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td>02 &amp; 04</td>
<td>EA</td>
<td>6.572***</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>EC</td>
<td>3.992**</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td></td>
<td>RA</td>
<td>-0.748</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td>01 &amp; 02</td>
<td>EA</td>
<td>6.046***</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>EC</td>
<td>7.682***</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>RA</td>
<td>-1.117</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td>03 &amp; 04</td>
<td>EA</td>
<td>5.294**</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td></td>
<td>EC</td>
<td>-0.937</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>RA</td>
<td>0.817</td>
<td>p &gt; .05</td>
</tr>
</tbody>
</table>

EA = Exploration and Awareness, EC=Expression and Creation, RA=Response and Appreciation

*p<0.05, **p<0.01, ***p<0.001

Table 3. Comparative Analysis of Creativity Test

<table>
<thead>
<tr>
<th></th>
<th>Creativity</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>05 &amp; 07</td>
<td>Fluency</td>
<td>-1.002</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td>-0.924</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>Originality</td>
<td>0.762</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>0.814</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td>06 &amp; 08</td>
<td>Fluency</td>
<td>-2.381</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td>-1.925</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>Originality</td>
<td>9.329***</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>1.168</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td>05 &amp; 06</td>
<td>Fluency</td>
<td>8.115***</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td>9.099***</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>Originality</td>
<td>8.329***</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>-2.882</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td>07 &amp; 08</td>
<td>Fluency</td>
<td>1.379</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td>-1.294</td>
<td>p &gt; .05</td>
</tr>
<tr>
<td></td>
<td>Originality</td>
<td>5.789**</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>0.814</td>
<td>p &gt; .05</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001

From Table 2 and Table 3, the conclusion is summarized as follows.

Difference between experiment and control group: In aesthetic sensibility measurement and creativity test, there is no significant difference in pre-test between two groups. But the pre-test average of experiment group is higher than the one of control group. In Aesthetic post-test, there is significant difference in
“Exploration and Awareness” and “Expression and Creation” between two groups. In creativity post-test, there is significant difference in “Originality” between two groups.

Difference between pre and post test of one group: There is significant difference in aesthetic – “Exploration and Awareness” and in creativity – “Originality” of control group. And there is significant difference in aesthetic sensibility—“Exploration and Awareness” and “Expression and Creation” and in creativity—“Fluency,” “Flexibility,” and “Originality” of experiment group.

Covariance Analysis

Before the covariance analysis, the basic hypothesis of within-group regression coefficient homogeneity is satisfied.

Table 4. Analysis of Covariance of Aesthetic Sensibility Measurement

<table>
<thead>
<tr>
<th>Source</th>
<th>Deviation from Average</th>
<th>Freedom</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exploration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness</td>
<td>Covariate</td>
<td>185.123</td>
<td>1</td>
<td>185.123</td>
<td>18.211 *** .000</td>
</tr>
<tr>
<td>Among Group</td>
<td></td>
<td>14.512</td>
<td>1</td>
<td>14.512</td>
<td>13.194 *** .000</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>183.312</td>
<td>27</td>
<td>10.795</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>400.533</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expression</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creation</td>
<td>Covariate</td>
<td>163.274</td>
<td>1</td>
<td>163.274</td>
<td>23.873 *** .000</td>
</tr>
<tr>
<td>Among Group</td>
<td></td>
<td>15.682</td>
<td>1</td>
<td>15.682</td>
<td>21.981 *** .000</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>143.843</td>
<td>27</td>
<td>9.452</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>367.982</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Response</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appreciation</td>
<td>Covariate</td>
<td>121.783</td>
<td>1</td>
<td>121.783</td>
<td>3.893 .384</td>
</tr>
<tr>
<td>Among Group</td>
<td></td>
<td>67.917</td>
<td>1</td>
<td>67.917</td>
<td>2.011 .468</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>810.893</td>
<td>27</td>
<td>31.873</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>998.385</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001

From Table 4, after getting rid of the influence of covariates, there is no significant difference in among-group of “Response and Appreciation” (F=2.011, p>.05). The results indicated that the treatment has no influence on “Response and Appreciation.” In “Exploration and Awareness” and “Expression and Creation,” there is significant difference in among-group (F=13.194, p<.001) and (F=21.981, p<.001) and in the effect of covariate (F=18.211, p<.001) and (F=23.873, p<.001), which means the covariates have high explanation on dependent variable and as well the treatment has significant influence on “Exploration and Awareness” and “Expression and Creation.”
Table 5. Analysis of Covariance of Creativity Test

<table>
<thead>
<tr>
<th>Source</th>
<th>Deviation from Average</th>
<th>Freedom</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluency Covariate</td>
<td>205.992</td>
<td>1</td>
<td>205.992</td>
<td>20.982 ***</td>
<td>.000</td>
</tr>
<tr>
<td>Among Group</td>
<td>32.165</td>
<td>1</td>
<td>32.165</td>
<td>3.033</td>
<td>.103</td>
</tr>
<tr>
<td>Error</td>
<td>201.463</td>
<td>27</td>
<td>11.257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>498.085</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexibility Covariate</td>
<td>122.145</td>
<td>1</td>
<td>122.145</td>
<td>19.483 ***</td>
<td>.000</td>
</tr>
<tr>
<td>Among Group</td>
<td>13.946</td>
<td>1</td>
<td>13.946</td>
<td>2.573</td>
<td>.253</td>
</tr>
<tr>
<td>Error</td>
<td>241.357</td>
<td>27</td>
<td>9.846</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>364.374</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Originality Covariate</td>
<td>950.469</td>
<td>1</td>
<td>950.469</td>
<td>9.385**</td>
<td>.002</td>
</tr>
<tr>
<td>Among Group</td>
<td>1688.384</td>
<td>1</td>
<td>1688.384</td>
<td>17.894 ***</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>2998.247</td>
<td>27</td>
<td>121.396</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>5023.668</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaboration Covariate</td>
<td>136.834</td>
<td>1</td>
<td>136.834</td>
<td>4.892</td>
<td>.086</td>
</tr>
<tr>
<td>Among Group</td>
<td>90.256</td>
<td>1</td>
<td>90.256</td>
<td>2.894</td>
<td>.196</td>
</tr>
<tr>
<td>Error</td>
<td>1143.306</td>
<td>27</td>
<td>43.872</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>1378.992</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001

From Table 5, after getting rid of the influence of covariates, there is no significant difference in among-group of “Fluency” (F=3.033, p>.05), and “Flexibility” (F=2.573, p>.05), and “Elaboration” (F=2.894, p>.05). The results indicated that the treatment has no influence on “Fluency,” “Flexibility,” and “Elaboration”; while in “Fluency” (F=20.982, p<.001) and in “Flexibility” (F=19.483, p<.001), those covariates effect reach significant, which mean covariates have high explanation on dependent variable. In “Originality”, there is significant difference in among-group (F=17.894, p<.001) and in the effect of covariate (F=9.385, p<.01), indicating that the treatment has significant influence on “Originality.”

**Qualitative Results**

From the evaluation of children’s drawings in any art form before and after the treatment, compared with the control group, the children of experiment group express more advanced quality in creativity and aesthetic sensibility, such as rich themes, explicit storytelling, colorful images, elaborate enjoyment, boundary breaking, integrating life experience, fantasy, and unlimited possibilities. From above discussion, the results indicate that hypothesis 1 and 2 are both partially agreed.
Conclusions

With the educators’ passion in encountering challenges through involvement in the creating process—asking, thinking and doing, children are willing to enjoy the profound feelings and then approach learning as a thinker to search for unanticipated possibilities in play. The results are similar with Huang (2001) and Chang (2003), children’s originality within creativity is elevated. The qualities fostering creative play in aesthetic form as summarized as follows: (1) Preschool children are provided with: hands-on aesthetic experience, attentive responding, positive attitude, emotional commitment, active participation, felt freedom, close observation and confident expression; (2) Educators and parents possess: participatory thinking, dialogical discourse, open-ended possibilities, inquiry-guided process, enough waiting time, multi-sensory courses, and immediate praise. The educators’ task is to present worthwhile aesthetic experience for children to sense the beauty within daily life; (3) The friendly-prepared environment: multi-sensory, child-centered, parent-supported, imaginative discovery, on-going introspection, creative themed images, felt safe and warm, low-structured or real objects, and Nature banquet.

Limitations

With the limitation of time, one preschool, randomly assign method, human resource, the field experimentation is adopted. Further, during research period, though the teaching quality, topic of creative play, children’s creative play experience is controlled, the preschool children’s physical and psychological maturity and parents and peers learning influence can’t be entirely controlled. The qualitative evaluation of 10 children’s unique drawings can’t present the total children. Finally, the creativity and aesthetic sensibility will be naturally performed in natural circumstances. Thus, the results could only explain the outcomes presented by the instruments in the research.

Suggestions

For researchers to be able to design appropriate aesthetic experiences for young children’s exposure in creative play, further suggestions are presented as follows: (1) Curriculum application for educators and parents. With the co-experiencing creative play with parents, children feel being cared, warm and are willing to participate in verbal and nonverbal communication. Therefore, the parent-child reading, playing, art-making, drama performing, etc are highly recommended for preschools in curriculum design; (2) Aesthetic material selection for children. Research results revealed that easily accessed and low-structured Nature material drive children toward creative possibilities. Especially with hands-on doing ex-
experience, children’s aesthetic sensibility and creativity are evoked; (3) Multi-
dimension further research: with factors influencing children’s aesthetic expe-
rience not discussed in the research, to extend it into research on language,
physical, cognitive, emotional, social development and cultural difference could
be for further studies. Moreover, with randomly sampling method, different age
children, different instruments, and more preschools would make the results
concise inference; (4) Advanced research method: Firstly, further study could
adopt one by one personal interviewing child and record their immediate feelings
on the treatment. Secondly, the correlation between aesthetic sensibility and
creativity could be done, and with the two factors by themselves complexity, the
long-term research would be more objective in exploring children’s inner feelings.
Further, there is a need to realize how children can be involved and to what extent
such involvement can be beneficial for aesthetic experience and creative play.

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