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ABSTRACT

The effect of lecture-demonstrations and workshops on changing elementary school children's attitudes toward drama (acting), music, dance and opera is the focus of this experimental report. Three self-report interest scales and a peer interest rating were administered in a pretest post-test format. The results indicated only slight attitude change as an effect of the teaching techniques employed in this program. Generally, the workshops seemed to produce more favorable attitudes than lectures; however, having both lectures and workshops together was less effective than either alone. Moreover, initial reactions as well as attitude change were more favorable toward acting than any other performing art. The author suggests that acting and workshops produce more favorable responses because of the direct physical and emotional involvement inherent in the two forms. Several suggestions are included for adapting acting and workshop procedure for classroom use to "personalize" lessons. (CF)

Final Report

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MEASUREMENT OF CHANGES IN CHILDREN'S ATTITUDES TOWARD THE PERFORMING ARTS

James R. Howard
Herbert J. Greenwald, Ph.D.

The Education Collaborative for Greater Boston

Cambridge, Massachusetts 02138

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TABLE OF CONTENTS

I	Introductory Section	1
	Summary	1
	Introduction	1
II	Methods	3
III	Findings and Analysis	4
	Results	4
IV	Conclusions and Recommendations	23
	Conclusions	23
	Problems and additional Recommendations	25
V	Supplementary and Appendix Materials	28
	References	28

LIST OF TABLES

TABLE I. Interrelationship to the Initial Self-report measure. 5

2. Average pre-and post-liking of drama for black and white students who were or were not exposed to a lecture or workshop in drama. 7

3. Summary of Analysis of Variance with Reference to Table 1. 8

4. Attitude changes of black and white pupils after lecture-demonstrations and workshops in the performing arts. 9-10

5. Urban and suburban Children Changes in Attitude towards the Performing Arts. 12

6. Interrelations among the Four Performing Arts on the Initial Self-Report Measures. 13

7. Interrelationship of the Performing Arts on the Initial Self-Report Measures (derived from Table 6) 14

8. Interrelationship of changes in Attitude Among the Self Report Measures. 15

9. Summary of Factor Analysis of the Change Scores (Normalized Unrotated Factor Loadings Shown in Parenthesis) 16

10. Summary of Factor Analysis of the Change Scores (Rotated Orthogonal Factor Loadings in Parenthesis) 17

11. Relationship of Peer Ratings to Self-Support Measures in the Results for Attitude Change. 17

12. Interrelationship of peer ratings with regard to attitude change. 20

13. Interrelationship of Self-Report Measures with Regard to Attitude Change. 21

14. Relationship of Social Desirability and Yeasaying to Self-Report Measures and Peer Ratings. 22

I. INTRODUCTORY SECTION

Summary. Grade school children and their teachers were pretested with regard to their attitude toward four performing arts -- drama, music, dance and opera. Lecture-demonstrations and workshops were conducted, in which some children were exposed to both lectures and workshops, some children to one of the two, and some to neither, according to a factorial design. The children were then retested to determine what changes, if any, occurred in their attitude and in their motivation toward involving themselves in these four performing arts. It was hypothesized that both the lectures and the workshops would have a favorable effect, the workshops more so, and that the greatest effects would be seen with regard to attitude toward drama.

The hypotheses were supported only in part. Drama was the most favorably regarded by the children and also produced the most improvement in attitude and motivation. The workshops were somewhat better than the lecture-demonstrations in affecting the children's attitude, but neither had much of the desired impact. The suburban children showed somewhat more improvement in attitude toward the arts than the city children. In addition, a general attitude toward culture seemed evident in the way the children responded to the questions about the arts.

Problems which developed in administering the tests suggested that there may be a need to build a prestudy public relations campaign into future studies to facilitate the cooperation of teachers.

Introduction. Recent studies (e.g., Berg, Bouchard & Davenport, 1966) have suggested that a school child's attitude toward dropping out of school is shaped as early as the fourth grade. This negative attitude might conceivably be related to a weakness in traditional methods of teaching; perhaps traditional methods do not sufficiently stimulate children. If so, new ways to foster school children's imagination, creativity, communication ability, and learning would be important to seek.

This issue seems to be increasingly on the community's mind. For example, the Boston Herald-Traveler (Porter, 1968) suggested that, "We must invest a much larger portion of our educational billions in exploring new ways to teach and motivate children...(we must) not just allow but...demand fresh and imaginative new approaches to teaching and learning...Private industrialists and entrepreneurs have known that innovation is a key to profits. Now it's the educational community's turn to learn that innovation is a key to quality."

A number of exploratory studies have taken this approach to heart. Among these is Carlton & Moore's (1966) use of dramatization in reading with regard to culturally disadvantaged children. This study not only improved reading, but the children's self-concept as well: "Significantly greater gains in reading were achieved through the use of classroom dramatization of stories...than through...methods involving the traditional

techniques of basal readers.....The results obtained may well be a breakthrough in the effort to help disadvantaged children make rapid progress in reading." (p. 130).

Concommittantly, there also seems to be a growing concern about how best to develop the "whole person" in school children. Many schools are now using the arts to help accomplish this. Particularly helpful in this regard may be the performing arts — music, drama, ballet and opera. Exposure to these arts, it is hoped, will provide children with new skills in self-expression and an understanding of life beyond the classroom. Perhaps the performing arts can also help continue the excitement in learning and discovery which children seem to lose as they progress in age. Were the performing arts helpful in accomplishing this, an increase in the acceptance of the performing arts by children and also by the teachers of these children might well improve the educational climate in schools. This, in turn, might lead to more enthusiastic employment of the performing arts as a method of "turning on" children to subjects in the classroom, and the performing arts might thus become particularly important in schools which offer less than optimal stimulation.

It would be important, first, to improve children's attitudes toward the performing arts. This might be a logical first step since children may not now be aware of the opportunities they would have for expressing their feelings through music, drama, ballet and opera.

It is unknown, at present, what the most effective means to attain these objectives through the performing arts would be. Perhaps they could be reached by exposing the children to professional performances, or by providing the children with workshops in these arts.

It was possible to do both of the above, that is, to provide school children with demonstrations and workshops in the performing arts in a project conducted by the Education Collaborative for Greater Boston (EdCo). EdCo is a Title III organization located at Harvard University. It joined with the Wasemequia Charitable Trust to develop a program designed for school children. This program was presented in three school systems: Boston, Cambridge, and Concord — the latter two suburbs of Boston — and was conducted by well known professional performing arts groups headquartered in the Boston area. These four groups were:

1. The Theater Company of Boston
2. The New England Conservatory of Music
3. The Cambridge Opera Workshop, and
4. The Boston Ballet Company

These groups gave the children an opportunity to see professional performances and also to participate in workshops with the performers. From EdCo's standpoint, it was also a way to begin a long range program of introducing innovative techniques that might heighten teaching effectiveness.

The question of what effect a broad exposure to the performing arts such as this might have upon children arose, and the present study was designed to answer this question. Thus, children's attitudes toward the

performing arts were checked upon before and after the children had been exposed to the program. The lecture-demonstrations and workshops were arranged in a controlled experimental design, described below. It was hoped thereby to provide an indication of whether children ought to have both lectures and workshops or just one, and the extent to which particular children might benefit from the performing arts.

II. METHODS

The subjects (Ss) in this study (2,315 4th, 5th and 6th grade children and their 101 teachers) were pretested with regard to their attitude toward four performing arts -- drama, music, dance and opera. (Examples of the questionnaires used in the testing are included in the Appendix). Perhaps the chief question on the pretest was, "How much do you like music (other than popular music)?" [...or dance (such as ballet)...or drama (such as acting)...or opera (plays which are sung)]. This question, answered separately for each of the performing arts, was responded to on a 6-point scale (0 = not at all, 6 = very, very much). Other questions checked upon these results and provided information about the children's motivation for the performing arts. For example, the children were asked, "How often would you want to have _____ programs in your school?" (answered on a 7-point scale, 0 = never, 6 = every day), and "... how likely is it that you would really take up _____ if the school offered it?" (answered on a 6-point scale, 1 = not at all likely, 6 = very, very much likely).

Another check was obtained by asking children to "name the five people in this class who you feel are likely to be the most interested in _____," and also "...the least interested in _____." The results of these two peer ratings, scored separately for each of the performing arts, were combined to provide one score for each child for each performing art a child was given; plus one every time his name came up as being interested in that performing art, or minus one if his name was given by a peer as being uninterested in that performing art. Thus, in a class of 25 students, in which the children rated others, not themselves, this peer rating score for a particular child could be as low as -24, or as high as +24.

Each of these pretest questions was also asked after the children had been exposed to the experimental conditions; the latter are described below. These pre- and post-measures furnished an indication of the amount that the students had changed their attitudes about the performing arts as a result of the educational techniques used to present the arts.

There were two experimentally manipulated conditions, both of which related to basic educational approaches. One of these was a lecture-demonstration. And, to provide a comparison, some students were not provided with a lecture-demonstration about the particular art (music, dance, drama or opera; a more detailed description of the lecture-demonstrations and the workshops can be found in the proposal). For the second experimental condition, a workshop, students did (or did not) participate in a workshop related to one of these four performing arts. Thus, for each performing art, this resulted in four different experimental conditions. That is, some students received both a lecture-demonstration

and a workshop in a performing art, some students were exposed to either a lecture or a workshop in that art, but not both, while other students were exposed to neither a lecture nor a workshop in that art. This 2 x 2 factorial design, expanded to a higher order design as described in a later section, was analyzed with analysis of variance for unequal cell frequencies (Winer, 1962).

The students were enrolled in 11 elementary schools in the following three communities: Boston (an urban environment), Cambridge (a Boston suburb that is moderately urban), and Concord (a still more distant Boston suburb that is moderately exurban). The children were about equally distributed in the 4th, 5th and 6th grades, came from families of widely varying social class (e.g., upper, middle, and lower), were enrolled in schools that were either predominantly white or predominantly black, and, as noted above, lived in regions that were urban or suburban.

III. FINDINGS AND ANALYSIS

Results. Taking into account all four of the performing arts, a total of 87% of the children attended the lecture-demonstrations, and 63% attended more than two assembly programs, while 25% of the children attended the small-group workshops. Thus, the project fulfilled one of its intents, to bring performing arts to the children.

It appeared that the measures checking upon the children's attitude toward the performing arts were highly related, as expected. For example, the pretest responses on the three measures — liking of the particular performing art, wanting to have programs of it in school, and willingness to take training in it if offered — were significantly intercorrelated. Their Pearson correlations ranged from .27 to .71 and the average correlation coefficient was .53 ($df = 988$, $p < .0001$, see Table 1). Also, the attitude change results for the experimental treatments on these self-report measures were generally consistent with one another, as will be seen later in this section.

Before discussing the experimental findings, it might be of interest to examine the initial responses of the students to the various performing arts prior to the students' exposure to the lecture-demonstrations and workshops. In accord with expectations voiced in the proposal, it appeared that the children (and also the teachers) had a more favorable attitude toward drama (acting) than toward any of the other performing arts. For example, in the usable sample of 990 Ss (see section 4, under conclusions and recommendations, with regard to problems), the average response on the 0 to 5 scale for liking was 3.34 for acting, 2.89 for music, 2.02 for opera, and 1.99 for ballet (dancing). Each of these means was significantly different from the other means ($p < .01$ to $p < .0001$ by t-test) except for a nonsignificant difference between opera and ballet. (For teachers, the order was essentially the same, with somewhat higher means).

This preference by the children for acting over the other arts was also manifested in answer to questions relating to how often they would

TABLE 1

Interrelationship of the Initial Self-report Measures

Art	MEASURE			M
	Liking - Want to Have	Liking - Want to Take Up	Want to Have - Want to Take Up	
Music	.42	.28	.27	.32
Dancing	.70	.71	.68	.70
Acting	.48	.58	.41	.49
Opera	.59	.63	.57	.60
M	.55	.55	.48	.53

like to have programs at school. (On a 0 to 6 scale, M = 4.28 for drama, 3.80 for music, 2.69 for opera, and 2.61 for ballet. Again, each of these means was significantly different from the others except for a nonsignificant difference between ballet and opera). The children seemed about as willing to take music at school as drama. (On a 1 to 6 scale, M = 4.49 for music, 4.38 for acting, 2.78 for opera, and 2.68 for dancing. These means, as before, were significantly different from one another except between opera and dancing and also, as noted, between music and acting).

Turning now to the effect of the experimental treatments, a three-way factorial design was employed: pre- and post-results for the lecture (versus no lecture) and for the workshop (versus no workshop), in which the results were further partitioned to provide information about region (suburb or city), or about race (black or white). For illustration, Tables 2 and 3 describe the pre- and post-results for black and white students' liking of acting -- acting, as noted, having been the most popular of the four performing arts. In this analysis, the sample had been partitioned by race, that is, whether the school's population was predominantly white (83% to 100% white), or moderately to largely black (50% to 85% black).

The figures in Table 4, which summarize the results for the experimental treatments, suggest that attitudes toward the performing arts remained essentially the same following either the lecture or the workshop program. (In the case of opera, size of sample did not permit analyses for effect of workshop). Sometimes the children even seemed slightly (usually non-significantly) turned off by the programs. In a few instances this negative reaction reached the level of statistical significance, notably opera as a result of the lecture, and dancing as a result of the workshop (see Table 4). Negativism also appeared to be related to race: black children were more turned off than white children were (overall mean changes = -.35 and -.15, see Table 4; one example: -.36 versus .03 for acting). This lack of greatly favorable changes in attitude was surprising in view of the original hypotheses. We will return to a discussion of this negativism in later sections.

It is useful to examine the number of positive changes in attitude that occurred. Table 4 shows that acting and dancing were far better received by the children than music and opera were. For example, positive change occurred in 15 instances of acting and dancing, but only 2 to 4 instances of music and opera. Thus; acting and dancing were the only two performing arts to show an overall positive change in attitude on the four measures employed. This finding will be discussed in a later section.

The workshops had an edge over the lectures in producing positive changes in attitude: 19 positive changes to 16 positive changes, and 10 to 14 negative changes. Most of these positive changes for the workshops (15) occurred for acting and dancing, and especially when the children did not also attend the lectures (11 out of these 15 instances). Interestingly, most of the positive changes generated by the lectures (12 out of the 16) were also with acting and dancing.

TABLE 2

Average pre-and post-liking of drama for black and white students who were or were not exposed to a lecture or workshop in drama.

	Predominantly Black Students				Predominantly White Students				
	No Lecture		Lecture		No Lecture		Lecture		
	No Work-shop	Work-shop	No Work-shop	Work-shop	No Work-shop	Work-shop	No Work-shop	Work-shop	M
Pre	3.35	4.00	3.48	4.44	3.25	3.40	3.11	4.00	3.34
Post	3.01	4.00	3.04	3.78	3.49	3.92	3.67	4.67	3.40
Net change	-.34	0	-.44	-.66	.24	.52	.56	.67	.07
Cell N	286	36	36	9	510	48	23	9	957

NOTE: The scale responses ranged from 0 to 5.

TABLE 3

Summary of Analysis of Variance with Reference to Table 1.

Source of Variance	Degrees of Freedom	Mean Squares	F Ratio
Pre to post change (C)	1	.41	.24
Race (R)	1	16.85	9.77*
Lecture (L)	1	.12	.07
Workshop	1	.37	.21
RLC	1	2.16	1.25
RWC	1	.12	.07
LWC	1	.81	.47
RLWC	1	.23	.13
Error (within)	949	1.72	

* $p < .01$

TABLE 4

Attitude changes of black and white pupils after lecture-demonstrations and workshops in the performing arts

MEASURE OF ATTITUDE CHANGE	Predominantly Black Students				Predominantly White Students				M	Statistical Significance							No. of Positive Attitude Changes
	No Lecture		Lecture		No Lecture		Lecture							Interactions			
	No Work-Shop	Work-Shop	No Work-Shop	Work-Shop	No Work-Shop	Work-Shop	No Work-Shop	Work-Shop		Pre-To Post	Race (R)	Lecture (L)	Work Shop (W)	$R_X L$	$R_X W$	$L_X W$	
ACTING																	
Like	-.34	.00	-.43	-.67	.24	.52	.56	.67	.11		*						4
Want to Have	-.09	.11	-.70	-.33	.26	.35	.22	.78	.08								5
Want to Take Up	-.35	.22	.04	-.33	.02	.35	-.44	-.22	-.09								4
Peer Rating	-.25	.11	-.26	-2.44	-.20	-1.31	.19	-1.44	-.70	*							2
M	(-.26)	(.11)	(-.34	(-.94)	(.08)	(-.02	(.13)	(-.05)	(-.16)								(15)
DANCING																	
Like	-.28	.28	-.39	-1.33	.05	.21	.00	-.33	-.22								3
Want to Have	-.28	.00	.65	-.67	.10	.62	.47	.78	.21								5
Want to Take Up	-.38	-.78	-.04	-2.67	.08	.33	.16	-1.00	-.54	*	*		*			*	3
Peer Rating	.23	.61	1.91	.33	-.22	-1.25	-.12	-2.33	-.84								4
M	(-.18)	(.03)	(.53)	(-1.08)	(.00)	(-.02)	(.13)	(-.72)	(-.16)								(15)

TABLE 4 - Cont'd

MEASURE OF ATTITUDE CHANGE	Predominantly Black Students				Predominantly White Students				M	Statistical Significance							No. of Positive Attitude Changes
	No Lecture		Lecture		No Lecture		Lecture							Interactions			
	No Work-Shop	Work-Shop	No Work-Shop	Work-Shop	No Work-Shop	Work-Shop	No Work-Shop	Work-Shop		Pre-to Post	Race (R)	Lecture (L)	Work-Shop (W)	R X L	R X W	L X W	
MUSIC																	
Like	-.40	-.75	-.74	.37	-.53	-.71	-.49	-.18	-.43	*							1
Want to Have	-.56	1.00	-.28	1.00	-.19	-.57	-.22	-.32	-.02								2
Want to Take Up	-.90	-.25	-.55	-.77	-.28	-.57	-.58	-.16	-.51	#							0
Peer Rating	-.15	-1.25	-.20	-.63	-.56	-.14	-.34	1.24	-.26								1
M	(-.50)	(-.31)	(-.44)	(-.01)	(-.39)	(-.50)	(-.41)	(.14)	(-.30)								(4)
OPERA																	
Like	-.28	-	-.62	-	-.25	-	.20	-	-.24								1
Want to Have	-.03	-	-2.12	-	-.02	-	-1.20	-	-.84	*		*					0
Want to Take Up	.00	-	-.24	-	-.04	-	.00	-	-.07								0
Peer Rating	-.20	-	-2.37	-	-.21	-	.40	-	-.59								1
M	(-.13	-	(-1.34)	-	(-.13)	-	(-.20)	-	(-.45)								(2)
OVERALL M	(-.27	(-.06)	(-.40)	(-.68)	(-.11)	(-.18)	(-.09)	(-.21)	(-.26)								
No. of Positive Attitude Changes	1	6	3	3	6	6	7	4									

* $p < .05$, # $p < .01$

Thus, it did not appear that having both lecture and workshop had a greater effect than exposure to either alone; indeed, together they were less effective than alone. Although these differences were slight they were surprising since it was expected that a combination of lecture and workshop would have the maximum effect.

It would seem that it was expecting too much to hope that a single program would have a noticeable effect on the children's attitudes. Or perhaps changes occurred in aspects other than those examined. Yet, exposing the children to these programs could not be said to be harmful, according to the results.

There were fewer positive changes in attitude among black children (12) than among white children (23). Table 5 suggests that this might have been related to region, since it was also true that a less favorable attitude occurred among urban children, both black and white. As Table 5 shows, among urban children the number of negative changes was almost double the number of positive changes (37 versus 19), whereas among the suburban children about the same number of negative and positive changes occurred (29 and 27, respectively).

An interesting additional finding was that responses to each of the four performing arts were interrelated. For example, children's responses to acting, dancing, music, and opera on the same self-report measure correlated with each other .17 to .43 (average $\underline{r} = .31$, $\underline{df} = 988$, $\underline{p} < .0001$, see Tables 6 and 7). This interrelationship among the arts was also borne out, although to a lesser extent, in the changes in attitude that took place from pre- to post-measure (see Table 8). In Table 8 this intercorrelating among the performing arts averaged .10 ($\underline{p} < .01$). (Because of the large sample size, $\underline{r}$ of .0685 = $\underline{p} < .05$, and $\underline{r}$ of .0895 = $\underline{p} < .01$) results further supported this conclusion when the attitude change scores were factor analyzed. In fact, the predominant factor for normalized, unrotated factors were the changes in attitude that took place (see Table 9).

At the same time that the interrelationship among the four arts was evident, it also appeared that the arts formed separate clusters among themselves (see Table 9). This separate clustering especially evident when a rotation for orthogonal factors (varimax) was performed (see Table 10). All four arts appeared clearly as distinct groups.

TABLE 5

Urban and Suburban Children's Changes in Attitude Toward the Performing Arts

Measure of Attitude Change	Urban Children		Suburban Children	
	Negative Change	Positive Change	Negative Change	Positive Change
Acting				
Liking	3	1	0	4
Like to Have	2	2	0	4
Want to Take Up	3	1	2	2
Peer Rating	2	2	4	0
Total	(10)	(6)	(6)	(10)
Dancing				
Liking	3	1	2	2
Like to Have	2	2	1	3
Want to Take Up	4	0	1	3
Peer Rating	1	3	3	1
Total	(10)	(6)	(7)	(9)
Music				
Liking	3	1	4	0
Like to Have	1	3	4	0
Want to Take Up	4	0	3	1
Peer Rating	2	2	2	2
Total	(10)	(6)	(13)	(3)
Opera				
Liking	2	0	1	1
Like to Have	2	0	0	2
Want to Take Up	1	1	1	1
Peer Rating	2	0	1	1
Total	(7)	(1)	(3)	(5)
Sum Total	(37)	(19)	(29)	(27)

TABLE 6

Interrelations Among the Four Performing Arts on the Initial Self-Report Measures[a, b]

	LIKING				WANT TO HAVE				WANT TO TAKE UP			
	Music	Dancing	Acting	Opera	Music	Dancing	Acting	Opera	Music	Dancing	Acting	Opera
Liking												
Music	–	.32	.20	.37	.42	.30	.16	.35	.28	.32	.19	.38
Dancing		–	.26	.39	.28	.70	.16	.29	.20	.71	.30	.43
Acting			–	.27	.22	.27	.48	.23	.21	.24	.58	.33
Opera				–	.30	.38	.21	.59	.21	.33	.29	.63
Want to Have												
Music					–	.35	.29	.40	.27	.28	.19	.34
Dancing						–	.25	.41	.19	.68	.29	.44
Acting							–	.35	.20	.16	.41	.22
Opera								–	.22	.30	.25	.57
Want to Take Up												
Music									–	.17	.23	.28
Dancing										–	.26	.43
Acting											–	.36
Opera												–

[a] Pearson product moment correlation coefficients

[b] $\underline{r}$ of .06 = $\underline{p} < .05$; $\underline{r}$ of .08 = $\underline{p} < .01$ ($\underline{N}$ = 990)

TABLE 7

Interrelationship of the Performing Arts on the Initial Self-Report Measures[a]

Art	MEASURE			M
	Liking	Want to Have	Want to Take Up	
Music-Dancing	.32	.35	.17	.28
Music-Acting	.20	.29	.23	.24
Music-Opera	.37	.40	.28	.35
Dancing-Acting	.26	.25	.26	.26
Dancing-Opera	.39	.41	.43	.41
Acting--Opera	.27	.35	.36	.33
M	.30	.34	.29	.31

[a] Derived from Table 6

TABLE 8

Interrelationship of Changes in Attitude Among the Self-Report Measures[a]

Art	MEASURE			M
	Liking	Want to Have	Want to Take Up	
Music-Dancing	.08*	.13#	.02	.08*
Music-Acting	.05	.10#	.03	.06
Music-Opera	.11#	.17#	.03	.10#
Dancing-Acting	.01	.09#	.12#	.07*
Dancing-Opera	.14#	.12#	.09#	.12#
Acting-Opera	.17#	.17#	.10#	.15#
M	.09#	.13#	.06	.10#

[a] Pearson product moment correlation coefficients

[b] N = 875 for the attitude change analysis

* $p < .05$, # $p < .01$

TABLE 9

Summary of Factor Analysis of the Change Scores (Normalized Unrotated Factor Loadings Shown in Parenthesis)[a]

	FACTORS					
	1	2	3	4	5	6
Variables	Total change (-.99) Like opera (-.56) Want opera (-.57) Take opera (-.44) Like acting (-.52) Want acting (-.41) Take acting (-.44) Like dancing (-.45) Want dancing (-.51) Take dancing (-.43) Like music (-.32) Want music (-.41)	Had a workshop (-.83) Had a lecture (.35)	Like dancing (.55) Want dancing (.55) Take dancing (.52) Like opera (-.34) Want opera (-.41) Take opera (-.31)	Like acting (.54) Want acting (.56) Take acting (.50) Take opera (-.31)	Like music (.51) Want music (.55) Take music (.46) Lecture (-.28)	Like music (-.5(Take music (.31
Percent of trace	21.09	12.24	8.89	8.41	7.81	6.21
Possible Label	Attitude Change	Lecture	Dance	Acting	Music	Take Music

a) Only factor loadings .25 and above are included for simplicity
b) Many demographic aspects, such as region, were not part of this analysis

TABLE 10

Summary of Factor Analysis of the Change Scores (Rotated Orthogonal Factor Loadings in Parenthesis)[a]

	FACTORS					
	1	2	3	4	5	6
Variables	Like opera (-.77) Want opera (-.75) Take opera (-.74) Total change (-.58)	Workshop (.98)	Lecture (.81)	Like dance (.78) Want dance (.75) Take dance (.74) Total chng. (.49)	Like acting (.76) Want acting (.70) Take acting (.65) Total chng. (.44)	Like music .71 Want music .73 Take music .41 Total chng..45
Criterion	.2740	.5293	.5442	.5443	.5443	.5443
Possible Label	Opera	Workshop	Lecture	Dance	Acting	Music

[a] Only factor loadings .25 and above are included, for simplicity

[b] Many demographic aspects, such as region, were not part of this analysis.

That each performing art should have a separate identity is not surprising, but does suggest implications for attitude change. It may be that each of the arts would be more effective if presented in a distinct fashion, without necessarily adhering to the original lecture or workshop formats.

Hence, the correlation matrix and factor analyses suggested that the performing arts have a great deal of communality. This supports the conclusion long held in education and literature that these arts relate to a kind of cultural form. At the same time, however, the analyses also suggested that each art has a distinct identity of its own. In turn, this suggests that attention be given to individual approaches for presenting programs in the arts.

In addition to the three self-report measures of attitude, peer ratings were employed. Analysis of these peer ratings suggests that the information they provided was somewhat inconsistent with that of the self-report measures. As Table 11 indicates, the peer ratings generally did not correlate with the self-report measures (average $\underline{r}$ = -.01). Also the peer ratings often showed different results for attitude change than the self-report measures did (7 out of 16 instances, see Table 4). On the other hand, the peer ratings for attitude change correlated significantly with one another (average $\underline{r}$ = .17, $\underline{p} < .001$, see Table 12), although not nearly to the same degree that the self-report measures did (average $\underline{r}$ = .32, see Table 13).

A check was made on the possibility that either measure might have been affected by such response artifacts as social desirability responding and yeasaying response set. The check indicated that neither the self-reports nor the peer ratings were likely to have been affected by social desirability and yeasaying, generally speaking (overall correlations < .04, $\underline{p}$ = not significant, see Table 14). Although three of the 32 correlation coefficients presented in Table 14 were statistically significant -- one for social desirability and two for yeasaying ($\underline{rs}$ of .07 and .08) -- other aspects mitigated these outcomes: the small variance accounted for by these coefficients (one-half of one percent), the possibility that they might have arisen by chance (3 out of 32), the lack of a general pattern, and the large sample size ($\underline{N}$ = 875 for the attitude change analysis) which set the .05 level at $\underline{r}$ = .07.

Thus, whether the peer ratings or the self-report ratings furnished the more accurate measure of attitude was hard to determine from the data. For this reason, both were counted equally in interpreting the results. On the other hand, our coders and those who supervised the administration of the questionnaires had a definite preference. They felt that the peer ratings tended to be more confusing to the children than the self-report measures and were taken less seriously by them. For this reason, and because of the self-report measures, ease of administration, economy and reliability of scoring, and greater opportunity of obtaining multiple measures, the self-report measures offer distinct methodological advantages. It might be noted that the peer measures contributed sizable expenditures and effort in the tabulation of data.

TABLE 11

Relationship of Peer Ratings to Self-Report Measures in the Results for Attitude Change[a]

	Peer Ratings			
	Peer - Like	Peer - Want	Peer - Take	M
Music	.03	-.02	.01	-.01
Dance	-.06*	-.05	.04	-.02
Acting	-.09#	-.04	.00	-.02
Opera	-.05	-.03	.12#	.01
M	-.04	-.03	.04	-.01

[a] Pearson product moment correlation coefficients

* $p < .05$, # $p < .01$

TABLE 12

Interrelationship of peer ratings with regard to attitude change [a]

	Music Peer Rating	Dance Peer Rating	Acting Peer Rating	Opera Peer Rating	M
Music Peer Rating	-	.18#	.12#	.16#	.15#
Dance Peer Rating		-	.13#	.14#	.13#
Acting Peer Rating			-	.23#	.23#
Opera Peer Rating				-	
M		.18#	.12#	.18#	.17#

[a] Pearson Product Moment Correlation Coefficients

# $p < .01$

TABLE 13

Interrelationship of Self-Report Measures With Regard to Attitude Change [a]

	Self-Report Measures			
	Like-Want	Like-Take	Want-Take	M
Acting	.24#	.07#	.15#	.15#
Dance	.41#	.37#	.37#	.38#
Music	.38#	.34#	.24#	.32#
Opera	.44#	.41#	.37#	.41#
M	.37#	.30#	.28#	.32#

[a] Pearson product moment correlation coefficients

# $p < .01$

TABLE 14

Relationship of Social Desirability and Yeasaying to Self-Report Measures and Peer Ratings[a]

Measure of Attitude Change	Measures of Artifact	
	Social Desirability	Yeasaying
Like		
Music	.01	.01
Dance	.01	.05
Acting	.04	.08#
Opera	.01	.05
Want to Have		
Music	.03	.06
Dance	.01	.02
Acting	.05	.01
Opera	.06	.04
Want to Take Up		
Music	.02	.04
Dance	.03	.04
Acting	.05	.06
Opera	-.01	.06
Peer Ratings		
Music	-.07*	.07*
Dance	-.02	.04
Acting	-.03	.02
Opera	-.01	.05
M	(.01)	(.04)

[a] Pearson product-moment correlation coefficients

* $p < .05$, # $p < .01$

Analyses to locate factors that might have been associated with positive changes in attitude led to little new information because there were only few additional factors included in the analyses apart from those already dealt with. For example, attitude change on the self-report measures was associated more with suburban and white children than with urban and black children, as reported earlier. And neither sex nor school grade level appeared to be related to attitude change (r_s = .02 and .04, respectively, p = not significant).

It is therefore recommended that discriminant analysis be conducted in future studies, utilizing subjects representing both extremes of the dependent variable, after obtaining a broad range of additional information about the respondents.

In sum, it appeared that little attitude change toward the performing arts occurred as the result of the lecture-demonstrations and workshops offerred in the program, and hence that not too much should be expected from a single program. On the other hand, there might have been gains in areas that were not measured, so that other questions may need to be asked in future investigations. The workshops had an edge over the lectures, particularly in the case of acting and dancing; attitudes toward music and opera were the least malleable. Acting was also the best liked, initially.

The four performing arts, despite a good deal of communality, manifested clearcut identities of their own. Suburban white children tended to have a more favorable attitude toward the arts than black children as a result of the experimental treatments.

Response artifacts with these children, such as social desirability and yeasaying, did not seem to enter into the picture. The two types of measures employed, self-reports and peer ratings, did not correlate with each other, although they showed internal consistency among themselves. The self-reports had distinct methodological advantages. It was recommended that individual approaches be employed in presenting each performing art, and that additional information be gathered about respondents to support post-experimental discriminant analyses.

IV CONCLUSIONS AND RECOMMENDATIONS

Conclusions. As indicated, the results showed that the present attempt to improve children's attitude toward the performing arts was much less successful than anticipated. Perhaps it was the questions asked. But there is a value in this outcome, especially in pointing up intuition as often being incorrect. In this case, intuition suggested that exposure to the performing arts might be sufficient to improve children's attitude toward the arts. It also appeared that the continued employment of what is perhaps the most widely used technique for teaching -- lectures -- may not have its hoped-for effects. It is interesting, in this regard, to note Boswell's quotation from Dr. Johnson (Hill, 1934):

> Lectures were once useful; but now, when all can read, and books are so numerous, [and TV is so ubiquitous, ed. note] lectures are unnecessary.

It appears that lecturing has not been the favored teaching approach in England (e.g., Hale, 1964), nor by some American educators (e.g., Cartter, 1967). It also appears that the present findings are consistent with those of McKeachie (1967) who found that although lectures are helpful in exposing students to information, they may not be especially effective in motivating students. In the present study, motivational aspects were the key foci. Our workshops seemed to accomplish somewhat more, perhaps for the same reasons that McKeachie found for other student-centered techniques: a direct involvement of the students in work related to the issue, and active problem solving with regard to it. Viewed in this light, the present results may, in part, provide some experimental evidence for McKeachie's conclusions.

There was nothing in the present study to explain why suburban children seemed to improve their attitude toward the performing arts more than the urban children. It did not seem to be because urban children's attitude toward "culture" was jaded more than that of the suburban children, since both the city and the suburban children had essentially the same initial attitude toward the arts, overall (means = 2.44 and 2.47, on a 0 to 5 scale). (Although the suburban children tended to like music and acting more than the city children, while the urban children liked opera and dancing more than the suburban children).

The most favorable change in attitude occurred for acting and dancing. It is interesting that acting was also the most highly regarded of the four arts prior to our program. Why acting? Perhaps it was because much of life for children involves simulation and exaggeration. Acting also provides an opportunity for interpersonal relationships and direct emotional experiences without props or special skills, something largely untrue of music, dancing, and opera. Similar comments can be made about the workshops, which had greater impact than the lectures. Workshops can provide more direct physical and emotional involvement than the more passive lectures.

These inherent assets in acting and in workshops can be made use of in the classroom. One can imagine a situation in which every lesson had some workshop or acting aspect. Such classrooms could automatically create involvement and life in lessons. Examples of "personalizing" lessons in this way, some of them already used in classrooms, include running a miniature supermarket (arithmetic), enacting a street scene with writing on the walls (English), operating a bistro (foreign language), conducting a cabinet meeting (history, government), and managing a make-believe farm (geography, ecology, biology). Other approaches include each-one-teach-one, problem solving tasks, role playing, and student generated lessons. These recommendations would also hold for the presentation of programs in the arts.

If one were faced with a choice of which performing art to employ in presenting information in a classroom, the best choice would seem to be acting or drama. The elementary school children in this sample seemed to

be most favorable to acting, with music second, and opera and ballet third. Fortunately, acting and drama would seem to lend itself more readily to many more subject areas than would music, opera or ballet. Where a change of pace would be desired, music could be another possibility.

It appears that pretesting action programs is important -- obvious hypotheses do not necessarily hold up. This might be especially important, the results suggest, when the programs are presented to urban children.

Problems and additional recommendations. Although the original plan of the grant proposal was followed in detail, some unforeseen aspects occurred. Many of these were related to the administration of the testing. For example, a majority of the children did not answer a substantially large enough number of questions to permit them to be included in all of the analyses. Others answered yes or no to questions asking for a numbered reply, named themselves on the peer rating questions or put some of the same people into the "most" and the "least" categories, or gave the same replies to both the lecture and the workshop questions despite having indicated that they attended only one.

Some confusions arose because certain schools had scheduled other performing arts programs during the semester, most particularly music programs. This confounded the original factorial design, causing children who were not intended to be exposed to demonstrations about those performing arts to be so, nevertheless. Another unexpected problem arose in instances where team teaching approaches were employed. The children sometimes were in a different group during the pre-test than during the post-test, and this resulted in a change in the position of children in the peer ratings from pre to post due to something other than the experimental treatments. (This team teaching occurred mostly in the Emerson and Thoreau schools, which are located in Concord, a well-to-do suburb).

Another problem concerned busing children to workshops. There were schedule disappointments and mixups, and children who were scheduled for a workshop sometimes secretly slipped in with friends to go to another workshop.

A major problem occurred in connection with the lecture-demonstrations. Our observers noted that the children were often herded into the auditorium in a semi-military manner. Much shouting and prodding by the teachers accompanied this, and the air was filled with "Keep quiet!", "Sit erect!", and "Don't take that seat!" In the observers' opinion, teachers often seemed more concerned with giving a good impression of the school than with maintaining rapport with the children (e.g., "Do you want them to think we're not well behaved?"). Principals participated, with one principal stopping the performance and threatening to cancel it if the children did not behave properly.

This chiding to obtain control, the observers felt, created an atmosphere of punitiveness. The tension seemed particularly great in urban and predominantly black schools. Since experience and research (e.g., Brehm, 1966; Regina & Greenwald, 1969) suggest that pressuring people is often counterproductive, it is possible that this might have led the

children to react negatively to the assembly program. There was also some indication that performers resented the principals' and teachers' conduct, which could have affected their performances. In any event, this assembly atmosphere is consistent with our finding more negativism toward the lecture-demonstrations among urban and black children than among suburban children.

It is recommended, therefore, that a more pleasant assembly atmosphere be striven for -- one that might evoke pleasant anticipation rather than smouldering resentment. If control though punitiveness, rather than a positive atmosphere is not a goal of the school or seems unlikely, then assembly programs might be omitted in favor of other approaches.

An important issue concerned the teachers in still another way. Some of them seemed to have a negative regard for the program and especially the testing. For example, in some classes only one set of booklets were returned, or large blocks of questionnaires were missing. There were many booklets with missing names (which prevented knowledge of pre- and post-changes of attitude), incompletions, and muddled responses. These tended to occur in some classes far more than in other classes, giving a distinct impression of a lack of teacher interest in the proceedings. In this respect, there were marked differences among the schools. For example, such difficulties occurred far less frequently in the Chapman School (a Boston school in East Boston, pupils with Italian heritage), than in the McCormick School (a Boston school in Dorchester, about 85% black in a transitional area).

Some of the children's errors in questionnaires appeared to have occurred inadvertently, because of such things as turning more than one page at a time, some children's feeling that they might not have sufficient amount of information to answer the questions, poor reading comprehension, or confusion with regard to some of the questions or answer choices. On the other hand, there were also indications that some students were resistant to the testing, or were resentful of the teacher, the school, or the program itself.

Despite the above problems, much of the data were usable. Incomplete responses were culled to leave only those Ss who had completed the entire questionnaire. This was done because, statistically, it was desirable to have cross comparisons and also because computer operations would falter if blank or inappropriate information was present. This resulted in 1,014 Ss (still a substantial number) for the t tests, 990 Ss for the correlational analyses, 957 to 977 Ss for the analyses of variance, and 875 Ss for the factor analyses.

Losses in subjects are to be expected to some degree in action studies since the investigator has considerably less control over the testing than he has in a carefully controlled laboratory situation. Nevertheless, it may be possible to reduce some of such unreliable responding. We recommend that people connected with the study be present to monitor the administration of the tests. Also, the tests are probably better administered in the classroom because there would be less anonymity and frivolity for the children, less tension in the atmosphere, closer monitoring, and more accountability by the teacher.

It is also suggested that teachers and principals be made more aware, prior to the testing, of the nature of the study and how the questionnaires are to be filled out, and, most importantly, that an attempt be made to enlist their cooperation. A separate public relations program of this sort would add considerable expense to the program. But, it appears worth the expense to do so. Some of this cost would be returned in savings of considerable computer costs that go into culling out inappropriate responses in the various columns. Thus, it might be wise to reduce the size of the sample in favor of a public relations and monitoring campaign. It is therefore recommended that studies in natural settings include a sizable budget for such public relations and monitoring designed to heighten both the reliability of the subjects' responses and the cooperation of officials responsible for the administration of the testing.

It is also recommended that the test questions be tailored to match the subject population by careful pretesting and revision, perhaps doing so numerous times. This would help reduce possible confusion in answering. (The present questionnaire was revised three times, after pretesting that was unfortunately limited by the schedule). It would also be easier for subjects were the same numbered scale employed throughout, rather than using different scales as in the present study.

Finally, it should be noted that a number of people volunteered much extra time to permit many of the analyses and testing to be accomplished which otherwise would not have been done within the budget. These people were, in alphabetical order, Gerald Blake of Research Resources, Herbert J. Greenwald of EdCo, Floyd John of Eastern Nazarene College, Elizabeth Pertzoff formerly of EdCo, Edward Spar of New York City, and Arthur Shane formerly of Computer Usage Corporation.

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