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AUTHOR	Dallenbach, Jan F.; DeYoung, Kenneth N.
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ABSTRACT

A project was undertaken to study the effects of in-school television programs on gifted 5th and 6th grade students in rural northeastern Minnesota. Ten inservice training workshops on the education of the gifted were held, and TV Programs were developed (one series for the students on content, another stimulating thought processes). A battery of pre and posttests were administered to 1556 gifted students, and statistical analyses of comparisons between the pre and posttest results and between the control and experimental groups are included. Numerous descriptive, inferential, and cluster analyses were made. On four posttests, certain subgroups of students exposed to the TV programs showed greater average gains than the control students, while in five instances, certain categories of the experimental students made smaller average gains. Schools' reactions were also surveyed by questionnaire, and the resulting conclusions and extrapolated recommendations are presented. (KW)

SPECIAL EDUCATION FOR THE GIFTED THROUGH TELEVISION

An
Evaluation Report
Of
Data Extrapolated From
Pre and Post-Tests Administered
During The 1967-68 Project Year

Prepared By
Mr. Jan F. Dallenbach
Acting Project Director

In Cooperation With
Mr. Kenneth N. DeYoung, Associate Professor
University of Minnesota Duluth
Duluth, Minnesota
and
Minnesota National Laboratory
St. Paul, Minnesota

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I. BACKGROUND INFORMATION

A. Scope and Purpose The Educational Research and Development Council of Northeast Minnesota (RAND) comprises 38 public school districts and the schools of the Catholic Diocese of Duluth. Combined, they cover and eight-county region of approximately 17,500 square miles and encompass a population of nearly 400,000 in which there are over 95,000 pupils and 4,300 teachers. District sizes range from approximately 22,000 pupils to 97 pupils. The area also includes three Indian reservations.

Nearly all districts are rural in character. Tourism, mining, and manufacturing of forest products are the major sources of income. Historically, most districts have always found themselves hard pressed to adequately finance a quality educational program. Responding to the needs of individual students and providing stimulating and enriching enviornments and educational experiences have not been generally possible. The only cultural center of any consequence, Duluth is located 12 to 200 miles from all other districts. Isolation requires long daily bus rides, in some cases as much as 80 miles a day. A large number of these pupils, therefore, cannot participate in cocurricular activities that ordinarily provide enrichment and motivation forces.

This physical, social and economic isolation has combined to create seriously disadvantaged pupils and teachers. This is particularly true as related to the gifted pupils. It has isolated these persons from contacts with new and more challenging materials, services, leadership personnel, equipment, and current information about innovative and exciting changes and techniques in education. These teachers are too often "outside" the contact potential for getting these and cannot interact with those agencies and forces which might help to bring them up-to-date in their thinking and understanding.

The major objectives of the project during the first year of operation were:

1. Implement the first regional plan in Minnesota for the special education of gifted pupils in grades five through six;

2. Implement the first regional plan for inservice teacher education on the special education of the gifted;

3. Implement the first organized system of identification and selection of gifted pupils in a cluster of school districts in a specific geograhpic area in Minnesota;

4. Explore the feasibility of telecasting concurrently a three-part educational television sequence of programs related to each other which would transmit new knowledge while developing the skills of higher thought processes attributable to the potential of gifted pupils;

5. Make specialized instruction for the gifted available to small school systems, rural school systems, and systems possessing a high percentage of economically and culturally deprived children;

6. Make specialized instruction for the development of giftedness uniformly available to students and teachers in public, private, and parochial schools in a region of adjacent school districts;

7. Begin the acquisition on film and videotapes of a valuable collection of learning and teaching materials which can be made available to other school systems in the state and in other states;

8. Start implementing a variety of organized techniques for inservice programs for teachers emphasizing reinforcement through follow-through and demonstration on the "why?", "how?" and "what?" in teaching the gifted;

9. Stimulate greater action toward local adaptations of curricular provisions for the gifted which would increase opportunities for individualized directed studies for them.

B. Activities The first year's activities, undertaken as a pilot year, included six major phases of work. They were (1) the dissemination of information and directives on the identification processes to be used for selecting the gifted students, (2) organizing the design for an evaluation program, (3) developing and implementing plans for ten workshops for teachers and administrators to interpret teaching strategies for developing productive-divergent thinking among the gifted, (4) selecting content and materials for the television programs and training the television teachers, (5) transmitting the programs scheduled January through April 1968, and (6) administer final evaluation instruments.

A series of working papers were distributed which contained information relating to the education of the gifted. These papers dealt with such topics as:

1. Project Objective

2. Independent and Small Group Discussion Sessions as Techniques to Help Individualize the Instruction of the Gifted.

3. Creativity

4. The Inquiry Process

5. Problem Solving

6. Productive Thinking

7. Curiosity

On September 11, 1967, the first notices were sent to RAND Council district superintendents and each of their elementary and junior high school principals announcing the plan for a series of ten workshops on the education of the gifted. These included two sessions conducted at each of five regional (school) centers in the area and were scheduled to be held prior to the start of the telecasting on January 8, 1968.

Certain kinds of information basic to the understanding of the concepts and techniques to be demonstrated and explained in the television programs needed to be introduced to the teachers and discussed. The workshops would provide a means for such orientation to large numbers of professionals and would help promote a greater readiness for the innovative approaches to the teaching of gifted pupils which the television programs would introduce.

Teachers, counselors, principals, supervisors, coordinators, and other special services personnel were invited. The ten workshops were scheduled from October 24 through December 6, 1967. Each center had a host leader who assumed full responsibility for expediting local arrangements and organized the seating, grouping, room, food dispensing, and record keeping aspects at the two sessions. A faculty of specialists in the fields of curriculum, education of the gifted, educational psychology, counseling,

and creativity were obtained from the University of Minnesota, University of Virginia, George Peabody University, and Macalester College. Resource persons were staff members of the project and RAND.

From August 15, 1967, through November 24, 1967, administrators of all schools in RAND Council districts received memoranda and fact sheets with attached directives, forms, descriptions, tables, and other essential information and material needed for local school orientation and for the accurate recording of information on the first two phases of the identification process. A tabular summary of returns was made and disseminated to all participating schools by December 5, 1967. The third phase of the identification and selection process was then initiated and on December 18, 1967, an orientation meeting for representatives from all schools was held at the project office. By mid-January, 1968, the pre-testing program had been completed in all schools. The quick timing was necessary to get all testing done before the telecasting on the 36 programs started on January 18, 1968.

The post-testing took place after the telecasting schedule was completed on April 4, 1968.

II. PROCEDURES

A. Selection of the sample Identification of the gifted was accomplished by use of the following procedures. RAND Council Schools reported intelligence quotients using scores no older than three years. Scores were reported only for those students who on group intelligence tests exhibited a minimum score equivalent to one standard deviation above

the norm using the individual Standford Benet as a reference. This reporting was known as Phase I. In actual practice those children who scored two or more standard deviations above the norm with regard to I.Q. were automatically included in the sample regardless of the ratings achieved on the Phase II screenings.

Further screening of the subjects was accomplished by Phase II procedures. This phase consisted of indicating those charateristics of giftedness possessed by each of the children from the Phase I screening. The listings were made by local school personnel. Restrictions were placed upon the local schools so that they should list at least 10% of the Phase I students for each of the characteristics, but no more than 20%. It was evident from the Phase II returns that not all of the schools followed these restrictions, however, the proportion of students selected in each case was very similar. An arbitrary criteria of 50% of the characteristics was selected as the basis for including in the final sample students who scored at or above the threashold I.Q. score, but below the second standard deviation.

Phase III procedures consisted of additional testing of selected subjects using tests of productive thinking and tests of creativity. The tests used are listed below.

Thinking Creatively With Words, Form A	Personnel Press
Vocabulary, V-2	Educational Testing Service
Plot Titles, O-1	Aptitude Research Project
Alternate Uses, Xs-2	Sheridan Psychological Corp.
Mathematics Aptitude, R-1	Educational Testing Service
Apparatus Test, Sep-1	Educational Testing Service
Object Naming, Xs-3	Educational Testing Service
Seeing Problems, Sep-2	Aptitude Research Project
Seeing Deficiencies, Sep-3	Educational Testing Service

It was the original plan to identify as being gifted those students who after passing Phase I and II were among the 50% receiving the highest scores on the above tests. This particular aspect of the identification procedures was questioned, the reasons being: (1) More students had been included in the Phase III test sample on the basis of I.Q. or straight randomization of sample than as the result of passing both Phase I and II procedures. (2) No normative data existed for most of the Phase III tests. (3) Only 04.3% of the students survived both Phae I and Phase II screenings even though Phase II screening required that only 50% of the characteristics be met. (4) If the criteria required the minimum of 6 trait characteristics and in addition that the I.Q. be two or more deviations above the norm, then only 01.4% of the total population would have survived. To further reduce this small percentage by half seemed to be of questionable value in terms of identifying the gifted. This was especially true if the evidence was to be useful in persuading schools to plan and implement programs for their gifted students.

Phase III tests had their greatest value as pre and post-test instruments in the evaluation of the telecasts and concommitant factors.

A random sample of 20% of those who passed Phase I but did not pass Phase II were included in the total sample group. In addition, this group met only the I.Q. criteria of being above the threashold score. This group provides a basis for comparative study for Phase II and Phase III procedures. In addition, it has given us a broad base so that we might

look at the sample with greater confidence as being more truly representative of the 5th and 6th grade students in the project area.

The total sample was divided into three sub-groups. This was also a random operation taking into account geographic locations within the E.R.D.C. area. It was proportionately done so that each sub-group would contain about the same number of subjects.

Since most of the schools in the RAND Council area had access to ETV and wished to participate fully, it was difficult to locate an adequate number of schools which could serve as comparison subjects.

Evaluation of the inservice program was only general at best. Proof of real success in this area will take years as schools begin to implement changes. The project was able to get at some of this information through the use of attitude analysis scales and questionnaires.

Additional information in the area of evaluation has been volunteered by a number of individuals. One excellent source has been the liaison personnel of WBSE-TV who regularly gets into each of the schools.

B. Discription of TV Series This project has undertaken to demonstrate that in-school television programs, carefully planned and executed, can be an effective means for providing identified and selected gifted pupils and their teachers and exemplary kind of special education which will, to an extent, help over-come the forces of their disadvantagement. The content series consisted of twelve films related to the common theme, Patterns of Living. The selected films had not been previously used in the regular curricula of the schools involved. It was the purpose of these films to provide the vehicle with which the strategies of process teaching could be

exemplified by the TV teachers. This series was primarily for student viewing. The content was not considered of particular value as to knowledge input.

The process series was directed to both student and teacher viewing. The students identified by Phase I and Phase II processes were to view these programs. In the process series the TV teacher attempted to stimulate productive thought processes. Demonstrating instructional techniques particularly adaptive to the potential of gifted pupils via videotapes prepared by the project was attempted in this series.

Series III the inservice series, was teacher oriented. Here, the master teachers attempted to expand the ideas introduced with the students during the process series. Teachers were given an opportunity to hear a discussion on the "how" and "why" of the learning process and the teaching techniques used in the process series. Thus the development of both learning skills for the students and teaching techniques for the teacher would be fostered. It was hoped that such experiences might benefit the observers.

C. Identification of Variables Subjected to Pre and Post-Test Analysis

Telecasting of the twelve series of films and tapes began on January 18, 1968 and concluded on April 4, 1968.

Prior to the initial telecasting Phase III tests were administered. A similar battery was administered following the April 4th telecast. A statistical comparison of the pre-test, post-test data provided some index as to the effectiveness of the telecasts.

Since the comparison schools could not receive the telecasts, a cautious comparison between the pre-test, post-test gains of the two groups would also provide further clues regarding the effectiveness of the telecasts.

Three kinds of statistical analysis was undertaken from the data obtained. They include the following types:

1. Descriptive Analysis This information consisted of finding the means, standard deviations, centiles and distribution for these items:

   a. Each test variable (by characteristics)

   b. Total test battery

   c. Pre-tests

   d. Post-tests

   e. By sub-sample group

   f. By sex

   g. By grade

   h. Experimental/comparison groups

   i. Public/parochial groups

2. Inferential Analysis

   a. Pre and post-test mean score difference by: test groups, total sample, sex, grade, experimental/comparison groups;

   b. Cross group comparisons of mean differences on post-test data by test group, by sex, by grade and by experimental/comparison groups;

   c. Inter-relationships among test variables on pre and post-test matrix: pre to post-test by group, sex, grade and experimental/comparison groups;

d. Study mean differences across groups at I.Q. levels on the post-test data;

e. Analysis of co-variance the statistical control of pre-test differences so as to allow post-test comparisons to be made.

3. Cluster Analysis Plans were made to look at the cluster analysis of students as related to I.Q., teacher, traits, and various factors of productive thinking such as flexibility, originality, etc.

In addition to this kind of evaluation, the reactions of the participants (schools) were surveyed by means of questionnaires following the final telecasts. Such information was sought from all levels; administrators, teachers and students.

D. Formation of Subgroups Because of the availability of over 1500 children identified as gifted as previously described, and because of the large amount of testing time which would be required if each student took all of the tests involved in the evaluation battery, it was decided to split this large number of students into subgroups and administer a different set of tests to the students in each subgroup.

Accordingly, subgroups were formed and certain tests were assigned to each subgroup. The experimental and comparison schools were first arranged by geographical Region I through V. (See Appendix A) The schools within each region were then divided in such a way that the number of gifted students from the schools in each of the three subgroups was approximately equal. The same procedure was then carried out for the comparison schools. Obtained by this procedure, then, were three groups of students representing, in approximately equal numbers in each group, the five regions within the area served by the Educational Research and Development Council of Northeast Minnesota. The subgroups were identified by the symbols I, II and III. The vast majority of the students in each subgroup came from the experimental schools, and thus were subsequently exposed to the TV programs, but in each group there was a sizeable number of students from the comparison schools, who, of course, were not to view the programs. (See Appendix B for the breakdown of schools into the three subgroups.)

The make up of each subgroup is summarized in Table 1.

TABLE 1

Frequency Breakdowns in Subgroups, by Sex, Type of School (Public or Parochial) and Treatment (Experimental or Comparison)

	Sex		Grade Level		Type of School		Treatment		Total
Subgroup	M	F	5	6	Pub	Par	E	C	
I	246	288	282	252	432	102	472	62	534
II	242	262	255	249	419	85	499	55	504
III	261	257	247	271	406	112	427	91	518
Total	749	807	784	772	1257	299	1348	208	1556

The tests used to obtain the pre and post-test scores (measures) have already been described. The assignment of tests to subgroups is summarized in Table 2.

TABLE 2

Tests Assigned to Subgroups for Pre and Post- Analysis

Subgroup I Thinking Creatively with Words Vocabulary, V-2
Subgroup II Alternate Uses, Xs-2 Plot Titles, O-1 Mathematics Aptitude, R-1 Apparatus Test, Sep-1
Subgroup III Vocabulary, V-2 Object Naming, Xs-3 Seeing Problems, Sep-2 Seeing Deficiencies, Sep-3

E. Statistical Analysis While there were a number of statistical analyses performed on the data gathered during the course of this study, this report is concerned only with the pre and post-analyses of the scores obtained on the various tests listed in a previous section, as they were administered to students in the various subgroups.

The primary goal of the statistical analyses of these data was to compare the mean gains (changes actually, i.e., gains or losses) made in these various tests by students who were exposed to the TV programs with the mean gains in the same tests during the same periods made by like students who were not exposed to the TV programs. Accordingly, only those comparisons were made which contrasted in some manner the gains of students from the experimental schools with those of students from the comparison schools.

An analysis of covariance was used to compare the mean post-test scores of the two groups of students. The version of this analysis which was used in this study* essentially took into account differences in the test scores obtained at the first testing (the pre-measures) in assessing the gains registered by the students as the post-measures were compared. In other words, differences in the post-test scores (i.e., the amounts gained) by students in the various groups could not be explained away by saying that one group started higher or lower and that this gave them an unfair advantage or disadvantage. In so far as it is statistically possible to do this analysis prevented any factors from affecting the gains made other than the factors specifically identified as being under study.

* An analysis of covariance using the pre-measure of each test variable as the covariate in each analysis, with an unweighted means solution, was used. Comparisons were made in terms of pre to post-gains when the latter were determined relative to the post-measure gain expected on the basis of the pre-measure of the given variable. Also in this analysis, equal weight was given to the mean scores in each category. This means that although there was actually a different number of students in each category, (especially the E and C categories), comparisons were made as if there were an equal number in each category.

A four way analysis was carried out in accordance with the breakdown of students as given above. That is, gains made by students divided in four ways were compared. First, and most important, post-test scores of those who viewed TV programs were compared with the same kind of scores of those who did not view the programs. Second, the post-test scores of the two sexes were compared. Third, the post-test scores of fifth graders were compared with those obtained by sixth graders. Fourth, the scores made by students in the public schools were compared with those obtained by students in parochial schools. Finally, the gains associated with all possible combinations were compared with those of all possible combinations of the four dimensions specified above.

However, only those comparisons involving the gains made by students who did or did not view the TV programs will be presented here. This involves the overall differences between the gains made by all those students who did or did not view the programs, and also the differences between the gains made by students in all combinations involving the "treatment" condition, i.e., the experimental group (who watched the programs) and the comparison group (who did not).*

In some analyses, as will be indicated, there were not enough students in the comparison group from parochial schools to permit the analysis, so analyses comparing types of schools were dropped from consideration.

III. RESULTS

The outcomes of the statistical analyses of the gains made in the various tests by students who either were or were not exposed to the TV programs are reported in the sections below. For convenience, the results obtained in the analysis of the three subgroups are reported separately.

*I.E., the only main effect presented here is Treatment, and the only interaction effects presented are those involving Treatment.

In general, only those results which indicated some differences which were associated with the Treatment (exposure to the TV programs) are presented here in any detail. Where there were no such differences, no attempt is made to summarize in this part of the report the statistical analyses leading to these conclusions. All summary data are presented in Appendix C and the statistical analyses carried out are summarized in their entirety in Appendix D.

The words "significant difference" or "statically significant difference" are, of course, statistical jargon meaning that the differences under consideration are too large to be explained away as being due to "chance, "i.e., to a multitude of small and unmeasureable errors which cannot be eliminated in this type of research. These words imply instead that such differences are due to a definite influence of some or combination of factors, which, if the research project is well designed, would be the input varibles specifically identified. In the present case, viewing or not viewing the programs, sex, grade level, and the type of school are the specifically identified factors with which any statistically significant differences are assumed to be related.

All test listed were given twice once in December, 1967 and again in May, 1968. In the duration between these dates, of course, students in the experimental schools were exposed to the TV programs, while those in the comparison schools were not.

A. Subgroup I Two tests, Thinking Creatively with Words, and Vocabulary, V-2, were assigned to students in Subgroup I.

Thinking Creatively with Words, as discussed previously, is a test in three parts, "Fluency", "Flexibility" and "Originality". The results of the analysis of these three subtests are presented separately below.

1. Fluency (FormA) There was no across the board statistically significant differences in the post-test scores (i.e., gains) achieved in Fluency by those who viewed the programs as compared with the scores of those who did not. The only

combinations of factors involving the Treatment (E and C) which provided significant differences was the School Type by Treatment interaction. ($F=5.29$, $p < .02$) The mean post-test (adjusted) scores for these two factors are summarized in Table 3.

TABLE 3

	TREATMENT		
Type of School	Experimental	Comparison	Combined
Public	84.9	98.2	91.5
Parochial	96.4	87.1	91.8
Combined	90.7	92.7	91.7

As can be seen in Table 3, the public school comparison students gained more in Fluency during this time period than did the public school experimental students, but in the parochial schools, experimental students gained more than the comparison students.

2. Flexibility (Form A) Again there was no significant differences in gains made by experimental and comparison students in general. Several higher order combinations involving the Treatment factor provided significant differences, but the School type and Treatment combination ($F=18.89$, $p < .001$) appears to be the only one having practical value (the others being second and third order interactions, i.e., combinations of three or all four factors at once). This is the same combination as found in Fluency, and it operates in the same fashion, as can be seen in Table 4.

TABLE 4

Adjusted Mean Scores in Flexibility for Treatment and Type of School

	TREATMENT		
Type of School	Experimental	Comparison	Combined
Public	37.4	48.2	42.8
Parochial	40.0	35.5	37.7
Combined	38.7	41.8	40.4

Those comparison students in the public schools gained more in Flexibility than did their experimental counterparts, while in the parochial school, the experimental students gained more.

3. Originality, (Form A) In Originality, there was an across the board differences in gain related to the Treatmert condition. Those who did not see the programs gained more, on the average, than those who did. ($F=5.10$, p .02) This difference, however, was entirely due to the students in the public schools, since the difference in the post-test scores made by the two groups of students in the parochial schools, was extremely small. (It should be kept in mind that the analysis treated all groups as equal in number, so that the fact that there were more students from the public schools has no bearing on this, or any other, result.) Obviously the combination of Treatment and School Type also provided significant differences. ($F=6.48$, p .01) This is the same effect as seen previously in Fluency and Flexibility, and in the same direction. Table 5 summarizes these results.

TABLE 5

Adjusted Mean Scores in Originality for Treatment and Type of School

	TREATMENT		
Type of School	Experimental	Comparison	Combined
Public	32.2	47.6	39.9
Parochial	26.2	25.4	25.8
Combined	29.3	36.4	32.9

It should be pointed out that the factors of Grade Level and Sex were associated with Treatment in other significant, though complex, differences. (G x T: $F=4.53$, $p<.02$; C x S T: $F=11.95$, $p<.001$) These differences were essentially due to the large gains made by sixth grade boys and fifth grade girls in the public comparison groups.

Vocabulary, V-2, tests were also given twice to all students in Subgroup 1. The outcome here is similar to those obtained in the Thinking Creatively with Words testing, in that the public school students who did not view the programs showed more gain than those who did, while the parochial school students who gained more were those who saw the programs. Unusually small gains by fifth grade boys in the comparison parochial schools played a large role in this outcome. Table 6 summarizes these data.

Summary of results of Subgroup I:

In the parochial schools, those students who viewed the Tv programs showed more gain in Fluency, Flexibility and Vocabulary than did students who did not view the programs. No differences appeared in the amount gained in Originality.

In the public schools, students who did not view the TV programs gained more than those who did in all variable measure: Fluency, Flexibility, Originality and Vocabulary.

B. Subgroup II Students in Subgroup II were assigned four tests: Alternate Uses, Xs-2, Plot Titles, O-1, Mathematics Aptitude, R-1 and the Apparatus Test, Sep-1.

Because in this subgroup there were not enough usable scores from students from comparison parochial schools to justify a breakdown between experiemental and comparison students in these schools, no attempt was made to compare gains of students from public and parochial schools. That is, scores of all students from both type of schools were thrown in together, and School Type was dropped as a dimension for the analysis. Thus, it will not be possible to see if the Treatment had a differential effect upon students from the two types of schools.

1. Alternate Uses, Xs-2, No significant differences were found.

2. Plot Titles, O-1, As previously indicated, the Plot Titles test provided two scores: the H (High) Score, which can be considered a measure of originality or eleverness, and the H & L (High plus Low) Score, which can be considered an index of productivity, with no implication of originality.

   A. H Score No significant differences were found.

B. H & L Score In the H & L Score, the comparison school students showed significantly more gain than did students from the experimental schools. ($F=6.51$, $p<.01$). The higher productivity of the comparison school students occurred only in the sixth grade, however, which also accounts for the significant Treatment by Grade interaction ($F=3.77$, $p<.001$). Table 6a shows the means involved in this analysis.

TABLE 6a

Adjusted Mean H & L Scores from Plot Titles Test for Treatment and Grade

	TREATMENT		
Grade	Experimental	Comparison	Combined
5	11.7	11.4	11.5
6	12.0	16.2	14.1
Combined	11.8	13.8	12.8

3. Mathematics Aptitude, R-1, While no differences in Scores attributable to Treatment provided a significant interaction effect. ($F=5.00$, $p<.02$) Table 7 shows the mean scores involved. Girls who showed more gain in this dimension during the time period were those who viewed the TV programs, while boys who did not see the programs showed more gain.

TABLE 7

Adjusted Mean Scores in Mathematics Aptitude for Treatment and Sex

	TREATMENT		
Sex	Experimental	Comparison	Combined
Male	7.5	9.3	8.4
Female	6.8	5.7	6.2
Combined	7.1	7.5	7.3

In addition, there was a significant higher order interaction ($F=8.86$, $P<.01$) involving Treatment, Sex and Grade Level, essentially occurring because in the sixth grade comparison group, boys made a larger gain than did girls.

4. Apparatus Test, Sep -1 The Apparatus Test also provided two scores: the D (Drastic) Score, which refers to suggested improvements in the objects or appliances of a drastic nature; and the M (Minor) Score, which refers to suggestions for relatively minor improvements in the same objects.

A. D Score No significant differences were found.

B. M Score Students in the experimental schools showed an overall greater gain in this score than did those in the comparison schools ($F=10.93$, P .001). This difference was quite consistent over all of the grade and sex categories, with the minor exception that the sixth grade girls from both types of schools did about equally well. Table (7a) shows the main effect difference in the M Score means.

TABLE 7a

Adjusted Mean H Score from the Apparatus Test for Treatment

	TREATMENT		
	Experimental	Comparison	Combined
Combined	15.6	11.7	13.6

Summary of results of Subgroup II:

Students who viewed the TV programs showed greater gain in the M score (minor improvements) of the Apparatus Test than did those who did not view the programs.

Sixth graders who did not view the TV programs showed greater gain in the H & L Score (a productivity index) of the Plot Titles Test than did sixth graders who did view the programs. No differences were found between fifth graders who did or did not view the programs.

Girls who were exposed to the TV programs showed greater gain in Mathematics Aptitude test scores, but the boys who did not see the programs made the greater gain.

No differences were found between students in the experimental and comparison schools in the Alternate Uses Test, the H Score of the Plot Titles Test, or the D Score of the Apparatus Test.

C. Subgroup III Four tests were assigned to students in Subgroup III: Vocabulary, V-2, Object Naming, Xs-3, Seeing Problems, Sep-2, and Seeing Deficiencies, Sep-3.

1. Vocabulary, V-2, No significant differences were found.

2. Object Naming, Xs-3, No significant differences were found.

3. Seeing Problems, Sep-2, An overall differences in favor of the students in the comparison group was found here. ($F=10.55$, $p < .001$) This difference, however, is totally accounted for by the parochial schools, in which the comparison students did considerably better than the experimental students. In the public schools, there was virtually no difference between the gains made by students who viewed the programs and those made by students who did not. (T X C: $F=11.35$, $p < .001$) Table 8 contains the relevant mean scores.

TABLE 8

Adjusted Mean Scores for Seeing Problems for Treatment and Type of School

	TREATMENT		
Type of School	Experimental	Comparison	Combined
Public	20.2	20.1	20.1
Parochial	21.2	26.4	23.8
Combined	20.7	23.4	22.0

4. Seeing Deficiencies, Sep-3, No significant differences were found.

Summary of results of Subgroup III:

In the parochial schools, students showing more gain in Seeing Problems were those who had not viewed the programs.

In the public schools, no differences of any kind were found which were associated with the Treatment condition.

D. General Summary of Results Gifted students in both experimental and comparison schools were given a series of the same tests on two occasions, once in December, 1967 and again in May, 1968. Between these two dates, the gifted students in the experimental schools only were exposed to specially prepared TV programs.

In comparing the scores obtained in the second application of the tests with those obtained in the first, certain general statements can be made, as indicated below.

1. Exposure to the TV programs was associated with greater average gains in:

   A. the M Score (minor improvements) of the Apparatus Test in all students taking the tests;

   B. the Fluency and Flexibility scales of the Thinking Creatively with Words Test in parochial school students;

   C. the Vocabulary Test scores in parochial school students;

   D. the Mathematics Aptitude Test scores in girls.

2. Exposure to the TV programs was associated with smaller average gains in:

   A. the Fluency, Flexibility and Originality scales of the Thinking Creatively with Words Test in public school students;

   B. the Vocabulary Test scores in public school students;

   C. The Seeing Problems scores in parochial school students;

   D. the H & L Score (productivity) if the Plot Titles Test in sixth graders;

   E. the Mathematics Aptitude Test scores in boys.

3. Exposure to the TV programs was associated with no differences in average gains between categories not listed above.

IV. DISCUSSION

Interpretation of any results of such a complex research study as the present one is difficult, but this is especially so when the results appear to give so little support to the beliefs which led to the study in the first place. Nevertheless, there are a number of possible reasons for outcomes such as these, and it is usually worthwhile to attempt to identify some of these.

First of all, it must be admitted that TV programs, such as those developed and presented in this project, may in fact provide little or no stimulation toward growth of creative abilities of the sort measured in this study in gifted students like those who served as subjects in this investigation.

It may be, for example, that in general TV presentations to youngsters who are accustomed to being taught by teachers in the classroom do not have forcefulness or impact enough to be meaningful. It may also be that removing children from their regular classroom creates disruption, or problems of a social sort, or resentment, or some other condition which might operate to minimize learning in the new situation.

It is very possible, however, that neither of the above is the case, but that the particular programs beamed at the students in this study were insufficiently compelling, or perhaps "pitched" too high or too low, to attract and maintain the interest of such students.

It is possible too that failure of the students to show consistent benefits from the programming could be attributed to inappropriate behavior on the part of the students' actual "live" teacher(s), regular or special, who may have been working at cross purposed to the programming. This

inappropriate behavior may take subtle forms, and may reflect limited success of inservice training.

Another dimension of the problem of getting reliable evidence for or against the use of any technique in teaching the gifted is in the assessment of any changes in students which might occur. It is an unfortunate admission to have to make, but there seems to be some valility to the statement that our ability to measure a characteristic is inversely proportional to its importance. The available procedures for measuring creative skills and abilities are certainly primitive, and to attempt to assess relatively small changes in such abilities may rank in deminishing returns.

On the other hand, it may have been merely that we were attempting to measure the wrong things. Our theories suggest that certain abilities might be changed by experiences such as those provided to these children, but perhaps the changes occurred in other, unexplored attributes.

One other source of difficulty of many difficulties in fact, lies in the identification and selection of students and their assignment to the groups which are to receive differential treatment. Besides accurately representing the population from which they were drawn, ideally the students should be assigned to the various groups in such manner that each group is like the others in all characteristics which might be related to the skills or abilities being studied. Usually this equality of groups is obtained by randomly assigning students to the various groups, or by careful and deliberate matching procedures which assure this state of affairs. Then too the process of selecting and soliciting the cooperation of different schools to serve in experimental and comparison roles allowed for the operation of some very biasing influences. In short, while the statistical analysis

used were designed to control for initial differences in the measured attributes themselves from affecting the results, there may well have been many other differences between the groups of students which might have affected the final sets of scores on which the analysis was based.

Finally, it should be recalled that the number of students in the different groups varied considerably, in general, there was an unavoidable significant shortage of comparison students. There were also very few parochial school students in this study. The statistical analysis used ignored these differences in number (a procedure almost demanded by the complexities of the data) but in so doing, surely led to some errors in specifying which differences were and which were not large enough to be statistically significant, or, in practical terms, worth paying attention to. Some of the means which actually were based on very small numbers are particularly suspect.

This then is a look at a first effort to provide supplementary educational experiences to gifted youngsters by using educational TV. That the results are somewhat disappointing should not be surprising nor, in the long run, discouraging. Research such as the present study usually provides suggestions, not conclusions. By performing such researches, and by comparing these projects with each other, we will improve our ability to design and provide meaningful and profitable experience to our gifted school children. No other avenue of effort seems as likely to produce the information necessary to enhance our skills in this demanding and important task.

As this pilot project was an effort to influence educator attitudes and school curriculum planning, it was in fact difficult to ascertain what

measures might be most effective in evaluating the project activities. In addition to utilizing tests of creativity to measure the effect of the project activities upon students, one of the five questionnaires developed was used to measure in part the attitudes of students relative to the activities they were involved in. This data seems to strongly indicated a positive reaction to the project activities during the pilot year. 83% of the students completing this questionnaire felt better prepared to solve problems which arose both in and out of the classroom as a result of their activity associated with the project. In addition these same students felt they had significantly improved many of their thinking or reasoning skills.

The questionnaire employed to establish what positive or negative attitudes exsisted among teachers and administrators toward gifted students and their needs gave much support to programs established for these students specific needs. Nearly 7 out of 10 teachers and administrators indicated they believed there is a tendency to slight gifted students when there is a wide range of ability reflected amongst students in a class. As was indicated in the responses to the attitude questionnaires, more than 9 out of 10 educators in both groups felt it wise to foster creative thinking in the school even if it implies the questioning of longstanding traditions and customary rules in a search for unconventional ideas.

The completed conclusions and recommendations extrapolated from the questionnaire portion of this evaluation are found in Appendix E of this report.

LAKE OF THE WOODS

REGION IV

KOOCHICHING

REGION III

REGION II

COOK

BELTRAMI

LAKE

ITASCA

HUBBARD

ST. LOUIS

REGION I

REGION V

CARLTON

WADENA

CASS

CROWWING

AITKIN

APPENDIX A

TODD

MORRISON

KANABEC

PINE

APPENDIX A

PARTICIPATING EXPERIMENTAL SCHOOLS

GEOGRAPHICAL REGIONS I - V

Region I

Duluth	Birchwood Elementary
"	Bryant Elementary
"	Chester Park Elementary
"	Congdon Park Elementary
"	Emerson Elementary
"	Endion Elementary
"	Ensign Elementary
"	Fairmount Elementary
"	Franklin Elementary
"	Grant Elementary
"	Irving Elementary
"	Jefferson Elementary
"	Kenwood Elementary
"	Lakeside Elementary
"	Lester Park Elementary
"	Lincoln Elementary
"	Lowell Elementary
"	MacArthur Elementary
"	Merritt Elementary
"	Morgan Park Elementary
"	Munger Elementary
"	Park Point Elementary
"	Piedmont Elementary
"	Riverside Elementary
"	Rockridge Elementary
"	Stowe Elementary
"	Washburn Elementary
Duluth Diocese	Holy Rosary School
"	Sacred Heart School
"	St. Anthony School
"	St. James School
"	St. Jean School
"	St. John School
"	St. Lawrence School
"	St. Margaret Mary School
"	St. Michael School
"	St. Peter & Paul School
" (Proctor)	St. Rose School
" (Virginia)	Marquette Elementary
" (Hibbing)	Assumption School
" (Grand Rapids)	St. Josephs School
" (Aitkin)	Maryhill School
" (Cloquet)	Our Lady of the Sacred Heart

Region I (Continued)

Proctor	Bayview Elementary
"	Caribou Lake Elementary
"	Summit Elementary

Region II

Finland	Finland Elementary
Silver Bay	Campton Elementary
"	MacDonald Elementary
Two Harbors	John A. Johnson Elementary
"	Minnehaha Elementary
Grand Marais	Grand Marais Elementary
Tofte	Birch Grove Elementary
Ely	Kennedy Elementary
Babbitt	Babbitt Elementary

Region III

Angora	Alango Elementary
Cook	Cook Elementary
Gilbert	Nelle Shean Elementary
Eveleth	Franklin Elementary
"	Lincoln Elementary
Virginia	Madison Elementary
"	Mann Elementary
"	Midway Elementary
"	Washington Elementary
Biwabik	Bray Elementary
Mountain Iron	Mountain Iron Elementary

Region IV

Chisholm	Lincoln Elementary
"	Roosevelt Elementary
"	Vaughan-Steffensrud Elementary

Region IV (Continued)

Hibbing	Alice Elementary
"	Brooklyn Elementary
"	Cobb-Cook Elementary
"	Greenhaven Elementary
"	Jefferson Elementary
"	Washington Elementary
Nashwauk-Keewatin	Nashwauk-Keewatin Elementary
Coleraine	Calumet Elementary
"	Cloverdale Elementary
"	Marble Elementary
"	Murray Elementary
"	Pengilly Elementary
"	Taconite Elementary
"	Vandyke Elementary
Grand Rapids	Bigfork Elementary
"	Central Elementary
"	Cohasset Elementary
"	Forest Lake Elementary
"	Murphy Elementary
"	Riverview Elementary
"	Southwest Elementary

Region V

Duluth	Homecroft Elementary
North Shore	North Shore Elementary
Toivola	Toivola Elementary
Floodwood	Lincoln Elementary
Cromwell	Wright Elementary
Hermantown	Hermantown Elementary
McGregor	McGregor Elementary
Barnum	Barnum Elementary
McGrath	McGrath Elementary
Cloquet	Churchill Elementary
"	Garfield Elementary
"	Leach Elementary
"	Lincoln Elementary
"	Washington Elementary
Sandstone	Sandstone Elementary
Hinckley	Hinckley Elementary
Carlton	South Terrace Elementary
Moose Lake	Moose Lake Elementary

APPENDIX A

PARTICIPATING COMPARISON SCHOOLS

GEOGRAPHICAL REGIONS I - V

Region III

Nett Lake	Nett Lake Elementary
St. Louis County	Orr Elementary
Tower	Tower Soudan Elementary

Region IV

Duluth Diocese (International Falls)	St. Thomas School
Grand Rapids	Squaw Lake Elementary
"	Warba Elementary
International Falls	Alexander Baker Elementary
"	Falls Elementary
"	Holler Elementary

Region V

Duluth Diocese (Brainerd)	St. Francis School
(Crosby)	St. Josephs School
(Pine City)	St. Marys School
Floodwood	Lincoln Elementary
Moose Lake	Moose Lake Elementary

APPENDIX B

SUB-GROUP DIVISION OF PARTICIPATING SCHOOLS

EXPERIMENTAL

Sub-Group I

Duluth	Bryant Elementary
"	Chester Park Elementary
"	Franklin Elementary
"	Grant Elementary
"	Lowell Elementary
"	Merritt Elementary
"	Riverside Elementary
"	Rockridge Elementary
Duluth Diocese	Sacred Heart School
"	St. Anthony School
"	St. Peter & Paul School
" (Hibbing)	Assumption School
" (Hibbing)	St. Leo's School
" (Cloquet)	Our Lady of the Sacred Heart School
Proctor	Bayview Elementary
"	Caribou Lake Elementary
"	Pike Lake Elementary
"	Munger Elementary
"	Summit Elementary
Silver Bay	Campton Elementary
"	Mary McDonald Elementary
Two Harbors	John A. Johnson Elementary
"	Minnehaha Elementary
Angora	Alango Elementary
Gilbert	Nelle Shean Elementary
Biwabik	Bray Elementary
Mt. Iron	Mt. Iron Elementary
Hermantown	Hermantown Elementary
McGrath	McGrath Elementary
Finland	Finland Elementary
Barnum	Barnum Elementary

Chisholm	Vaughn-Steffensrud
Hibbing	Alice Elementary
"	Brooklyn Elementary
"	Cobb-Cook Elementary
"	Greenhaven Elementary
"	Jefferson Elementary
"	Washington Elementary
Coleraine	Marble Elementary
"	Taconite Elementary
Grand Rapids	Central Elementary
"	Murphy Elementary

Sub-Group II

Duluth	Birchwood Elementary
"	Congdon Park Elementary
"	Endion Elementary
"	Ensign Elementary
"	Kenwood Elementary
"	Park Point Elementary
"	Piedmont Elementary
"	Cobb Elementary
"	Nettleton Elementary
Duluth Diocese	Holy Rosary School
"	St. James School
"	St. Lawrence School
"	St. Margaret-Mary School
"	St. Michael School
" (Proctor)	St. Rose School
" (Virginia)	Marquette School
Grand Marais	Grand Marais Elementary
Tofte	Birch Grove Elementary
Babbitt	Kennedy Elementary
Eveleth	Lincoln Elementary
"	Franklin Elementary
St. Louis County	Homecroft Elementary
"	North Shore Elementary
Cromwell	Wright Elementary
Cloquet	Garfield Elementary
"	Lincoln Elementary
Sandstone	Sandstone Elementary

Sub-Group II (continued)

Carlton	South Terrace Elementary
Nashwauk-Keewatin	Nashwauk-Keewatin Elementary
Coleraine	Calumet Elementary
"	Murray Elementary
"	VanDyke Elementary
Grand Rapids	Cohasset Elementary
"	Riverview Elementary

Sub-Group III

Duluth	Fairmount Elementary
"	Irving Elementary
"	Jefferson Elementary
"	Lakeside Elementary
"	Lester Park Elementary
"	Lincoln Elementary
"	MacArthur Elementary
"	Morgan Park Elementary
"	Stowe Elementary
"	Washburn Elementary
"	Munger Elementary
"	Emerson Elementary
Duluth Diocese	St. Jean's School
"	St. John's School
" (Grand Rapids)	St. Joseph's School
" (Aitkin)	Maryhill School
Ely	Kennedy Elementary
"	Lincoln Elementary
Virginia	Madison Elementary
"	Mann Elementary
"	Midway Elementary
"	Washington Elementary
St. Louis County	Toivola Elementary
Cloquet	Churchill Elementary
"	Leach Elementary
"	Washington Elementary
Hinckley	Hinckley Elementary
Chisholm	Lincoln Elementary
"	Roosevelt Elementary
Coleraine	Cloverdale Elementary
"	Pengilly Elementary
Grand Rapids	Big Fork Elementary
"	Forest Lake Elementary
"	Southwest Elementary

APPENDIX B

SUB-GROUP DIVISION OF PARTICIPATING SCHOOLS

COMPARISON

Sub-Group I

Floodwood	Lincoln Elementary
Tower	Tower Soudan Elementary
Duluth Diocese (Crosby)	St. Josephs School
International Falls	Falls Elementary
"	Holler Elementary

Sub-Group II

Duluth Diocese (Pine City)	St. Mary's School
Moose Lake	Moose Lake Elementary
Nett Lake	Nett Lake Elementary
International Falls	Alexander Baker Elementary

Sub-Group III

Duluth Diocese (Brainerd)	St. Francis School
(Intn'l Falls)	St. Thomas School
Grand Rapids	Squaw Lake Elementary
"	Warba Elementary
St. Louis County	Orr Elementary

SUMMARY DATA

APPENDIX C

Table 1E

Adjusted Means

Subgroup 1

Variable Fluency

	Male			Female			Total		
Pro	E	C	Total	E	C	Total	E	C	Total
Pu 5	82.70	92.84	87.77	86.09	103.48	94.785	84.395	98.16	91.28
Pu 6	86.98	104.62	95.80	83.75	92.03	87.89	85.365	98.325	91.85
Pu Total	84.84	98.73	91.79	84.92	97.755	91.34	84.89	98.25	91.52
Pa 5	84.81	68.93	76.87	102.11	101.45	101.78	93.46	85.19	89.33
Pa 6	90.65	70.99	80.82	108.17	107.09	107.63	99.41	89.04	94.23
Pa Total	87.73	69.96	78.85	105.14	104.27	104.705	96.44	87.12	91.78
5	83.76	80.89	82.33	94.10	102.47	98.29	88.93	91.68	90.31
6	88.82	87.81	88.32	95.96	99.56	97.76	92.39	93.69	93.04
Total	86.29	84.35	85.33	95.03	101.02	98.03	90.66	92.69	91.68

Variable Flexibility

Pu 5	34.60	45.81	40.21	37.53	51.54	44.45	36.07	48.68	42.38
Pu 6	38.48	53.36	45.92	38.78	42.09	40.44	38.63	47.73	43.18
Pu Total	36.54	49.59	43.07	38.16	46.82	42.49	37.35	48.21	42.78
Pa 5	43.08	28.18	35.63	39.38	42.44	40.91	41.23	35.31	38.27
Pa 6	37.89	32.88	35.39	39.59	38.32	38.96	38.74	35.60	37.17
Pa Total	40.49	30.53	35.51	39.49	40.38	39.94	39.99	35.46	37.72
5	38.84	37.00	37.92	38.46	46.99	42.73	38.65	42.00	40.33
6	38.19	43.12	40.66	39.19	40.21	39.70	38.69	41.67	40.18
Total	38.52	40.06	39.29	38.83	43.60	41.22	38.67	41.84	40.36

Variable Originality

Pu 5	29.32	31.53	30.43	32.70	43.70	38.20	31.01	37.62	34.32
Pu 6	31.98	58.03	45.01	35.53	56.90	46.22	33.53	57.47	45.50
Pu Total	30.65	44.78	37.72	34.12	50.30	42.21	32.27	47.55	39.91
Pa 5	25.75	13.58	19.67	27.77	28.69	28.23	26.76	21.14	23.95
Pa 6	22.26	22.43	22.35	28.97	36.71	32.84	25.62	29.57	27.60
Pa Total	24.01	18.01	21.01	28.37	32.70	30.54	26.19	25.36	25.78
5	27.54	22.56	25.05	30.24	36.20	33.22	28.89	29.38	29.14
6	27.12	40.23	33.68	32.25	46.81	39.53	29.69	43.52	36.61
Total	27.33	31.40	29.37	31.25	41.51	36.36	29.29	36.45	32.88

Table 2E

Adjusted Means

Subgroup 1

Variable Vocabulary

	Male			Female			Total		
Pro Gr	E	C	Total	E	C	Total	E	C	Total
5	8.44	9.32	8.88	8.49	9.76	9.13	8.47	9.54	9.01
Pu 6	10.02	14.11	12.07	8.08	10.10	9.09	9.05	12.11	10.58
Total	9.23	11.72	10.48	8.29	9.93	9.11	8.76	10.83	9.80
5	8.60	5.66	7.13	6.95	8.08	7.52	7.78	6.87	7.33
Pa 6	10.74	9.20	9.97	8.98	9.55	9.27	9.86	9.38	9.62
Total	9.67	7.43	8.55	7.97	8.82	8.40	8.82	8.13	8.48
5	8.52	7.49	8.01	7.72	8.92	8.32	8.12	8.21	8.17
6	10.38	11.66	11.02	8.53	9.83	9.18	9.46	10.75	10.11
Total	9.45	9.58	9.52	8.13	9.38	8.75	8.78	9.48	9.14

Table 3E

Adjusted Means for
Public Schools Only

Subgroup 2

Variable Alternate Uses

	Male			Female			Total		
Gr	E	C	Total	E	C	Total	E	C	Total
5	17.81	15.67	16.74	17.89	16.41	17.14	17.85	16.04	16.95
6	18.56	19.35	18.96	17.67	18.97	18.32	18.13	19.16	18.65
Total	18.19	17.51	17.85	17.78	17.69	17.73	17.99	17.60	17.80

Variable H Score

5	2.82	2.37	2.60	2.67	2.69	2.68	2.75	2.53	2.64
6	2.81	3.26	3.04	2.52	3.00	2.76	2.67	3.13	2.90
Total	2.82	2.82	2.82	2.60	2.85	2.72	2.71	2.83	2.77

Variable H & L Score

5	11.52	10.67	11.10	11.85	12.06	11.96	11.69	11.37	11.53
6	11.99	15.96	13.98	11.94	16.53	14.24	11.97	16.25	14.11
Total	11.76	13.32	12.54	11.90	14.30	13.10	11.83	13.81	12.82

Variable Math Aptitude

5	5.86	5.87	5.87	5.10	6.04	5.57	5.48	5.96	5.72
6	9.18	12.68	10.93	8.42	5.40	6.91	8.80	9.04	8.92
Total	7.52	9.28	8.40	6.76	5.72	6.24	7.14	7.50	7.32

Table 4E

Adjusted Means for Public Schools Only

Subgroup 2

Variable D Score

Gr	Male E	Male C	Male Total	Female E	Female C	Female Total	Total E	Total C	Total Total
5	5.47	7.74	6.61	7.07	6.72	6.90	6.27	7.23	6.75
6	7.01	8.36	7.61	7.81	7.67	7.74	7.41	8.02	7.72
Total	6.24	8.05	7.11	7.44	7.20	7.32	6.84	7.63	7.24

Variable M Score

5	17.34	11.83	14.59	14.96	10.32	12.64	16.15	11.08	13.62
6	15.06	10.10	12.58	14.84	14.45	14.65	14.95	12.28	13.62
Total	16.20	10.97	13.59	14.90	12.39	13.55	15.55	11.68	13.62

Table 5E

Adjusted Means

Subgroup 3

Variable Object Naming

	Male			Female			Total		
Pro Gr	E	C	Total	E	C	Total	E	C	Total
5	9.01	7.93	8.47	8.86	8.65	8.76	8.94	8.29	8.62
Pu 6	10.48	11.43	10.96	9.94	9.91	9.93	10.21	10.67	10.44
Total	9.75	9.68	9.72	9.40	9.28	9.35	9.58	9.48	9.53
5	9.79	8.52	9.16	7.98	7.38	7.68	8.89	7.95	8.42
Pa 6	11.03	7.88	9.46	9.98	8.27	9.13	10.51	8.08	9.30
Total	10.41	8.20	9.31	8.98	7.83	8.41	9.70	8.02	8.86
5	9.40	8.23	8.82	8.42	8.02	8.22	8.91	8.13	8.52
6	10.76	9.66	10.21	9.96	9.09	9.53	10.36	9.38	9.87
Total	10.08	8.95	9.52	9.19	8.56	8.88	9.64	8.76	9.20

Variable Seeing Problems

5	18.65	17.59	18.12	19.82	19.41	19.62	19.24	18.50	18.80
Pu 6	20.47	22.96	21.72	21.66	20.43	21.05	21.07	21.70	21.39
Total	19.56	20.28	19.92	20.74	19.92	20.34	20.16	20.10	20.10
5	20.22	23.94	22.08	19.31	25.87	22.59	19.77	24.90	22.34
Pa 6	23.72	26.11	24.92	21.67	29.85	25.76	22.70	27.98	25.34
Total	21.97	25.03	23.50	20.49	27.86	24.18	21.24	26.44	23.84
5	19.44	20.77	20.11	19.57	22.64	21.11	19.51	21.71	20.61
6	22.10	24.54	23.32	21.67	25.14	23.41	21.89	24.84	23.37
Total	20.77	22.66	21.72	20.62	23.89	22.26	20.70	23.38	21.99

Variable Seeing Deficiencies

5	4.68	4.86	4.77	3.83	4.89	4.36	4.26	4.88	4.57
Pu 6	5.44	5.68	5.56	4.87	3.57	4.22	5.16	4.63	4.90
Total	5.06	5.27	5.17	4.35	4.23	4.29	4.71	4.76	4.74
5	3.69	4.05	3.87	4.79	4.39	4.59	4.24	4.22	4.23
Pa 6	5.42	5.53	5.48	4.50	4.60	4.55	4.96	5.07	5.02
Total	4.56	4.79	4.68	4.65	4.50	4.57	4.60	4.65	4.63
5	4.19	4.46	4.33	4.31	4.64	4.48	4.25	4.55	4.40
6	5.43	5.61	5.52	4.69	4.09	4.39	5.06	4.85	4.96
Total	4.81	5.04	4.93	4.50	4.37	4.44	4.66	4.70	4.68

Table 6E

Adjusted Means

Subgroup 3

Variable Vocabulary

	Male			Female			Total		
Pro Gr	E	C	Total	E	C	Total	E	C	Total
Pu 5	9.47	8.52	9.00	8.77	9.77	9.27	9.85	9.15	9.02
Pu 6	10.87	9.53	10.20	11.05	12.90	11.98	10.96	11.22	11.09
Pu Total	10.17	9.03	9.60	9.91	11.35	10.63	9.91	10.19	10.06
Pa 5	7.94	8.53	8.24	7.68	9.84	8.76	7.81	9.19	8.50
Pa 6	9.01	8.17	8.59	11.41	10.02	10.72	10.21	9.10	9.66
Pa Total	8.48	8.35	8.42	9.55	9.93	9.74	9.01	9.15	9.08
Total 5	8.71	8.53	8.62	8.23	9.81	9.02	8.47	9.27	8.87
Total 6	9.94	8.85	9.40	11.23	11.46	11.35	10.59	10.16	10.38
Total Total	9.33	8.69	9.01	9.73	10.64	10.19	9.53	9.72	9.63

APPENDIX D

Table 18C

Subgroup 1

Dependent Variable Fluency Post

SV	DF	SS	MS	F	P	%variance (Eta)	
T	1	122.78	122.78	.17	.68	0.06	Beta .888
S	1	4767.71	4767.71	6.63	.01	1.76	
G	1	223.42	223.42	.31	.58	0.08	
C	1	1.40	1.40	----	.96	----	
T X S	1	470.43	470.43	.65	.58	0.17	
T X G	1	15.92	15.92	.02	.88	0.01	
T X C	1	3799.73	3799.73	5.29	.02	1.40	
S X G	1	320.57	320.57	.45	.51	0.12	
S X C	1	5225.27	5225.27	7.27	.01	1.92	
G X C	1	140.93	140.93	.20	.66	0.05	
T X S X G	1	82.69	82.69	.12	.73	0.03	
T X S X C	1	45.62	45.62	.06	.80	0.02	
T X G X C	1	1336.23	1336.23	1.86	.17	0.49	
S X G X C	1	530.02	530.01	.74	.60	0.20	
T X S X G X C	1	185.59	185.59	.26	.62	0.07	
Error	234	168184.9	718.74				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 19C

Subgroup 1

Dependent Variable Flexibility
Post

SV	DF	SS	MS	F	P	Variance (Eta)	
T	1	296.61	296.61	3.26	.07	1.03	Beta .490
S	1	110.59	110.59	1.22	.27	0.38	
G	1	.61	.61	.01	.93	----	
C	1	758.66	758.66	8.35	----	2.62	
T X S	1	78.89	78.89	.87	.65	0.27	
T X G	1	1.00	1.00	.01	.91	----	
T X C	1	1716.58	1716.58	18.89	----	5.93	
S X G	1	249.59	249.59	2.75	.09	0.86	
S X C	1	188.86	188.86	2.08	.15	0.65	
G X C	1	27.43	27.43	.30	.59	0.09	
T X S X G	1	385.91	385.91	4.25	.04	1.33	
T X S X C	1	1452.50	1452.50	15.98	----	5.02	
T X G X C	1	398.76	398.76	4.39	.03	1.38	
S X G X C	1	123.56	123.56	1.36	.24	0.43	
T X S X G X C	1	.01	.01	----	.99	----	
Error	234	21269.10	90.89				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 20C

Subgroup 1

Dependent Variable Originality
Post

SV	DF	SS	MS	F	P	%Variance (Eta)	
T	1	1509.75	1509.75	5.10	.02	1.80	Beta .211
S	1	1457.39	1457.39	4.93	.03	1.74	
G	1	1675.79	1675.79	5.66	.02	2.00	
C	1	6047.99	6047.99	20.44	----	7.22	
T X S	1	289.40	289.40	.98	.68	0.35	
T X G	1	1340.95	1340.95	4.53	.03	1.60	
T X C	1	1916.84	1916.84	6.48	.01	2.29	
S X G	1	40.38	40.38	.14	.71	0.05	
S X C	1	190.96	190.96	.65	.57	0.23	
G X C	1	441.29	441.29	1.49	.22	0.53	
T X S X G	1	170.35	170.35	.58	.54	0.20	
T X S X C	1	3534.48	3534.48	11.95	----	4.22	
T X G X C	1	352.34	352.34	1.19	.28	0.42	
S X G X C	1	136.06	136.06	.46	.51	0.16	
T X S X G X C	1	29.52	29.52	.10	.75	0.04	
Error	234	69237.40	295.89				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 21C

Subgroup 1

Dependent Variable Vocabulary Post

SV	DF	SS	MS	F	P	%variance (Eta)	
T	1	966.35	966.35	35.42	----	5.99	Beta .152
S	1	.33	.33	.01	.91	----	
G	1	3.25	3.25	.12	.73	0.02	
C	1	9.21	9.21	.34	.57	0.06	
T X S	1	4.03	4.03	.15	.70	0.02	
T X G	1	12.29	12.29	.45	.51	0.08	
T X C	1	39.77	39.77	1.46	.23	0.25	
S X G	1	1.14	1.14	.04	.83	0.01	
S X C	1	.08	.08	----	.96	----	
G X C	1	1.88	1.88	.07	.79	0.01	
T X S X G	1	.03	.03	----	.97	----	
T X S X C	1	-----	-----	----	.99	----	
T X G X C	1	6.53	6.53	.24	.63	0.04	
S X G X C	1	-----	-----	----	.99	----	
T X S X G X C	1	1.97	1.97	.07	.78	0.01	
Error	234	1L130.66	27.28				

Definitions: T = treatment G = grade

S = sex C = district (public - parochial)

Table 22C

Subgroup 2

Dependent Variable Alternate Uses
Post

SV	DF	SS	MS	F	P	%variance (Eta)	
T	1	5.90	5.90	.18	.67	0.03	Beta .735
S	1	.55	.55	.02	.89	----	
G	1	119.37	119.37	3.68	.05	0.59	
T X S	1	3.58	3.58	.11	.74	0.02	
T X G	1	85.79	85.79	2.64	.10	0.42	
S X G	1	11.62	11.62	.36	.56	0.06	
T X S X G	1	.06	.06	----	.96	----	
Error	399	12942.70	32.44				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 23C

Subgroup 2

Dependent Variable H Score Post

SV	DF	SS	MS	F	P	%variance (Eta)	
T	1	.68	.68	.17	.68	0.04	Beta .311
S	1	.38	.38	.10	.76	0.02	
G	1	2.88	2.88	.72	.60	0.16	
T X S	1	.63	.63	.16	.69	0.04	
T X G	1	4.98	4.98	1.25	.26	0.28	
S X G	1	1.37	1.37	.34	.56	0.08	
T X S X G	1	.49	.49	.12	.73	0.03	
Error	399	1587.00	3.98				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 24C

Subgroup 2

Dependent Variable H & L Score Post

SV	Df	SS	MS	F	P	%variance (Eta)	
T	1	164.87	164.87	6.51	.01	1.54	Beta .088
S	1	13.25	13.25	.52	.52	0.12	
G	1	275.91	275.91	10.89	----	2.59	
T X S	1	7.21	7.21	.28	.60	0.07	
T X G	1	222.18	222.18	8.77	----	2.09	
S X G	1	3.54	3.54	.14	.71	0.03	
T X S X G	1	.56	.56	.02	.88	0.01	
Error	399	10104.16	25.32				

Definitions: T = treatment G = grade

S = sex C = (public-parochial)

Table 25C

Subgroup 2

Dependent Variable Math Aptitude
Post

SV	DF	SS	MS	F	P	% variance (Eta)	
T	1	5.33	5.33	.32	.58	0.06	Beta .230
S	1	197.79	197.79	11.95	---	2.35	
G	1	428.55	428.55	25.89	---	5.10	
T X S	1	82.83	82.83	5.00	.02	0.10	
T X G	1	.58	.58	.03	.85	0.01	
S X G	1	146.46	146.46	8.85	---	1.74	
T X S X G	1	146.74	146.74	8.86	---	1.75	
Error	399	6604.49	16.55				

Definitions: T = treatments G = grade

S = sex C = district (public-parochial)

Table 26C

Subgroup 2

Dependent Variable D Score Post

SV	DF	SS	MS	F	P	%variance (Eta)	
T	1	25.77	25.77	1.74	.18	0.42	Beta .021
S	1	1.22	1.22	.08	.77	0.02	
G	1	39.10	39.20	2.64	.10	0.63	
T X S	1	44.47	44.47	3.00	.08	0.72	
T X G	1	1.37	1.37	.09	.76	0.02	
S X G	1	.56	.56	.04	.84	0.01	
T X S X G	1	3.38	3.38	.23	.64	0.05	
Error	399	5907.59	14.81				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 27C

Subgroup 2

Dependent Variable M Score Post

SV	DF	SS	MS	F	P	%variance (Eta)		
T	1	609.73	609.73	10.93	---	2.43	Beta	.617
S	1	.16	.16	-----	.96	----		
G	1	-------	-------	-----	.99	----		
T X S	1	78.18	78.18	1.40	.24	0.31		
T X G	1	60.74	60.74	1.09	.30	0.24		
S X G	1	170.27	170.27	3.05	.08	0.68		
T X S X G	1	36.31	36.31	.65	.57	0.14		
Error	399	22265.44	55.80					

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 28C

Subgroup 3

Dependent Variable Object Naming Post

SV	DF	SS	MS	F	P	%variance (Eta)
T	1	38.47	38.47	3.17	.07	0.61
S	1	19.57	19.57	1.61	.20	0.31
G	1	85.18	85.18	7.02	.01	1.35
C	1	21.43	21.43	1.77	.18	0.34
T X S	1	3.00	3.00	.25	.63	0.05
T X G	1	.47	.47	.04	.84	0.01
T X C	1	30.73	30.73	2.53	.11	0.49
S X G	1	.10	.10	.01	.93	----
S X C	1	3.45	3.45	.28	.60	0.05
G X C	1	11.06	11.06	.91	.66	0.18
T X S X G	1	.89	.89	.07	.78	0.01
T X S X C	1	49.21	49.21	4.06	.04	0.78
T X G X C	1	.81	.81	.07	.79	0.01
S X G X C	1	18.34	18.34	1.51	.22	0.29
T X S X G X C	1	5.20	5.20	.43	.52	0.08
Error	440	5339.44	12.14			

Beta .282

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 29C

Subgroup 3

Dependent Variable Seeing Problems Post

SV	DF	SS	MS	F	P	%variance (Eta)	
T	1	314.05	314.05	10.55	----	1.52	Beta .402
S	1	14.48	14.48	.49	.51	0.07	
G	1	357.19	357.19	12.00	----	1.73	
C	1	653.51	653.51	21.96	----	3.17	
T X S	1	23.66	23.66	.80	.62	0.11	
T X G	1	6.95	6.95	.23	.63	0.03	
T X C	1	337.69	337.69	11.35	----	1.64	
S X G	1	10.24	10.24	.34	.56	0.05	
S X C	1	.87	.87	.03	.86	----	
G X C	1	2.90	2.90	.10	.75	0.01	
T X S X G	1	1.51	1.51	.05	.82	0.01	
T X S X C	1	306.75	306.75	10.31	----	1.49	
T X G X C	1	70.85	70.85	2.38	.12	0.34	
S X G X C	1	19.19	19.19	.64	.57	0.09	
T X S X G X C	1	40.84	40.84	1.37	.24	0.20	
Error	440	13092.57	29.76				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 30C

Subgroup 3

Dependent Variable Seeing Deficiencies Post

SV	DF	SS	MS	F	P	%variance (Eta)
T	1	.13	.13	.02	.89	----
S	1	11.92	11.92	1.69	.19	0.31
G	1	14.41	14.41	2.05	.15	0.37
C	1	.59	.59	.08	.77	0.02
T X S	1	1.46	1.46	.21	.65	0.04
T X G	1	3.06	3.06	.43	.52	0.08
T X C	1	------	------	-----	.99	----
S X G	1	20.56	20.56	2.92	.08	0.53
S X C	1	7.08	7.08	1.01	.32	0.18
G X C	1	2.43	2.43	.34	.56	0.06
T X S X G	1	1.98	1.98	.28	.60	0.05
T X S X C	1	.96	.96	.14	.71	0.02
T X G X C	1	.03	.03	-----	.94	----
S X G X C	1	1.71	1.71	.24	.63	0.04
T X S X G X C	1	7.84	7.84	1.11	.29	0.20
Error	440	3097.77	7.04			

Beta .527

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

Table 31C

Subgroup 3

Dependent Variable Vocabulary Post

SV	DF	SS	MS	F	P	%variance (Eta)	
T	1	.85	.85	.04	.84	0.01	Beta .532
S	1	67.53	67.53	2.92	.08	0.49	
G	1	114.22	114.22	4.94	.03	0.83	
C	1	51.55	51.55	2.23	.13	0.37	
T X S	1	28.88	28.88	1.25	.26	0.21	
T X G	1	15.39	15.39	.67	.58	0.11	
T X C	1	-----	-----	----	.99	----	
S X G	1	29.33	29.33	1.27	.26	0.21	
S X C	1	1.13	1.13	.05	.82	0.01	
G X C	1	7.80	7.80	.34	.57	0.06	
T X S X G	1	.61	.61	.03	.87	----	
T X S X C	1	1.67	1.67	.07	.78	0.01	
T X G X C	1	-----	-----	----	.99	----	
S X G X C	1	.03	.03	----	.97	----	
T X S X G X C	1	8.62	8.62	.37	.55	0.06	
Error	440	10173.11	23.12				

Definitions: T = treatment G = grade

S = sex C = district (public-parochial)

APPENDIX E

QUESTIONNAIRE EVALUATION

REPORT

CONCLUSIONS AND RECOMMENDATIONS

Special Education For The Gifted Through Television is a project conceived and developed as an educational procedure for demonstrating to school people a mehtod for helping them facilitate curriculum planning for gifted students. Its purposes were primarily directed toward using ETV as a vehicle helping teachers extend and enrich the knowledge input of these students, and to provoke in them new kinds of thinking skills. The project was designed to act as a catalyst, to fill a void, and to demonstrate techniques that could effect the learning process of these students as they performed in and out of school. It was assumed that the programs in the project would stimulate local concern which would result in initiating action for instructional and administrative changes on behalf of the gifted.

Schools were urged to provide school time for program orientation sessions and to follow through in an action and inter-action sequence in the classrooms after each program was telecast. No attempt was made by the project staff to move into the local school and direct or determine kinds of local action. The staff was always available for consultation, explanation and for expediting materials and other services associated with the needs of the participating schools. Schools were encouraged to make local accommodations for scheduling school time of the identified students and their teachers for enhancing the potential of the content of each ETV program.

The questionnaire is a forced-choice instrument. Some respondents in each group did not answer all the questions. This explains the deviations found in the total responses of each item in the tabulations. The data indicates there exists a keen interest in the gifted child by both teachers and administrators. It evidences very little attitudinal differences between them as determined by the Weiner Scale. There is evidence, however, of uncertainty in their attitude about how schools should provide for the needs of their gifted.

I. Concerning Teacher - Administrator Attitude Toward The Gifted

A. Conclusions

As determined by the Weiner Scale the mean on the distribution of scores of teachers and administrators was nearly identical; 33 for administrators and 32 for teachers. There was no significant difference between the groups relevant to the standard deviation. However, there is evidence of uncertainty concerning the school's responsibilities and methods. In a few cases this was revealed in a dichotomy of opinions. From the total responses tabulated certain conclusions can be made. These are noted.

1. A marked majority of respondents approved the idea of establishing special classes for the gifted.

2. A strong majority indicated agreement that gifted children would benefit from placement in a group composed of their intellectual peers sometime during the school day.

3. There was strong indication both groups felt there was a greater chance for overlooking the gifted in the classroom if he were active only in heterogeneous groups. However, they indicated a strong preference for placing the gifted child in a heterogeneous classroom for social reasons.

4. Most responses indicated an attitude that the gifted child does not demand more classtime than do other students.

5. There was strong agreement that an identification procedure should be based upon the use of many kinds of criterion.

6. There was marked evidence of strong feelings about the need to change the grading system for the gifted and for providing special services for them commensurate with that which is presently made available to the handicapped.

7. The respondents showed a marked preference for limiting the use of acceleration to the secondary school level, a response significantly different from the findings of research as indicated in the literature on the gifted.

8. A polar difference of opinion exists between the two groups concerning utilizing the gifted child's school time as an aid to the teacher to help the slow learner.

9. Nearly all respondents indicated there should be special teachers for the gifted and they should be selected on the basis of special qualifications.

B. Recommendations

Local school personnel may well have been alerted, through the ETV programs, concerning the need for reviewing their own attitudes about their gifted students. It may prove to be educationally significant for each individual gifted child if the school would take advantage of this positive, interested attitude of their staff members concerning the gifted. Since there appears to be both readiness and concern on the part of teachers for action, the following recommendations are suggested.

1. Administrators might take advantage of teacher interest and plan to expand the school's regular identification of the gifted program starting with grade 1.

2. It may be timely to identify the special, extraordinary talents and abilities of the most gifted children in the school and try to program special groups in accordance with their interests and abilities.

3. Involving the entire school staff in an inservice program designed to encourage and expand the teachers' interests in and desire for more knowledge about their gifted students seems in order.

4. The school's professional library might be enriched with basic current literature on the education of the gifted.

5. The selection of one staff member to assume a leadership role for organizing an action program to take advantage of the interest and concern of staff members may help to expedite local planning.

6. Planned experimentation in curriculum adaptations for the gifted involving as many staff members as are interested and willing to initiate changes could be encouraged.

II. Concerning Teacher - Administrator Attitude Toward Creativity

A. Conclusions

The Covington Scale responses revealed teachers and administrators are cognizant of the value of creative thinking skills and have a general understanding of these thinking processes. This should help to foster the implementation of these skills. However, the scale extrapolated attitudes concerning creativity, but did not determine to what extent these skills were being used within the classroom and the educational experiences of the gifted. Our conclusions are, therefore, based on attitudes about creativity, not its application.

1. Although teachers and administrators did not agree as to whether creativity was a new way to talk about basic intelligence, they did agree that the concept of creative thinking adds much to the understanding of childhood learning and should be a factor in planning most phases of work and study for the child.

2. Both groups agreed that emphasis on the development of creative thinking skills would not imply rejecting sound traditional concepts, procedures, rules, values, etc.

3. A majority agreed that developing creative thinking skills is a major responsibility of the teacher and should be included in his planning of class and individual instruction. However, there was some doubt whether these skills could be developed directly in all content subjects.

4. Both groups agreed it is feasible to develop special curriculum content and procedures which could result in the increased use of creative thought and in the improvement of the quality of this kind of divergent thimking.

5. More than half of each group felt the school could develop means for fostering creative thinking in every child in every classroom.

B. Recommendations

1. Schools can plan faculty discussion sessions on creativity and the development of creative thinking skills. Opportunities to observe the demonstration of classroom instructional techniques would enhance and clarify understandings.

2. A review of the literature which explains, illustrates and provides guidelines for classroom strategies which specifically encourage creative thinking may be in order. (See Torrance, Williams, Barnes, Osborn, Miels, Guilford and others)

3. Schools could expedite their needs by organizing and planning a specific scheduled program for all their faculty to observe and discuss the contents of the programs of the Process Series and Inservice Series in the "Special Programs For The Gifted Through Television" series.

4. Committees to write local instructional guidelines and materials for classroom use in each of the substantive content areas at various grade levels could be of great value to the staff in developing creative skills in all their students.

III. Concerning Student Reaction To The ETV Programs, January - April 1968

A. Conclusions

The results of the survey indicated a significant affirmative expression concerning individual improvement as a result of observing the ETV programs. Educational experiences such as reading more materials on different subjects, more purposeful reading, more independent study and improvement in problem solving abilities were noted as evidence. Thinking skills were also indicated as having been improved. From such responses the following general conclusions were drawn.

1. Students believed the ETV programs were effective in helping them improve their reading habits and skills.

2. Most students agreed that the ETV programs did much to encourage their practice of independent study and research processes.

3. The ETV programs helped them improve their techniques for developing self-expression and improved their ability to express opinions and ideas.

4. A large majority indicated they were better able to solve problems as a result of their learning from the programs.

5. Nearly all students felt they had significantly improved in their productive-divergent reasoning and thinking skills.

6. Most students felt wiewing ETV programs telecast during school hours was a worthwhile experience and indicated a desire to have continued opportunities in this kind of school activity.

B. Recommendations

1. Teachers and administrators could attempt to make local scheduling of ETV programs an accepted means for enriching the daily curriculum of the gifted.

2. More flexible curriculum accomodations of time and schedules would help sustain and strengthen the interest manifested by the students in viewing ETV programs.

3. All children in general, and gifted children in particular, would benefit from planned orientation time with teachers before viewing each ETV program, and an opportunity for reacting to and interacting with other after observing each program.

4. The ETV programs should be looked upon as a means for extending the gifted child's horizons of understandings.

5. The ETV programs should be encouraged as a means for the school to "open doors" to new kinds of knowledge and new ways of thinking and learning by gifted students to help stimulate their unique abilities and strengths.

IV. Concerning Administrative Procedures Used To Meet The Needs Of The Gifted In The Pilot Area Schools

A. Conclusions

The questionnaire assumed that local administrators would be the responsible persons for implementing identification procedures, making facilities and personnel available for implementing ETV programs within the school curriculum, and for planning the most feasible scheduling and follow-through activities for students and teachers. Project staff made suggestions and gave advice when called upon. Final decisions rested entirely with local authorities. As a result of the responses indicated on the questionnaire returns, the following conclusions about administrative procedures were made.

1. When the project started about half the administrators had already in operation some working procedure for identifying gifted students.

2. Most administrators indicated dissatisfaction with the conventional means used by schools for establishing curriculum provisions for the gifted.

3. Nearly all administrators tried to have some faculty members viewing the programs each week.

4. More than half the administrators allowed children, other than the identified gifted, to view the programs because of scheduling problems or because they did not prefer to have special grouping for the gifted.

5. A majority of administrators preferred allowing their teachers to decide whether they wished to view the programs or not, but half of them indicated they did encourage informal discussions after each Inservice Program presentation.

B. Recommendations

1. Innovations in school organizational patterns are more likely to succeed if the administrator is able to involve the majority of their staff in the processes of change. Therefore, ETV programs as a new aid for teachers working with their gifted students can be more effective vehicles if the concerned administrator would initiate plans for positive and specific involvement of the staff rather than rely exclusively on permissive atmosphere and voluntary efforts.

2. Since most administrators indicated their dissatisfaction with traditional methods of curriculum planning for the gifted it might help bring about a change to introduce inservice activities for the study, planning and implementing of more effective methods as exemplified in the wealth of available literature on successful kinds of programing for the gifted.

3. The responses indicated most administrators were concerned about existing identification programs. It would be helpful for each gifted child and for the whole school if the administrator could bring about the establishment of a consistent, workable plan that encompasses all the grades and the most advanced concepts of the nature of giftedness and the many ways to identify it.

4. Encourage and permit flexibility of time and schedule for teachers and gifted students to allow for greater independent use of facilities and manpower within the school offerings.

5. The establishment of a sound public relations program to assure an informed, understanding parent community will assist the administrator in bringing about enthusiastic participation of ETV program viewing by students and teachers.

V. Concerning Teacher Participation In And Reaction To The ETV Programs Telecast During January - April 1968

A. Conclusions

Project staff recongnized from the start that teacher involvement in project activities at the local school level would be a significant factor in determining the success of the undertaking. All communications were handled through the office of the school principal. Dissemination of information and materials had to depend upon the effectiveness of the communication channels in the school building or in the school district. Evidence in the responses indicated most teachers were not informed about pre-telecast workshops, available background materials, and the informative meetings and sessions devoted to explanation and use of identification materials. In face to face remarks teachers often indicated they were not getting materials on time even though mailings from the project office were early enough to facilitate this. Because

the project did not assume any authoritutive role in local school affairs, these delays and lack of an adequately informed teacher group created problems and provoked misunderstandings.

With all this, however, there was much cooperation and concern amongst most of the teachers. The questionnaire responses indicate a more positive than negative attitude and a sincere willingness and concern on the part of most teachers to help their gifted students. It is from this evidence primarily that the conclusions are drawn.

1. Most teachers accepted the ETV programs as effective vehicles to help them teach their gifted students even though they reported little help was made available at the school level through inservice work on the gifted.

2. Some inconsistencies were evident in the pattern of responses to questions. Notably these stand out as sources of concern.

   -a- Teachers felt there was a break-down in the interest level of the students as the programs progressed. This was not the response the students made to the same type of question.

   -b- Teachers felt there was a lack of follow-through by students in their patterns of study which was opposite to the responses made by the students to the same type of questions.

   -c- A majority of teachers indicated they sent students to view the telecasts without preliminary orientation or any follow-up activities planned for after viewing. At the same time a large number of responses indicated they did not see any changes or improvements in student work habits or behavior as a result of the ETV experiences. Apparently they saw no effective relationship between the two conditions.

   -d- Slightly more than half the teachers indicated they had learned some new instructional techniques and had expanded their reading of professional literature on the gifted yet a larger percentage emphasized the lack of improved study habits and work patterns of the gifted in their classroom. Again, their responses showed no effective relationship between the two conditions.

3. A great majority of teachers indicated a real desire to assume some role at the local level to help improve curriculum accommodations for their gifted students.

B. <u>Recommendations</u>

1. Teachers need more inservice training in helping them implement new techniques into classroom strategies.

2. Developing better lines of communication between the office and individual teacher will do much to deminish the insecurities created by a lack of information or misinformation on the part of the teacher. We recognize this as a difficult problem to resolve but its importance urges us to include it.

3. Teachers need help in establishing priorities on their time and energies during the school day. It would be helpful to them and their students if guidelines were available giving direction to the flexible use of time and scheduled activities.

4. Consideration of such well documented techniques as modular scheduling, team teaching, special grouping and the like may be worth local study by teachers and their administrators in order that special programs such as the ETV series can be adapted within the local school curriculum to the benefit of the individual student.

5. Increasing the opportunities for experiencing independent study and research activities requiring individualized work may provide effective training to help the individual gifted child move into such specialized activities as the ETV program without the usual supervision and survailance of teachers.

6. Allow teachers greater flexibility in the use and scheduling of the library and other resource facilities in school and the community.

7. Encouragement and reward for teacher effort through evidences of strong administrative support will do much to encourage individualizing and facilitating special programs for the gifted such as the ETV program.