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A PROGRAM TO DEVELOP AESTHETIC PERCEPTION
IN THE EARLY ADOLESCENT

Georgia McLellan

A Thesis
in
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of
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ABSTRACT

A PROGRAM TO DEVELOP AESTHETIC PERCEPTION IN THE EARLY ADOLESCENT

GEORGIA McLELLAN

A program designed for perceptual development of young adolescents in junior high schools has been implemented and tested against aesthetic criteria to determine if aesthetic perception shows enough promise to justify use of the program by other art educators at this grade level.

One hundred and five grade seven students were subjects of this research. The city school they attend draws from three different feeder schools and represents a diversity of cultural and socio-economic backgrounds. The chronological ages of the subjects ranged from eleven to fourteen, mental ages from eight to sixteen and stanines from three to nine. The testing and treatment environment was the classroom.

No firm conclusions may be drawn from the statistical results of the tests, indicating that mental, social and environmental factors may have affected the outcome. Student interest and participation was high and most have indicated a desire to continue studying art at the next level of instruction.

RESUME

UN PROGRAMME POUR LE DEVELOPPEMENT DE LA PERCEPTION ESTHETIQUE CHEZ L'ADOLESCENT

GEORGIA McLELLAN

Un programme destiné à développer la perception chez les adolescents dans les écoles secondaires de premier cycle a été appliqué et vérifié d'après des critères esthétiques en vue de déterminer si la perception esthétique est suffisamment prometteuse pour justifier l'utilisation du programme par d'autres éducateurs d'art à ce niveau d'enseignement.

Cent cinq élèves de classe septième furent l'objet de la recherche. L'école municipale où ils travaillent reçoit des élèves provenant de trois écoles différentes et ainsi elle représente un arrière-plan varié au point de vue culturel et socio-économique. L'âge chronologique de ces élèves varie de onze à quatorze, leur âge mental de huit à seize, et leurs "stanines" de trois à neuf. La salle de classe formait l'ambiance dans laquelle eurent lieu les tests et traitements.

Aucune conclusion certaine ne peut être tirée des résultats statistiques du test, aux fins de montrer que des facteurs mentaux et sociaux ainsi que l'ambiance auraient pu affecter le résultat. Les élèves faisaient preuve d'un vif intérêt et d'un degré élevé de participation et la plupart d'entre eux manifestaient leur désir de continuer l'étude des arts au niveau subséquent plus élevé.

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G.N. McL.

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CHAPTER I

THE PROBLEM

Introduction to and background of the problem

In suggesting possible improvements to a college for aesthetic education similar to that established in Santa Cruz in the University of California, Frank Barron contends that although such an experiment is valid, the full scope of "aesthetic education" would be realized only if the implications of creativity for the learning process were embodied in educational techniques. Barron says:

The college devoted solely to aesthetic education may be a bit premature, but surely not much so. The time is coming when aesthetic education must reach down to the elementary and pre-school levels, through special training programs for teachers, and reach out from the schools as we know them now to a broader community school in which education will employ all its means to honor the artistic impulse in people in all walks of life.¹

To find out how much has been done previously in either Canada or the United States to foster aesthetic education, many hours of research reading was devoted to literature dealing with this subject. The fact emerged that although some effort has been extended in this direction at the graduate, college, senior high school and elementary levels, very little appears to have been directed to the junior high school level. This being the case, it seemed that a research project, designed to increase perceptual development, could be tested against aesthetic criteria for the

¹Frank Barron, Artists in the Making (New York: Seminar Press, 1972), p. 88.

early adolescent segment of society in attendance at junior high schools.

Area of Concern and Goals Related to the Problem

Despite increased teacher programming, most elementary education still depends upon two factors: (a) the education, ability and attitude of the classroom teacher and (b) the purposeful planning for art experience within the classroom. Many elementary school teachers are not prepared, either academically or emotionally, to be art educators, thus many art programs are a series of isolated "activities" without continuity, coherence or purpose. Art activities should not be isolated examples of "busy work" but a continuing process or artistic growth through exploration and involvement. If elementary art education may have been at the most disorganized or at the least inadequate, it would appear that the first year of high school would be the logical time to initiate a serious art learning process.

In addition, few students will continue to study art at the next learning level when it becomes an optional course, and fewer still will focus their energies towards the world of fine arts. However, each child will become an adult member of society conditioned by the aesthetic environment of everyday life.

It is the function of an art teacher at the early adolescent level to encourage the child to develop aesthetic perception that will enable him to contribute to the total society by an enhanced awareness of aesthetic values and by his individual standards of aesthetic taste.

Purpose of this Study

At this stage of development, early adolescents are eager to learn and enthusiastic to perform. They identify with their peers and enjoy group

activities but are not inhibited by fear of failure or by self-consciousness. High school presents a challenge to their newly acquired physical and mental abilities that they willingly accept. They are interested in being treated like young adults but still retain their respect for authority. They are willing to test their intellects and skills and enjoy activities which test individual initiative. Although critical awareness has begun to control their imaginative activity, they have not yet lost spontaneity in production. Because they want to acquire new skills and absorb new ideas and have sufficient maturity to retain and utilize these skills and ideas, they will accept disciplined, rigorous work and intellectual challenge to fit them to become a part of the larger world they are entering.²

The purpose of this study is to design an art program for early adolescents that will help them to improve their ability to see, to perceive, and to conceive the aesthetic in the order of things; to evaluate and participate in the formative aspects in the creation of the art experience; to develop attitudes and temperament to discriminate among the products of daily experience and to become aware of themselves as individuals, and as members of society so that each may establish personal aesthetic values and not rely upon current social values as a criteria.

Questions to be Developed

- Can young adolescents be taught to evaluate, judge, criticize and discriminate by implementation of a planned teaching program?
- Does a program designed to increase perception in the early

²Earl W. Linderman, Teaching Secondary School Art (Dubuque, Iowa: W.C. Brown Company, 1971), pp. 50-56.

adolescent actually improve aesthetic judgment and in what ways?

- Can such a program be tested to prove its worth?

Importance of the Study

Junior high school students comprise the largest percent of enrollment in art classes at the secondary school level since attendance is compulsory. After grade seven, students may elect the disciplines they wish to pursue. Many do not elect art and may drop out of school altogether. If aesthetic awareness is an important psychological and/or cultural factor in the development of the individual, it would appear that this period of early adolescence is the prime time to institute learning designed to improve aesthetic sensitivity. In defense of this, Charles and Margaret Gaitskell state:

Because many pupils terminate their art education before they attain full intellectual power, their artistic potentialities, which depend to no small extent upon intellectual endeavor, may never be realized either by their teachers or by themselves.³

and to further support the need for programmed art instruction at this stage of development, Keiler states:

In summary, we may note that although art has become an accepted, integrated part of elementary education, it is still an isolated appendage of secondary education.... On the face of it, it appears that elementary education has outdistanced secondary art education. One need only compare the impressive amount of literature pertaining to elementary art education with the meager collection available for the secondary schools.... This is a plea for equal efforts to be exerted in clarifying goals of secondary art education to high school administrators and educators....⁴

³ Charles and Margaret Gaitskell, Art Education During Adolescence (Toronto: Ryerson Press, 1954), p. 5.

⁴ Manfred L. Keiler, The Art in Teaching Art (Lincoln, Nebraska: University of Nebraska Press, 1961), p. 70.

Definitions of Terms Used in this Study

"early adolescence" refers to young persons between twelve and fourteen years of age.

"junior high school level" means grade seven and eight in the school system in which this research was undertaken.

Delineation of the Research Problems

Subjects were not assigned to groups at random but were preassembled by school policy. These groups, that were as similar as availability permitted, were given pretests. Pretest means and standard deviations were compared for similarity for each pair of treatment groups and for the control group. The quasi-experimental research used here for non-randomized control-group pretest-posttest design had the practical advantages that it dealt with intact classes and did not disrupt the school program. Since a wide variety of classes from several settings were used, it was possible to attain a high degree of external validity, thus the reactive effects of experimental procedures did not hamper generalization to any marked degree. Conducting this authorized experiment without the subjects being aware of it, other than as a regular art class procedure, was made easier than if the subjects had been assigned at random to treatment groups.

Outline of the Six-Week Teaching Program

The program is based upon the art elements of light and color, line, space, texture and composition, each of which is used as a basic concept for teaching units. Continuity is established by activities designed to emphasize the elements without isolating any one of them. Activities are preceded by the introduction of principles, either by

observation of the immediate environment or by teacher demonstration, followed by exploration of the possibilities for application, and concluded by comparison of artistic standards utilizing the principles. Activities are exploratory both by individuals and by groups, both inside and outside the classroom. References through slides, prints, films and paintings to both good or poor usage of the elements are researched, viewed and discussed to reinforce perception in the experience of visual art. Within the framework of the basic principles, students are encouraged to perceive, conceive, create, construct and construe in terms of visual order.

This program was implemented for a period of six weeks for each of six groups composed of fifteen to twenty grade seven students, ranging in age from twelve to fourteen years, arbitrarily chosen by school policy for Art Exploration classes of seven weeks duration. There were two such classes each day for forty five minutes per class. The art teacher is the author of the program and of the research study.

Delimitation and Scope of the Study

By restriction of treatment and testing to one grade level, the experiment has been sufficiently delimited to permit exhaustive treatment, but sufficiently significant to warrant further investigation at the grade eight level, the second stage of young adolescents who are categorized as junior high school students.

Although the field of this study is in only one high school, the number of students attending junior high schools is very large and their numbers significant in the over-all school enrollment picture. A program successful in improving the aesthetic sensitivity of early adolescents in one school should be, in principle and in practise, applicable to any

secondary school within a comparable educational framework.⁵

Hypothesis

The program later detailed in this research study, using aesthetic criteria as a tool for comparison, will improve aesthetic perception at the junior high school level of early adolescence, as shown by Meier Art Tests I Art Judgment.

Null Hypothesis

The program later detailed in this research study, using aesthetic criteria as a tool for comparison, will not improve aesthetic perception at the junior high school level of early adolescence, as shown by Meier Art Tests I Art Judgment.

⁵ Stephen Isaac and William B. Michael, Handbook in Research and Evaluation (San Diego, California: Robert R. Knapp 1971), 31-35.

CHAPTER II

RELATED LITERATURE

Aesthetic Education in the Social Context

Vincent Lanier argues that art education should contribute an understanding of human problems current enough to be social issues and that the student must learn "to perceive social, political and economic contradictions, and to take action against the oppressive elements of reality." To do this, he maintains, the school must teach art properly to "help the young explore both the nature and range of their own visual experiences, an undertaking of no mean dimensions if we wish to promote a cultured as well as self-directing citizenry." He feels that art must not be taught as if the model of the student is the artist, the historian or the critic, but to use as the only proper model the aesthician since it is he who "tries to clarify the processes of aesthetic response." Lanier feels that this is not what is practised today under the name of aesthetic education which places priority upon studio work. He feels that the art education of the future should resemble that envisaged originally by Broudy, Munro and Ralph Smith, and later broadened by Barkan, Ecker, Chapman, Eisner, Madedja, and others, with Barkan's inter-disciplinary Guidelines as a model.⁶

Halsall supports Lanier's argument when he writes in his comparison

⁶Vincent Lanier, "A Plague on All Your Houses." Art Education 27 (March 1974): 12-15.

of aesthetic educational theories in the American and German societies:

Art educators should consider aesthetics and artistic practice as an inseparable part of social consciousness and intellectual activity. Art education should not promote the idea that creative freedom is the immunity of the artist from any kind of responsibility to other people and society in general.

Art education can be an effective force in a democratic society because of its ability to develop consciousness through a constant creative coming to terms with life in nature and society. An important part of art education should be making people aware of their relationship to society.

Readings in the area of art education seems to indicate a growing awareness of aesthetic education as not only a factor in the education of the individual but as a motivating power for social consciousness. The inference seems clear that art educators may play a prime role in recognizing this power and by so doing help the students to today, who will be the society of the future, restructure the environment so that aesthetic values will be fully recognized.

In assessing aesthetics as a context for general education in America, D. Arnstine suggests that "art studied in school that is disconnected from the natural and social events which are its chief source of meaning and significance is at best an esoteric amusement and at worst a bore."⁸

As further support for aesthetic education in the social context R.A. and C.M. Smith affirm:

⁷ Tom Halsall, "Towards a More Effective Art Education Curriculum; Comparing American Art Education Theory with Marxist/Lenist Art Education Theory in the German Democratic Republic." Art Education 27 (September 1974): p. 5.

⁸ Donald Arnstine, "The Aesthetic as a Context for General Education." in Aesthetics and Problems of Education. ed. Ralph A. Smith (Chicago: University of Illinois Press, 1971), p. 413.

Briefly, if it can be judged worthwhile that persons be made cognizant of the perceptual richness and peculiarities of things, then yet another function may be posited for the aesthetic: it "reveals" something, it suggests man's consciousness in his world. Something is experienced in the act of aesthetic beholding which is unattainable through normal goal-directed transactions with the environment.

Most recent writers of literature dealing with aesthetic function of art education appear to share the feeling that all education, but most specifically art education, must play an active role in promoting social consciousness toward improvement of the environment. One of the most impassioned of these is June King McFee, who not only predicts the need for increased perceptual ability and the need for action by art educators, but clearly and decisively suggests practical measures that may be adopted in today's schools.

In commenting on the changes taking place in today's fluid society and forecasting the role the art educator must take, McFee writes:

...Art as a social function needs much more developing than ever before. Without depreciating the need for art as a very personal, individualized and introspective part of human expression, we need to turn the coin over and also develop the capacity to use art as a humanizing force in improving the quality of life on this earth. This cannot be done on an individualized basis alone, but must be done through concern for others.

There are trends that we can identify that are clearly predictable. They are the results of overpopulation, decreased natural resources, and inflation on a worldwide basis...¹⁰

After defining what she sees as the methods aesthetics may use to cope with the problems she outlines, she points out that "A crucial educational problem is bringing art into a study of the environment is

⁹ R.A. and C.M. Smith, "Justifying Aesthetic Education." in Aesthetics and Problems of Education, ed. Ralph A. Smith (Chicago: University of Illinois Press, 1971), p. 133.

¹⁰ June King McFee, "New Directions in Art Education." Art Education 27:8 (November 1974): 11-15.

the lack of perceptual awareness that students bring to the problem solving task." She illustrates her point by citing studies done by Bruner, Maccoby and Modiano that indicate that American children focus more on the functional than on the perceptual aspect of things. Because of this, she feels the art teacher must play a key role in protecting the environment:

The art teacher may be the only one who is focusing on perceptual material. But unless we are aware of the ways children are taught by our culture to emphasize the conceptual at the expense of the perceptual, we may not be helping them respond to the visual. It may be the same visual underdevelopment that allows our people to ignore the environment until it gets so bad they are forced to look at it.

To show that cooperation between teen-agers, townspeople and city planners may be conducive to aesthetic improvement, she cites experiments conducted in Oregon. She summarizes, "They (teen-agers) are becoming more expert in relating the visual quality to the visual method and to the social use, and to see how these factors need to be considered in economic decisions."¹¹

It would thus appear that writers in the field of aesthetic education heartily endorse the theories and aims of the environmentalists and feel that art educators not only should appreciate the need for education toward a more aesthetic experience, in life and of life, but have the ability, opportunity, and a multiplicity of potential disciples at their command.

Mass Education in Aesthetic Awareness

That aesthetic education is not only desirable but should be available for everyone is not an idea peculiar to this century. In the eighteenth

¹¹ Ibid., p. 15.

century Friedrich Schiller's Letters in Aesthetic Education, according to Grossman, went beyond the educational concept of art to make art an integral part of his idea of mankind. Grossman contends that Schiller's belief that a harmonious society cannot be attained until the members of society have achieved aesthetic culture was not "an evolution reserved for the elite, even if at that particular moment only an elite approaches its ideals." In summarizing his article on Schiller's work, Grossman suggests that "Aesthetic education, as postulated by Schiller, might meet its greatest challenge in the affluent society of the mass media age..."¹²

Since Schiller's time a growing awareness of the need for aesthetic education from infancy to old age is attested to by a large body of literature on the subject. As articles, papers and texts dealing with this subject are numerous and available, there is no need to trace the history of the evolution of the aesthetic concept from the private domain of the individual artist or viewer, through its inception into public education as appreciation, production, and therapy to the present time when greater use of technology and scientific enquiry has resulted in the establishment of colleges devoted to aesthetic education alone. That the avowed intention of such colleges is to make, in the foreseeable future, of aesthetic education a function to honor the artistic impulse in people in all walks of life would indicate that this century might see a confirmation of Schiller's ideals and that serious art educators might agree with Merle Flannery's assessment of the purpose of education:

If one accepts Susan Langer's ideas, if art is the education of feeling, one can imagine that the masses--that is, each and every one of the very unique human beings who exist on earth--can feel,

¹²Walter Grossman, "Schiller's Aesthetic Education." in Aesthetics and Problems of Education. ed. Ralph A. Smith (Chicago: University of Illinois Press, 1971), p. 41.

do feel, and can come to know the vast intricacy of feeling which exists in them. Eliciting this knowledge of feeling is the true function of art teaching. By giving rise to a steadier and more creative conceptual mentality, art education, in the sense defined, can nourish all the rest of education.¹³

Aesthetic Considerations Influencing Program Construction

To set up a program that will be viable aesthetically and functionally for students at the junior high school level, the teacher must have clearly established concepts concerning aesthetic education, must have set up goals, both general and specific, that would further the aesthetic education of the students, must have flexibility to adjust the program to allow for contingencies of time, season, mood and events within the classroom structure, must have integrity toward the personal role of educator and empathy to the individuality of each student so that each is provided with the opportunity to enlarge his artistic perception, appreciation and judgment within the artistic dimension.

The teacher would need to analyse procedures prior to implementation, assess both process and product following implementation, and adjust goals for individual students, individual classes and the social structure of the school.

Kaelin defines education as "any planned or controlled production of changes in behavioral patterns of human individuals," and aesthetics as "any phrase of those activities involved in the creation and appreciation of works of art."¹⁴ and also as a discipline concerning itself

¹³Merle Plannery, "Art for the Masses." Art Education 25:5 (May 1972): 20.

¹⁴Eugene F. Kaelin, "The Existentialist Ground for Aesthetic Education." Studies in Art Education 8:1 (Autumn 1966): 3.

with artistic communication - with the description of creativity and appreciation of works of art."¹⁵

Arnstine says that " 'aesthetic education' very broadly indicates whatever conditions might increase sensitivity to, understanding of, appreciation of, and enjoyment of artistic features of the world, as well as aesthetic experience."¹⁶ and Villemain states that "comprehensive conception of education in the 'fine' arts incorporates an account of the role of the cognitive mediations that forward aesthetic processes and the continuities between predominantly aesthetic practisings and those predominantly cognitive."¹⁷

To relate these and similar interpretations of the meaning of aesthetic education advanced by other educators to the goals of the individual teacher for implementation in the classroom, the art teacher must be aware of and call upon the resources of art history, philosophy, art criticism and art psychology as well as be competent as an artist-teacher to put aesthetic education into practise, if the role of art educationalist is to be validated.

Since art history is basically the study of how man as an artist interpreted and expressed his culture in graphic form, the program should include units dealing with art history, appreciation of world masterpieces and studies of current art trends and products, as well as background information of the social conditions and environments responsible for the art of any period.

¹⁵Eugene F. Kaelin, "Aesthetic Education: A Role for Aesthetics Proper." Aesthetics and Problems of Education. ed. Ralph A. Smith (Chicago: University of Illinois Press, 1971), p. 149.

¹⁶Arnstine, p. 402.

¹⁷Francis T. Villemain, "Toward a Conception of Aesthetic Education." Studies in Art Education 8:1 (Autumn 1966): 30.

To embody concepts from the field of art criticism, the teacher must implement units in the curriculum which support the contention of Aiken that "Judicial criticism...seeks...to educate taste through a more rational means of objective analysis and the evaluation of the inherent values of the work of art which presumably other individuals have shared or may confirm." and that "The problem of the educator is thus not to instill in individuals a proper respect for the valuations of their betters; so much could be accomplished by a course in etiquette. What is required is relevant information concerning inherent values which may, with a modicum of good will and training, be incorporated among the recurrent intrinsic values of the individual."¹⁸

A comprehensive program in aesthetic education would train the student to adopt a critical attitude toward his own and others' creative efforts. Units would include learning a critical vocabulary, understanding the criteria and norms associated with any work of art with which he may be confronted, improving discriminatory abilities to increase perceptiveness to beauty in general and to the environment in particular. To encourage the student to do so, the program could employ the critical method of talk suggested by Sibley, by which the teacher can bring the children "to see what they have seen regarding aesthetic qualities and to link their experiences to the aesthetic usage of terms."¹⁹

¹⁸ Henry David Aiken, "A Pluralistic Analysis of Aesthetic Value." in Aesthetics, Contemporary Studies in Aesthetics. ed. Francis J. Coleman (New York: McGraw-Hill, 1968), p. 129.

¹⁹ Frank Sibley, "Aesthetic Concepts." in Philosophy Looks at the Arts; Contemporary Readings in Aesthetics. ed. J. Margolis (New York: Scribner, 1962), p. 84.

Obviously, to be valid, the program must incorporate the psychology of art education that allows students to "report fully their responses to any given work of art, to understand and respect the individual differences in response to what appears to be the same stimulus, to distinguish between psychological responses and value judgments and to justify their judgments, favorable or unfavorable toward the historical or contemporary work of art."²⁰

Kaelin adds further "the teacher-artist is concerned primarily with the universe of the student, of coming to an understanding of the student's expression, of guiding and offering clear alternatives to the means and manner of expressing himself."²¹

In developing curricula, Eisner identified three domains in the visual arts: productive - dealing with the formulation of objects having expressive and aesthetic qualities, critical - dealing with the perception of qualities constituting art, and historical - dealing with the evolution of art in human culture. Within each of these domains, concepts were identified and principles formulated in which the concept functioned. Each of these empirical generalizations about art were ordered in array according to their complexity so that for each concept a variety of principles were ordered serially and used as a sequence of learning activities.²² Eisner notes however:

Concepts, principles and objectives, are clearly insufficient to insure learning: somewhere there needs to be an array of activities in which the student is to engage and which are directly related to the concepts, principles and objectives that have been

²⁰ David W. Ecker, "Justifying Aesthetic Judgment." Art Education 20:5 (May 1967): 6.

²¹ Kaelin, "The Existentialist Ground for Aesthetic Education." p. 11.

²² Elliot W. Eisner, "Building a Curricula for Art Education," in Aesthetics and Problems of Education, ed. Ralph A. Smith (Chicago: University of Illinois Press), pp. 387-401.

formulated...Curriculum activities are not only related to the objectives but must be formulated in a way that will be of interest to the child and to his level of development."²³

To support Eisner's observation that the formulation of activities is done more through pooled experience and education than through consulting educational theories, Barkan, Chapman and Kern, under the sponsorship of CEMREL and the Ohio State University, planned a curriculum to develop aesthetic education that rests on the premise that "It is possible to conduct curriculum development for aesthetic education in a rational manner...that curriculum materials can be produced to reflect the multiplicity of values associated with the arts and with aesthetic experience ...and that curriculum materials in a pluralistic society should include options that teachers and students can exercise toward effective teaching and learning...."²⁴

° Ideally, to rationally plan an individual aesthetic program for artistic involvement at any grade level, units should be designed in logical, sequential order to incorporate the three aforementioned domains recurrently, so that each type of goal is represented by at least one unit in any given series of units. A group of units should be so constructed that collectively they incorporate diverse styles of artistic development, represent various points of view about aesthetic qualities in objects and events, and allow for student creativity.

To insure flexibility, units should be designed toward concise individual and class goals, should function as a core unit around which smaller units might develop, and should be designed for typical groups with varying degrees of ability. They should involve aesthetic response

²³Ibid., p. 393.

²⁴Manuel Barkan, Laura H. Chapman and Evan J. Kern, Guidelines (St. Anne, Missouri: CEMREL Inc., 1970), pp.i-xi.

not only to the visual arts but to other arts and to the environment. Units should also provide for remedial practice where needed and for growth opportunities where indicated. Above all, the program should be evaluated and re-evaluated to prevent it becoming a straight jacket into which successive classes may be forced to fit. No program in aesthetic education is so ideal that it should be expected to suit successive classes anymore than it can be made to fit another teacher's needs without some tailoring. Hence, program planning is an on-going process. The program used in this research study has proven flexible enough to be adjusted to each successive week throughout the six-week period.

If a program is intrinsically sound, based on valid concepts; principles and goals and is strengthened by commonsense and versatility, removing or changing a unit to suit the individual class, teacher, or school will not seriously affect the total structure. As Eisner said, "Programs systematically organized and sensitively taught might provide conclusions that would illuminate what can be achieved in the visual arts through the aegis of the school."²⁵

Problems Inherent in Conducting Tests for Aesthetic Awareness

To reduce jeopardization of external validity for both population and treatment, Snow suggests that thorough descriptive analysis should be made. In addition, he suggests that the investigator should prefer experiments that refer to larger domains of future behavior. To achieve further representativeness, Snow feels that educational research should take place

²⁵ Elliot W. Eisner, "Research on Teaching the Visual Arts," in Second Handbook of Research on Teaching, ed. Robert M. W. Travers, (Chicago: Rand McNally College Publishing Company, 1973), p. 1208.

in the school, under normal classroom conditions where possible, and that the experiment might take place in two or more places fitting the foregoing description. Further aids to external validity would be, Snow adds, extraexperimental observation, student preparation, duration of treatment more closely approximating the natural situation, and quantitative case studies.

Obviously no one study can do all this, so he suggests that valid educational research would need generalizability that examined the range and distribution of the ecological and personal variables, estimating variances and covariances to gauge the relative importance of each in the domain of concern, and there would need to be conclusion oriented research designed with knowledge of the natural variations and covariations. Snow concludes:

This separation would allow each kind of study to be designed as powerfully as possible for its own purpose: one for representativeness and descriptive generality; one for systematic, incisive decisions about courses of action in further instructional design and theory construction.²⁶

Snow is concerned with designs for research on teaching. Eisner, on the other hand, is concerned with teaching the visual arts. He sees, as problems plaguing those involved in art educational research: general tensions between reliability and educational significance, which have hindered research in art education by requiring that experiments be of too short duration in order to provide control of variables and the quest for both objectivity and reliability which has resulted often in experiments which are educationally trivial; the tendency of researchers to skimp on

²⁶ Richard E. Snow, "Representative and Quasi-representative Designs for Research on Teaching." in Review of Educational Research 44:3 (Winter 1974) (Chicago: Rand McNally, 1974), p. 285.

the amount of descriptive material provided on the characteristics of the experimental treatment. Eisner indicates that researchers apparently believe that what is done to achieve results is of less importance than the results. Another problem plaguing research in art education, he indicates, is the change in the values of educators resulting in the tests being considered of little value unless current. Eisner notes:..."unless researchers can do the type of basic research on human behavior that is so fundamental in character as to be able to withstand altered educational values and changed people, the likelihood of securing conclusions on human behavior which will endure will probably be small."²⁷

Research into the social values of art students does not help art teachers as it is likely to be of more psychological than artistic import, Eisner feels. He notes:

...research on the social values of art students is an interesting area of investigation, but it has only marginal utility for improving the teaching of art. Two of the central goals of the field of art education are to develop the student's ability to experience the visual world aesthetically and to develop his ability to form visual images in some material that expresses his personal experience.²⁸

and to use these objectives as criteria will require the use of more suitable paradigms, such as those of anthropology and art criticism. As examples of testing and research which he feels were successful, Eisner cites experiments in aesthetic learning conducted by: Brent Wilson in 1962, Waymack and H. Hendrickson in 1932, James Dorter in 1966, Bernard Pyron in 1966, Beittel and Mattil in 1961, Elizabeth Dubin in 1944,

²⁷ Elliot W. Eisner, "Research on Teaching the Visual Arts," in Second Handbook on Research on Teaching, ed. Robert M.W. Travers (Chicago: Rand McNally College Publishing Company, 1973), pp. 1198-1199.

²⁸ Ibid., p.1200,

R.H. Salome in 1965, R. Murray Thomas in 1951, Jonathon Goodson in 1968 and Robert Clements in 1964. From these studies, Eisher concludes that in the field of art education, we need descriptive studies of practice at both elementary and high school levels; we need information on the types of teaching techniques and curriculum activities that facilitate the transfer of artistic learning and the effects of different kinds of motivation on the content and form of art work produced by students. Tests conducted for the above-mentioned researches included testing by presentation of works of art in print or slide form, drawing and copying, by evaluation of design reproductions and by student questions. It would appear, therefore, that a problem facing the researcher in aesthetic education is to insure that the tests used relate results to the intent of the research.²⁹

Even less optimistic about the results of empirical research than either Snow or Eisner, are MacDonald and Clark, who note:

The smallest viable research unit with useful explanatory power would seem to be what is often called a treatment and which consists at least of objectives, materials, media and methods, and all the isolatable subvariables within these areas. This does not lend itself to undue optimism if the Cronbach and Snow (1969) study is an accurate assessment of the present day situation. Cronbach and Snow focused on a large scale examination of the studies that involved various treatments and found that there was no consistent and systematic empirical evidence to validate the contention that predictable effects upon individual learning could be projected from present knowledge of treatment procedures...³⁰

Although their concern is an analysis of objectives and curricula for general education, the inference is clear that a major problem of

²⁹ Ibid., pp. 1200-1209

³⁰ James MacDonald and Dwight Clark, "Critical Value Questions and the Analysis of Objectives and Curricula," in Second Handbook of Research on Teaching, ed. Robert M.W. Travers (Chicago: Rand McNally College Publishing Company, 1973), p. 405.

testing and programming in any discipline is that of integration through value judgments rather than by the use of empirical data, the scope of the program, the sequence and results obtained, as these refer to the learner. It would seem that the primary concern in conducting tests for aesthetic awareness should be that of goals.

Prior to conducting tests for aesthetic awareness, the researcher would need to establish for himself: what the problem area is; what other tests have been conducted successfully in this area and how these are applicable to the researcher's own time and field of aesthetic awareness; what the goals of the research are; what results can be hypothesized for the tests; what is the best type of test to use--observational, statistical or a combination of both; what are the variables which might affect the test results; what basic assumptions govern interpretation of results; and what qualifications does the researcher have for maximum success in establishing, implementing and evaluating the test.

The researcher in aesthetic awareness has also the ethical problem of belief that the research he has undertaken will serve a useful purpose in the field of aesthetic education. According to Eisner, there are quite a number of philosophers, psychologists and educators who believe that empirical research has no place in the field of aesthetic education. He notes:

The field of art education...does not have a long heritage of empirical research. Empirical work in the field began to develop and take on a distinct character in the early 1950's...But to say that empirical research in art education has not had a long history is only part of the story. For years, indeed even today, there is a substantial number of individuals who claim that scientific inquiry has no proper place in the field...It will, in the eyes of some, take the mystery out of art and thereby rob it of its special charm and peculiar power.³¹

³¹Eisner, "Research on Teaching the Visual Arts." p. 1196.

...For those sophisticated to the methods and assumptions of science, objections are sometimes raised on epistemological grounds. Art, it is claimed, discloses a mode of reality which is fundamentally different from that disclosed by science. Art must be known through art. The argument holds, a fortiori, with respect to understanding growth in art and its teaching.³²

General conclusions, reached after intensive reading in literature dealing with the planning, implementation and testing of programs designed to improve aesthetic awareness, agree with Eisner's summation that the concerns are: The general problem of identifying descriptively the kinds of teaching practise used in teaching art; The problem of determining the extent to which transfer of artistic learning has occurred; The problem of establishing the validity of criterion measures used in educational research; The problem of assessing the effect of motivation on the content and form produced by the student; The problem of determining the extent to which systematic and sustained instruction improves the art student's ability to see and respond to visual form and the problem of establishing a critical clinical methodology which will stand the test of time.³³

³² Ibid., p. 1197.

³³ Ibid., pp. 1207-1209.

CHAPTER III

A PROGRAM DESIGNED TO DEVELOP AESTHETIC PERCEPTION

Unit to Demonstrate the Visual Elements of Light and Color

Purpose: To have the students learn by observation, exploration and comparison that color, like other elements of visual art, is not only an integral part of a picture but is also an essential part of human experience and of the environment; that knowledge of the relationship between light and color is necessary for a fuller understanding of the environment; that artists must develop this knowledge and apply it to their product so that the viewer's response is heightened; that advertisers, manufacturers and architects use this correlation of light and color to psychologically manipulate the senses to stimulate need, give satisfaction and establish identity; that the capacity to be aware of color is a factor in individual response to environmental conditions; that the increase of technological knowledge has widened the range of colors used today for both pleasure and profit; that one can derive pleasure from personal experimentation with color and learn to use it so that delight in creative activity is increased.³⁴

Introductory Discussion: Have the children look around the classroom, and discuss the wide variety of color present in the immediate environment. Show that most of the colors used are the result of the use of

³⁴Bureau of Secondary Education, Studio on Art; A Comprehensive Foundation Course (Albany: State Education Department, 1972), 25-35.

pigment in paint, textiles and other man-made articles. Compare the color on the darker side of the room with that in full light, in direct sunlight, and in artificial light. Turn off the lights or suggest that students shut their eyes. Discuss the absence of color which results. Turn to the outside environment. Compare the differences in color value noted on adjacent planes of the same object. Discuss possible reasons. Ask children to describe the color spectrum seen in a rainbow, in the arc of water from a garden hose or sprinkler or a fountain spraying in sunlight. Allow children to inspect and discuss refractions of light from a prism held to the light. Discuss the resulting color range.

Activities: Have each child select a primary color in tempera paint and by brushing it on white bond paper, white manilla, newsprint, white plastic, white cotton, white styrofoam, etc., discover how each material changes the value of the color they selected. Repeat the process using colored drawing and printing inks, vegetable dyes and commercial dyes to reinforce conclusions reached about effects of light, media, and materials on color value.

- By using a movie screen or large sheet of white poster board for a backdrop and geometric shapes sufficiently large to be clearly visible to all students, let each child experience the optical illusion of "negative-after image" effect. Encourage children to express reactions and discuss possible causes. Supply each child with envelopes containing a white bristol board rectangle to fit the envelope and eight one and one-half inch rectangles of colored plastic film in red, yellow, blue, violet, green, orange, black and white. Suggest the children use these to make similar and additional colors against the white cardboard or the window

glass. Discuss the findings and theorize on how value is affected by black and white or by addition of complementary colors.

- Supply each child of a three-person team with a one-inch paint brush, a primary color paint and with an eighteen by twelve inch sheet of manilla paper. Suggest that each student loads his brush with his primary color, squeezes the color upon his own and upon his teammates' paper in turn, then picks up his own paper with the three primary colors on it, and manipulates the colors by rotating the sheet to force the colors to run. Ask each child to study the images he has created, then to paint in solid areas of any or all of the primary colors to create a fantastic or realistic painting. Display and discuss results, allowing each artist to state his own intention and evaluation.

- Supply each student with a nine by twelve inch sheet of manilla, a container of one color of his choice, a paint brush, scissors, glue and a six by nine inch sheet of black construction paper. Suggest that each makes a color wash over the entire sheet. Before this dries, suggest that each child, using a full brush load of black paint, brush that amount over the wash beginning at the bottom and stopping when the paint brush has become dry. Repeat with white paint from the top of the wash. While the results are drying, ask them to look at their own work and decide what the tinting and shading suggests literally or emotionally. Suggest - they now cut out figures or shapes, limited to three, that will graphically illustrate what their tinted and shaded wash suggested. When they have completed the silhouettes, display and discuss the resulting works.

- Show slides such as Chagall's I and the Village.

Van Gogh's Sunflowers.

Derlain's London Bridge.

Monet's The River.

Klee's Park Near Lucerne.

Picasso's Harlequin.

Seurat's Sunday Afternoon on the
Island of the Grand Jette.

Discuss how each artist has used color to suggest his own feelings, to create a mood, and to influence the emotional response of the viewer.

- By using magazines, scissors and glue, have teams mount on twenty-four by thirty inch sheets of bristol board, illustrations they feel use color to influence a person's choice of clothing, home furnishings and homes, and those that use color to attract attention to an advertisement for recreation or pleasure. Display the results and ask each team to support its choice. Discuss color preferences and color connotations and how color in the environment affects emotional response.

- Suggest that each child make a drawing of a favorite meal. Suggest that they then paint or crayon the various foods with colors they feel to be quite inappropriate. Discuss change of reaction towards the food. Discuss color nomenclature arising from traditional attitudes or local customs. Consider how color is used in the theatre, television, advertising and the supermarket to manipulate the viewer's mental attitudes.

- Using a selection of colored construction paper slips twelve inches long and of varying widths, suggest the children might construct a three dimensional animal, human or abstract shape using glue to attach the strips together. Display and discuss the resulting creations. Students might discuss whether color influenced choice of figure or if color choice

was dependent upon pre-conception of figure. Children might test effect of light upon their constructions by moving them about from areas of light to dark or by directing a strong light upon them and discussing resulting values and shadows thus created.

- By working in teams of four or five, each child might take turns in painting an abstract shape in any color on a large sheet of white manilla. As the painting progresses, consideration about the effect of one color upon an adjacent color area, upon the balance of the painting, upon the composition as a whole might be voiced by units of each team. Upon completion, the paintings might be displayed, discussed and voted upon for the most successful color combination, composition and communication. Discussion might indicate a growing awareness of hue, value, intensity, warmth or coolness of color, and spatial implications created by color.

Unit to Demonstrate the Visual Element of Line

Purpose: To have the students learn by observation, exploration and comparison that line, like the other elements of visual art, is not only an integral part of a picture, but also of human experience and of the environment; that lines convey emotions; that lines derive meanings from observed reality; that lines are a form of communication and of identification; that although lines may be made by beginning with a dot or point and moving in any direction with the use of a great variety of tools and media, lines are also made by the demarcation between colors, values, shapes, volumes, mass or space; that lines may be visible or implied or exist in space and that lines may produce perceptual effects, deliberately or accidentally.

Introductory Discussion: Ask the students to define a line, to find lines in the classroom and outside the classroom and on their own persons. Discuss which of these lines are real, and which imaginary. Find examples of types of lines--long, short, thick, thin, fuzzy, sharp, hard, soft, broken, continuous, erratic, rhythmic, vertical, horizontal, oblique, curved, etc., using examples to illustrate each example given. Ask the students to describe the horizon line, whether it differs from the country to the city, from the plains or the sea to the mountains. Discuss what lines can do: control, contain, create illusions, merge, cross, join, communicate and so forth.³⁵

Activities:

- Make lines using a variety of media, materials, tools, and types.
- Have each child, in turn, draw a line on the blackboard which the rest of the class will translate into quick drawings on folded manilla sheets with charcoal, pencil or pen and ink. Display the resulting drawings and discuss the implications and associations that lines have for humans.
- Experiment with strips of black construction paper cut into various widths to establish perspective and/or unity in spatial relationships.
- Suggest that each child think of an action to act out for the class to sketch. As each in turn begins to do so, signal "stop" so that each student poses for a brief period while the class sketches with charcoal on newsprint sheets. After all have had an opportunity to pose, and be sketched, discuss the drawings, paying special attention

³⁵ Ibid, pp. 45-50.

to the lines of the body in action.

- Supply children with large sheets of manilla folded into sixteen rectangles, india ink, and sponges. Suggest each child in turn call out an activity involving either humans or animals and each student will do one minute sketches of the suggested situations. Exchange for comparison and discussion. Discuss reduction of a sketch to its essential lines.

- Give students large sheets of newsprint on which to sketch a member of the family engaged in a routine activity. Display, discuss and evaluate when these are returned. Elicit information that line is indicative of mood.

- Suggest that children use magazines or newspapers to find illustrations of line in architecture, in household furnishings, and in vehicles. Select best examples by groups to mount and display. Discuss the function of line in the environment.

- Suggest that children use pencil and ruler to explore the possibilities of perceptual illusion. Show slides by Mondrain, Molinari, Tousignant, Nakamura and Town to reinforce discoveries. Discuss perceptual illusion in the environment, either accidental or deliberate.

- By using two-yard lengths of string for each child, crayons and india ink, children might explore the line possibilities of rubbing, crayon resist and etching.

Unit to Develop the Visual Element of Space

Purpose: To have the student learn by observation, exploration and comparison, that space is fundamental not only to art but to creation; that space exists in the real world of the visual and in the mind as well; that man's concept of space is constantly changing and enlarging as he

grows; that physical and visual space in the environment can affect each individual's attitudes and behavior; that man can control the use of space both positively and negatively for himself and for others and that both the psychological and aesthetic aspects of space can be exploited to create visual effects that condition the viewer either positively or negatively.

Introductory Discussion: Questions such as the following might lead the students into a discussion relating to concepts of spatial relationships. What do we mean by the word "space"? What is your own space right now? Is space limited? How? If you put a ball in a box, are you limiting space? In what way? Look at this picture. Is there space in it? What kind of space? Can you put your hand in it? Do you feel you could move in that space? Why? When you refer to "a head full of ideas." What are you saying about space? Think of a room. Describe it. What kind of space were you describing? Look outside. Do you feel that space to be limited? How? What has happened to the size of the cars you see over there? How do you explain that? How do we feel about the amount of space we want for ourselves? What creative people might be concerned about this? How do such people create space for other people? How do you think the artist created space around the objects or people in his painting? Let's discuss other ways of creating space in a picture.

Activities:

- Using slides or large prints, show the students a variety of art works which illustrate the artist's control of visual space by use of color, detail, linear perspective, size, location on the picture plane, and by changes in value and texture. Explore each painting to discover how space was created in each. Slides or prints similar to the following

might be used;

Peter Bruegel the Elder's Hunters in the Snow.

Jan Van Eyck's The Annunciation.

Rembrandt's The Good Samaritan.

Leonardo Da Vinci's The Last Supper.

Cezanne's Fruit Bowl, Glass and Apples.

Seurat's Bathers.

Picasso's Three Musicians.

Alex Coleville's Horse and Train.

David Milne's Haystack.

- Have groups of children create a group pose for the others to draw in a continuous line so that only mass is suggested. Make six copies of this drawing to experiment with the ways artists create the illusion of visual space.

- By drawing a still life of several identical objects such as boxes, blocks of wood, milk cartons, plastic ice cream containers, etc., have students investigate the spatial relationships involved. Discuss apparent change in size, location on the picture plane and negative and positive space which occur as they draw. Refer to the environment outside the classroom to discover that the same principles hold true relatively as in representation.

- By using scraps of wood, toothpicks, poster board cut into identical shapes, styrofoam packaging bits, spools, string, equal lengths of wire, pop can pull-tabs or any other similar "found" material, suggest the students try to create ten identical units with which to construct a stabile. Display completed works. Discuss balance, spacial effects and design achieved.

- By using slides of architecture of several periods, help children discover how architects using repeated design to create a balance between positive and negative space. By using newspapers and magazines, suggest students make a folder showing examples of their discoveries.

- By sending small teams of children to different inside and/or outside areas of the school, have them discover perspective by sketching views of hallways, stairwells, building corners, banks of windows, walls, fences, etc. Display and evaluate finished sketches.

Unit to Develop the Visual Element of Texture

Purpose: To discover by observation, investigation, discussion, and comparison that texture is both a visual and a tactile element of art; that every substance in the environment has texture; that the visual aspect of texture is created by light; that texture can be simulated in a two-dimensional presentation, that actual textured objects may become part of an art work; that media and materials used in painting may have textural characteristics and may be used in a variety of ways to create other textures; that "found" objects can, because of their texture, create art works and that experience of art can be both a tactile and a visually enjoyable experience.³⁶

Introductory Discussion: Suggest children run hands over desk tops. Ask for verbal descriptions of the surfaces. Determine why differences in description exist. By handling or touching various objects in the classroom, have students classify textures as hard, soft, spongy, rigid, rough or smooth. Have children describe texture of hair, face and clothing.

³⁶ Ibid, pp. 51-56.

Discuss visual and tactile impressions of texture. Theorize about differences in the two impressions of texture. Discuss grain weave, mesh and repetitive motif. By changing the plane of various objects, discover ~~apparent~~ changes in visual texture. Discuss possible reasons for this. By referring to the external environment, discover how direct sunlight appears to affect the texture of building roofs and walls.

Discussion should lead to formulation of theories concerning light and texture.

Activities:

- By assembling large quantities of "found" materials such as screening, wire mesh, textured aluminum sheets, wood, bark, tile, etc., have children discover textural differences by crayon rubbings on six inch squares of newsprint. Suggest that students experiment with light and heavy pressure, by overlaying of rubbings, by shifting the paper and by testing other available surfaces. By comparing the collected rubbings, have children discover characteristic textural patterns of familiar surfaces or materials.

- Using the collected rubbings, suggest that the students cut these to compose a collage expressing an abstract, symbolic, stylized or realistic art work glued to a nine by twelve inch sheet of posterboard. Mount and display. Discuss in terms of successful communication of idea.

- Supply white bond paper divided by folding into six smaller areas and suggest that students try to replicate the textures of some of the surfaces previously rubbed.

- Show slides or prints of the works of artists who have created realistic illusions of textured surfaces. Examples similar to the following might be used:

Raphael's School of Athens.

Jan Vermeer's The Letter.

Hans Holbein The Younger's Henry VIII.

Master of Flamel (Robert Campin) The Annunciation.

Albrecht Durer's Self Portrait.

Andrew Wyatt's Anna Kerner or Siri.

Lauren Harris' Dr. Salem Bland.

- Develop a relief sculpture using plaster of Paris poured into box tops and imprinted before the plaster hardens with a variety of small "found" objects. Have students discover the effect of light upon the surface by shifting positions of the casts. Bond all the units together to create a class sculpture. Discuss total composition in terms of positive and negative space, balance and design.

- Using pens and colored drawing inks, suggest students try to reproduce the texture of a single familiar object such as an old shoe, piece of bark, a gourd, etc. Discuss development of textural quality for realistic two-dimensional representation of a three-dimensional object.

- By making a series of prints developed from a composition using string, poster-board shapes, and textured surfaces, children might experiment with simulated texture and color.

- Students might create a story, fable or nursery rhyme collage using pieces of fabric, fur, cord and raffia to discover use of actual textures to create a work of art. Mount on heavy bristolboard and discuss displayed works.

- By decorating a clay slab-construction candle holder with cut-out design, incised lines, printed relief of "found" objects or relief

strips, students might explore possibilities of creating textures to enhance a functional object.

- By making a collection of illustrations of architecture, sculpture, furniture, ceramics and kitchen utensils, students might examine examples of the artist's use of texture in the environment. The collection might include prints, illustrations from newspapers and magazines and slides. Discuss the use of texture in functional and aesthetic contexts. Help students discover that texture in a work of art is both indigenous and manipulated; that architects such as Moishe Safdie, Le Corbusier and Frank Lloyd Wright represent architects who use natural texture in native materials to establish a union between a building and its location, between function and aesthetic pleasure.

Unit to Develop the Visual Element of Composition

Purpose: To help the student learn by observation, exploration and discussion; that composition is the foundation of all art whether representational, abstract or non-objective; that composition employs the elements previously discussed in class; that composition depends upon the principles of organization and design--unity, balance, rhythm, proportion and completeness; that composition reflects the individuality of each artist; that composition communicates with the viewer and that composition may involve the world of the mind as well as that of the senses.

Introductory Discussion: By displaying a prepared drawing, in black felt pen on heavy bristolboard, of a six by six inch square within a twelve by twelve inch square and connected by lines to it at each corner, discussion is directed to what it symbolizes, what it is intended to represent. Conclusions should be diverse enough to establish that one sees what one

wants to see, recognizes that which is familiar, and that each person perceives uniquely. Hand each student in turn two small sealed boxes containing an identical object familiar to each student such as an eraser, crayon, etc. Discuss conjectures as to the identify of the objects and lead the children to theorize that we usually rely on more than one sense to recognize the familiar out of context. Allow each child to handle and observe in detail a small organic sculpture, Eskimo carving or stone resembling an abstract sculpture of a recognizable form. Discussion should reinforce ideas previously explored through the drawings of the squares and the sealed boxes that most senses do not operate independently, that most persons' perceptivity is conditioned by experience, and that most of us prefer the familiar in art as well as in life. Further discussion might lead to the conclusion that more aesthetic experience might lead to increased perceptivity and to more enjoyment of the environment.

Activities:

- Set up a still life of three fruits or vegetables and suggest that each child might make five drawings, paintings or collages using (a) pencil or conte to draw the still life with lines, (b) sponges and india ink to suggest mass, (c) colored paints to suggest value (d) pen and india ink to suggest texture (e) collage to suggest space. Mount and display finished work. Discuss how successful the exploration was in terms of personal satisfaction, communication with other students and viewer pleasure.

- Show slides or prints of works of different painters, sculptors or architects which represent different treatments of identical themes.

Examples might be:

Light and Movement: Mark Tobey's Broadway.

Piet Mondrain's Broadway Boogie.

Joseph Stella's Battle of Light,
Coney Island

Rhythm:

Eero Sainen's T.W.A. Terminal, Kennedy
International Airport

Frank Lloyd Wright's The Solomon R.
Guggenheim Museum

Human Figure:

Henry Moore's Family Group.

Paul Klee's Family Walk.

Giacometti's Man Pointing.

Egyptian Panel of Hesi-Ra.

Greek Discus Thrower

Compare and discuss interpretations of the theme, use the elements of art such as mood, balance and unity. Have students discuss what some of the artist's reasons for his interpretation of the theme might be.

- Using wood blocks, wire, cardboard rolls or any other suitable material, the students may construct the human figure. During the construction encourage discussion of balance, composition and spatial relations.

- By constructing a posterboard cube painted with a design continuing around, over, and under the box, students may explore the need for balance, rhythm and color in packaging design. Display and discuss effectiveness of each creation.

- After discussing composition of a painting, students may decide upon a theme of mutual interest for a picture using any media, materials and style. A few students might pose in selected attitudes and positions for quick sketches by the others. Using newspapers, pupils might tear out shapes suggesting the contours of the models, which they may then glue on large sheets of black construction paper to serve as a guide for their final composition. Discuss dominance and subordination, balance, rhythm

and proportion as the work progresses. Display the finished art work and discuss success of the paintings in terms of viewer, artist and message, if any.

CHAPTER IV

METHODOLOGY

Subjects

Subjects were one hundred and five adolescent art students at the grade seven level, ranging in age from twelve to fourteen years. Both sexes were represented in an almost equal proportion of forty-eight girls and fifty-seven boys. Most have had some elementary art education, although the amount varies from school to school of the three feeder groups. By arbitrary school policy, all grade seven students must attend art exploration classes of seven weeks duration for a school year of thirty-five weeks. Class size varies from fifteen to twenty students. Each class has a daily forty-five minute art period for a period of seven weeks. There are two classes daily. The socio-economic levels range from deprived to reasonably affluent. Each level was represented in the seven groups involved in this research.

Subject Selection

Each group was composed of fifteen students. There were seven such groups. Six groups were selected from the Exploration Art Classes population. A control group of fifteen subjects was chosen from an Exploration class in another discipline, not yet having had any art experience at the grade seven level and not slated to receive it until the end of the total experimental period. Like the art classes, this group received the pre- and posttests, but received no interval treatment. The six art

classes received a six-week treatment between the pre- and posttests.

Tests

One hundred slides in black and white, were made from the Meier Art Test I, Art Judgment. Based on the research of Norman Charles Meier, Ph.D., this test is the first of a series of three tests of aesthetic sensitivity and requires that the subject make a choice between two versions of works of art from ancient to contemporary times. One version is original, while the other has been altered in respect to symmetry, balance, unity or rhythm. The viewer was told in what detail the two versions differed.

Extensive reading devoted to literature pertaining to tests of aesthetic perception was done. Conclusions reached regarding suitability for the objects of the research,³⁷ age levels and availability resulted in the selection of the Meier Art Test I Art Judgment.³⁸

Because of the delay in correspondence with the publishers of the tests, occasioned by the summer recess and a postal strike of some duration, it was impossible to secure sufficient copies of the test to administer it individually, as suggested by the author, hence slides were made. These were divided into two sets of fifty-odd and fifty-even numbered items. In administration of the test, a two-point score for each "right" answer was used as the balance of weighted questions of the original test was upset by the "odd-even" division into two sets of fifty items. Use of the Spearman-Brown formula indicated that correlation between the halves was

³⁷ A. Anastasi, Psychological Testing, 3rd. edn. (New York: Macmillan, 1968), pp. 366-367.

³⁸ Robert L. Thorndike & Elizabeth Hagen, Measurement and Evaluation in Psychology and Education, 3rd. edn. (New York: John Wiley & Sons, 1969), pp. 374-376.

consistent with the reliability coefficient established in the original test. This was .7082 with a mean of 76.24 for raw scores of one hundred junior high school students.³⁹ The reliability coefficient of the "odd-even" division in half of the original test was .4179 with means of 73.6 and 75.2 for the first two experimental groups and a mean of 78. for the control group, indicating that this version of the test was acceptable.

In establishing the validity and reliability of his tests, Meier states:

The norms for the Art Judgment Tests were obtained from students taking art in junior high and senior high schools in twenty-five different localities involving more than thirty-three hundred cases...For the most part, the norms are based upon persons interested in art: the few unselected ones represent an inconsequential minority. This was done to make the test selective, not in the general population, but primarily in the art-student population.

He goes on to add:

The accuracy with which complex mental functions, such as intelligence and special abilities, can be measured is always relative...The measurement of art judgment is necessarily a rough approximation at best and should be accepted simply as indicating relative standing in the general population to which it refers. The safeguards against undue error are contained in the care with which the test was originally constructed and the efforts made to make it as fool-proof as possible.⁴⁰

Reliability refers to the accuracy of measurement by a test. Any direct measurement of such consistency calls for comparison between at least two measurements. Retesting the students with the total one hundred items was deemed undesirable as the "odd-even" method reduces time spent on testing where time was a vital element. Isaac and Michael states "...the successive administration of two parallel forms of the same test...is

³⁹ Norman Charles Meier, The Meier Art Tests I Art Judgment Examiner's Manual (Iowa City: Bureau for Educational Research Services, University of Iowa, 1942), p. 19.

⁴⁰ Ibid., pp. 12-13.

the most desirable index of test reliability, since it involves two different representative samples of items." They go on to equate the "alternate forms" approach to reliability with that of the "split-half" or "odd-even" method which divides the test items independently into two equivalent halves, as equally valid for determining what proportion of the test was non-error variance.⁴¹

To determine the significant difference between the means of fifteen subjects randomly selected from the six experimental groups and the control group, a t-test was applied. Values at the .05 level for a one-tailed test were computed for levels of significance.

Procedure

A quasi-experimental method using non-randomized control-group pretest-posttest design was utilized. All groups, including the control group, received a pretest at the beginning of a seven week period. The other six groups received an intensified art program designed to improve aesthetic perception. At the end of a six-week treatment period each group received a posttest. To reduce the maturation variable for the control group, it was pre- and posttested at a period equidistant from the beginning and end of the total experimental period.

In presenting the test to the classes, testers for both the experimental and control groups indicated that it was a part of the normal routine. Since in both cases, it was administered about the second or third day of the new Exploration session and was indicated to be an exploration of their attitudes to pictures and not an examination of any

⁴¹Stephen Isaac and William B. Michael, Handbook of Research and Evaluation (San Diego: Robert K. Knapp, 1971), p. 89.

kind, none of the children appeared to be unduly concerned about scoring in a competitive manner. By the time the posttest was administered, both the experimental and control classes had had sufficient exposure to a variety of visual media as to render the test-taking a normal part of classroom procedure.

Data Collection

Test 1 was administered, collected and tabulated and retained until the total experimental period had elapsed. Test 2 was also administered to each group successively, collected, tabulated and retained until the expiration of the experimental period.

Data Analysis

At the end of the experimental period, when all the art groups had been tested, treated and retested, and the control group also had been pre- and posttested, statistics for all the subjects were collected and evaluated. Results were tabulated and a t-test applied to determine if a significant difference between the treated art groups and the non-treated control group existed. Random selection of fifteen subjects from the experimental group was made and statistics from it and from the control groups compared by means, scores, frequency polygons and histograms.

Variables

The use of six groups of grade seven art students, ranging in age from twelve to fourteen years, comprised of fifteen individuals in each group and an additional group of non-art students with the same group constants to act as a control group to whom the treatment was not administered, reduced the variables of history and testing, as each group

received the pre- and posttest prior to and after a six-week treatment period. Changes in obtained measurement did not occur as the judge remained constant, as did the tester and treatment administrator for the experimental groups, and the test administrator for the control group. Statistical regression was eliminated as mandatory placement negated choice based on extreme scores. Selection bias did exist but only as the subjects were assigned to the classes on a rotational basis wholly dependent upon school policy. Experimental mortality was controlled by having a sufficient surplus of subjects in each class to allow for loss from the class population. Maturation was not a variable as the tests and treatment were administered to each class successively. Subjects' chronological maturation was controlled by imposed pairing of classes throughout the total experimental period of twenty-one weeks.

It is unlikely that pretesting created a jeopardizing factor in external validity as none of the subjects were made aware of the purpose of the tests nor of their choice as subjects within the total class population. The reactive effects were minimal as the experimental settings were the classes to which they were assigned and expected to remain for the seven week period. Since subjects received only one pre- and posttest and one treatment with the same teacher, multiple treatment interference was a null factor. Because of the numbers of experimental groups, experimental conditions differed with each group, hence experimental variance should be maximized. Extraneous variance was controlled by the homogeneity of I.Q.'s, age, and S. E. S. as randomization of the subject selection was out of the hands of the test and treatment administrators.

Error variance was minimized as the tests administered have been measured for reliability and the treatment conditions, i.e.; the classroom,

remained constant for all subject groups.

With variables at a minimum, both external and internal validity was maximized. Since the treatment appeared to result in higher posttest scores for sixty-one subjects, identical scores for six subjects and losses for twenty-three, two-thirds of the total subjects tested benefited from the program. If increased scores were, indeed the result of the experimental treatment, and not because of other factors which cannot be determined, one could assume that this treatment is valid and that it accomplished its purpose, to improve aesthetic judgment at the young adolescent level of junior high school.

Hypothesis

The program previously outlined, using a slide version of the Meier Art Tests, I Art Judgment as a tool for comparison, will improve aesthetic perception at the junior high school level of early adolescence.

Null Hypothesis

The program previously outlined, using a slide version of the Meier Art Tests I Art Judgment as a tool for comparison, will not improve aesthetic perception at the junior high school level of early adolescence.

Findings

The difference within the random test group is statistically significant; between the .05 and .025 level for a one-tailed test, or by interpolation, at approximately the .03 level of significance. (See Table 1.)

TABLE I.

MEANS AND RAW SCORES OF RANDOM AND CONTROL GROUPS

Random		Control	
N = 15		N = 15	
Test 1	Test 2	Test 1	Test 2
94	98	94	96
88	96	88	94
84	94	88	92
84	92	86	88
84	92	86	86
82	92	86	84
78	86	84	78
78	84	82	74
76	84	76	72
72	76	76	70
64	76	74	70
62	70	68	68
60	70	66	68
60	68	66	66
52	68	56	64
Mean = 74.53	83.06	78.4	74.

In terms of comparison between the random and control groups t-tests, we find that the value for the pre-test is $-.927$ as compared to 1.270 after the experiment. While neither of these values is in itself statistically significant, it should be noted that this effect is largely due to the central location of the control groups. (See Tables 1 and 2).

TABLE 2
 MEANS AND STANDARD DEVIATIONS FOR
 EXPERIMENTAL GROUPS

Group	Test	Mean	Standard Deviation
1	1	73.46	8.277741
	2	75.2	8.4478
2	1	74.26	11.7273
	2	74.	11.7303
3	1	73.93	11.3106
	2	75.06	11.4744
4	1	70.	8.26237
	2	73.86	9.8378
5	1	83.33	7.1802
	2	88.66	5.04205
6	1	86.8	7.65245
	2	93.2	6.27376

One could suppose the condition whereby a result could be obtained approximately equivalent to the t-test value of .927 plus 1.270 = 2.197, which would be significant for a one-tailed test at a level better than .025 and clearly better than .05. This condition would arise if the mean of the control group and random group had been equal before the treatment began and assuming similar results to what was obtained at pre- and posttesting of the control group.

We can conclude that while there was no significant change in the mean of the control group compared to a statistically significant change in the mean of the random group, chosen from the total experimental population, an implied validity for the program exists. However, due to the results obtained

in the direct comparison of the control and random groups before and after the experimental treatment, additional treatments with other groups would have to be performed to support or refute this conclusion on a significant basis.

Randomization was made by selecting the raw scores of every sixth subject to arrive at a total of fifteen subjects for comparison with the fifteen subjects of the control group. (See Table 3).

TABLE 3

RAW SCORES OF EXPERIMENTAL GROUPS
FOR PRE- AND POSTTESTS

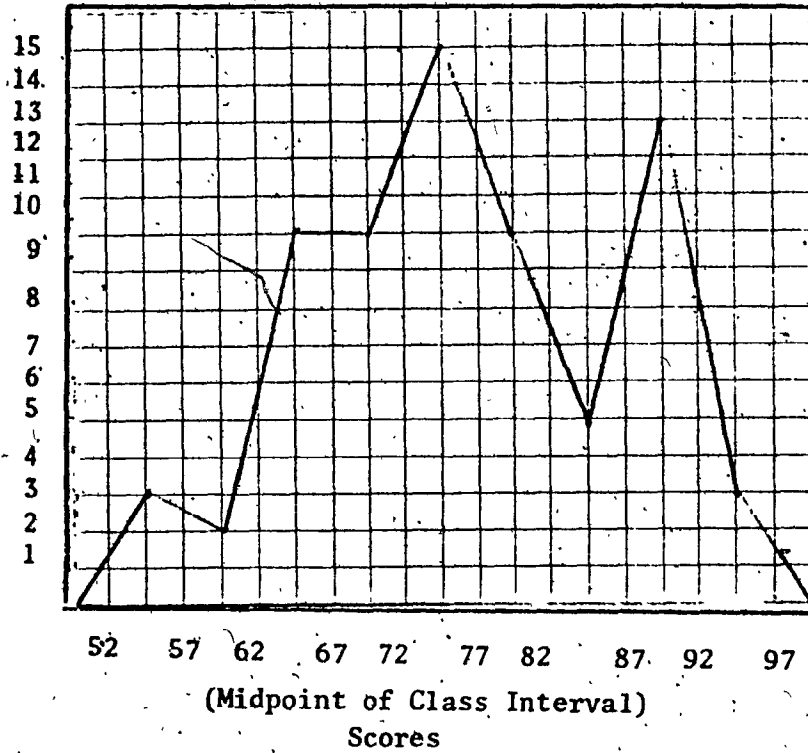
Group I		Group II		Group III		Group IV		Group V		Group VI	
84	92	90	94	92	94	92	98	98	96	98	98
84	84	90	94	86	94	78	88	94	96	96	98
82	84	90	90	86	86	76	84	90	94	94	98
82	84	88	86	84	84	74	78	90	92	94	98
80	78	84	76	80	84	74	76	88	92	92	98
78	78	80	76	76	78	74	76	84	92	90	96
78	76	76	76	74	78	70	74	82	90	90	96
72	74	72	70	72	76	68	72	82	88	88	96
72	74	72	70	72	72	68	70	82	88	84	94
72	72	66	68	70	70	68	70	82	88	84	94
68	70	64	66	66	68	64	68	78	88	82	92
68	70	64	66	66	62	64	66	78	82	82	92
64	68	62	62	66	62	62	66	76	82	82	88
60	68	62	58	52	62	60	64	74	82	78	86
58	56	54	58	52	56	58	58	72	80	68	74
N = 90		Pretest Mean = 76.79				Posttest Mean = 76.66					

If what appears to be a positive reaction to the program was nullified by the t-test findings, other factors must be isolated. Plotting the frequency distribution of posttest standard deviations resulted in a negatively skewed graph curve, which was to be expected, as fifty of the cases

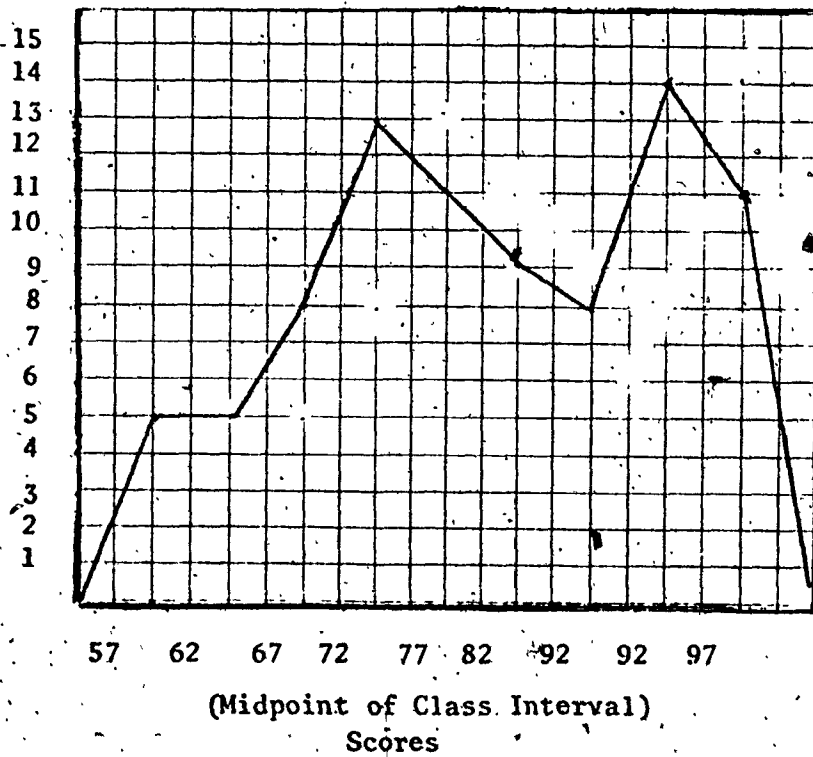
FIGURE 1

FREQUENCY POLYGON OF PRETEST AND POSTTEST RAW SCORES

Test 1.



Test 2.



were above the median of 77.55 and forty were below (See Table 3). This would appear to indicate that the test was too easy for at least the last two experimental classes. Scores tabulated indicated that this might be the case, as the lowest raw score in these groups is 68 compared to 52 for the first three groups for the pretest and 74 compared to 56 for the posttest scores. Means ranged from 70 to 86.6 for the pretest scores and from 73.86 to 93.2 for the posttest scores for the total experimental population. (See Table 2). However, Meier states that from evidence collected, "...there is now reason to believe that aesthetic judgment varies greatly in childhood and adolescence, but that there is some maturation, reaching its culmination about, or shortly after the senior year of high school..."⁴² Scattergrams indicate that the tests had a very high correlation and although the graph plotted for the frequency distribution of posttest scores appeared negatively skewed, the one plotted for the pretest scores was not. A frequency polygon for both pre- and posttest scores, for which the slide version of Meier Art Tests I Art Judgment was used, is similar to that which is illustrated in his Examiner's manual.⁴³ (See Fig. 1). This supports the assumption that the test was neither too easy nor was maturation a factor in the higher scores for the last two groups being treated. (Tables 2 and 3). It may be noted also, that the fourth group tested had a mean almost as low as the first and chronologically younger first group. (See Table 2). They also scored lower than the control group who were at an equivalent stage of maturation. (See Tables 1 and 3).

If maturation was ruled out as a factor, then others might obtain. Meier notes that "...While very superior intelligence is not an absolute

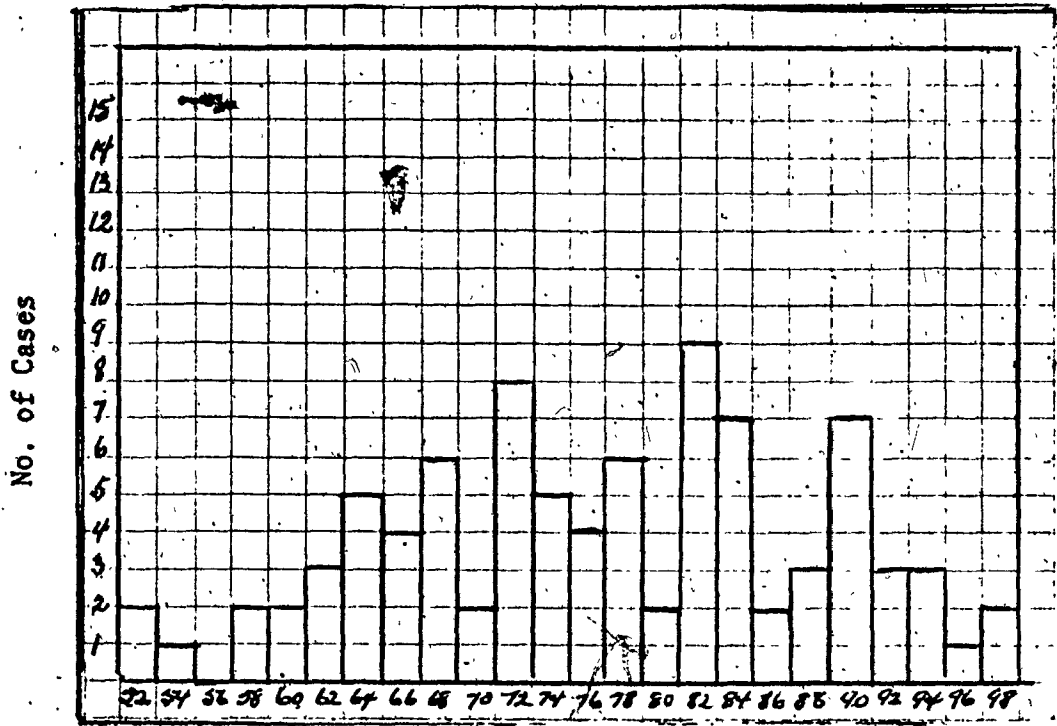
⁴²Meier, p. 15.

⁴³Ibid, p. 16.

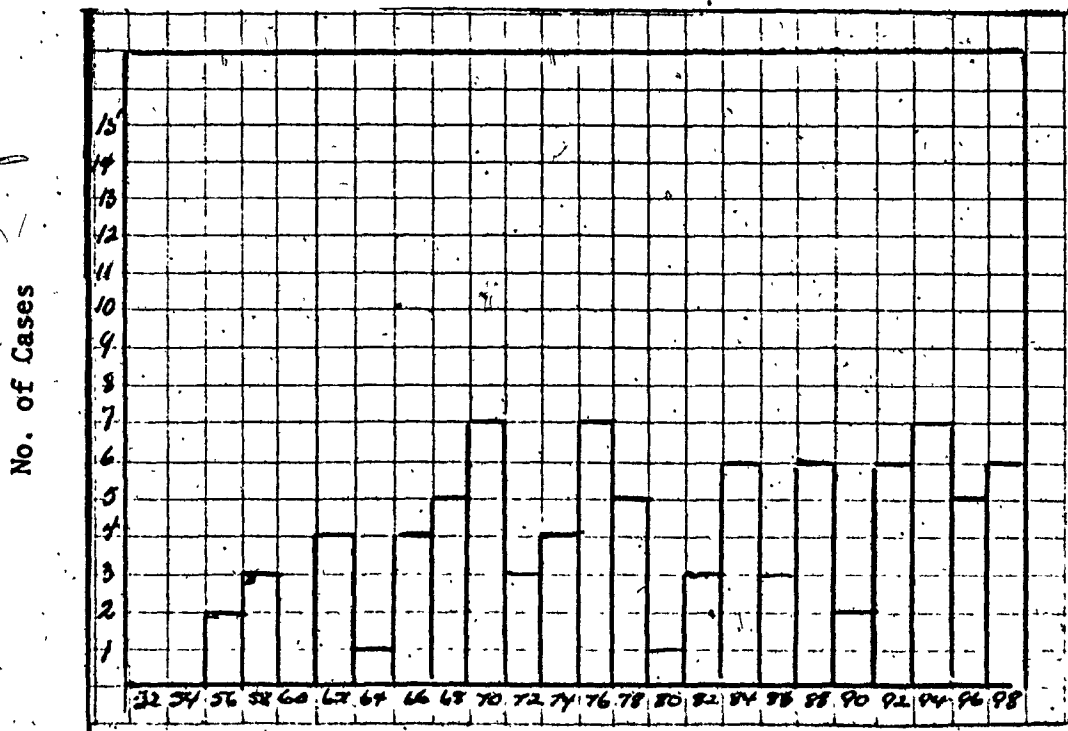
FIGURE 2

HISTOGRAMS OF PRETEST AND POSTTEST
RAW SCORE FREQUENCY

Test 1



Scores
Test 2



Scores

requirement for outstanding success in art, it is undoubtedly a very helpful adjunct, and in all cases probably conditions the rate of progress and eventual success of the individual."⁴⁴ To check this supposition, a comparison was made between individual scores and stanines. Results indicated that the last two groups had in fact higher stanine than the fourth group. Another factor which may have influenced posttest scores for all the subjects who made decided gains over pretest scores was that about half of the subjects were members of French Immersion classes. This does not mean that the intelligence level is different from that of regular classes, but it does mean that these students are predisposed to volitional perseverance, which Meier lists as one of the necessary attributes for success in art."⁴⁵

Frequency polygons (Fig. 1) and histograms (Fig. 2) for both pretest and posttest scores for the total experimental population do not follow a normal curve. Each of the factors which may have caused errors in testing were examined, evaluated and rejected. Ratings could not have been affected by initial positive or negative impressions as scoring was done on a simple right-wrong basis. This also eliminated any tendency to over- or underrate scores. Since subjects were in the normal classroom situation, following what they assumed were normal art procedures and had no reason to attach undue significance to the tests, the "Hawthorne Effect", the "Placebo Effect" and "Law of the Instrument" errors were eliminated. As far as can be determined, neither the "Self-fulfilling Prophecy" nor "post-hoc" errors were allowed to operate.⁴⁶

Comparison between the random and control group t-tests yielded

⁴⁴ Ibid., p. 4-5.

⁴⁵ Ibid., p. 18.

⁴⁶ Isaac and Michael, Handbook of Research and Evaluation, pp. 58-59.

significance levels of $-.9272$ for the pretest and 1.2695 for the posttest.

Conclusions

Although statistical findings have indicated that the program designed to improve aesthetic perception at the grade seven level had not done so to a significant level, other results have been obtained which indicate that the other parts of the program have been successful.

At the end of the six-week treatment period and following the post-testing, subjects were encouraged to discuss and evaluate the art exploration class they were leaving. To assist the researcher in obtaining subjective analysis of the program the following questions were asked:

1. What do you feel about the art exploration class?
2. If you liked it, what part did you like best?
3. How has the class affected your interest in art outside the school?
4. Do you prefer to work out your own solutions in art? Why?
5. Do you like to be told how to do things in art?
6. Has this class helped you enjoy beauty outside of school?
7. Has this class helped you in other school activities or subjects?
8. How do you feel about continuing in art next year? Why?
9. Would you say that your family is interested in art: in making things, in painting, in looking at pictures?
10. Do they like you to bring your art work home?
11. Do you think this class may have helped you see more things around you outside the class?
12. Was there other art you wish we had done?

Responses to the first question ranged from outright rejection to total acceptance. Of the ninety subjects, sixty-seven responded in the

positive, ten in the negative and thirteen were noncommittal. To the second question, the responses ranged from "nothing" to an itemization of every phase of the program. The responses to the third question were predominantly favorable, in that they indicated an increased awareness of elements of art in T.V. commercials, magazines and architecture. Most responses were positive for question four and negative for question five. This would seem to indicate a healthy interest in exploring the possibilities of art techniques with only initial help from the art educator. Even the hard core rejectors of art in any form indicated that they were more aware of art elements, especially color, in the environment. Geography and mathematics seemed to be the subjects that were most affected by the art course. To the question about continuation in art at the next level, positive responses were in a three to one ratio toward the negative, and of these many indicated that music or woodworking had precedence. Seventy-two responses to this question indicated that the course had been of interest, helpful and "fun". Even those who indicated some other subject choice for the next level declared that they had enjoyed the art experience they had just completed. Surprisingly few felt that there was any interest in any form of art in the home and not many students felt their parents were interested in their art product. Only seven felt that their perception had not increased. More were quite specific about the improvement in awareness they attributed to the program. Responses to the last question indicated that some of those who rejected art did so because they wanted to work more with clay, ceramics or wood. This was impossible to implement in a program of such short duration, but does indicate fields of interest for the next level. Most of the responses expressed regret that the course was not longer. The students appeared to be looking forward to additional art experiences at the next level.

SUMMARY

One must not be too optimistic because of student response at this level as they may well change their priorities a dozen times before entering grade eight. However, if one agrees with Broudy that the goal of aesthetic education is two-fold, aiming on the one hand "...at an emotional and intellectual maturity that will render stereotyped, immature, obvious art products aesthetically inadequate." and on the other hand undertaking "...to provide the symbolic skills required by more mature forms of expression and impression." and that "...in the early adolescent years, the problem of acquiring techniques may be paramount to ward off the imminent aesthetic inarticulateness; and that, in higher education, the exploration of highly mature forms of art might take precedence over other phases."⁴⁷, then one might assume that a carefully planned program aimed at improving aesthetic perception should be implemented in early adolescence.

It may be suggested that active participation, personal satisfaction and continued involvement in aesthetic education should outweigh the objective standards of statistical performance.

The primary purpose of this research was to plan and implement a program designed to improve the aesthetic perception of students at the junior high school level. The author feels that this has been accomplished in the limited scope of this study.

⁴⁷ Harry S. Broudy, "Some Duties of a Theory of Educational Aesthetics," in Aesthetics and Problems of Education, ed. Ralph A. Smith (Chicago: University of Illinois Press, 1971), p. 115.

The author also feels that the program was instrumental in helping the students learn to appreciate, judge, criticize, and discriminate aesthetically. Since this is a subjective evaluation, it would be hard to substantiate. However, comparison of student products, discussion and observation of these art students in other situations which require the above abilities, seem to indicate that the program was successful.

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