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ABSTRACT

This study investigated the effects of a creative movement program on the motor creativity of Taiwanese preschool children, hypothesizing that there would be no significant different in motor creativity between children participating in the creative movement program and those participating in a control group. The intervention group completed a 6-week, 2-day per week, creative movement program which was based on Gilbert's (1992) conceptual approach lesson plan format. The control group participated in an unstructured free setting. Pretest and posttest data were collected using Torrance's Thinking Creatively in Action and Movement scale, which assessed changes in the children's motor creativity. Results indicated that the experimental group had significantly higher levels of motor creativity than did the control group, suggesting that the creative movement program was essential to the development of the total child. (Contains 14 references.) (SM)

# THE EFFECTS OF A CREATIVE MOVEMENT PROGRAM ON MOTOR CREATIVITY OF CHILDREN AGES THREE TO FIVE

by

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*Introduction*

Children love to move. Movement is a part of their lives from the very moment they are born. Children obtain joy and happiness through movement. There are many reasons for providing opportunities for children to move. It has been shown that prime learning and growth comes by and through movement (Andress, 1991). Movement is the primary form of expression from a child's earliest days. Even when speech becomes the major vehicle for expression, a child still falls back on gesture and movement for nuance and emphasis. It is through movement that the child very often finds the only means to manifest deeply felt emotions (Liselott, 1991). A preschool child's primary means of communication is through movement. Movement is both functional and meaningful. Children use movement instinctively, expressing their feelings, thoughts and desires through their bodies, in ways that are spontaneous and imaginative (Taylor, 1975). Creative movement promotes growth in many areas of development, including the physical, mental, social, and emotional. It allows children to develop creative thinking, problem-solving skills, and motor skill abilities. The effects of movement naturally overflow into other aspects. Stimulation of these skills and abilities allows children to apply them to the learning of other subjects (Clements, 1995; Gilbert, 1992; Pica, 1990a, 1997, 2000).

*Method*

The purpose of this study was to identify the effects of a creative movement program on motor creativity of preschool children. In order to accomplish this it was necessary to utilize a program of experiences that seek to find motor creativity differences. It was hypothesized that there is no significant difference in motor creativity between children participating in the Creative Movement Program and those in the control group.

*Instrument/Sample/Intrarater Reliability*

Torrance's Thinking Creatively in Action and Movement (TCAM) (Torrance, 1981) was used to assess changes in motor creativity. Torannce's test is an appropriate creativity test on motor development for preschool children in ages three through eight. It is designed to be administered individually in approximately 10-15 minutes. The Torrance's Test (TCAM) is comprised of the following four different activities:

1. How Many Ways? – ask the child to move in different ways from one place to another
2. Can You Move Like? – ask the child to imagine, empathize, fantasize, and pretend unfamiliar roles
3. What Other Ways? – ask child to find alternative ways of placing a cup in a wastebasket
4. What Can You Do? – ask the child to give unusual use of cup.

All observations, except for Activity 2, were recorded in the test booklet and were later evaluated.

The target population for this study consisted of the children attending a children's center which serves children ages 36 months through 71 months old, in Taichung, Taiwan during 2002. All the children of the target age were identified and grouped into the following categories: 36-47 months, 48-59 months, and 60-71 months. For TCAM test, both experimental and control groups were administrated pretest and posttest for assessing motor creativity.

*Intervention Program*

The experimental groups participated in a six-week Creative Movement Program. The length of each lesson was 30 minutes. Lessons took place two days per week according to specific lesson plans. This program is based on Gilbert's (1992) conceptual approach lesson plan format. The control group at this time participated in the unstructured free setting. The children were actively engaged in self-selected physical activities in a defined area on the playground under teacher supervision but not direction.

*Data Analysis*

Using SPSS for Windows software descriptive and frequency statistics were used to present the demographic data and an analysis of covariance (ANCOVA) was utilized to test null hypothesis in order to determine whether significant differences exist in motor creativity following the intervention of the Creative Movement Program. Motor creativity was the dependent variable and was measured by the total test scores on the TCAM test. The independent variable was group membership (experimental or control group). The ANCOVA was chosen to adjust for the initial group differences that may have existed. The pretest mean score was used as a covariate and the adjusted posttest mean score was served as a dependent variable.

*Result/Conclusion*

Results of this study showed that students participating in the Creative Movement Program scored in motor creativity ($p < .05$) significantly higher than those in the control group following the intervention.

*Demographic Characteristics*

There were a total of 60 subjects in this study. Of the 60 subjects, 30 participated in the Creative Movement Program, while 30 participated in the unstructured free play setting. The subjects' characteristics (i.e., chronological age and mean age) for both the experimental and control groups are illustrated in Table 1.

Table 1

*Characteristics of Subjects by Age*

| Group | Chronological Age (months) | Mean Age (months) |
|---|---|---|
| Experimental | | |
| one | 39-45 | 42.7 |
| two | 49-59 | 53.1 |
| three | 61-71 | 64.8 |
| Control | | |
| one | 38-47 | 42.6 |
| two | 49-59 | 53.6 |
| three | 61-70 | 66.5 |

Table 2 shows the number and percentage of subjects in this study by gender.

Table 2

*Characteristics of Subjects by Gender*

| Group | Male | % | Female | % | Total | % |
|---|---|---|---|---|---|---|
| Experimental | | | | | | |
| one | 4 | 40.0 | 6 | 60.0 | 10 | 100.0 |
| two | 7 | 70.0 | 3 | 30.0 | 10 | 100.0 |
| three | 2 | 20.0 | 8 | 80.0 | 10 | 100.0 |
| Control | | | | | | |
| one | 6 | 60.0 | 4 | 40.0 | 10 | 100.0 |
| two | 9 | 90.0 | 1 | 10.0 | 10 | 100.0 |
| three | 7 | 70.0 | 3 | 30.0 | 10 | 100.0 |
| Total | 35 | 58.0 | 25 | 42.0 | 60 | 100.0 |

Pretest/posttest means and standard deviations for the TCAM are illustrated in Table 3. While the posttest mean score of the experimental group was 317.23, the posttest mean score of the control group was 254.40. Posttest scores for the children participating in the Creative Movement Program (experimental group) increased. Comparing the posttest scores of the Creative Movement Program group and the control group, it appeared that the experimental group posttest scores where higher than those of the control group.

Table 3

*Means and Standard Deviations on the TCAM (Motor Creativity)*

| Group | Pretest Mean | Adjusted Posttest Mean | Pretest SD | Adjusted Posttest SD | N |
|---|---|---|---|---|---|
| Experimental | 230.23 | 322.00 | 22.52 | 48.12 | 30 |
| Control | 237.77 | 254.40 | 27.90 | 40.03 | 30 |
| Total | 234.00 | 288.20 | 25.21 | 44.08 | 60 |

The results of ANCOVA posttest measures are presented in Table 4. After adjusting for pretest values, there was a significant difference between the experimental and control groups, $F$ (1. 57)= 42.99, $p$ = .000. This indicated that the experimental group's result on motor creativity was higher and differed significantly from those of the control group. As there was a significant difference in motor creativity between children participating in the Creative Movement Program and those in the control group, null hypothesis was rejected.

Table 4

*Results of Analysis of Covariance (ANCOVA) for the TCAM*

| Source | *SS* | *df* | *MS* | *F* | *p* |
|---|---|---|---|---|---|
| Motor creativity | | | | | |
| Between | 73010.83 | 1 | 73010.83 | 42.99 | .000* |
| Within | 96810.36 | 57 | 1698.43 | | |
| Total | 182165.60 | 59 | | | |

*Note.* $n$ = 30 for the experimental group and 30 for the control group.

*Revealed a significant difference found between the experimental and control groups at the .05 level.

Discussion/Recommendation

According to Hinitz (1980), creative movement is the guided exploration of movement concepts, designed to increase children's awareness and understanding of their own range of movement and that of others. It is offered as a movement experience in which the child is the center, and creative involvement and challenge are part of each experience. Additional research suggests that motor creativity can be influenced by early experiences in dance and movement education (Hanson, 1992; Lubin, 1978; Sherrill, 1986). The findings of the study indicated that the experimental group, whose ages ranged from 36 months old to 71 months old, did produce significantly greater performances than the control group. In this light, it is important to find suitable programs for the early development of preschool children. The results

of this study provide professionals in early childhood education, early intervention service providers (e.g. health professionals, therapists), program administrators (e.g. school, community recreation), and parents with research to support a quality Creative Movement Program. Through this research, an understanding was developed of what creative movement is about in the preschool setting, sensed the times and places in which creative movement can be a natural extension of daily classroom activities, and developed increasing skill in planning and leading meaningful creative movement experiences. For the overall creative movement experience to be worthwhile, there must be cohesiveness between planning, activity, and evaluation. Educators will then have an idea of the nature of motor creativity each child possesses. Setting up developmentally appropriate activities is possible once one has this important information about the children. Based on the findings of the study, the following recommendations for practice are made.

1. This study demonstrated that the Creative Movement Program is essential to the development of the total child; a position that the related literature supported. It is recommended that there should be regular and frequent use of these programs at the preschool level.
2. In order to achieve an effective Creative Movement Program a longer period of time should be used. The longer time span would allow the time necessary for the growth and development of an individual.
3. In order to take advantage of an established teacher and child relationship, it is recommended that such a program be taught by the classroom teacher; the direct effect on the children of such a program would become more apparent.
4. Training the teachers to teach a Creative Movement Program would expand the opportunity for children to participate in this movement program. In order to ensure a chance for every child to participate in a Creative Movement Program, it is recommended that all preschool teachers have some experience with such programs as part of their professional training. This training could be obtained either through a college course or through an in-service training program.
5. A greater effort must be made to develop guidelines for teaching the Creative Movement Program whereby teachers and preschool directors can more positively identify motor creativity in children so that they can develop their potential.

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