A Comparison of the Effects of Dance and Physical Education on the Self-Concept of Selected Disadvantaged Girls.

Current research has indicated that one of the handicaps of the disadvantaged child is a poor self-concept, which is generally reflected in an inability to adjust to the school's middle class setting and which results, in many cases, in educational disadvantage. In modern educational dance, the body is used both as a means of expression and as a projection of the self. A study was conducted on whether modern dance could be used to improve the self-concept of the disadvantaged child in a school setting. Seventy-five disadvantaged inner-city elementary school girls were exposed to modern educational dance as a substitute for the standard required physical education curriculum, to which a control group of 75 girls were exposed. The goals of the modern dance class were to develop a vocabulary of movement and the opportunity for creative, improvisational movement. The Lipsitt Self-Concept Scale for Children was administered as the pretest, at the conclusion of the experimental period four months later, and again 3 1/2 years later. Tables noting differences between the pre- and posttest scores and the experimental and control group scores are included. The data provided significant proof that modern educational dance positively influenced the child's self-concept. (JS)
Modern dance, during most of its evolution, was concerned with its image as an art form. Gradually however, in addition to the artistic concerns of modern dance, there has developed a consciousness of the potential inherent in the use of modern dance as an educational tool. Currently modern dance is being used as an adjunct to the usual physical education requirements in many school systems and as such must have documentation as to its justification for use within these educational institutions.

Although proponents of modern dance have developed standard cliches as to potential outcomes that accrue to participants in a modern dance experience, research evidence is not readily available to substantiate their manifold claims. Although it is claimed that modern dance enhances body image, self-concept, creativity, self-actualization, etc., there is no supporting documentation.

This study was undertaken to examine the effect of modern dance on self-concept. The specific area this research focused on was whether modern dance could be used to improve the self-concept of the disadvantaged child in a school setting.

Current research has indicated that one of the disadvantaged child's handicaps is a poor self concept which is generally reflected in an inability to adjust to the school's middle class setting and results, in many cases, in
educational disadvantage.\textsuperscript{2} The development of methods to improve this self-concept (the phenomenological view of the self) in order to help the child succeed would be of significant benefit to both the child and society.

Proponents of Modern Educational Dance claim that dance offers promise for the improvement of the self-concept of the disadvantaged child, inasmuch as it makes use of the body which can be viewed as the outward symbol of the self.\textsuperscript{3} Hawkins has reiterated this when she states that "dance is a symbolic form which reveals the creator's inner vision."\textsuperscript{4} Inner thought is mirrored through the body, and expression is given to thoughts and feelings which might otherwise remain inert. Through modern educational dance experiences, participants are allowed to explore internal feelings and subsequently to express these feelings in objective form. Thus the body becomes the mirror of thought and through modern educational dance one is able to "plum", qualify and express these inner thoughts, feelings and emotions. It is claimed that it is partially this process, the exploration and expression of inner feelings afforded the participant in modern dance, that affects the self-concept.

Thus, in modern educational dance, the body is used both as a means of expression and as a projection of the self. In addition, because of the physical involvement, there is an increase in body control, skill and physical self-consciousness. It is this physical self-consciousness, i.e., the dance participant's awareness of his physical abilities, which are characteristic of, and controlled by him, which dance educators claim also accounts for dance's influence on the self-concept.

If modern educational dance positively affects all of these variables and ultimately influences the self-concept, then educators have another viable alternative which can be introduced into the standard curriculum, especially for the disadvantaged child.
Seventy-five disadvantaged (the criteria for this was a child from a family with an income of less than $4,000 and/or receiving support from Aid to Families with Dependent Children) inner city elementary school girls were exposed to modern educational dance as a substitute for the standard required physical education curriculum to which a control group of 75 girls were exposed.

The control subjects received a daily half-hour of physical education as required by the participating school system and described in the Course of Study in Physical Education published by the School systems Board of Education. This included games of low and high organization, self-testing activities, stunts and developmental activities using equipment. Each lesson involved motor activities and excluded modern dance.

The experimental subjects received a daily half-hour of modern dance instruction. The daily class in modern dance had as its aim two distinct goals: the development of a vocabulary of movement and the opportunity for creative, spontaneous, improvisational movement. Both goals were structured around material from the writings and theories of Laban, whose theories of movement can be divided into four major headings under which it is observed: 1) The Body—the ways it can be made to move, 2) Effort—or the time and energy factors that are present whenever an action occurs, 3) Space—the area that the body utilizes when it is quiet or moving, and 4) Relationships—the interactions that occur when more than one person is involved. Each lesson included two or three of these areas, thus safeguarding against a lesson lacking in the depth necessary to enrich the movement vocabulary of the child. Specifically, movement vocabulary and improvisational movement were approached in the following manner.
Movement Vocabulary - The specific techniques to achieve the development of a movement vocabulary revolved around basic dance exercise taught stressing the Laban factors of time, weight, space, flow, and the impulse of motion that comes from inner efforts. According to Laban, all movements are built upon basic elements, and the person who has studied the range of these basic elements has at his disposal an infinite combination of movements. The knowledge of these basic elements of movement enables the teacher to choose ways of motivating students to discover their own movements. Instead of developing a routine of standardized exercise, Laban stressed "basic themes of movement and their combinations and variations." He stated it as follows:

Every...basic movement theme represents a movement idea corresponding to a stage in the progressive unfolding of the feel of movement in the growing child, and in later stages to the development of his mental understanding of the principals involved.

Laban, in his book, Modern Educational Dance, specifies sixteen basic movement themes and stresses that the permutation and combinations of these basic building blocks are endless.

The investigator used Laban's themes as pivotal points around which to achieve a movement repertoire. Additionally, each lesson intrinsically provided for vigorous activity, graduated increase in flexibility and an increase in range of movements.

Improvisational Movement - To achieve the second goal, the opportunity for creative, spontaneous, improvisational movement, the concern was with the process rather than the product, since not all children will respond to creative movement with the same enthusiasm or the same ability.
although also involved with the medium of movement, is a structured and clearly defined way of moving. Thus, the rationale for this study was that although mandated requirements, of which physical education is one, have been part of the public school curriculum since the early twentieth century, there has been no significant change in the low self-concept of disadvantaged children, as evidenced in the continued low self-concept reported by Kvaraceus and Adler, as well as many others.15

PROCEDURE AND RESULTS

The Lipsitt Self-Concept Scale for Children was used to measure self-concept. The self-concept scale contains twenty-two trait descriptive adjectives, each prefaced by the phrase, "I am..." and followed by a five point rating scale.

The scale was administered as the pretest in September and then given again in January, four months later (the conclusion of the experimental period) as the posttest. The scale was readministered three and one-half years later.

A t test for significance of differences between differences was performed for the data accumulated during the pretest, posttest, and retests in order to test significance of the independent variable, modern educational dance. The five per cent level was used throughout the analysis.

Table 1 presents the means and standard deviations for the self-concept scale experimental and control groups. As can be seen from this table, each group gained in mean self-concept scores, the experimental group by 12.44 and 15.58 and the control group by 7.16 and 10.64.

Table 2 presents the results of the t test between pretest
This may be due to several reasons: 1) individual
differences in motor ability, 2) parental pressure,
3) religious disagreement, 4) physical or mental
factors. 13

While previous modern dance experiences were not a factor here
because socioeconomic conditions of the subjects tended to result in
cultural deprivation, there were problems. As Andrews states:

It is imperative for every child to have adequate
opportunities for self-expression. The self is the
focal point and remains as such throughout the pro-
cess of creating. It is what the individual thinks,
feels, sees and expresses, in terms of himself and
in his own way. 14

In order to react spontaneously, within the structure of
a class, some children needed to have stimuli to which to react.
These stimuli were given in the form of words such as "sticky,"
"buoyant," and "magnetic." Visual presentation included colors,
shapes, and textures while rhythms made use of vocal sounds or
body sounds. The variety of possibilities for use as stimuli
were infinite; the problem became one of selection. If stimuli
were not needed, then the teacher acted to channel the subjects'
ideas.

RATIONAL

Although modern educational dance could be one of the physical
education activities offered in schools, in practice it is rarely
offered because of lack of trained modern dance teachers. It had
never been offered at the school utilized in this study.

The major distinction between modern educational dance and
physical education is the act of communication of inner perceptions,
feeling, and ideas which are basic to modern educational dance.
Dance is an expressive and creative activity whereas physical education
and posttest data. The result (t=2.66 df.=148) was significant at the five per cent level and thus the hypothesis that modern educational dance positively influenced the child’s self-concept was accepted.

### TABLE 1

**COMPARISON OF PRETEST, POSTTEST AND RETEST MEAN AND STANDARD DEVIATION SCORES ON THE LIPSITT SELF-CONCEPT SCALE FOR CHILDREN FOR CONTROL AND EXPERIMENTAL GROUPS**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pretest Mean</th>
<th>Pretest N</th>
<th>Pretest S.D.</th>
<th>Posttest Mean</th>
<th>Posttest N</th>
<th>Posttest S.D.</th>
<th>Retest Mean</th>
<th>Retest N</th>
<th>Retest S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>67.840</td>
<td>75</td>
<td>16.36</td>
<td>80.280</td>
<td>75</td>
<td>12.61</td>
<td>83.428</td>
<td>63</td>
<td>13.3</td>
</tr>
<tr>
<td>Control</td>
<td>67.306</td>
<td>75</td>
<td>11.30</td>
<td>74.466</td>
<td>75</td>
<td>14.98</td>
<td>77.949</td>
<td>59</td>
<td>15.8</td>
</tr>
</tbody>
</table>

### TABLE 2

**SIGNIFICANCE OF THE DIFFERENCES BETWEEN DIFFERENCES FOR PRETEST AND POSTTEST EXPERIMENTAL AND CONTROL GROUP SCORES (ADMINISTERED DURING THE SEMESTER OF THE EXPERIMENT).**

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>D</th>
<th>$S_D^2$</th>
<th>$S_{MD1-MD2}$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>75</td>
<td>12.440</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>75</td>
<td>7.160</td>
<td>147.24</td>
<td>1.981</td>
<td>2.665*</td>
</tr>
</tbody>
</table>

*Significant at .05 level

Pretest and retest scores were analyzed using the $t$ test for significance.
of differences between differences. Table 3 presents the results of the \( t \) test which was significant at the five per cent level.

### TABLE 3

SIGNIFICANCE OF THE DIFFERENCES BETWEEN DIFFERENCES FOR PRETEST AND RETEST (ADMINISTERED THREE AND ONE HALF YEARS LATER) EXPERIMENTAL AND CONTROL GROUP SCORES.

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>( \bar{D} )</th>
<th>SD(^2)</th>
<th>( S_{MD_1-MD_2}^2 )</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>63</td>
<td>16.841</td>
<td>318.27</td>
<td>3.23</td>
<td>2.186*</td>
</tr>
<tr>
<td>Control</td>
<td>59</td>
<td>9.779</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level

Table 4 contains the \( t \) test for posttest and retest scores. The \( t \) test for significance of differences between differences yielded a \( t \) test that was not significant at the five per cent level.

### TABLE 4

SIGNIFICANCE OF THE DIFFERENCES BETWEEN DIFFERENCES FOR POSTTEST AND RETEST EXPERIMENTAL AND CONTROL GROUP SCORES

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>( \bar{D} )</th>
<th>SD(^2)</th>
<th>( S_{MD_1-MD_2}^2 )</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>63</td>
<td>3.934</td>
<td>16,863.58</td>
<td>23.52</td>
<td>.035</td>
</tr>
<tr>
<td>Control</td>
<td>59</td>
<td>3.169</td>
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</tbody>
</table>

Table 5 presents the pretest-posttest correlations for the combined groups and then for the experimental and control groups.
Stability of measurement as a form of reliability is indicated by .607.

**TABLE 5**

**PRETEST-POSTEST CORRELATIONS FOR COMBINED GROUPS AND BY EXPERIMENTAL AND CONTROL GROUP**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>r</th>
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</thead>
<tbody>
<tr>
<td>Combined</td>
<td>150</td>
<td>.617**</td>
</tr>
<tr>
<td>Experimental</td>
<td>75</td>
<td>.684**</td>
</tr>
<tr>
<td>Control</td>
<td>75</td>
<td>.607**</td>
</tr>
</tbody>
</table>

**significant at .01 level**

Table 6 presents the posttest-retest correlations for the combined groups and then for the experimental and control group. All correlations are significant.

**TABLE 6**

**POSTTEST-RETEST CORRELATIONS FOR COMBINED GROUPS AND BY EXPERIMENTAL AND CONTROL GROUP**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined</td>
<td>122</td>
<td>.339**</td>
</tr>
<tr>
<td>Experimental</td>
<td>63</td>
<td>.286*</td>
</tr>
<tr>
<td>Control</td>
<td>59</td>
<td>.339*</td>
</tr>
</tbody>
</table>

**Significant at .05 level**

**Discussion**

As a result of the data, the hypothesis that modern educational dance positively affects the child's self-concept was accepted. This was consistent with the literature that theorized that modern dance
positively affects the self-concept.

Based on the increase in mean scores for the control group (pretest-posttest) one might hypothesize that some change might have been beginning to take place in the subjects (control group) taking physical education as well, although the degree of change was not significant. Possible explanations for this increase include a "Hawthorne effect" and/or an effect from the physical activities as an influence on the self-concept via an indirect effect on the body image.

The "Hawthorne effect" involves the subjects competing to be viewed as a "special group". This interpersonal striving would be, in Sullivan's theory of the evolution of the self-concept, an elaboration of the self through reflected appraisals of "significant other" people. The "significant others" may be either the experimental group, or members of their own group. It could, however, be postulated that this effect would be across groups and should cancel out.

The latter explanation for the increase in mean scores in the control group, namely physical activity as an influence on the self-concept via the indirect effect on the body image, deserves more serious consideration, since physical education and modern educational dance both make use of body activity. However, it was the contention of this study that the "expressive" component unique to modern educational dance accounted for modern dance's unique contribution to positive increases in the self-concept. The significant difference between mean scores confirmed that modern educational dance did, in fact, contribute to a more positive self-concept than physical education. Thus, one can conclude from the data that, although the physical activity inherent in both modern educational dance and physical education affects
the self-concept, the additional component specific to modern dance, namely the intrinsic expressiveness of the art medium, appears to have been a factor responsible for the significance of the differences. However, the fact that self-concept mean scores did increase for the control group might lend additional support to the advocates of the influence of body image on self-concept, and in this present era of required physical education often finding itself on the defensive, should not be overlooked.

Additionally, the data (a significant t between pretest and retest scores) indicate that the initial beneficial effects of modern dance are still present in the experimental group subjects three and one-half years later. The chronicity of this beneficial effect would seem to indicate that the modern educational dance experience had significant carry-over value. Obviously the meaningfulness of the dance experience was in some way incorporated into the self-structure. This is consistent with other studies which indicate that dance both evokes and articulates feelings, and these newly generated or reanalyzed feelings then become internalized.

That there was no significant difference between posttest and retest data indicates a gradual loss of residual benefits due to the lack of continued exposure to the modern educational dance experience, which ceased after the one-term experimental program.

As a result of this experimental study, there is now some statistical evidence to suggest that modern educational dance is a valid educational tool to be used as an adjunct to the currently available methodologies which aim to remedy the widely documented low self-concept of disadvantaged children.
In summary, a one-term school program of modern educational dance compared to a one-term school program of physical education produced significant changes in the self-concept scores, as measured by the Lipsitt Self-Concept Scale for Children, of selected, disadvantaged, public elementary school girls.
REFERENCES


REFERENCES (continued)


Sol Adler, The Health and Education of the Economically Deprived Child (St. Louis: Warren Green, Inc., 1968)