A STUDY OF RELATIONSHIPS BETWEEN ATTITUDES ABOUT ART EXPERIENCE AND BEHAVIOR IN ART ACTIVITY

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

CORETTA WARING MITCHELL, B. Sc. in Educ., M. A.

*****

The Ohio State University
1957

Approved by:

[Signature]
Adviser
School of Fine and Applied Arts
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A STUDY OF RELATIONSHIPS BETWEEN ATTITUDES ABOUT ART EXPERIENCE AND BEHAVIOR IN ART ACTIVITY

CHAPTER I

THE HYPOTHESIS, PURPOSES, AND NEED FOR THE STUDY

The Hypothesis

The study asks these questions: Are there relationships between what a student says about his art experience and what he produces in his art activity? If there are such relationships, how can they be described? What is the significance of such relationships for teaching art in situations similar to those in which the study was made? Answers to these questions are sought through an investigation of the hypothesis: there are significant relationships between a student's capacities to derive behavioral principles from his art experience and his capacities to manifest them in his behavior in an art activity.

These questions and the hypothesis for answering them are the products of several successive reformulations. In its initial stages, the hypothesis was considerably more general in scope. As the study progressed and ways to carry it out were explored, earlier statements of the hypothesis were found to be too complex because they contained too many variables to allow for investigation in a single effort. The transition and reformulations from this general stage to
the present form are discussed in detail in Chapter III as part of the development of the study.

**Purposes of the Study**

The general purpose of the study is to learn more about teaching prospective elementary classroom teachers how to become creatively involved in art activities. Out of this general purpose, several specific purposes have emerged as the study progressed: (1) to develop and use methods for selecting and recording data showing capacities to derive behavioral principles and to behave creatively, (2) to develop and use descriptive criteria for evaluating this data, (3) to develop and use methods to analyze the two sets of data, and (4) to discover implications of the procedures used for future studies about creative behavior in similar study situations. These specific purposes were viewed and considered in the study as follows:

1) **To develop and use methods for selecting and recording data showing capacities to derive behavioral principles and to behave creatively in art activities.** The data to be used in the study were viewed as needing the following characteristics:

   a) *they should allow for observation in a complex teaching situation.*

   b) *they should provide the information needed for the study.*
c) they should allow for observation and recording without elaborate observational devices and methods, since the situation available for study was also the teaching situation requiring my full-time attention to the business of teaching.

2) To develop and use descriptive criteria for evaluating this data. The criteria to be used in the study were viewed as needing these characteristics:
   a) they should be capable of describing the behavior and attitudes demonstrated by students.
   b) they should be capable of assessing differences in the degree to which a student derived behavioral principles and behaved creatively in his art activities.
   c) they should take into account as much of the data as possible.
   d) they should be capable of differentiating among the different behavior characteristics described as components of creative behavior in the study.

3) To develop and use methods to analyze relationships between the two sets of data. The methods for analyzing the data which were used in the study were viewed as needing these characteristics:
   a) they should allow for comparison between
the two sets of data.
b) they should show which characteristics are related to other characteristics in the two sets of data, and to what degree.
c) they should allow for comparison among the characteristics within both sets of data.

4) To discover implications of the procedures used for further studies about creative behavior in situations similar to the study situations. The study procedures should lead to implications for developing more adequate procedures for future studies:

a) they should have implications for selecting more adequate data to demonstrate creativity.
b) they should have implications for procedures to develop more adequate criteria for evaluating data.
c) they should have implications for developing and using teaching procedures in a teaching-research situation.

Need for the Study

Research in art education can be conceived in two ways, each of which has its particular contribution to make to important knowledge about the field. One kind of study aims at gathering information about conditions or facts about art education. This kind of information is observable and identifiable, and it presents no serious methodological
problems in handling its data. It is useful in providing a picture of existing practices or conditions in the field, and it may also be useful in identifying important problem areas which need adjustment or further inquiry. The typical methods for dealing with the data for this kind of study involve survey and tabulation and analyses of some conditions or facts. One such example is a study of "Comparative Expenditures for Art Supplies in Typical School Systems," reported by Gordon, McDaid, and Hubbard.¹

Another kind of study in art education research aims at inquiry into basic assumptions about the nature of education in the arts. Here the information sought is not so easily identifiable, nor is it always directly observable. Yet it is the kind of information which is of primary importance for the improvement of teaching in the field. Without adequate knowledge to support assumptions about the nature of education in the arts, teaching art becomes essentially intuitive and even accidental. Even competent, intuitive teachers need to understand more clearly what they are are doing and why and how they are able to do it, in order to perform at consistently high levels and to predict and control their accomplishments under other conditions.

Research in art education which attempts to deal with basic assumptions about the nature of education in the arts is faced with problems which stem from the particular character of creative behavior in art experience. Creative behavior in art experience is so complex and its manifestations so varied and unpredictable that the methods for inquiring into its processes require as much attention as the questions which prompt the inquiry. In his "Introduction" to Research in Art Education, Lester Dix discusses the need for study and development of appropriate methods for research in art education:

Research in art experience, production, and education requires still further dimensions for studying the meaning of certain kinds of overt behavior and also for understanding behavior which is so complex, so subtle, and so private as very often to present no easily observable phenomenon at all.  

Research which pays attention to the nature of education in the arts has to assume the task of developing "further dimensions" for studying its problems along with studying the problems themselves. Methods for study cannot be developed apart from actual problems being studied. Lacking wholly adequate and appropriate methods, the research worker in art education must go ahead with what is available to him now. This means he begins with the best assumptions

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and methods he can formulate at the time. It also means that he needs to hold his assumptions and methods open for modifications as his study reveals "new dimensions." The researcher in art education, therefore, has a two-fold task: (1) to formulate important questions about processes involved in teaching and learning in the arts, and (2) to develop more adequate and appropriate methods to deal with his questions.

The researcher who attempts this two-fold task cannot select a "typcial" method for his study. Yet he does have resources on which he can draw. He can look to the body of methodology in the behavioral sciences developed for dealing with other aspects of human experience. He can also look to what is currently being developed in art education research. In addition to these resources, he has his own sensitive regard for the particular nature of his inquiry and the experience he is seeking to understand. Whatever he finds in the other sources must be subject to this regard.

Methods for research in the behavioral sciences are not always directly applicable to dealing with the problems of art education. The particular quality of experience in the arts implies a certain degree of unpredictability which has to be preserved. Whenever methods are "borrowed" they need to be used with discernment and understanding of their limitations as well as their potentialities for seeking understanding about creative experience. The researcher
in art education must be artist enough to translate the material he borrows into forms appropriate for the problems with which he is engaged. In a recent article, Barkan compares research in art education to the artistic process:

To a very high degree, research into the process of teaching art is analogous to the artistic process itself because both are engaged in creatively. Although there are clear differences, both rest on an experimental attitude; both require inventiveness and imagination; both are oriented toward the unknown in order to make it more knowable; both are disciplined activities; both require extreme sensitivity to the nature of their characteristic forms, materials, and tools; and both depend on deep identification with the particular problem at hand.

This view of research in art education is both appealing and challenging. It gives the researcher a central position as the designer of his research, but it also gives him the obligation to pay particular attention to the consequences of his actions as a designer. The artist-researcher's freedom is not less, but different from the artist's. He may bring together ideas not ordinarily seen as connected. As an artist, he may stop at this point; as a researcher he must show how they are connected and what the consequences are from their connection.

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Four specific needs in art education are given attention in this study. Although these needs are not the primary purposes of this study, they are, nevertheless, recognized as areas in art education research which need clarification. At present, they impose inevitable limitations on inferences which may be drawn from research in art education. These needs are: (1) identifying and describing creative behavior in art activity, (2) developing descriptive criteria for evaluating this behavior, (3) developing techniques to observe creative behavior processes in art activity, and (4) developing techniques for handling the complex variables present in art teaching situations.

Lacking adequate means to identify and describe creative behavior in art activity, teaching and research in art education has depended on assumptions about the nature of this behavior to deal with its problems and questions. Some research in art education, however, has recognized the need for identification and description as a major purpose. One example is Brittain's report of "An Experiment Toward Measuring Creativity," in which items assumed to be aspects of creative behavior were sought in persons judged by other criteria to be "more" or "less" creative. Another approach to this problem is Barkan and Hausman's report of "Two Pilot

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Studies with the Purpose of Clarifying Hypotheses for Research into Creative Behavior. One of these pilot studies begins without assumptions about the nature of creative behavior and attempts to analyze the structure and design of behavior of subjects judged by other criteria to be "creative". The other pilot study begins with an assumption about creative behavior and seeks for manifestations of this assumption in various behaviors of subjects in order to develop a theory about its function in creative behavior.

Both these reports add to understanding the nature of creative behavior. But more important, they also demonstrate that research in art education need not rest on assumptions that creative behavior is too mysterious and indefinable to be described more fully than we can at present. A great deal more must be learned before the need for identifying and describing creative behavior is no longer an issue in art education.

Developing descriptive criteria for evaluating creative behavior in art activity depends upon our assumptions about creative behavior and upon what we are able to learn about the nature of such behavior. Developing techniques for observing creative behavioral processes in art activity is a

5 Manuel Barkan and Jerome Hausman, "Two Pilot Studies with the Purpose of Clarifying Hypotheses for Research into Creative Behavior," ibid., pp. 126-141.
part of the larger problem of identification and description. Indeed, they are accompaniments of each other. The two study reports by Brittain and Barkan and Housman referred to above are examples of researches which focused on these needs for more adequate and appropriate research methods in art education.

Lacking techniques for dealing with the complex variables in art teaching situations, research in art education is necessarily limited in respect to inferences which can be derived from the data of a teaching situation. Some of these variables are inherent in the art activity and some are not; hence this problem is related to the need for identifying and describing creative behavioral processes in art activity. An example of research which tried to deal with variables in a teaching situation, is Hausman's study of "Children's Art Work and Their Sociometric Status." Here, relationships between the use of art materials and choice processes in the situation are explored. Hausman's study suggests that research in art education can profitably adapt some of the methods used in the behavioral sciences as techniques for handling some variables in art teaching situations. This, however, implies recognition by the researcher of the variables to which he must pay attention,

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either in his attempts to deal with them or in making them explicit as limitations on the inferences he can make from his study.

The needs of research in art education which are discussed here are in part recognized as limitations for the study. Their inclusion in this report also serves the purpose of providing a ground from which implications can later be derived from the study as possible ways to meet these needs.
CHAPTER II
BACKGROUND OF THE STUDY

The study was developed out of three contributing sources: the first is my own teaching experience and my observations of students in my art classes; the second is my reading and study about learning and creative behavior; and the third is my own experience as an artist. Each of these sources is discussed in the following sections.

Teaching Experience

Part of my teaching experience has been in a required beginning art course for Elementary Education majors. This course not only contributed to the background of the study but it also provided the location for conducting the study. It is designed as a laboratory and discussion class in which students work with a variety of art materials and processes in activities ranging from picture-making to three dimensional construction. Its purpose is to create a background of personal experience in the arts for the students so that they can later develop their own procedures for guiding children's art activities. While the students are working, their attention is directed toward their own actions and the implications these have for the quality of their art experience and art products. Personal involvement and identification with ideas, openness to the emergence of meaning in the process of making an art work, and actions involved
in aesthetic forming are among the conceptions brought to their attention in relation to their art work.

Teaching the course presents some particular instructional problems. Many of these students have had little or no experience in art. Others may have had negative experiences. Only a small minority have a positive interest or any real ability in art activity when they enter the class. Consequently, I have found that students in these classes generally tend to start their work at a fairly low level of visual conception, skill, or understanding of art and art processes.

I have conceived the primary teaching task at the beginning of the course to be the development of the students' confidence that they can perform acceptably in art and obtain satisfaction from their art experience. At a later point my task becomes one of helping the students to look more critically at their work and the nature of their actions while they are working. At this stage, the course becomes more challenging and demanding for the students. It is also at this stage that some problems I am concerned with in this study appear.

I have generally found improvement in the quality of student art work during the ten week period of the course. Yet I have not always been sure that the students understood the implications of their specific actions while they were working in their art activities. This has been manifested
not only in discussions with students, but also in tangible difficulties they have encountered in their work. For example, faced with an idea different from those dealt with previously in their art work, some students are unable to work with it visually. In their efforts with new materials, some students are unable to carry over the skills or understandings they apparently developed in work with other materials. Often, when introduced to a new medium, these students begin at a lower level of aesthetic organization than they were able to accomplish in media they worked with previously.

These problems raise questions about the significance of a student's awareness of his own actions for facilitating learning in subsequent art activities. During the summer of 1954 I used the opportunity of teaching this course to begin to study these problems in a more systematic way, and out of my experience that summer I began to formulate the study problem. Since the subsequent development of the study stemmed directly from the insights I gained in teaching this particular class, I shall describe this experience in detail.

First, some brief comments about the nature of this particular class are necessary. The students differed from the regular undergraduate enrollment in the course. With two exceptions, they were registered in a post-degree program in Elementary Education leading to certification as elementary school teachers. All had bachelor's or advanced
degrees in various non-teaching or secondary teaching fields. A few had teaching experience, and most of them expected to teach that very autumn. This course was the only contact they would have with the visual arts in their training program. I found these students generally more mature and with a wider background of interests than the undergraduate students. In regard to experience and understanding of the arts, however, they demonstrated about the same characteristics as the undergraduates. I felt they were a good deal more responsive and interested than most classes I had taught.

I began the class with painting, with emphasis on personal interpretation of ideas. As the course developed, increasing emphasis was given to aesthetic form and organization in relation to ideas. Throughout the quarter we discussed various reproductions of paintings and other professional art works. The students visited the Columbus Gallery of Fine Arts and wrote evaluations of some specific works of art. They visited the Columbus Zoo where they sketched animals as resource material for painting and other art work. A regular daily occurrence was a discussion of current student work. In addition, the students wrote a paper describing their experience in the course and its significance to them.

At the same time, I was engaged in a weekly conference with a member of my doctoral committee. At his suggestion,
I began to pay particular attention to the events of the class as a means to clarify a problem for my study. As preparation for our weekly conference I wrote brief papers about the developments in the class and their implications for defining the study problem. A graduate student in Art Education took rough notes of all class discussions. These records, plus the weekly conference papers, proved extremely valuable in reviewing and analyzing my conduct of the course. They were helpful in defining the study problem.

In teaching this class I was concerned with the broad problem of transfer of value from creative experience in art activities to other activities. This concern had developed out of my previous teaching experiences with students in this same course. These students were not going to be practicing artists and whatever value they obtained from their art activities would have to have more general significance. I felt they would need to see value in their experience which they could transfer to other things they did. I was confident that some significance obtained from their art experience did transfer. What concerned me, however, was the transfer of values in the experience of making art works, of creating visual forms for ideas, and in organizing them aesthetically. I was looking for ways to accomplish this transfer more effectively, explicitly, and inclusively.

Up to this point, I had been looking for an approach
to this problem through the possible differences which might exist in ways that students perceived their experiences as significant. I had been reading in perception theory, and this had focused my attention on perceptual processes. Some of this material suggested differences in perceptual processes when different materials and ideas were dealt with. I had given some thought to the symbolic differences through which meaning could be achieved in various kinds of experiences. The symbols used in art and in language are obviously different. I had observed that the students beginning to work with art symbols, which were unfamiliar to them, seemed to understand these symbols more clearly when they could interpret them in reference to familiar symbolic means. For example, these students seemed more readily able to interpret the concept of "rhythm" in visual symbols when they could refer to such more familiar symbols as music, acting and dancing, for expressing rhythm.

Although I felt that symbolic difference was an important aspect of perception of meaning in experience, I had begun to explore other approaches which seemed more direct. I wondered if what students saw as significant in their art experience might be an approach as well as how they came to see the significance. Accordingly, I began to examine the class discussion records for this kind of information. At the same time, I began to look closely at what I was asking the students to see as significant in their art experience.
As a way to clarify and control what I was asking the students to see in their experience, I formulated some concepts that seemed significant to bring to their attention. These concepts dealt with aesthetic form and organization, freedom and discipline in art activity, personal involvement and identification, openness and receptivity to ideas and emergent meanings in art work, and values in art experience.

My analysis of the discussion records yielded some interesting information. I found that in response to students' questions I had generally asked other questions which focused on their behaviors and their reasons for certain kinds of actions. For example, I often asked a student to explain his reasons for selecting a certain aspect of an idea, certain colors or forms, or why he had organized the forms in a particular way. My role had been to ask what this meant to all of us so that we could then draw generalizations from the students' comments about their specific works. Many of my comments and questions contained references to other activities as illustrations of particular points about the students' art work and art experiences. I paid little attention to technical problems in the discussions.

The students' comments and responses were related to the concepts I asked them to deal with in the discussions. The following were some of their concerns:
1) knowing how to select what was significant in an experience in order to express it visually.

2) knowing how to make use of art materials and visual forms to communicate the "feeling" they wanted to express.

3) knowing how to interpret symbols in art works they could not readily identify.

4) knowing how to handle their own frustration to find out why, when the picture wasn't turning out "right".

5) knowing what was "right" in order to communicate their own ideas.

6) understanding what was "real" in their art work.

7) knowing how to appreciate their own art work when it lacked the qualities they associated with "good" art.

8) knowing how to be "creative" in their art work.

The students' comments indicated some understanding at a verbal level. They were saying: that art could not be "real" in the sense of being reproductive; that symbols in art works achieved meaning in relation to other symbols; that each person had a unique point of view which gave validity to the different interpretations of ideas they
were putting into their work, and to the different visual forms they used. While they were saying they could invent their own forms, they were also expressing a need for some criteria of "rightness" to help them construct and organize visual forms which communicated more clearly.

I felt also that the students were beginning to realize personal significance in the experience of their activities. They spoke of "excitement," "enjoyment," "deep feelings," and "my own ideas," in relation to their art work. In some cases, they explained their feelings by references to other kinds of experiences. One student commented: "When I first began painting, I just loved every picture I made. Now it's the next picture I love. I always wondered how artists could paint and throw away. Now I know. It's like singing a song, and then singing another one."

Two things emerged from my analysis of the discussion records: (1) the students were concerned with their actions in art in order to be "more creative," and (2) they sometimes related their actions in art activities to other kinds of activities. At this point I attempted to review the events of the class to see how these had developed.

At the beginning, the students had been most concerned with technicalities about art activities. The discussions focused attention on their own experience in making a work of art. They had been asked to pay attention to their own
attitudes and feelings, such as "how hot it is today," or "the way my house looks to me." Evaluation had been in terms of their own attitudes and feelings, such as "does it communicate your idea," or "would it be clearer if you put the tree here?" Thus, the students had been put in the center of their art work as experiencers and evaluators. They had been led to look at their own ideas in their work, and at ways they could communicate their ideas more effectively. Shape, line, color, space, and other visual elements had been seen as ways to organize and express the significance of their ideas in their art work. They had been led to inquire about ways they were acting; they were encouraged to see their actions as "having a feeling about the idea," "drawing all over the picture," or "letting the picture talk back." They seemed to see these actions, for the most part, in direct relation to their art work, but some had been able to extend this view to include similar action in other experiences. These other experiences were generally of an expressive nature, such as music or dance.

I felt that the students had developed through the emphasis placed upon themselves and their own actions in their art experience. This emphasis also seemed to help them see some relationships between their art experiences and some other kinds of experiences.

As I looked at the papers the students wrote near the end of the quarter, I began to obtain additional information
about the way the students had viewed the course in general, what they had expected to get from it, and what they felt they had obtained from the experience.

Student expectations, when they entered the class, fell into two categories: (1) personal satisfaction and increased skill in "making things," and (2) knowledge and skill about teaching art to children. A few students had been disturbed by the emphasis placed on their own experience. These people felt that more direct instruction about principles of art and teaching art to children should have been given. In general, however, the students felt they had gained a great deal. In regard to their understanding of art, they felt more secure in criticizing art works and more critical of "color and form." In regard to themselves, they reported increased awareness of "the world around them," "cultivation" of their imaginations, emotional satisfaction in "creative art expression," increased understanding of themselves, increased ability to express what they felt and saw visually, acquaintance with new materials and processes, and increased skills in handling art materials. In respect to other kinds of experience, they reported better understanding of each other's ideas, increased interest in observing things, increased sensitivity to relationships among ideas and things, increased awareness of different points of view from which to look at their own ideas and experiences, and some insight into how to teach art in their classrooms.
The final session of the class convinced me that the students had developed some awareness of the significance of their art experience. They spontaneously planned a meeting later in the year to talk over what they had done with art in their classrooms. Of the twenty-two students in the class, nineteen met again in the Autumn Quarter, 1954. Many of them brought art work done by children in their classrooms. It was evident that their interest in the arts was maintained beyond the time limit of the course.

After I had read the students' papers, I wrote a paper for them in appreciation of what they had contributed to my own learning. I explained some of my concerns in teaching classes such as theirs, the point of view from which I worked with them, what I felt we had accomplished, and the further questions they had helped me ask about my own concerns in teaching art. The following questions are among those I was able to ask at that time which contributed directly to my formulation of the study problem:

1) How did my role in the class affect the students' freedom to make their own discoveries?

2) Did the students see themselves in my role at any time?

3) What kinds of referents are most effective in helping students obtain wider
meaning from their art experiences?

4) Did those students who seemed to get wider meaning from their art experience already have a sense for the significance of aesthetic quality in their experience?

5) Do class discussions reveal depth of experiencing in art?

6) Do students' art works support what they say about their experience? Does their art work show evidence of depth of feeling, range of ideas and feelings, carry-over of learning from one medium to others?

7) What kinds of principles were effective in helping students carry learning from specific activities to other activities?

8) To what extent can students generalize their art experiences in terms of their own purposes? What kind of evidence can be sought for this?

9) Do the students still ask questions they can answer themselves if they would be able to generalize the meaning of their experience?

Through subsequent teaching experiences with undergraduate students in this course, I began to feel that if students could be brought to the point of seeing their
actions in art as a way of experiencing creative behavior, and if they found this rewarding, they would be able to transfer values from their art experience to other kinds of activities. As indicated in Chapter I, however, this was an early stage in the development of the study problem. The manner in which it was developed to its present form is described in Chapter III.

Reading and Study

Reading and study have reinforced and extended the scope of understanding developed in my teaching experience. In some cases, my ideas changed or were directed into more productive channels. A major contribution has been the development of conceptual tools to deal with my own unrealized insights.

The most relevant material in my reading and study has been about creative behavior and learning in art, and research design. This includes study in psychology, aesthetic theory, art education, and social psychology. Following is a discussion of some of this material.
CREATIVE BEHAVIOR IN ART ACTIVITY

A major problem in studying creative behavior in art is to identify what is being studied. Indeed, some research in art education has taken this as a major problem. The unique manifestations of creativity in the actions of different people are often contradictory. Not all "creative" people behave in the same way. Our estimates of people's creativity have been made on the basis of what they produced, rather than on how they produced. But the purposes of art education are not only to enable people to produce art products which look creative, but to enable them to learn to act creatively. In order to do this, we need to identify what "being creative" looks like.

Creative behavior can be studied from several different approaches, depending on the particular orientation and interest of the person asking the questions. It can be seen as: (1) an inherent drive in all forms of life, (2) as a cultural manifestation, (3) as a psychological process, (4) as a manifestation in observable behavior, and (5) as a manifestation of products of behavior, as

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1 An example of such research is reported by Barkan and Hausman in "Two Pilot Studies with the Purpose of Clarifying Hypotheses for Research into Creative Behavior," in Research in Art Education, National Art Education Association, Kutztown, Pa., 1956. The purpose of these studies was to conduct pilot investigations into the nature of creative experience, through learning how to handle data gathered from the observation of individuals at work in the arts in order to formulate researchable hypotheses and relevant theory.
ideas or objects. Whatever approach is taken to studying creative behavior, however, two problems are implicit: (1) the need to identify the actualities of the behaviors of real people, and (2) the need to avoid setting limits which impose the only conditions under which behavior can be called creative.

These very problems are inherent in other kinds of inquiry. For example, they are contained in one of the important questions in aesthetics - the nature of art. Theories in aesthetics need to be capable of describing an actual work of art. At the same time, they must be able to deal with a great many works of art. According to Reid:

Aesthetic hypotheses have this in common with scientific ones, they must be tried and tested and adjusted to suit the rich variety of particular facts... There must be continual movement, familiar in science, from the individual facts to generalization back again to the individual facts.  

While many works of art may have something in common, they differ from each other. The theorist draws these differences together into a conceptual framework which he applies not only to certain works of art, but to other facts of other works of art. The problem is the range of

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"particular facts" which are taken into account in a theory about the nature of art. The conceptual framework needs to be at once specific and general. Yet it can be neither too specific nor too general, for on the one hand, it may deny the status of art to many works ordinarily called art, and on the other it may attribute artistic status to many things not commonly called art works.

There are a great many definitions of art, most of which set some limits for what can be called a work of art. In his discussion of various of these definitions, Morris Weitz has pointed out that the concept of art cannot be closed into any one system; it is by necessity an expansive concept. The definition of art must be left open for what the artist will create; otherwise, it will dictate what he can do in order to be called "artist." Weitz proposes a definition of art drawn from approaches which have focused primarily on certain aspects of the nature of art:

Every work of art...is an organic complex, presented in a sensuous medium, which complex is composed of elements, their expressive characteristics and the relations obtaining among them.4

3 Lectures by Dr. Morris Weitz in Philosophy 515, a course in Aesthetics, at The Ohio State University, Winter Quarter, 1955.

Weitz convincingly applies his definition to several different art forms as well as to specific art works, by taking each form and each work in terms of its own constituents and its own organic relations.

Apart from his definition of the nature of art, however, Weitz has indicated the importance of different approaches to theories of art in spite of their limitations for describing the whole of art. Each of these has value in pointing toward particular aspects of the nature of art not taken into account by other theories. The editors of \textit{The Problems of Aesthetics} also voice this point of view about the material they include in their anthology on the nature of art:

> Which of these definitions is preferable is something on which we may not expect any ready agreement. But certainly a knowledge of several of them is essential to us if we are to make our own choice among them. And while these definitions should help to mark off the field on which the discipline of aesthetics is to operate, they should serve also -- if we look for the particular aesthetic problems from which the definitions are drawn -- to introduce us to the necessity of seeing how interrelated are the various factors which make up this field.\(^5\)

Obviously no single approach can deal with all the complexities of art, and no single choice needs to be made so long as each theory is viewed as one way of describing the phenomenon of art rather than as a definition of it.

Then it becomes possible to say that this work, and others similar to it, are commonly called works of art, but that all works of art do not necessarily have these common characteristics. This allows us to identify and describe the actualities of a particular work of art, while it does not limit the conditions under which a work can be called a work of art. Viewing different theories as descriptions also allows us to focus on particular approaches to the nature of art in depth, while recognizing the necessity for considering other approaches as a means to more comprehensive understanding.

The particular value of this point of view to me is the insight it provides for viewing different approaches to the study of creative behavior.

Whatever approach is taken to the study of creative behavior needs to be regarded as a means for describing particular aspects, rather than limiting conditions. Creativity, like art, is an expansive concept. What is going to be called creative behavior must be left open for how creative people will behave; otherwise, it will dictate what people can do and still be called creative. To set the limits within which behavior can be called creative, means that every specific action which might be called creative must be drawn into a conceptual framework which can be applied to all of them. The problem here, as in aesthetics, is the range of facts which can be taken
into account in any particular approach. Any single approach would need to be both specific and general, and would also run the risk of becoming too narrow or too broad to be useful in dealing with the variety of actualities of creative behavior.

If the limits of what will be called creative behavior cannot be defined, the question of identifying and evaluating actual behavior still remains. Taken as descriptions rather than as definitions, different approaches to explaining the nature of creative behavior allow us to view the problems in a variety of ways without the necessity of claiming that each approach can deal with every instance of creative behavior. We can then view behavior in terms of how different elements function within it, without claiming that all creative behavior has these elements, or that these elements function in a particular way in all instances. This point of view recognizes the importance of different possible approaches to the study of creative behavior and their contributions toward more comprehensive understanding of it. It points to their usefulness in calling attention to the functions of elements, aspects, or relationships within acts of creativity which may have been neglected in a single approach. Each has to be seen as another facet for describing a complex phenomenon of human activity.

From such a multi-directional point of view it becomes
much more difficult to identify and evaluate creative behavior. It is easier to recognize "much" or "little" creativity in terms of a definition as compared to a description of creative behavior. But recognizing this difficulty and accepting the fact that limits cannot be imposed on the conception of creativity, it remains possible to deal with what we will call creative behavior.

We can describe how certain elements function in relation to other elements within specific actions. These instances of action, and others similar to them, we can call creative, but we must recognize that other instances of action also commonly called creative do not necessarily include the same elements in the same relationships.

The difficulty with this point of view is that every man can become his own critic of creative behavior. However, as in aesthetic theory, this does not mean that "everything" or "anything" can be identified as creative. The obligation is to recognize the range and depth of possible elements and their relationships. In any single instance, other approaches and other evidence need to be brought to bear on the problem if the intention would be to arrive at a comprehensive description. Identification, description, and evaluation of creative behavior needs to be made with due recognition of the limitations of the particular approach that is taken and what it takes into account.
A number of approaches have contributed to my understanding of why and how human beings are able to behave creatively. These are creative behavior as a drive in all forms of life and creativity as aspects of psychological processes.

One view of creativity attributes creative behavior as an inherent capacity of all life forms to maintain and fulfill themselves. This is an appealing view, for it allows the concept of creativity to be applied to all living things. We can thus describe why a dandelion will grow through concrete to fulfill being a dandelion. We can also use it to describe some of the aspects of man's creative behavior. Mooney does so in these terms:

A plant reaches out to take chemicals from the soil to compose them into something of value within the living system of the plant. A man, likewise, reaches out to include forms from his environment (internal and external) to compose them into something of value within the system of his life. By such means, living things are able to fulfill their lives. This is the dynamic of life. It is also the process of creation.

Although natively creative, man can be more or less clumsy in fulfilling his creative potential. There is a lot to a man, a lot to the universe - many levels and orderings. One can compose a little or much; potentially there is always more. How much one composes depends heavily on the orientation of his conscious behavior.

Although creativity is an inherent capacity within

man, he often inhibits his own fulfillment by the way he perceives his needs and directs his actions. Man is able to manifest what we call creative behavior in many different ways, not all of them ultimately instrumental to self-fulfillment even while they are directed toward that end.

Approaches to creativity as a psychological process have helped me understand why creative potentialities are not always fulfilled and the implications this has for understanding creative behavior in the arts.

The "orientation of his conscious behavior" to which Mooney refers depends on processes of perception and evaluation. We choose courses of action because we see value in them for self-fulfillment. While these processes are not always carried on at the level of conscious awareness, they affect conscious behavior.

Some of the concepts of psychoanalytic theory have helped me understand the importance of the roles that unconscious motives and processes may assume in creative behavior. While these processes are not focused on in this study, some insight into them is essential for understanding aspects of creative behavior which are more or less inaccessible to direct observation. They have also helped me to formulate my own conceptions of differences between creative and non-creative behavior in the arts, through awareness of the differences in levels of psychic involvement one may maintain in behavior.
Freud's view of creative behavior in art as the sublimation of conflict allows little autonomy for creative behavior; the images the artist makes are always symbolic of his inner conflicts and disorders. Yet autonomy from inner conflict, although it may be the original source of motivation, seems to be a requisite for creative behavior. Kris enlarges on Freud's view to incorporate other conceptions which he uses to describe how autonomy and control over instinctual needs emerge in creative behavior:

We have come to view psychological conflict not only as an unavoidable accessory to personality development, but also - within certain limits - as an essential ingredient and incentive. We are about to study ego development not only in relation to typical conflicts, but also as far as the ego's capacities and functions emerge from conflict involvement and acquire autonomy.

According to Kris, the "aesthetic illusion" is the means the creative person employs to discharge and gain control over energy from his instinctual needs with both pleasure and safety. The artist removes himself from his personal conflicts by projecting them into a medium

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9 Kris's explanation of the "aesthetic illusion" is complex and involved. He makes use of concepts of "id," "ego," "displacement" and "transformation" or energy, "neutralization," and others.
in which he can test their "reality" apart from his involvment and without risk. Kris's view of sublimation differs from Freud's in that he sees the maintenance of the "aesthetic illusion" as both a means to resolve conflicts and to gain control over them. He sees creative behavior as ultimately bringing more satisfaction than the resolution of the conflicts which may have motivated it, and thus achieving autonomy.

Differences between creative and non-creative behavior in the arts would appear to depend to some extent on levels at which the "aesthetic illusion" was able to be maintained. Here Kris employs concepts of "over-distance" and "under-distance" to explain the relative amount of control that unconscious instinctual demands exercise in behavior. As long as the "aesthetic illusion" is maintained at a level enabling the artist to identify himself with the deep-lying feelings expressed in his work without their controlling his behavior, he can behave creatively. "Over-distance" would prevent identification and any discharge of energy from instinctual needs; "under-distance" would allow these needs to assume control over behavior.

Kris's concepts can be used to describe the need for both involvement and detachment in creative behavior. Involvement allows the artist to sense significance and meaning in the forms he makes, and detachment allows the activity to become autonomous and significant in itself.
Other aspects of creative behavior can be differentiated and described by using concepts in theory of perception. In particular, Bartlett's concepts of constructive imagination and thinking have given me some insight into how differences in modes of perception may affect creative behavior. According to Bartlett, the chief differentiations between constructive recall, constructive imagination and constructive thinking are in the range of material over which they move and the precise manner of their control. Recall is "schematically" determined. The circumstances which lead us to remember arouse attitudes which are directed toward specific "schemes." In constructive imagination, however, the "scheme" is not pre-determined by the initial attitude. The construction develops as it proceeds, and points of interest also develop along with it. Material from various "schemes" may be combined in unexpected and unusual ways, and the only control is that the materials have significance together. Constructive thinking differs from constructive imagination only in the control that the topic of thinking demands, as in science or in standards independent of individual idiosyncrasy in literature, art, or philosophy.

Bartlett has given me some insight into flexibility and imaginative play in creative behavior. Putting his

conceptualizations of constructive imagination and constructive thinking together seems to describe and differentiate creative from non-creative perceptual processes in creative behavior. On the one hand, the flexibility with which materials were combined in "constructive imagination" might be so great as to fantasy itself into nothingness in the way of creative behavior. On the other hand, too little flexibility would not allow the free play and juxtaposition of materials with each other and would thus result in predetermined and non-creative behavior.

Another approach to studying actions involved in creative behavior has been to collect statements from persons judged to be creative about their work. These statements are analyzed to find out how these people acted when they were behaving creatively. One of the problems of this approach is that the creative persons themselves may be unaware of the significance of their own behavioral processes and unable to describe them, or they may even be in error in their attempts to recall events which occurred during the progress of their work. Speaking of the material written by artists in various creative fields in his "Introduction" to The Creative Process, Ghiselin says:

Some of this material is conflicting. Part of it may have been shaped by the individual limitations of the writers. Its authority cannot be regarded as absolute. It is more
manageable and meaningful when understood in terms of the general principles by which it should be tested, and which in turn it should test and illustrate.\textsuperscript{11}

Another problem in this approach is the basis from which principles will be abstracted from the variety of behaviors and incidents reported by the writers. The interpreter of this material will have to make sense out of it in terms of his conceptual framework about creative behavior. It, therefore, seems to me that two reservations need to be made: (1) other conceptual bases for understanding creative behavior need also be used to interpret the material and abstract principles from it, and (2) the principles abstracted need to be seen as descriptive rather than definitive.

The principles abstracted from such data should, as Ghiselin points out, be capable of testing and of being tested by the material from which they were abstracted. While these principles must be general enough to include a variety of incidents, they must also be capable of describing the actualities of creative behavior. They need to be regarded only as segments within the total functioning of an artist's behavior. Other unrecognized, or seemingly irrelevant principles may also operate within his behavior, and the dynamics of their interfunctioning may be infinitely variable.

Another way to study actions involved in creative behavior is direct observation of creative persons at work. The problems here are somewhat similar to those encountered in studying the statements of creative people. Some overt actions may seem to have little relevance and others which have much relevance may be inaccessible for observation. In either case, inferences have to be drawn from what can be observed, and these need to be made in terms of a framework which enables the interpreter to make sense out of what he is observing.

Observations of creative persons, whether drawn from their own reports or from direct observation of their ongoing behavior, seem to reveal that deep personal involvement, sensitivity and receptivity to experience, and capacity to express the meaning of experience through artistic channels are characteristic of most creative persons. Creative people manifest these kinds of behavior in many different ways. Ghiselin describes some of them in this way:

In all this it is clear that creative minds feel drawn toward specific material with which to work; the creative impulse is no mere appetite for novelty for it is highly selective. It is so even when governed by no explicit idea of its end... The end to be reached... is some specific order urged upon the mind by something inherent in its own vital condition of being and perception, yet nowhere in view.\textsuperscript{12}

\textsuperscript{12} Ghiselin, \textit{op. cit.}, pp. 10 and 14.
The desired new order implicit in the stir of indeterminant activity cannot be seized in the abstract; it must crystallize in terms of some medium in which the worker is adept. Without craft it will escape.\textsuperscript{12}

Mooney has also worked with statements by creative people and has systematically categorized them, arriving at four dimensions: "(1) openness for the reception and extension of experience, (2) movement toward differentiation and realization of self, (3) disciplined management of means to significant experience, and (4) aesthetic ordering of the forms of experience."\textsuperscript{13}

These dimensions refer broadly to all the behavior items gathered from various sources which he considered in constructing his "Indices of Creative Behavior." Mooney's categories have been valuable to me as a basis for formulating the descriptions of creative behavior used in this study.

Another helpful source is the work done by Barkan, Hausman, and Pepinsky toward building theory about the nature of creative experience.\textsuperscript{14} From their observations of the behaviors of people at work, they hypothesized a continuum with "fixed relationships" at one extreme, and "flexible relationships" at the other. "The individual


\textsuperscript{14} Manuel Barkan and Jerome Hausman, \textit{op. cit.}. 

acting within 'fixed relationships' has a 'clear image' of what he is going to do. The one acting within 'flexible relationships' holds many possibilities open for choice." They hypothesize further that people near either extreme of this continuum are not creative. Those requiring "fixed relationships" are not open to their experiences; those who are too open to possibilities are unable to make decisions for action.

From observation of children at work, Barkan and the others arrived at the concepts of "official" and "private" tasks from which they hypothesize that in the context of a given task, the person behaves creatively only when the situation allows him to see and accept a role for himself.

Still another source I have used for the description of creative behavior in this study has been material focusing on behavioral manifestations in the products of creative art activity. It is relatively simple to evaluate art works independently of the person who produced them. No concern needs to be taken for the person's behavior as he did them. Depending on the particular aesthetic view of the critic, certain principles of aesthetic form and organization can be applied to evaluate a work of art. It is a different matter, however, to deduce from the art work the kind of behavior which went into its creation. Certain

15 Ibid., p. 133.
accidental effects may give a work of art the appearance of having been done by a creative artist. On the other hand, some works may not reveal the depth and quality of creative effort which went into their production. It must be recognized, however, that because only little attention has been given to behavior as revealed in art work, inferences made from the observation of art work for indices to the processes of their production are made on shakier ground, insofar as corroboration from sources in the literature is concerned. Lowenfeld's work on the development of children's visual conceptions has proved most valuable in this regard. 16

While Lowenfeld's analysis of children's work does not contribute directly to the problem of this study, the relationships he postulates between behavioral characteristics and visual forms and organization in art work is most relevant.

Lowenfeld bases his analysis of children's development through art on the psychological relationships revealed in their art work at different age levels. Each age level has its accompanying characteristics of visual representation which reveal something of the child's psychological orientation and his total pattern of development. These characteristics are seen in the ways the child expresses

self-identification in his work; his awareness of self and
environment; his visual and motor coordination; his sensi-
tivity to kinesthetic, visual, and tactile stimuli; his
identification with others; his integration of feeling,
thinking, and perceiving; and his individuality and origi-
nality. The characteristic ways that the child represents
the human figure, his representations of space, and his
use of color and design in his art work are the indices
Lowenfeld uses to evaluate the child's total developmental
growth.

Lowenfeld's work is useful in suggesting ways to look
at art work as revelations of the behavioral characteris-
tics which went into their production. While his material
is directed toward evaluating developmental stages in
children's work, it is helpful in devising criteria for
viewing the art products of the subjects in this study.

Schaefer-Simmern's work was also helpful in suggesting
ways to view a person's art work. One of the problems en-
countered in evaluating a student's work is the wide varia-
tions of levels of visual conception that are demonstrated.
Since the subjects of this study had little or no prior
art experience, their work often showed striking resemb-
lances to that of children. Schaefer-Simmern's work
throws light on the reasons for this:
If one takes into consideration that the child grasps the world preponderantly by means of perceptual experience then the creation of unity of form is his way of reaching cognition. His modest artistic activity thus becomes indispensable to his mental growth. All normal children display this inner drive for pictorial creation...

But because in the course of general education, attention is still mainly directed toward acquisition of conceptual knowledge, the child's spontaneous drive for visual cognition is neglected. As he grows older, the creative urge diminishes. It is therefore understandable that in most persons visual conception and its pictorial realization are not developed beyond the stages of childhood. But the ability itself has not vanished. It is always latent and can be awakened. A revival of inherent artistic abilities can only start, however, from the individual's stage of visual conception.17

Schaefer-Simmern says further: "The need for pictorial realization of his own visual conception compels the individual to establish his own artistic viewpoint."18

In terms of the problem and subjects in this study, it would seem that the students who were studied are indeed at very early levels of visual conception on entering the course.

The conception of creative behavior which I have used in this study has grown out of the sources that have been described. I am assuming that creative behavior in art activity is characterized by: (1) deep personal

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18 ibid., p. 199.
involvement with experiences, (2) flexibility in action, feeling, and thought, and (3) capacity to give aesthetic form to the expression of experience in art work. I hold this conception which all the reservations I have mentioned earlier in the discussion, recognizing that behavior in art may also be viewed from other vantage points, and that the view that I am taking here for the purposes of this study only partially describes the complex functioning of these and other characteristics of the behavior of a creative artist.

The art works of a creative person seem to be characterized by visual forms and organizations which reveal his involvement and identification with the experience expressed in his work. The organization of these forms reveals both openness to the experience and capacities to give it aesthetic visual form and order. As in the behavior involved in making an art work, the forms and organizations which reveal these behavioral characteristics are infinitely varied. They need to be analyzed in terms of principles which describe them, but do not limit them. In addition, no single art work may be expected to reveal characteristics of the behavior of the artist. Several need to be examined in order to discover the artist's characteristic behaviors through his art productions.
Learning in Art Activity

One of the questions relevant to this study has been the generalization of learnings from one activity to another. As has already been indicated earlier in this chapter, the initial conception of the study problem was concerned with the transfer of modes of behavior from art activity to other non-art activities. While this is no longer the focus of the study, learning theory has implications for the teaching procedures which have been followed in the study situation.

Materials from psychology summarized by McGeogh and Irion have supplied some of the background for my conception of learning.¹ These authors point out that "...general principles are one of the most important vehicles of transfer."² They add, however, that the mere acquisition of a principle is not a guarantee that the principle will be used in other situations, regardless of its applicability. They identify specificity of principles to particular kinds of activities in which they are learned, and, in some cases, dis-similarity of activities as deterrents to transfer. "It may be possible, however, to train individuals to apply general principles more widely if specific training is given in that form of behavior and if the learner

² ibid., pp. 329-330.
is taught to analyze similarities between old and new situations."³

Thus it would seem that behavior learned in one art activity if it were learned in terms of principles, would carry over to another art activity, or in some cases to another kind of activity, depending on the ability of the person to identify similarities between the "old" and the "new" activities.

McGeogh and Irion's summary of transfer of learning does not deal with how people analyze principles or similarities between different kinds of activities except in terms of verbal instruction. But much of behavior in art is non-verbal and resists verbal instruction. They speak of insight in relation to transfer, noting earlier that "...the value of the concept of insight for explanatory purposes is highly questionable."⁴

In her discussion of Gestalt psychology, Heidbreder identifies insight as "a patterning of the perceptual field in such a way that the significant relations are apparent; it is a formation of a Gestalt in which the relevant factors fall into place with respect to the whole."⁵ Viewed as a gestalt, insight may be a part of the process through which principles can be seen as relevant to different

³ *ibid.*, p. 329-30.
⁴ *ibid.*, p. 53.
activities. It seems imperative, however, that principles of behavior have to be learned through active participation.

A convincing demonstration of the role of active participation in learning is the "distorted room" of the Visual Demonstration Center. When a person sees the room as square from a particular point of view, even while he knows that from all other points of view it is distorted, he is unable to act on the basis of his prior knowledge. When he is asked to hit the "mouse" in the corner, he errs in his judgment of its distance from him and strikes the back wall of the room. After practice, however, he learns to hit the "mouse" accurately. His learning is dependent on his activity directed toward the goal of hitting the "mouse." His activity allows him to reorganize his perception of where he and the "mouse" are. This reorganization of perception involves kinesthetic awareness as well as knowledge about the location of his goal. This is affirmed by the experience of those who observe one person's learning to hit the "mouse," but are unable to do so themselves until they have experienced it. This occurs even when verbal explanations have been made beforehand. The "whole" person is involved in learning.

6 The Ames Demonstrations, in the Visual Demonstration Center at The Ohio State University, used frequently by the writer as a teaching resource to demonstrate the role of perception in behavior and learning.
It is not until the person's attention is directed toward the processes involved in learning to hit the "mouse," however, that he is able to speak of his actions in terms of principles. Cantril offers an explanation of the way that experience comes to be understood. In describing experience, "some focusing, categorization, and coding are operating in the process of dealing consciously or verbally with any selected experiential aggregate." In conceptualization of experience, Cantril says that "focused analysis" differentiates this level of understanding from description of experience. By implication, this is the process through which abstractions are derived from experience. This seems to me to point clearly to awareness as a major factor in enabling people to transfer principles from one act to another.

Mooney approaches the same problem in this way:

In the full life scale, maturation thus progresses from (1) immediately experienced specific occasions, (2) to differentiated lines of experiencing, (3) to common realizations within many modes of experiencing, (4) to universality. Each stage is a development out of the preceding stages as "figure emerging out of ground."

Mooney's third point implies that as people perceive common principles among varieties of experiences they are

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able to relate the modes of experience involved in them. His fourth point leads to a complete realization of the unity of principles in all experience.

Applied to this present study, these conceptions of learning have been integrated into my teaching procedures as well as taken as assumptions in the study problem. Learning is an active process, involving the "whole" person. Capacity to relate principles from one experience to another grows as the person is able to perceive significant relations in his immediate experiences and then to conceptualize these into abstractions at the level of awareness. This increasing awareness of one's own behavior and the principles involved in it "fits" with my own experiences, both as an artist and as a teacher. How this conception of learning is reflected in the teaching procedures followed in the study will be shown in Chapter V where the study situation is presented in detail.

Research Design

Another of the major problems in this study has been the appropriateness of the research methodology for investigation of the question. Study in social psychology and sociology have been helpful in providing insights into the limitations and potentialities of both the question for study and the study situation. To a large extent, study in these fields has also influenced the development and current formulation of the study problem.
Initially the study problem implied causal relationships among a number of variables in creative behavior. My reading in sociology has made it increasingly apparent that much more precise knowledge and much greater control than we are currently able to achieve is necessary to establish causal relationships about questions concerning creative behavior in art. "Every alleged cause is relative to a whole dynamic system and can be properly assessed only in the light of our comprehension of that system." Since we are not yet able to comprehend fully the "system" involved in creative behavior in art, our efforts need to go into seeking out relationships within it before we can make generalizations which imply cause. As I became increasingly aware of the complexity of the question, and the necessary limitations on causal inquiry, the causal implications were eliminated from the formulation of the study problem.

Study in another aspect of research design has been helpful in handling the data gathered in the investigation. Evaluating this data was a major problem involving reliability among raters. According to Heyns and Lippit, factors which can influence reliability among raters include: (1) the amount of inference required of the rater, (2) the amount of material which is to be rated, (3) unclear definition of the limits of the data, (4) the amount

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of training for the ratings, and (5) the rater's private frame of reference. It would seem to follow that data need to be as clearly indicative of the criteria as it is possible to make them, so that excessive inferences are not required. In addition, irrelevant materials and the total quantity of material to be evaluated should be kept to a minimum. The frame of reference from which the raters approach their task also needs to be clearly understood and accepted for the task.

All the materials reported here have been helpful both in formulating the study problem and in developing the methods followed in this study. They have also helped in drawing implications for methodology for future studies as my reading became "real" to me in the experience of conducting the study.

Personal Art Experience

My own experience as an artist has both reinforced and been reinforced by what I have learned from my reading and study. The ultimate source of my conception of creative behavior in art has been the testing in my own experience against what I have observed in my students, read about, or otherwise experienced vicariously.

My personal art experience has led me to feel that awareness of the significance of one's own actions has a relationship to the creative quality one is able to attain in his experience and art work. I feel very deeply that this is valid for me. My reasons for questioning its validity as a way to teach others in art stem not only from the complex nature of awareness of one's own actions, but also from the recognition that I do not fully understand the dynamics of my own behavior as an artist. A brief comment about my personal history will illustrate my meaning.

My early training in art was concentrated on manipulative skills and techniques. There was little or no opportunity in this experience for personal direction or design. In spite of this, I felt a deep sense of identification with being an artist. At the same time, however, I was becoming more and more dependent on direction which was outside my own feelings about the matter of art. I finally reached the point where I had to recognize that my work was inadequate, and I knew no ways to improve it. This resulted in a long period of non-participation in art for me. Whatever creative potential I had for art laid down quietly, or was channelled into such directions as sewing.

When I later became involved in art training and experience, I was placed in the position of having to choose
my own directions and to design the experience for myself. The long period of time between these experiences may have prepared me in some ways to endure this challenge with some chance for success. I underwent some pain and a great deal of insecurity. And as I worked, I became conscious of the need to understand why certain results occurred when I approached my work in certain ways. I cannot honestly say I came to this realization spontaneously or without assistance. The climate I worked in was sympathetic and also stimulating. And at the same time, I was engaged in reading and study which focused my attention on the behavioral aspects of creative activity in art.

As I continued to be more concerned with my own actions as an artist and the effects they produced in my work, I could see changes in both myself and my work. I was able to express more of my own feelings in what I was doing, I was able to design with more originality and I was becoming a more able craftsman. In addition, I was feeling more secure, and I felt a sense of significance and meaning both in the experience and in what I was making.

In some respects I believe my own experience has given me a good deal of empathy for those students of mine who have had similar early experiences in art activity. It is easy for me to understand their apprehension and insecurity when they are faced with the task of performing in an activity in which they have found little success. I once
remarked to a student about my early experiences and my feelings that I was still unable to paint as I wanted to. The student replied: "Well, Mrs. Mitchell, you ought to take our course some time!" The fact that the student could not paint well has little to do with the implication of her statement.

In my own experience it has been awareness of the significance of my own behavior as an artist which has led both to being a better artist than I was and to the value I place on the experience of being an artist. Those characteristics I am studying in the behavior of the subjects in my study are also characteristics which have appeared to me as important in my own behavior.
CHAPTER III
DEVELOPMENT OF THE STUDY PROBLEM

There have been four stages in the development of the study problem, each of which has been an effort toward clarification and manageability. At each developmental stage I encountered problems, implications, and variables I had not taken into account or could not control. As these became apparent, the formulation and the specific focus of the problem was changed. These stages are presented here chronologically and in detail, to show the evolution of both the problem and my thinking about it.

First Problem Statement

If people who become deeply involved in a creative art experience can perceive their behavior as creative, then they can abstract principles from this behaving which will enable them to behave more creatively as they deal with other situations within their experience. They must perceive their behavior as satisfying and "good."

This first formulation of the statement was made during the autumn of 1954, as a culmination of my analysis and reflections over my teaching experience of that summer.¹

The statement now seems obviously unwieldy and incapable of study in a single effort. But it was not until I had attempted to find ways to study it that I became aware of all of its implications and the problems it contained.

During the winter of 1955, I had the opportunity to present this statement to a seminar of Fine Arts graduate students and faculty. The presentation included my views on the problem and some tentative plans for its study. Following is a brief resume of my presentation.

I saw the key to the problem in the way a person perceived his behavior in his art work and in his other activities. Three factors might affect ability to become aware of his behavior: (1) his past experience, (2) differences in the nature of the activities, such as their symbolic forms, and (3) the psychological risk involved in self-awareness. Some assumptions were implicit in the problem: (1) creative behavior can be distinguished from non-creative behavior, (2) all people can be creative in art, (3) people can be creative in some kinds of activities while not in others, and (4) creative behavior is "good."

Tentative plans were to study the problem in a class of elementary education majors, for these reasons: (1) classes were always available, (2) students were generally unfamiliar with art and changes in their work could

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Seminar in Art Education, conducted by Dr. Manuel Barkan, and attended by Dr. Frank Seiberling, Jr., Dr. Jerome Hausman, and Professor Donald Wood of the Fine Arts faculty.
easily be observed, and (3) the problem would be studied within the context in which it originated.

Plans for collecting data were at that time incomplete but it seemed possible to include students' art works and some kind of information about behavior in art and other activities. The students' own analyses of their working processes promised to serve as data for perception of their behavior in art. Since it was not possible to observe behavior outside the art situation, some kind of questionnaire was considered in order to reveal their behavior in other activities. Responses to these questionnaires could then be compared to statements the students made about their art behavior.

The need for clarification of the problem became readily apparent in the discussion which followed the presentation. Some of the questions were:

1) Assuming there is a causal relationship between creative behavior in art and in other activities, how did I propose to identify it?

2) How would I find out when people were "deeply involved in a creative art experience"?

3) How would I find out they perceived their behavior as "creative," "satisfying," and "good"?

4) How would I assess the "psychological risk" involved in a given person's self-awareness?

5) How would I evaluate the creativeness of people's behavior?
6) What kinds of "other situations" did I propose to study?

7) How would I assess the effect of "past experience" on self-awareness?

8) How would I deal with the differences I suggested in the nature of creative behavior in art and other activity?

I was not able to find answers to all these questions at the time. During the next year, preceding the second problem statement, I continued my study and teaching. The problem began to take a sharper focus as I discovered new insights through these experiences.

It became apparent that the causal agents implied in the problem would be difficult to identify and separate. A great many variables were included, and the relationships among these were not yet clearly understood. Thus, I saw no way to establish priority for "deep involvement," "perception of behavior as creative," or "perception of behavior as satisfying and good." In addition, I began to see the complexity of other elements in the problem. I have already indicated that past experience, differences in the nature of activities, and psychological risk appeared to be probable significant factors influencing perception of a person's own behavior. I had to recognize that any one of these factors could furnish material for a major study of the role of self-perception in creative behavior.
It also became apparent that the situation I proposed for study would contain other variables which I could neither identify nor control. If I were to try to study the causal relationships in the problem, these other variables would have to be isolated. Furthermore, these variables would probably be different for each student, since each was subject to varied influences about which I could know very little. The full implications of this aspect of the problem did not emerge at this time, and I continued to think in terms of studying the transfer problem.

Another realization which emerged was the limitations of the situation for the kind of data I could gather. I would be limited to observations only within the art situation. This meant I could not observe overt behavior in other kinds of activities, but would have to depend on some kind of indirect information such as attitudes about behavior.

The most important realization concerned the nature of the problem I was attempting to formulate. Stripped of the elements I could not control, the problem was reduced to three variables: (1) derivation of principles from creative behavior in art, (2) behavior in art, and (3) attitudes about behavior (or behavior) in other situations. These three variables were the bases for the next formulation of the problem.
If an individual is enabled to derive behavioral principles from his actions while working in the visual arts, his behavior in his subsequent art activity will tend to become more creative, and he will also tend to become more creative in his expressed attitudes about behavior in other fields of activity.

This formulation was presented at a meeting of my doctoral committee in May, 1956. A brief summary of the implications of the statement and a proposed research design follows: The purpose of the study would be to determine the significance of an individual's capacity to derive behavioral principles for increasing his creativity in art and other activities. The problem would require study of an individual's behavior in two contexts: (1) art experience (his attitudes about his art behavior and his behavior in art), and (2) experience in other areas (his attitudes about behavior in other activities).

I proposed to evaluate the creativity of both behavior and attitudes through the use of descriptive criteria composed of behavioral characteristics currently being ascribed to creative behavior in art. These would include such characteristics as flexibility, rigidity, tolerance.
for ambiguity, ability to focus on a task, and involvement. They would be assumed as components of creative behavior in the study.

The study would be conducted in a class of elementary education majors. Teaching procedures would follow the regularly established purposes of the course. In addition, I would focus on: (1) providing conditions in which students could behave creatively in art, (2) guiding the students to become involved in their work, and (3) guiding them to evaluate their art work and pay attention to their own actions while they were at work.

The data would consist of three kinds: (1) papers written periodically by the students to reveal awareness of their own behavior in terms of principles derived from their engagement in work, (2) all the art work produced by the students over the period of the course, and (3) responses to a questionnaire which would reveal their attitudes about behavior outside the art situation. This questionnaire would be given at the beginning and at the end of the course. All these data would be evaluated in relation to the behavioral characteristics I was assuming for creative behavior.

An analysis of the data would be made to determine changes which occurred during the quarter. These would include: (1) changes in attitudes about behavior in art, indicating that students had or had not derived principles
from their art experience, (2) changes of behavior in art activities, indicating that students were or were not more creative, and (3) changes in attitudes about behavior in other activities, indicating that students' attitudes about such behavior were or were not more creative.

I proposed to carry out a pilot study during the summer of 1956, for the purpose of developing and refining questionnaires, writing assignments, and the criteria I would use for the evaluation of the students' verbal responses and art products. Suggestions and comments from my doctoral committee were as follows:

1) The problem should be further clarified and simplified. The inclusion of "other" behavior was questioned further. A study of behavioral characteristics in art activity seemed sufficiently broad for a study.

2) Attention should be given to the data I would seek from the students in relation to the behavioral characteristics I proposed to study.

3) Attention should be given to the development of the study as well as to the study problem itself. The development of the study and my involvement in it could become the focus of the dissertation.

4) The proposed pilot study should be conducted.

After seriously considering the committee's suggestion to clarify and simplify the study problem, I began to
realize more fully the implications of including behavior in activities other than art. Although there were undoubtedly similarities between creative behavior in art and other activities, not enough was known about the nature of either to assume they were alike in regard to the characteristics I would study. Such differences as purpose, symbolic forms, materials, and consequences of action might conceivably mean a difference in the organization and function of these behavioral characteristics in different kinds of behavior. These factors would need to be studied in both kinds of behavior before it could be assumed that both kinds would become more creative under the same circumstances. As a result, I decided to focus the study on behavior in art activities.

I also gave serious consideration to the committee's suggestion that the development of the study problem and my involvement with it could become the focus of the dissertation. I felt strongly, however, that this could not be done apart from continued serious involvement with the study problem itself as the principle focus. I decided to write brief notes about my involvement in the progress of the study with a view toward possible inclusion of this kind of material in the dissertation if it proved significant.

I decided to conduct the proposed pilot study and simultaneously to start the development of needed research
instruments. This "pilot" study was later incorporated as a part of the "real" study. Those aspects of the "pilot" study which contributed to the development of the research instruments are described in Chapter IV. The conduct of the study and the data obtained from it are described in detail in Chapter V.

**Third Problem Statement**

If an individual is enabled to derive behavioral principles from his actions while working in the visual arts, his behavior in his subsequent art activity will tend to become more creative.

The significant difference between this and the second statement of the study problem was the omission of behavior in activities other than art. This remained the "working hypothesis" for the study until after the data had been gathered.

During the summer of 1956, I conducted the "pilot" study and worked toward developing the research instruments. At the end of the summer, I decided to continue the study with another group of students during the autumn quarter using questionnaires and writing assignments similar to those developed during the summer. The criteria for evaluation were not yet developed. I planned to concentrate on this during the autumn while I was conducting the study.

During the process of developing the criteria for
evaluating the data, it became apparent that I could not support the causal implications in the study problem. There were too many unresolved and unknown relationships involved in creative behavior in art to assume that the characteristics I was studying were "causes" for creativity in art. Another realization also emerged. I would not be able to infer from the data that the subjects were relatively "creative" or "non-creative." The structure and organization of creative behavior in regard to relationships among its characteristics was also an unknown. The characteristics I was studying might indeed be components of creative behavior. I could not, however, hypothesize their qualitative weight or the degrees of their presence in the behavior of given "creative" persons.

I also realized that the data I had gathered were not appropriate to measure changes toward creativity in the behavior of the subjects. This was a function of the way the data has been gathered. A questionnaire had been given at the beginning and at the end of the quarter. Data other than from this questionnaire were also collected throughout the quarter, but no single writing assignment had obtained enough data to evaluate all the characteristics under consideration at discrete points in time.

Two further limitations for the study, therefore, emerged and had to be considered: (1) changes in behavior could not be evaluated from the data collected, and (2)
"causes" for creativity could not be supported on the basis of the data. The focus of the study then became modified toward discovering the relationships among the characteristics I was studying in the attitudes and behaviors of the subject.

**Fourth Problem Statement**

There are significant relationships between a student's capacities to derive behavioral principles from his art experience and his capacities to manifest them in his behavior in an art activity.

This is the present statement of the study problem. It represents a continuous struggle for refinement and clarity throughout the entire progress of the study. Implications and inferences derived from studying this problem are the subject of discussion in Chapter VI.
CHAPTER IV
RESEARCH DESIGN, CRITERIA, AND INSTRUMENTS

The research design was developed in relation to the requirements of the study problem and the nature of the study situation, and includes: (1) teaching the classes in which the study was conducted, (2) gathering data from these classes, (3) evaluating the data obtained, (4) analyzing the evaluations of the data, and (5) drawing conclusions and inferences from the analysis. Carrying out these steps required the development of: (1) teaching procedures appropriate for conducting the study, (2) instruments for gathering appropriate data, (3) descriptive criteria and instruments for evaluating the data, and (4) methods for analyzing the evaluations of the data. The teaching procedures, data gathering instruments, criteria for evaluation and methods of analysis are described in detail in the following sections.

Teaching Procedures

The teaching procedures I used in the two classes which served as the study situations did not differ significantly from those I normally use in similar classes. These procedures, however, are an important consideration in view of the study problem. If the students were to derive behavioral principles from their art experiences in these classes, they would need to have explicit
opportunities to do so. To clarify the kinds of procedures I would follow for this purpose, I set forth the teaching goals I would make explicit. A basic assumption in outlining these goals is that participation and experiencing are necessary for deriving principles from specific actions and experience in art. I viewed the goals as follows:

1) **Students should have opportunities to become personally involved in their art work.** Specific assignments should allow students to take their own points of view about the tasks. Opportunities for personal choices among different materials and activities should also be provided. Personal points of view should be respected and valued. Personal standards should be encouraged.

2) **Students should have opportunities to behave flexibly in their art work.** Specific assignments should allow students to explore alternative solutions to the tasks. Opportunities to explore a number of materials and activities should be provided. Different points of view expressed in art work should be respected and valued. Prescribed standards should be discouraged.

3) **Students should have opportunities to develop and use aesthetic criteria in their art work.** Evaluations of the students' work should lead them to
awareness of principles of aesthetic organization in their work. They should have opportunities to evaluate the work of professional artists. Aesthetic standards should be applied in relation to personal standards for their art work.

4) Students should have opportunities to pay attention to the behavioral principles by which their art work and their attitudes were being evaluated. Evaluations of the students' own work and that of professional artists should focus on a variety of ways that the generalized behavioral principles used in this study may be manifested in specific art works. Writing assignments should allow the students to view different aspects of their art experiences in terms of these principles.

During the progress of the study I kept daily records of the procedures which were followed in the classes. These records served two purposes: (1) they guided me in formulating the next activities of the class, and (2) they furnished a complete record of the procedures followed throughout the conduct of the study. A summary of these records is presented in Chapter V.

Instruments for Gathering the Data

Data were needed to reveal the students' level of awareness of the behavioral principles in relation to the degree to which these principles were reflected in the students'
behavior in art activities. Two kinds of data were, therefore, required: (1) about awareness of behavioral principles, and (2) about behavior in art activities. The particular kinds of data gathered also needed to have the advantage of "standing still" for observation and analysis. In addition, the nature of the data was limited by their availability in the study situation.

Many of the interactions going on in the situation would have furnished rich data for the study, but these would have required outside observers to record. In the classroom situation, however, I had the dual task of observing and teaching. Data had to be found which would fulfill the requirements of the study and, at the same time, be accessible for me to observe while engaged as the teacher. In view of both the requirements and the limitations, I selected the verbal attitudes written by the students as appropriate data for revealing their capacities to derive behavioral principles, and their art products as appropriate data for demonstrating behavioral principles in their art activities.

In order to gather the verbal attitude data, I designed writing assignments to reveal: (1) the students' personal involvement and points of view about their art experiences, (2) their flexibility in approach to these experiences, and (3) their capacities to plan and evaluate their experiences in terms of aesthetic criteria. Two kinds of
assignments were designed for this purpose.

The first kind of assignment was a short questionnaire given at the beginning of the course. The information requested was: (1) the students' feelings about their previous art experiences, (2) their conceptions of appropriate subjects for paintings, (3) their conceptions of the qualifications of a "great artist," (4) their attitudes and expectations on entering this course, and (5) their preferences among three reproductions of paintings by professional artists. Another similar questionnaire was designed to be given at the end of the quarter.

The second kind of writing assignment was more general. Although specific areas were indicated for discussion, these assignments allowed the students to express their views about their art experiences in any way they wished. This was done to avoid limiting their responses to only a few directed alternatives. These assignments were given periodically throughout the course in relation to current specific experiences in the class.

The data about the students' art products were gathered by retaining all the art work produced by the students, and keeping these in the order in which they were made. The writing assignments used in the study, the verbal responses and the art works by sample students are presented in Chapter V.
The conception of creative behavior described in Chapter II served as the basis from which to extract behavioral principles to account for the assumed behavioral characteristics of creative persons. These principles were defined, and descriptive criteria (behavioral manifestations of the principles) were developed in terms of the material in the data. In the process of developing the descriptive criteria, however, some changes were made in the original set of principles. One principle was eliminated because the data did not contain adequate information for its application. A second was eliminated because it failed to discriminate among the characteristics in the data. Another was added because a means for describing information available in the data was found.

These behavioral principles selected are not conceived as a definition or as exclusive components of creative behavior, nor is any single principle in itself conceived of as an index of creative behavior. Particular degrees of manifestation of any of these principles in art products or verbalizations, therefore, do not imply degrees of "creativity." It is conceivable, however, that different combinations at different degrees of manifestation of these principles could characterize creative persons.

The initial list of behavioral principles included:
(1) involvement, (2) flexibility, (3) tolerance for ambiguity, and (4) focus on a task. The revised list includes: (1) involvement, (2) flexibility, and (3) aesthetic forming. Following is a conceptual definition of each principle and the reasons for its inclusion or rejection in the revised list. The function of the background materials in Chapter II will be readily apparent as the bases for these definitions.

Involvement is defined as the "capacity to rely on sources within the self in art experience." This appears to be an important complement of the behavior of creative persons. It was possible to differentiate it from other principles at both the conceptual and behavioral levels. The data contain adequate information for its services as an evaluative tool and, therefore, it was retained in the revised list.

Flexibility is defined as the "capacity to remain open to alternatives in an art experience." This is also an important component in the behavior of creative persons. It was also possible to differentiate it from other principles, and the data contain adequate information to be evaluated by it. Therefore, it was retained.

Tolerance for ambiguity was included in the initial list of principles in order to describe that kind of behavior which is characterized by the "capacity to remain open to alternatives without necessity for immediate closure to
a problem." While this also appears to be a component of the behavior of creative persons, it was difficult to differentiate from flexibility at the level of descriptive criteria in terms of the data which were gathered. The value of retaining both "flexibility" and "tolerance for ambiguity," therefore, seemed doubtful. Since "flexibility" appeared to be capable of more general application to the data it was retained in the revised list, and "tolerance for ambiguity" was eliminated.

Focus on a task was defined as the "capacity to recognize and develop intrinsic qualities or characteristics of an idea in artwork." Since the term "focus on task" proved unsuitable to the descriptive criteria, another term, "meaning," was applied to it. I regard this as an important component in the behavior of creative persons, but when applied to the data, difficulty was encountered in differentiating it from involvement. It was finally eliminated from the revised list because that part of the data which contained information relative to it was eliminated.\footnote{Reasons for the elimination of part of the data are presented in Chapter V.}

Aesthetic forming was added to the revised list in order to evaluate an important part of the data. I had originally felt that the lack of the students' skill in art activity would make aesthetic evaluations of their art works difficult. Upon examination of the data however,
I concluded this was not an issue. Descriptive criteria could be formulated to evaluate the aesthetic quality of the visual organization of art works produced by these students as differentiated from their skill in execution. Furthermore, data for aesthetic forming were also present in the verbalizations. The definition of this principle is "capacity to recognize and develop aesthetic visual relationships in art work."

In order to use the manifestations of the behavioral principles as criteria to evaluate the data, I needed appropriate instruments with which to treat both the art products and verbalizations. These instruments needed to be capable of differentiating among degrees of manifestation in both kinds of data. My first formulation of these instruments was at three levels and included: (1) the behavioral principles, (2) the behavioral manifestations in terms of the data, and (3) examples found in the data. All three levels were initially conceived at five degrees of manifestation ranging from "one" (low) to "five" (high). The levels of behavioral manifestation and examples for these five degrees were further subdivided into several categories according to the kinds of action in which they

\[\text{See Appendix I and III.}\]

\[\text{The third level of examples found in the data was included only in the instrument for evaluating the verbalizations.}\]
would be manifested. These kinds of action were derived from the data. The initial instruments contained twenty items for verbalizations and fifteen for art products on which the raters would need to make judgments. Consideration of the complexity this would bring to the raters' task, however, led to the formulation of new instruments with a reduction of the five degrees of manifestation to three: "high," "middle," and "low." The subcategories for kinds of manifestation were reduced to three for the art product evaluations and to two for the verbalization evaluations. These kinds of manifestation were clearly apparent in the data. Descriptions for both "high" and "low" degrees of manifestation were formulated. The "middle" degree was used to evaluate data which did not clearly fall into either "high" or "low" or which appeared to reveal both tendencies.

Rating forms were designed to allow the raters to evaluate the data at the three different degrees of manifestation on the subcategory descriptions only of each principle. The students' ratings on each principle were obtained from averages of the ratings on the subcategories for the principle. When ratings on the subcategories were evenly or nearly evenly divided between different degrees of manifestation, the rating was called "high middle" or

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4 See Appendix II and IV.
5 See Appendix V.
6 See Tables 3 and 4.
"low middle," whichever was more appropriate. In cases where the preponderance of the subcategory ratings were clearly located at one of the three degrees, the degree which received the majority of the ratings was chosen.

Evaluations of the data were made by two raters who were chosen on the basis of their qualifications as judges of the material they were asked to evaluate. Both have had extensive training and experience in the arts, and both have taught the course in which the study was conducted.

Training sessions for the raters were held, and instructions prepared for their use in interpreting the criteria for evaluation of the data. Evaluations of the art product data and the verbalization data were made about four weeks apart. Problems connected with the evaluation of the data are discussed in detail in Chapter V.

Methods for Analyzing the Evaluations of the Data

The method for analyzing the evaluations of the data was to obtain Pearson product moment correlation coefficients for various relationships, in order to determine whether these relationships were significantly different than those which might have occurred by chance ratings. The following groups of correlations were obtained:

1) Correlations between the raters' evaluations of

7 The raters were Charles B. Goodwin, Instructor, and Thomas G. Crossnoe, Jr., Graduate Assistant, in Art Education.
8 See Appendix VI and VII.
the data. These consisted of separate correlations between the evaluations for each of the subcategories for the principles and the descriptive criteria on both art products and verbalizations. These were obtained to describe the reliability of the ratings.

2) Correlations between the subjects' ratings on each of the behavioral principles in terms of the descriptive criteria for the art products. These consisted of correlations between:
   a) involvement and flexibility ratings
   b) involvement and aesthetic forming ratings
   c) flexibility and aesthetic forming ratings
These were obtained to describe the consistency of the relationships between these principles as they were demonstrated in the subjects' art products.

3) Correlations between the subjects' ratings on each of the behavioral principles in terms of the descriptive criteria for the verbalizations. These consisted of the same kinds of correlations as those obtained for the art products ratings, and were obtained for the same reasons.

4) Correlations between the subjects' ratings on each of the behavioral principles in terms of
the descriptive criteria for the art products and
the descriptive criteria for the verbalizations.
These consisted of correlations between the fol­
lowing ratings:

a) involvement in art products and in
   verbalizations

b) flexibility in art products and in
   verbalizations

c) aesthetic forming in art products and
   in verbalizations

d) involvement in art products and flexi­
bility in verbalizations

e) involvement in art products and aesthetic
   forming in verbalizations

f) flexibility in art products and involve­
   ment in verbalizations

g) flexibility in art products and aesthetic
   forming in verbalizations

h) aesthetic forming in art products and
   involvement in verbalizations

i) aesthetic forming in art products and
   flexibility in verbalizations

These were obtained in order to describe the re­
lationships between the principles demonstrated
in the students' art products and in their verbali­
zations.
Correlations between the students' ranks on their ratings for all principles in terms of art products and their ranks in terms of verbalizations. For these correlations, the students were ranked into eight groups on the basis of patterns of their three ratings on the art products and into the same number of groups on the basis of the same patterns of their ratings on the verbalizations. These groups consisted of students who obtained the following patterns in their ratings:

a) Group I, three "high middle" ratings
b) Group II, two "high middle" ratings out of three
c) Group III, three "middle" ratings
d) Group IV, two "middle" ratings out of three
e) Group V, three "low middle" ratings out of three
f) Group VI, two "low middle" ratings out of three
g) Group VII, two "low" ratings out of three
h) Group VIII, three "low ratings"

These correlations were obtained in order to describe the relationships of the patterns of ratings for all the students on all the characteristics as they were demonstrated in the art products and
the verbalizations.

In addition, Fisher's \( z \) transformation for \( r \) was used to obtain an average of all the correlations obtained between the art product and verbalization ratings. This average was obtained to describe the over-all relationship between the principles as they were demonstrated in the art products and in the verbalizations.
CHAPTER V

THE STUDY, PROCEDURES, AND CONCLUSIONS

The Study Situation

The study was carried out in two successive classes of undergraduate students enrolled in Fine Arts 569, which I taught during the Summer Quarter (Group "S") and the Autumn Quarter (Group "A") of 1956. Each group consisted of twenty-four students who were typical of others in different classes of this same course. Group "S" met three days a week for three hours; group "A" met five days a week for two hours. Both groups met for ten weeks. Since there were no apparent differences in the evaluations of the data from these two groups in regard to either variety or level of ratings, the data are handled as one group.

At the first class meeting, the students were asked to cooperate in a study of their art work and their opinions about art and their art experiences in the course, for the purpose of improving teaching in classes such as theirs. I explained the study procedures I would follow: (1) I would ask them to write periodic papers about their experiences in the course, and (2) I would study their art work. Their roles in the study would be to give thoughtful, frank answers to the questions I would ask them to write about, and to save all their art work in the sequence in which it was done. They should respond to the class situation in any
they felt was appropriate and comfortable for them. In addition, I assured them that whatever they wrote would be used only for the purposes of the study, and not for evaluating their performances in the course. Reactions to this proposal were positive in both classes. The first writing assignment was given to the students at this meeting, (see page 92).

The teaching procedures I followed in both classes were designed to follow the requirements I outlined in Chapter IV (see pp. 70-72). While there were a few differences in specific activities, both classes had the same general experiences. Both classes followed the same work schedule with materials and processes. Assigned topics for art work were similar. Both groups read and discussed Chapters 2, 5, 6, and 7 in Barkan's A Foundation for Art Education. Both took field trips to the Columbus Zoo for the purpose of making sketches and gathering ideas to be carried out in activities in the classroom. Resource materials used in the class were also similar. Each group spent two class sessions working in the "flash room" early

2 A laboratory containing equipment for tachistoscopic showing of slides in total darkness. The students' task is to reproduce forms which are shown on a screen for 1/10th of a second. The purpose is to train students to see these forms as unified "wholes," and to react in their drawing which is also done in total darkness.
in the quarter, and both visited the Visual Demonstration Center. Following is a resume of the kinds of art activities, and the time devoted to them, which were carried on during the quarter in both groups.

Approximately six weeks of the quarter were devoted to painting and picture-making with various other media. About two and one-half weeks, at the very beginning, were spent with painting. This was followed by picture-making in chalk, charcoal, collage, and printing. The remaining four weeks of the quarter were devoted to work with three dimensional materials. Each student worked with clay, and then selected among papier mache, scrap material construction, wire sculpture, mobiles, or various combinations of these. Some students worked in more than one of these optional activities. Others continued work in the original medium of their choice.

Painting activities were begun with specific assignments of various topics which were common to the experience of all the students. These were presented in order to give the students security in knowing what to paint. These topics, however, were assigned so that the student would take a personal point of view about them. For example, if the topic was "storm," emphasis was placed on painting the picture to show "how you felt when you were in a storm."

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3 The Ames Demonstrations, see Chapter II, p. 50 for discussion of these.
or "how a storm looks to you." In about two weeks, the students were selecting their own topics for painting. Approximately three days were spent in drawing figures, using class members as models. The students worked out-of-doors for about a week, making chalk drawings of the campus and the buildings. Collage and printing activities were begun with emphasis on experimenting with materials in order to get ideas from them. These were also developed into picture-making activities. The students used the resource materials from their field trips for ideas in their pictures and in their three dimensional activities.

Discussion of current student work and resource materials was carried on simultaneously with their studio activities. This discussion was directed toward the students' awareness of the behavioral principles which I was studying in their art work and attitudes. Early emphasis in the evaluation of the students' own art works was placed on their recognition of the consequences of their own involvement and identification for communicating the ideas they were expressing in their work. Attention was also directed toward the variety of points of view possible to take about an idea being expressed in an art work by pointing to different interpretations different individuals had made of the same topics. Emphasis was then given to the need to become open to the various meanings of an idea in
order to express it with clarity and depth. As the students demonstrated need to know how to express their ideas more adequately, emphasis was directed to principles of visual form and organization as a means for achieving aesthetic quality and consistency in visual communication. Discussion of these principles as they were manifested in the students' own works was reinforced with discussion of reproductions of professional art works.

I kept daily records of the events and procedures of each of these classes in order to study the purpose and direction of my teaching. Samples of these records covering a period of a week are presented in Appendix VIII. These records indicate the relationship of the events of the class to the requirements of the study.

**Collection of the Data**

The data for manifestations of behavioral principles in art activity consist of the art works produced by the students over the entire teaching period. All their art works were retained by the students in the order in which they were produced until the end of the quarter. They were then collected. Each student was given a number with the prefix "S" or "A" to distinguish the group to which he belonged. These numbers were attached to the students' portfolios, and all identification removed from the art work, except in cases where the student had signed the work.
The data for studying behavioral principles in attitudes consist of students' responses to periodic writing assignments. With the exception of the first and last assignments, these were developed during the progress of the study with the "S" group. The purposes of these assignments for the "S" group were as follows:

1) Assignment number one was originally intended to reveal the students' attitudes at the beginning of the course (see p. 92). The data gathered from this assignment, however, proved irrelevant to the study when its emphasis was changed. However, it did reveal the depth of the students' unfamiliarity with the art field.

2) Assignment number two was designed to reveal the degree of the students' self-reliance in conceiving their idea and range of alternatives they considered in developing the idea in the picture (see p. 92). It was also sought to reveal the relevance of the students' view of his problems to his purpose in the picture.

3) Assignment number three was designed to reveal essentially the same information as number two, at a later date and in a different context (see p. 93).

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4 See Chapter III, p. 69.
4) Assignment number four sought information about the degree of the students' awareness of aesthetic principles in their work, as well as their involvement (see p. 93).

5) Assignment number five was developed after the students had been working with a variety of media. The purpose of this assignment was to discover the degree of the student's involvement in his work, and the value he placed on his own involvement. It was also expected to reveal the degree of openness with which he considered alternatives and made choices in his activity (see p. 93).

6) Assignment number six was conceived to discover changes in the students' attitudes revealed in assignment number one (see p. 93). Although change was no longer being studied, information obtained from this assignment was valuable in revealing the students' criteria for evaluating works of art, as well as their involvement and flexibility.
WRITING ASSIGNMENTS GIVEN TO GROUP "S"

Assignment One, June 20, 1956

1. Indicate whether you have had any art experience in:
   Elementary school
   Junior High School
   Senior High School
   College
   Other places than school

2. Briefly describe how you feel about each of these art experiences you have had.

3. If you were going to paint a picture, what subject would you like to paint? Why?

4. What are some things you feel make a person a great artist?

5. Name someone you feel is a great artist.

6. Would you choose to take an art course if it weren't required in your curriculum?

7. What would you like most to accomplish in this course?

8. Which of these paintings do you prefer? Why?
   a) Braque: "Still Life with Lemons"
   b) Chardin: "Bowl of Plums"
   c) Cezanne: "Apples and Oranges"

Assignment Two, June 25, 1956

You have just spent an hour painting a picture. Please number it, and use the number in your paper. I'd like to know:

   a) What you thought about while you were painting this picture.
b) What problems you had.

Assignment Three, July 16, 1956

After looking through your portfolio, how do you feel about the work you have done so far in this course? What significant changes or improvements do you see in your pictures? What things or happenings have seemed to help you most? If you refer to specific pictures in your discussion, please refer to them by number.

Assignment Four, August 17, 1956

One of the problems you have encountered in this course is evaluating your own art work to have it meet your expectations. What criteria do you apply to your art work? How do you decide when you have been successful or unsuccessful? How do you decide when to make changes or what to do next in your work? Do you find it easier or more difficult to evaluate another person's work than your own? Explain why.

Assignment Five, August 29, 1956

Which of your art experiences during this course has been most satisfactory to you? Why? Discuss this experience, telling what you thought, felt, and did, during the experience.

Assignment Six, August 21, 1956

1. If you were going to paint a picture now, what subject would you choose? Why?
2. What are some of the things you now feel make a person a great artist?

3. Name someone you feel is a great artist.

4. What do you feel are the most important things you have accomplished in this course?

5. Would you choose to take another art course if it were not required in your curriculum?

6. Which of these paintings do you prefer? Why?
   a) Braque: "Still Life with Lemons"
   b) Chardin: "Bowl of Plums"
   c) Cezanne: "Apples and Oranges"

Writing assignments for the "A" group were like those given to the "S" group, with some exceptions in wording and sequence in which they were given. In some cases, the events of the "A" group were not appropriate for the same questions to be given to the "S" group. These assignments were then re-designed to gather the same kind of information in the different context. In other cases, the sequence in which the assignments were given was altered, due to appropriateness in timing for the "A" group. The following changes were made in sequence and assignments:

1) Assignment three for the "S" group was given as two for the "A" group. The time at which it was given during the quarter was approximately the same.
2) Assignment two for the "S" group was replaced by assignments three and four for the "A" group. Although the context of the questions was different, the information gathered was similar.

3) Assignment four for the "S" group was given as five for the "A" group. Assignment six for the "A" group was added because information about aesthetic criteria was not revealed in five.

4) Assignment five for the "S" group was given as seven for the "A" group. The timing of the assignments was similar for both groups, however.

5) Assignments one and six for the "S" group were given as one and eight for the "A" group, at the same times during the quarter.

WRITING ASSIGNMENTS GIVEN TO GROUP "A"

Assignment One, October 2, 1956

1. Describe briefly any art experiences you have had in school or elsewhere, telling how you feel about them.

2. What are some things you feel make a person a great artist? Name someone whom you consider to be a great artist.

3. What would you like most to accomplish in this course? Why?

4. Indicate which of these paintings you prefer, and explain your reasons for your preference:
a) Cezanne: "Apples and Oranges"
b) Chardin: "Bowl of Plums"
c) Braque: "Still Life with Lemons"

Assignment Two, October 18, 1956

After looking through your portfolio, how do you feel about the work you have done so far in this course? What significant changes or improvements do you see in your pictures? What things or happenings have helped you most in your work?

Which of your pictures do you like best? Why?

Please refer by number to specific pictures in your discussion.

Assignment Three, October 26, 1956

Yesterday you went on a trip and made some sketches. Before we begin working with art materials, I would like for you to write an account of your field trip, describing what you found that was interesting, and how you felt about what you saw.

Assignment Four, November 2, 1956

Discuss the work you have done since your field trip last week, including answers to the following questions. Please add anything else you wish to say about the pictures or your experience of making them. Leave your sketches and pictures with your paper.

a) Why did the subjects you chose for your sketches appeal to you?
b) What aspects of your subjects were most interesting?

c) Do your pictures reflect the ideas or feelings you had when you made the sketches?

d) If your pictures show changes from your original ideas, what are these changes, and why did you make them?

e) Do you feel that this series of pictures is more, or less successful than your previous work in this course? What reasons do you have for your feelings about this?

**Assignment Five, December 4, 1956**

One of the problems you have encountered in this course is making judgments about your own work. What criteria do you apply to your work? How do you decide when you have accomplished what you intended? How do you decide when to make changes? Do you find it easier or more difficult to evaluate another person's work than your own? Why?

**Assignment Six, December 6, 1956**

Are there any objective criteria which you use to evaluate your own or other's art work? How do you apply these to the art work?

**Assignment Seven, December 12, 1956**

Which of your art experiences during this course has been most satisfactory to you? Discuss this experience,
why it was more satisfactory than others, and describing what you did during your work in it. Make any comments you wish about the course in general in relation to this experience.

Assignment Eight, December 12, 1956

1. What are some of the things you feel make a person a great artist?

2. Name someone you consider a great artist.

3. What do you feel are the most important things you accomplished in this course?

4. Would you choose to take another art course if it were not required in your curriculum? Explain your reasons.

5. If you answered "yes" to the above question, what would you like to accomplish in an elective course?

6. Which of the three paintings on the board do you prefer? Discuss your choice, indicating reasons for your preference:
   a) Cezanne "Apples and Oranges"
   b) Chardin "Bowl of Plums"
   c) Braque "Still Life with Lemons"

   The data obtained from these writing assignments were transcribed from the students' original papers and kept in sequence. Numbers matching those given to their art works were given to these data. All other identification was removed.
Data for each student, then, consisted of a series of papers written in response to the writing assignments, and all the art work done by the student throughout the quarter.

Three samples of these data are presented in Appendices I, X and XI. The verbalization data are presented in their entirety. Photographs of samples of the students' art works are presented to show the basis for the raters' evaluations of the art products data.

These samples were chosen on the basis of the similarity and differences shown between their evaluations on the verbalizations and art products. Student "A" 24 demonstrates about the same degrees of manifestation of the behavioral principles in both verbalizations and art products. Student "S" 13 demonstrates a low degree of manifestation in verbalizations and a high degree in art products. Student "S" 16 demonstrates a high degree of manifestation in verbalizations and a low degree in art products. The two extreme examples serve to illustrate instances where degrees of manifestation in the students' verbalizations and art products are not related. The other, however, illustrates an instance in which the degrees of manifestation are related. The evaluations obtained by these students from rater one, rater two, and the combined evaluations are shown in Tables 3 and 4.

Evaluation of the Data

Evaluation of the data was a major problem in carrying
out the study. The evaluation procedures are described here in detail to provide a background for methodological implications. These implications are discussed in detail in Chapter VI.

The original plan for evaluating the data called for three raters, including myself, to evaluate both kinds of data. The other two raters were asked to become familiar with the criteria for evaluation. Training discussions were held, and "pilot" ratings were made of the art products of two students in Fine Arts 569 class not included in the study. The evaluations made of these art products revealed a high degree of disagreement among the raters. Further discussion showed that while there was agreement about the definition of the behavioral principles, clear agreement was lacking on the manifestations of these principles. We felt that more agreement could be reached by further clarification of these manifestations. Accordingly, written instructions were prepared for the raters, and these were discussed before further evaluations were made. Discussion about these instructions indicated a clearer understanding of the criteria and the rater's task.

Following the procedure just described, sixteen portfolios of art work from the "A" group were evaluated. The

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5 See Chapter IV, p. 80.
6 See Appendix VI.
raters viewed the entire sequence of each student's work before making their evaluations on the forms provided. These evaluations were then tabulated on a combined evaluation sheet for each student, using colored pencils for the tally marks to identify each rater (see Table 1). No statistical analysis of the reliability among the raters was made. It was apparent, however, that my own evaluations disagreed with the others. I concluded that this was due to my familiarity with the materials and the students who produced them. In making my evaluations, I was undoubtedly relying on information which was not available to the other two raters. For this reason, I eliminated myself as a rater.

Although there was reasonable agreement between the other two raters, I felt that it was not yet sufficiently high to warrant using their evaluations for the data. While there was no statistical analysis made of the agreement, only 63% of the items evaluated were agreed upon. Further discussion led to another evaluation of these sixteen sets of data in which the raters reached agreement on 84% of the items. This was accepted as a satisfactory level.

The sixteen sets of art products data used in these training sessions, however, were now unsuitable as data for the study, and consequently had to be considered as

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7 See Appendix V.
pilot ratings. The number of sets of data was, therefore, reduced from forty-eight to thirty-two. Evaluations of these thirty-two sets of art products data showed that correlations between the two raters for reliability were significant at the 1% level of confidence, with the
exception of the items of techniques on flexibility and aesthetic forming (see Table 2). Correlations on other items were sufficiently high to accept the ratings as reliable.

On completion of the art products evaluations, pilot evaluations were made of six sets of verbalizations data from among the sixteen which matched those used for the pilot evaluations of the art products data. The raters were given notebooks containing the data and rating forms for their evaluations. Tabulations of the results of these evaluations showed only 38% agreement on the sub-category items for the verbalizations. It was apparent that this level of agreement was not satisfactory. The following reasons might be applicable:

1) A great deal of inference was required by the raters to interpret the data. Statements made by the students were sometimes ambiguous and could be interpreted in different ways. No single statements could be used, but rather an "impression" or gestalt judgment had to be made. Early statements in the data sometimes contradicted later ones. The attention of the rater might be fixed on one or the other of these contradictions.

2) The criteria were not clearly defined in some cases, and in others they were limiting because of the

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8 See Appendix V.
### TABLE 2

**INTER-RATER RELIABILITY OF THE SUBCATEGORY ITEMS OF VERBALIZATIONS AND ART PRODUCTS EVALUATIONS**

<table>
<thead>
<tr>
<th></th>
<th>Inter-rater Correlations</th>
</tr>
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<tbody>
<tr>
<td><strong>VERBALIZATION EVALUATIONS</strong></td>
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<tr>
<td>Involvement: Conception of ideas for art work</td>
<td>.21</td>
</tr>
<tr>
<td>Involvement: Conception of visual forms and organization</td>
<td>.53*</td>
</tr>
<tr>
<td>Flexibility: Conception of ideas for art work</td>
<td>.25</td>
</tr>
<tr>
<td>Flexibility: Conception of visual forms and organization</td>
<td>.56*</td>
</tr>
<tr>
<td>Aesthetic Forming: Criteria for evaluating art work</td>
<td>.56*</td>
</tr>
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<td>Aesthetic Forming: Conception of visual forms and organization</td>
<td>.20</td>
</tr>
<tr>
<td><strong>ART PRODUCTS EVALUATIONS</strong></td>
<td></td>
</tr>
<tr>
<td>Involvement: Symbol formation</td>
<td>.88*</td>
</tr>
<tr>
<td>Involvement: Visual organization</td>
<td>.63*</td>
</tr>
<tr>
<td>Involvement: Techniques</td>
<td>.65*</td>
</tr>
<tr>
<td>Flexibility: Symbol formation</td>
<td>.86*</td>
</tr>
<tr>
<td>Flexibility: Visual organization</td>
<td>.74*</td>
</tr>
<tr>
<td>Flexibility: Techniques</td>
<td>.06</td>
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<tr>
<td>Aesthetic Forming: Symbol formation</td>
<td>.73*</td>
</tr>
<tr>
<td>Aesthetic Forming: Visual organization</td>
<td>.77*</td>
</tr>
<tr>
<td>Aesthetic Forming: Techniques</td>
<td>.32</td>
</tr>
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</table>

*Significant at the 1% level of confidence.*
Inclusion of too specific examples.

3) The raters tended to confuse the definitions in the criteria with their own private definitions of the behavioral principles being evaluated in the verbalizations.

4) The time taken for the evaluations was not sufficient, and too many were being attempted at one time. Reading more than two at a session tended to blur the rater's judgments by fusing impressions of earlier readings.

5) The amount of data was excessive, and some of it was irrelevant for the items under evaluation. Early material in the data when compared with statements written later introduced the factor of "change" into the raters' judgments without their being aware of it.

These defects and problems led to a re-examination of the criteria and to further clarification in the task of the raters. The following steps were carried out:

1) The raters' task in respect to the verbalizations, was redefined and written instructions were prepared for their assistance in interpreting both the criteria and the data.  

2) Time for completing evaluations for the data was extended to two weeks. Procedures were established so that no more than two sets of data were evaluated at

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9 See Appendix VII.
a single session, and no more than four to six in a single day.

3) The early part of the data was eliminated in order to remove the factor of "change" from the raters' evaluations.

The cutting point for eliminating the early part of the data was established by scanning the data to insure that the latter part contained information relevant to all the criteria. I found that all the information needed would be included except that which was required to evaluate the items for "focus on task" or "meaning." After consideration, however, I decided that more advantage would be gained by eliminating this data, even though the principle of meaning would also have to be eliminated. The amount of inference and the amount of data the raters needed to keep in mind in order to make their evaluations were the principle factors in making this decision. This decision also resulted in eliminating evaluations already made of manifestations of this behavioral principle in the art products data.

After these steps had been taken, the raters proceeded with their evaluations of the thirty-two usable sets of verbalization data. Correlations were obtained for the reliability of the raters' agreements on all the subcategory items on the verbalization criteria. These correlations show reliability for only one subcategory on each
of the behavioral principles (see Table 2). The lack of reliability with which the items were evaluated leads to further question about the effectiveness of the criteria as instruments for evaluating this kind of data, and the use of such material as data. This question will be discussed further in Chapter VI.

Averages were obtained on the raters' combined evaluations of the subcategory items to arrive at the students' evaluations on the behavioral principles, using the method described in Chapter IV. These averaged evaluations for each student are presented in Tables 3 and 4. These figures also show the averaged evaluations of the subcategory items as they were evaluated by each rater independently.

Analysis of each rater's evaluations reveals some interesting information. The correlations of the evaluations of rater number one are higher than those of rater number two for the relationships among behavioral principles demonstrated in art products, and also for relationships among behavioral principles demonstrated in the verbalizations (see Tables 5 and 6). This may indicate that rater number one has used a more generalized approach to each of the evaluation tasks, and has carried over a "halo" from his evaluation of one principle to another, whereas rater number one has not done so.

10 See pp. 79-80.
TABLE 3
COMPARISON OF RATINGS AND RANKS OBTAINED BY STUDENTS ON COMBINED AND INDIVIDUAL EVALUATIONS OF VERBALIZATIONS BY TWO RATERS

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<th>#2</th>
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<td>M</td>
<td>M</td>
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</tbody>
</table>

* C = combined evaluations.
** Data is presented in Appendix IX.
*** Data is presented in Appendix X.
**** Data is presented in Appendix XI.
### Table 4

Comparison of Ratings and Ranks Obtained by Students on Combined and Individual Evaluations of Art Products by Two Raters

<table>
<thead>
<tr>
<th>Student</th>
<th>Involvement</th>
<th>Flexibility</th>
<th>Aesthetic Forming</th>
<th>Rank</th>
</tr>
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<tbody>
<tr>
<td></td>
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<tr>
<td>S 2</td>
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<tr>
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(continued)
Table 4 - Continued

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<thead>
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<td>A 23</td>
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<td>A 24</td>
<td>M</td>
<td>HM</td>
<td>M</td>
<td>VI</td>
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</tbody>
</table>

* C = composite evaluations.
** Data is presented in Appendix IX.
*** Data is presented in Appendix X.
**** Data is presented in Appendix XI.
Table 5
Comparison of Correlations Among Art Products Ratings for Involvement, Flexibility, and Aesthetic Forming as Evaluated by Rater One, Rater Two, and Composite Ratings

<table>
<thead>
<tr>
<th>Verbalizations</th>
<th>Rater One</th>
<th>Rater Two</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement and flexibility</td>
<td>.58*</td>
<td>.50*</td>
<td>.50*</td>
</tr>
<tr>
<td>Involvement and aesthetic forming</td>
<td>.54*</td>
<td>.42**</td>
<td>.54*</td>
</tr>
<tr>
<td>Flexibility and aesthetic forming</td>
<td>.72*</td>
<td>.60*</td>
<td>.63*</td>
</tr>
</tbody>
</table>

* Significant at the 1% level of confidence
** Significant at the 5% level of confidence

Table 6
Comparison of Correlations Among Verbalizations Ratings for Involvement, Flexibility, and Aesthetic Forming as Evaluated by Rater One, Rater Two, and Composite Ratings

<table>
<thead>
<tr>
<th>Art Products</th>
<th>Rater One</th>
<th>Rater Two</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement and flexibility</td>
<td>.54*</td>
<td>.37**</td>
<td>.39**</td>
</tr>
<tr>
<td>Involvement and aesthetic forming</td>
<td>.78*</td>
<td>.57*</td>
<td>.81*</td>
</tr>
<tr>
<td>Flexibility and aesthetic forming</td>
<td>.49*</td>
<td>.24</td>
<td>.37**</td>
</tr>
</tbody>
</table>

* Significant at the 1% level of confidence
** Significant at the 5% level of confidence
Correlations among the evaluations on art products data and verbalization data, however, are lower for rater number one than for rater number two (see Table 7). There appears to be no adequate explanation for this difference. The evaluations of the art products preceded those of the verbalizations by approximately four weeks, which should be adequate time to dispel any "halo" effect. Yet, this cannot be dismissed as a possibility.

Since the rater's agreement on the verbalization evaluations was reliable on only one subcategory for each of the behavioral principles, and the combined evaluations represented more disagreement than agreement, I decided to base the conclusions drawn from the analysis on the evaluations of both of the raters. It is clear that there is no way to establish the superiority of one of the raters, except on the basis that there may have been less "halo" effect in the evaluations made by rater number two. Both evaluations are used, therefore, in drawing possible conclusions from the study. Comparison of correlations obtained for both raters independently and for their averaged evaluations does not seem to indicate that conclusions drawn would be altered to any great extent, since few relationships which are statistically significant were found in any of them (see Table 7).
TABLE 7

COMPARISON OF CORRELATIONS AMONG VERBALIZATION AND ART PRODUCT RATINGS FOR INVOLVEMENT, FLEXIBILITY, AND AESTHETIC FORMING AS EVALUATED BY RATER ONE, RATER TWO, AND COMPOSITE RATINGS

<table>
<thead>
<tr>
<th>Art Products and Verbalizations</th>
<th>Rater One</th>
<th>Rater Two</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement and involvement</td>
<td>-.27</td>
<td>.27</td>
<td>-.06</td>
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<tr>
<td>Involvement and flexibility</td>
<td>.19</td>
<td>.44*</td>
<td>.23</td>
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<tr>
<td>Involvement and aesthetic forming</td>
<td>-.13</td>
<td>-.14</td>
<td>-.05</td>
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<tr>
<td>Flexibility and involvement</td>
<td>-.19</td>
<td>.10</td>
<td>-.02</td>
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<tr>
<td>Flexibility and flexibility</td>
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<td>.25</td>
<td>.28</td>
</tr>
<tr>
<td>Flexibility and aesthetic forming</td>
<td>-.14</td>
<td>.05</td>
<td>.07</td>
</tr>
<tr>
<td>Aesthetic forming and involvement</td>
<td>.06</td>
<td>.23</td>
<td>.15</td>
</tr>
<tr>
<td>Aesthetic forming and flexibility</td>
<td>.28</td>
<td>.03</td>
<td>.13</td>
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<tr>
<td>Aesthetic forming and aesthetic forming</td>
<td>.14</td>
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<td>.21</td>
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</tbody>
</table>

* Significant at the 1% level of confidence.
Analysis of the Data and Conclusions

Analyses of the evaluations of the data were made by using the methods described in Chapter IV. Although the conclusions have been based on the evaluations made by both raters, an analysis was also made of the combined evaluations, in order to tell whether there would have been different conclusions had they been selected. Comparison of all the correlations obtained from the combined evaluations of the raters and their independent evaluation, indicates that the conclusions would have been similar with one exception in regard to relationships between the verbalizations and art products. This will be discussed in the appropriate context in the following discussion. All the analyses of the two raters' and their combined evaluations are presented to show their similarities (see Tables 8, 9, 10).

In drawing conclusions from the analysis of the evaluations of the data, it must be acknowledged that the evaluation procedures followed in the study impose limitations. It is clear that instruments and methods for evaluating and gathering data in such a study need further development to obtain significant reliability among raters. These, and other limitations and their implications are presented and discussed in detail in Chapter VI.
TABLE 8
CORRELATIONS AMONG INVOLVEMENT, FLEXIBILITY, AND AESTHETIC FORMING ART PRODUCT AND VERBALIZATION RATINGS
BY RATER ONE

<table>
<thead>
<tr>
<th>Art Products</th>
<th>Verbalizations</th>
<th>I**</th>
<th>F***</th>
<th>AF****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art products</td>
<td>I</td>
<td>.58*</td>
<td>.54*</td>
<td>-.27</td>
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<tr>
<td>Art products</td>
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<td>.72*</td>
<td>-.19</td>
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<tr>
<td>Art products</td>
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<td></td>
<td>.06</td>
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<tr>
<td>Verbalizations</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Verbalizations</td>
<td>F</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

* Significant at the 1% level of confidence.
** I = involvement.
*** F = flexibility.
**** AF = aesthetic forming.
TABLE 9

CORRELATIONS AMONG INVOLVEMENT, FLEXIBILITY, AND AESTHETIC FORMING ART PRODUCT AND VERBALIZATION RATINGS

BY RATER NUMBER TWO

<table>
<thead>
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<th>Art Products</th>
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<td>Art products</td>
<td>I</td>
</tr>
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</tr>
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<td>Art products</td>
<td>AF</td>
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<tr>
<td>Verbalizations</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>F</td>
</tr>
</tbody>
</table>

* Significant at the 1% level of confidence.
** Significant at the 5% level of confidence.
***I = involvement.
****F = flexibility.
*****AF = aesthetic forming.

The analysis of the evaluations of the behavioral principles manifested in the students' verbalizations and art products does not support the hypothesis that "there are significant relationships between a student's capacities to derive behavioral principles from his art experience and his capacities to manifest them in his art activity."

Nevertheless, some significant relationships were revealed in regard to behavior within the context of verbalizations and within the context of art products. Following are the conclusions which stem from the analyses of the data:
TABLE 10
CORRELATIONS AMONG INVOLVEMENT, FLEXIBILITY, AND AESTHETIC FORMING ART PRODUCT AND VERBALIZATION RATINGS BY AVERAGED EVALUATIONS OF TWO RATERS

<table>
<thead>
<tr>
<th></th>
<th>Art Products</th>
<th>Verbalizations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I** F*** AF****</td>
<td>I F AF</td>
</tr>
<tr>
<td>Art products I</td>
<td>.50* .54* -.06 .23 -.05</td>
<td></td>
</tr>
<tr>
<td>Art products F</td>
<td>.63* -.02 .28 .07</td>
<td></td>
</tr>
<tr>
<td>Art products AF</td>
<td>.15 .13 .21</td>
<td></td>
</tr>
<tr>
<td>Verbalizations I</td>
<td>.39** .81*</td>
<td></td>
</tr>
<tr>
<td>Verbalizations F</td>
<td>.37**</td>
<td></td>
</tr>
<tr>
<td>Verbalizations AF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Relationships among manifestations of behavioral principles in art products

The correlations obtained from the evaluations of the art products data indicate that there are significant relationships among the behavioral principles studied as they are manifested in behavior in an art activity (see Table 5). The degree to which a student is able to behave flexibly appears to have a slightly higher relationship to the degree of his capacity to develop visual and aesthetic relationships than to the degree of his involvement.
However, there are significant relationships between the degree of his involvement and the degree of his flexibility. This would seem to indicate that all three of these behavioral principles, as they are manifested in the students' behaviors in their art activity, are closely related in their degrees of manifestation. This indicates a high level of relatedness among the behavioral principles within the context of behavior in an art activity.

Relationships among manifestations of behavioral principles in verbalizations

The correlations obtained from the evaluations of the students' verbalizations indicate that there are significant relationships between the degree of a student's capacity to derive behavioral principles concerning flexibility and the degree of his capacity to derive behavioral principles concerning aesthetic forming (see Table 6). This same relationship is also revealed by the capacity to derive behavioral principles concerning involvement, although at a lower level of significance. The three behavioral principles, as they are manifested in the verbalizations of the students, are not as closely related in their degrees of manifestation as they are in their manifestations in the art products of the students. While this suggests consistency among these levels of manifestations of the
behavioral principles within the context of verbal behavior, it also suggests less consistency than that manifested in behavior in art activity.

Relationships among manifestations of behavioral principles in art products and in verbalizations

The correlations obtained for the two raters' evaluations of the students' art products and their verbalizations indicate that no significant relationships exist between the degree to which students manifest capacity to derive behavioral principles from art experience and capacity to manifest them in their behavior in an art activity (see Table 7). One exception to these results is found in the evaluations of rater number two. His evaluations show a correlation of .44, which is significant at the 1% level of confidence, between involvement manifested in art products and flexibility manifested in verbalizations. The absence of other correlations near this level make this correlation appear doubtful. In addition, the same relationships evaluated by rater number one show a considerably lower correlation of .19.

Correlations between students' rankings on verbalizations and art product evaluations

When the manifestations of these behavioral principles in the verbalizations and art products are considered as a single pattern falling into a rank, the degrees of manifestation show no significant relationships between capacity
to derive behavioral principles and to manifest them in behavior in the art activity (see Table 11). This further suggests consistency of degrees of manifestation of these behavioral principles within a context of a particular kind of behavior, but no relationship between these degrees of manifestation between the two contexts of behavior studied.

**Average intercorrelations among verbalizations and art product evaluations**

The average intercorrelation among all the correlations obtained among the evaluations of both verbalizations and art products also reveals no relationship among degrees of manifestation of the principles of behavior in these contexts of behavior (see Table 12).

**TABLE 11**

<table>
<thead>
<tr>
<th></th>
<th>Rater One</th>
<th>Rater Two</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbalization and Art Products</td>
<td>.05</td>
<td>.21</td>
<td>.19</td>
</tr>
</tbody>
</table>

* Ratings obtained by average of both raters' evaluations of subcategories.
TABLE 12

COMPARISON OF AVERAGE INTERCORRELATIONS* AMONG VERBALIZATION AND ART PRODUCT RATINGS BY RATER ONE, RATER TWO, AND COMPOSITE RATINGS

<table>
<thead>
<tr>
<th>Average Intercorrelations*</th>
<th>Rater One</th>
<th>Rater Two</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbalization and Art Products</td>
<td>.02</td>
<td>.16</td>
<td>.11</td>
</tr>
</tbody>
</table>

* Obtained by Fisher's z transformation of r.

The above conclusions drawn from the analysis of the evaluations would seem to indicate: (1) that there are significant relationships among degrees of manifestation of behavioral principles within the contexts of the two kinds of behavior studied, but (2) there are no significant relationships among degrees of manifestations of these behavioral principles between these two kinds of behavior.
CHAPTER VI

IMPLICATIONS

Although the analysis of the data in this study shows no significant relationships between what students say about their art experiences and the ways they behave in their art activities, this conclusion needs to be viewed in relation to implications derived from other information revealed by the data, and in relation to the conduct of the study.

The lack of relationship found between the students' verbalizations and their behavior in art activities, together with the consistency of relationships among the behavioral principles within the contexts of verbalizations and art behaviors, raises questions about learning and behavior in art activity. Limitations in the study procedures have implications for developing more adequate methods in future studies. In addition, the development of the study has implications for the role of the teacher-researcher in similar situations. The implications of the present study may, indeed, be more significant than the conclusions drawn in relation to the hypothesis. The following sections of this chapter deal with these implications.

Implications for the Study of Behavior in Art Activities

Following are some implications derived from information in the data related both to differences and
consistencies in the evaluations of the behavioral principles manifested in the students' verbalizations and art products. In addition, the data have implications about the nature of creative behavior in art activity.

DIFFERENCES BETWEEN VERBALIZATIONS AND ART PRODUCTS EVALUATIONS

When the lack of relationships between the evaluations of the students' art products and verbalizations is viewed in comparison to the consistency within these areas of evaluation, questions emerge concerning possible differences in the nature of these two kinds of behavior. It may be that, for these students, the differences in the two kinds of behavior are so great that close relationships between observable manifestations cannot be expected. The question arises whether different behavioral manifestations requiring the use of different symbols can be expected to show close relationships. The differences in kinds of organization required by visual as compared to verbal symbols may result in differently organized behaviors, especially for students who are unfamiliar with the organization of visual symbols. For example, students who are unfamiliar with visual symbols may be hampered by technical difficulties which inhibit their capacities to demonstrate behavior in terms of the principles being studied in their art work. The factor of the students' unfamiliarity with visual symbols was not within the scope of the present study. One
can speculate, however, that when students are familiar with the symbols system they are using, they will manifest more readily their capacities to behave in terms of the behavioral principles. For students like those among whom the study was conducted, such speculation indicates the need for time to become familiar with visual symbols before valid judgments of their behavior in art activities can be made in terms of these behavioral principles.

Another, perhaps more important question about differences between the students' verbalizations about their art experiences and their behavior in their art activities, is whether behavior at different levels of abstraction of experience can be expected to reveal similar behavioral manifestations. Cantril has pointed to this fundamental difference between experience and description of experience:

...any attempt to describe or analyze experience immediately alters that experience. When we are trying to describe or analyze experience or any aspect of it, we are functionally organized quite differently than when we are participating in a process of living and are not describing or analyzing it.

Verbalization and communication, either retrospectively or simultaneously with the occurrence of some experience, may be distinguished methodologically from naive experience itself because of a form of awareness on selected aspects of experience.¹

The students' behaviors in their art activities and in their verbalizations about these experiences are "experience" and "descriptions of experience." Their

¹ Hadley Cantril, op. cit., p. 282.
verbalizations are, in fact, abstractions of their art experiences. The differences in the organization of their experiences in art activity and their descriptions of the experiences may result from the students' attention only to selected aspects of their art experiences, which, at the least, do not fully reproduce them. Ghiselin points this out in relation to artists' reports of their experience (see Chapter II, p. 39).

The question raises a fundamental problem about the dissimilarity in behavior involved in art experience and in reporting about it. One can speculate that a different kind of behavioral organization is involved in participation in the experience itself, at least insofar as observable manifestations of behavioral organization are concerned. Thus, while participation and description of art experience may spring from similar sources within an individual, such elements as purpose, symbolic means, feelings, or directness of action may contribute to an apparent lack of similarity in behavioral manifestations.

The question, then, is whether these two kinds of behavior have enough similarity in observable manifestations to serve as predictors of each other. Since no consistent tendencies for either higher or lower manifestations of behavioral principles in one kind of behavior were found to accompany particular degrees of manifestation in the other, it can be concluded that what a student says about his art
experience does not necessarily indicate how he will behave in his art activities. A student may, indeed, show little capacity to describe his art experience in terms of the behavioral principles, yet at the same time, he may manifest what might be called a kind of "nonverbal" awareness of them through his behavior in subsequent art experience. This kind of awareness may need to be inferred from observable changes in the students' behaviors in art experiences, rather than being sought in their verbal reports. Thus, one can speculate that how a student will behave in his art activities can be predicted with more certainty from evaluation of the behavioral principles manifested in his art activities than from evaluations of his verbal descriptions of his art experience.

CONSISTENCY WITHIN VERBALIZATIONS AND ART PRODUCTS EVALUATIONS

The consistency of the evaluations of the students' verbalizations and their art products tends to reinforce the idea of difference in the nature of these data. It also suggests a fundamental pattern of behavior within the context of each kind of behavior which is characterized by similar or nearly similar degrees of manifestation. Thus, a student who demonstrates a low degree of flexibility is more likely to manifest low degrees of involvement and aesthetic forming than middle or high degrees. This further suggests that behavior within contexts where the symbolic
means and the levels of abstraction of experiences are similar, is consistent and unified in its structure, insofar as observable manifestations are concerned.

An apparent contradiction to this conclusion, however, is the lower degree of consistency within verbalizations than within art products evaluations. Differences in the nature of these data again need to be noted in this respect. While the students' verbalizations are descriptions of their art experiences, their comments in this study were not limited to those experiences alone. This suggests that previously held attitudes may color students' reports of their experiences, and thus contribute to greater inconsistency of manifestation of the behavioral principles. It also suggests that, for certain students, some attitudes are less susceptible than others to influence from direct experiences in art. For example, the consistently lower evaluations of the principle of aesthetic forming seem to indicate that while students may describe their experiences in ways that manifest their capacities for involvement and flexibility in an art experience, their previously held attitudes about aesthetic criteria for art works may persist strongly. While previously held attitudes and readiness for art experience were not included within the scope of the present study, their bearing on the behavioral manifestations of students could profitably be studied in relation to both verbalizations and art products.
evaluations.

Another factor which may bear on the greater inconsistency within the verbalizations evaluations is the students' use of cliches in describing their experiences. The vocabulary of students includes a good many cliches which contribute some ambiguity to their statements. This factor has implications for data collected to be discussed in the section of this chapter concerning methodological implications.

CRITERIA FOR CREATIVE BEHAVIOR IN ART ACTIVITIES

No attempts are made in the present study to weigh different degrees of manifestation of the behavioral principles in terms of a model for creative behavior, although it was hoped that the data of the study might throw some light on this question. The consistency of manifestations of the behavioral principles within the verbalizations and art products evaluations suggests that creative behavior might be characterized by similar degrees of manifestation of these behavioral principles rather than by variability. The inconsistency between manifestations in the two contexts further suggests, however, that these students may be conceived as more creative in one context of behavior and less creative in the other insofar as observable behavior is concerned.

While the data do not support weighting of certain degrees of manifestation of the behavioral principles in
respect to creativity, the level of excellence of the students' art products could be conceived as a criterion for creativity. These art products are tangible evidence of the students' capacities to organize ideas and materials creatively into aesthetic visual forms. At the same time, they are evidence of the students' flexibility and involvement in their art activities. But while a series of art products needs to be viewed to evaluate the students' degrees of involvement and flexibility, the degree of capacity to organize ideas and materials creatively is manifest in each art product. This suggests that aesthetic forming could be developed as a criterion for creative behavior in art activity. To become a useful criterion, however, the definition of aesthetic forming as a behavioral principle needs to be more fully explored and developed than it has been in the present study. The generally low levels of the evaluations obtained by the students in relation to aesthetic forming confirm the need for further attention to this question. One purpose for further study should be to establish more precise definitions of manifestations of aesthetic forming in both verbal reports and in art activities.

The consistency of the evaluations of flexibility and involvement with aesthetic forming in the two contexts of behavior in the present study further supports the speculation that both verbal behavior about art experience and
nonverbal behavior in art activities is characterized by similar degrees of manifestations of these principles. If aesthetic forming can be considered as a criterion for creative behavior, it can be further speculated that creative behavior is characterized by high, rather than by low degrees of manifestations of all the behavioral principles.

IMPLICATIONS FOR FURTHER STUDIES

The implications derived from the data suggest several possibilities for further study:

1) Study of differences in the organization of verbal and nonverbal creative behavior in art. Such study would involve investigation of the roles that students' purposes, previously held attitudes, and familiarity with verbal and nonverbal symbol systems may have in determining their behavioral manifestations in both their verbalizations about their art experiences and their behavior in their art activities. Identification of the roles that these factors may have in students' artistic behaviors would enable the development of more appropriate teaching procedures for particular individuals and groups of students.

2) Study of changes in students' behavioral manifestations in both verbal and nonverbal art behavior. Such study should investigate consistencies maintained in patterns of behavioral
manifestations as students participate in art experiences over a period of time. Knowledge about possible shifts in consistency among behavioral manifestations in both verbal and nonverbal behaviors would further understanding of the structure and progress of learning in art experience.

3) Study of the criterion of artistic excellence as a measure for creative behavior in art derived from observations of students' manifestations of aesthetic forming behavior. Such a study would involve developing more precise descriptions of manifestations of aesthetic forming capacities in respect to both verbal and nonverbal behavior, and the relationship of other behavioral manifestations to this criterion. It would have basic implications for a behavioral theory about creativity in art experience.

4) Study of the relationships of verbal and nonverbal teaching procedures in relation to both verbal and nonverbal manifestations of behavioral principles in art experience. This kind of study would involve more precise definition and development of teaching procedures in relation to the behavioral principles being studied. Such a study would have significance for identification of some of the factors which may have little or
much bearing on the development of students' capacities to behave creatively in their art experiences.

IMPLICATIONS FOR TEACHING

The significance of the present study for teaching prospective elementary classroom teachers to become creatively involved in their art activities is limited by the breadth of the conclusions reached. The implications derived from the study, however, do point to some procedures which can have immediate application to similar teaching situations, as well as to profitable directions for future study.

The study suggests that students' progress in their art activities can be predicted with more validity from evaluations of the behavioral principles manifested in their art works than from their verbal reports about their art experiences. Thus, evaluations of students' performances in art as revealed in their art products in respect to involvement, flexibility, and aesthetic forming can provide teachers with insight into the particular needs of students. For example, evaluations of students' behaviors when they change from one medium to another, such as from painting to sculpture, can provide the teacher with valuable information about the students' nonverbal awareness of behavioral principles in their art experiences. On the basis of this information, teachers can give attention to developing the
kinds of behaviors which may appear to be least understood by the students. Particular kinds of tasks and media can be selected for use in the class to develop more desirable behaviors in art activities.

Methodological Implications

In addition to implications for further research into learning and behavior in art activities, the conduct of the study suggests more adequate procedures to carry out these implications. Three of the procedures used in the present study need to be viewed in relation to their limitations for both the present and future studies:

(1) gathering and recording data, (2) criteria for evaluating the data, and (3) analyzing the evaluations of the data. Following is a discussion of some of the limitations now apparent in these procedures, and suggestions for their improvement for use in future research in teaching-research situations.

GATHERING AND RECORDING DATA

Two kinds of data were needed in the study: (1) data revealing students' attitudes about approaching and carrying out their art experiences, and (2) data revealing how they did this in the experience. In addition, these data had to be simple and clear enough for me to observe and gather while I was teaching. How instruments were developed for gathering data to fit these requirements was described in Chapter IV (see pp. 75-80). The question
now is whether the data gathered through use of these instruments were adequate for the purposes of the study. The reliability of the raters' evaluations of the data in terms of the criteria developed for these evaluations is one indication of their adequacy or inadequacy. Both art products and verbalizations data need to be re-examined in respect to the evaluations of the raters were able to make of them.

In respect to the art products data, the raters' agreements on their evaluations indicate that these data revealed the students' behaviors in their art activities in terms of the behavioral principles. With only two exceptions, reliabilities were found for the raters' evaluations of all the subcategories described as manifestations of the behavioral principles. These exceptions were techniques as manifestations of both flexibility and aesthetic forming (see Table 2, p. 104). These exceptions have implications for the criteria used for the evaluation of the art products data, and will be discussed in relation to the criteria. In general, however, it is possible to maintain that students' art works are adequate data for revealing manifestations of the behavioral principles in their art activities.

In respect to the verbalizations data, however, rater reliability was found for only one of the two subcategory manifestations described for each of the behavioral
principles (see Table 2, p. 104). This lack of agreement between the raters in their evaluations of what the students wrote about their art experiences indicates that these data might not have been as adequate as was originally expected. While some of the verbalizations data gathered with the instruments used in the study were not adequate, the adequacy of other parts of the data indicates that such data can be gathered to reveal the function and presence of the behavioral principles in students' verbal attitudes.

The instruments for gathering the verbalizations data were designed to obtain information about the students' attitudes within the context of the experiences with which the attitudes were connected. The instruments, therefore, consisted of "open-ended" questions focusing on specific art experiences. I felt I would learn more about the function of students' attitudes in relation to the behavioral principles by allowing students to describe their art experiences in their own terms, rather than by directing their responses to defined alternatives. As an outcome of the study, three limitations are now apparent in the information obtained from these "open-ended" questions: (1) lack of sufficient specific information, (2) inclusions of irrelevant and sometimes contradictory information, and (3) points in time when data can best be gathered. The inevitable result of these limitations was to require the
raters to make excessive inferences, and at times to di­
vert their attention from relevant information.

This result has implications for designing more ade­
quate instruments to gather relevant verbal data. Instru­
ments for this purpose need to be capable of: (1) directing
students' responses clearly to all the specific information
required, and (2) allowing students to reveal the function
as well as the presence of the behavioral principles within
the context of their own experiences. Limiting the stu­
dents' responses to alternatives which seem most appropri­
ate to describe their experiences would have the advantage
of obtaining specific information and eliminating need for
inferences from the raters. But such a procedure would
also limit the students' freedom to reveal the information
within the context of their own experience. The kinds of
questions asked of students, therefore, need to be more
explicit than the ones used in this study, but, at the
same time, not limiting. For example, writing assignment
five used in this study asks students to discuss their
most satisfactory art experience during the course (see
assignment 5, p. 93). The instructions are not directed
specifically enough toward information concerning the
students' involvement, flexibility, and aesthetic forming
capacities. For future studies, such questions as the
following could elicit more specific information, but at
the same time, would give the student freedom to reveal
what is most significant to him in the experience. In regard to involvement, these kinds of questions could be asked:

1) In what ways does this experience differ from others in the kind of personal satisfaction you obtained from it?
2) In what ways does the idea you expressed in this experience differ from ideas in your other art activities?
3) Did you require a different kind of help to carry out this activity than in others?

In regard to flexibility, these kinds of questions could be asked:

1) In what ways was this activity easier or more difficult for you to accomplish?
2) Did this activity require fewer or more changes in your ideas while you were working than others?

In regard to aesthetic forming, these questions could be asked:

1) Is the art work you made in this activity your best art work?
2) In what ways is this art work different aesthetically from other art works you have made in the course?

These kinds of questions would also have the advantage of placing specific information in certain locations in the
students' discussion so that the raters would be able to find information relevant to the particular evaluations they were making.

It must also be remembered that some of the earlier data had to be eliminated from the evaluations, while the criteria had been developed in relation to all the data. The questions used in gathering this earlier data (see pp. 92, 93, 95, 96) elicited information relevant to manifestations on which the raters disagreed most. Important information was, therefore, lacking for the raters. Although there was good reason to eliminate the earlier data from the evaluations in this study, there are important implications for future studies. Data gathering needs to take into account the students' changes in attitudes brought about through their experiences in the course. Data gathered at given points in time must, therefore, be comprehensive enough to provide information relevant to all the criteria being considered.

In addition to reconstructing the kinds of questions asked in writing assignments and better control of time points in gathering the data, other verbal data might also be obtained in future studies. Data could be obtained from an interview schedule to provide the needed information. This kind of data could have advantages for obtaining valuable information from students who are unable to express themselves well in writing. Such interviews could
be arranged as an auxiliary to written assignments.

CRITERIA FOR EVALUATING THE DATA

The criteria used to evaluate the data consisted of definitions of each behavioral principle and descriptions of the kinds of manifestations the raters would find in the data. The lack of agreement in the raters' evaluations of some of these manifestations has implications for developing more adequate criteria for future studies. Following are some of the limitations now apparent in both the art products and verbalizations criteria, and the implications derived from them.

As noted earlier, the raters' reliability in the evaluations of the art products was generally satisfactory, with two exceptions in respect to the subcategory of techniques as manifestations of flexibility and aesthetic forming. The evaluations of techniques as a manifestation of involvement, however, were reliable. Two possible reasons may account for this discrepancy: (1) the descriptive criteria were not as clear for techniques as manifestations of flexibility and aesthetic forming as for involvement, or (2) the art products did not clearly reveal these kinds of manifestations in terms of the criteria. The characteristic lack of technical skills demonstrated by these students in their art works may indicate that techniques are not serviceable criteria for use in evaluating manifestations of the behavioral principles. Since
there does not seem to be any reason to believe that the descriptive criteria for techniques were not clearly stated, my judgment is that these manifestations were not apparent in all the art products data. Consequently, these manifestations could not be evaluated readily (see Appendix IV). In future studies I would, therefore, eliminate techniques as criteria.

Taken as a whole, the high correlations between the raters' evaluations of the other described manifestations of the behavioral principles in the students' art works indicates that such data and the criteria were adequate for the purposes of the study, and can be used in future studies.

As noted earlier in respect to the verbalizations criteria, rater reliability was obtained for only one of the two manifestations described for each of the behavioral principles. This low level of agreement indicates that both the data and the criteria for the verbalizations were not adequate for the purposes of the study.

It is interesting to note, however, that the raters' evaluations were reliable for the subcategory conception of visual forms and organization as manifestations of involvement and flexibility, but not for aesthetic forming. In contrast, evaluations of the subcategory conception of ideas were unreliable both for involvement and flexibility (see Table 2, p. 104). Two reasons may account for this:
(1) lack of specificity in the descriptive criteria, or
(2) lack of information in the verbal data. The limitations of the data in this respect have been discussed earlier. The limitations of the criteria now need attention.

The difficulties of describing manifestations of behavioral principles as they might be revealed in the students' statements are obvious in one respect. The nature of these descriptions was such that they had to be general enough to include a wide range of specific manifestations. This level of generality gave the raters considerable leeway to use their "private definitions." This problem has already been discussed in relation to the evaluation procedures (see pp. 104-105). While each rater brings his own frame of reference to the evaluation task, the criteria must be stated clearly enough and accepted by all the raters for reasonable agreement to be obtainable.

Implications for gathering more adequate verbal data and developing more precise descriptive criteria for use in future studies are intimately related. The criteria for evaluating these data need to describe the data adequately. The criteria developed for three of the manifestations of the behavioral principles in respect to the verbalizations data appear to be adequate. For example, the raters' evaluations of the subcategory standard for art works as manifestations of aesthetic forming were reliable because
the information in the data was clearly apparent and the descriptive criteria were clear (see sample verbalizations data in Appendices IX, X, and XI).

The limited success with which part of the verbalizations data and criteria fulfilled the purposes of the study indicates that instruments for collecting and evaluating such data can be developed for use in a teaching-research situation.

ANALYZING EVALUATIONS OF THE DATA

A primary consideration in analyzing the evaluations of the data within this study was the question of their validity. Although the raters' agreements were not consistently reliable, in consideration of the complexity of their task and the inadequacies in the data and the evaluative criteria, it seems possible to base some conclusions on an analysis of the raters' evaluations. But these conclusions need to be regarded with question until new studies are made using more adequate procedures.

The kinds of analyses it was possible to make are a function of the way the study was conducted and the hypothesis that was being studied. The analyses deal with two relationships: (1) among the same degrees of manifestations of the behavioral principles in the two sets of data, and (2) among the same degrees of manifestation within each set of data. The conduct of the study made it impossible to deal with changes of degrees of
manifestations over the period of the course. Reasons for this have already been discussed in Chapter III (see pp. 68-69). Other relationships among different degrees of manifestations of the behavioral principles also need investigation. No other pattern of relationships was apparent in the present analysis of the data than those among similar degrees of manifestation, but the absence of other patterns may well be a function of the limited number of student subjects in the study. It should be possible, if studies were conducted over a period of time, to obtain enough instances to reveal other kinds of relationships among different degrees of manifestation of the behavioral principles.

Implications for the Role of Teacher-Researcher

The conduct of this study is, in a sense, a record of my own progress in learning to define and design methods for carrying out the study of a problem with which I am intimately involved. As such, the study has implications for the role of a teacher-researcher.

The hypothesis for the study emerged as the product of my involvement in my teaching situation. The problems I saw in this situation were recognized through the sensitivity I was able to bring from my own experience. The methods I developed for carrying out the study were products of a rather flexible interaction with the problems within the context of the developing situation. Both the problems
and the methods for study can be conceived as components of a process analogous to the artistic process. The emergence of this feeling of similarity seems to me to be an important outcome from my involvement in the study.

As a teacher-researcher, one is intimately involved in two aspects of what can be considered a single complex situation: (1) teaching students, and (2) conducting research on his teaching. The teacher-researcher interacts with both these aspects with the opportunity and need to become aware of the consequences of his actions both as teacher and researcher. If he is able to be aware of the processes of his behavior as both teacher and researcher, he can direct his teaching and the questions he asks himself about his teaching with more control and effectiveness. For me, this meant becoming more aware of the emerging patterns of interaction among the elements in the situation—the students, the problems, the teaching procedures, and my own actions. As I became more aware of these patterns and their implications for the questions I was asking, it became possible to sense directions which would lead further in designing clearer and more effective procedures for both my teaching and research. The same behavioral principles I am studying in the attitudes and behaviors of the students are implied as components of the behavior of the teacher-researcher for becoming creatively involved in his research as well as in his teaching.
APPENDIX I

INITIAL FORM OF CRITERIA FOR EVALUATING BEHAVIORAL PRINCIPLES DEMONSTRATED IN VERBALIZATIONS

**EVALUATION CHART: INVOLVEMENT**

<table>
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<th>1</th>
<th>5</th>
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</table>

**BEHAVIORAL PRINCIPLES**

<table>
<thead>
<tr>
<th>Depends on sources outside self</th>
<th>Relies on sources within self</th>
</tr>
</thead>
</table>

**BEHAVIORAL MANIFESTATIONS**

**Standard for art works**

<table>
<thead>
<tr>
<th>Depends on external standards</th>
<th>Relies on personal standards</th>
</tr>
</thead>
</table>

**Conception of artist's function**

<table>
<thead>
<tr>
<th>Function seen as objective reproduction of a subject</th>
<th>Function seen as subjective interpretation of ideas</th>
</tr>
</thead>
</table>

**Source of ideas for art work**

<table>
<thead>
<tr>
<th>Relies on external sources</th>
<th>Relies on personal attitudes and feelings</th>
</tr>
</thead>
</table>

**Conception of visual forms and organization**

<table>
<thead>
<tr>
<th>Seeks standardized, objective forms and formal organization</th>
<th>Seeks personal, subjective forms and formal organization</th>
</tr>
</thead>
</table>

**Purpose held throughout making an art work**

<table>
<thead>
<tr>
<th>Depends on &quot;given&quot; purpose and motivation</th>
<th>Relies on self for purpose and motivation</th>
</tr>
</thead>
</table>

(continued)
EXAMPLES

Standards for art works

When I see something that attracts my attention it is usually a picture which is very real to life

If you try to know and realize the painter's purpose, you become involved yourself and see and feel things you otherwise wouldn't

Conception of artist's function

All the things she does are very real and I like her work very much

A great artist must be able to portray his feelings, dreams, and ideas

Source of ideas for art work

I added the swans because they are a symbol of happiness and tranquility

I think the most important thing was the discovery of my personality in connection with the things I do

Conception of visual forms and organization

Picture #14 is my best attempt at getting correct perspective

When I realized what it really looks like I could see my own delight and my own silliness in it

Purpose held throughout making an art work

I could not decide what to draw, but I knew I had to bring something back to the classroom

Only I know why I use certain means of color, design, and shape to express this

EVALUATION CHART: FLEXIBILITY

BEHAVIORAL PRINCIPLES

Limited to single arbitrary conception permitting no alternatives

Open to search for alternative conceptions
EVALUATION CHART: FLEXIBILITY (cont.)

1__________________________5________________________

BEHAVIORAL MANIFESTATIONS

Standard for art works

Relies on single, arbitrary standards for evaluation Relies on no single standard as adequate for all evaluations

Conception of ideas in art work

Relies on single arbitrary conception Seeks alternative conception

Conception of visual forms and formal organization

Relies on single arbitrary conception as rule for forms and organization Seeks alternative forms and formal organization

Purpose held throughout making an art work

Relies on single arbitrary purpose without change Seeks alternative purposes

EXAMPLES

Standard for art works

I like... best because I don't like modern art Some people like certain color combinations, some like details, stills, etc. My opinion usually varies quite a bit

Conception of ideas in art work

I am unable to start on a project without a pre-conceived idea of what I want I continued working on the head and I began to think the nose was really pathetic, so I thought, why not make him a sad, despondent character?

(continued)
149

EVALUATION CHART: FLEXIBILITY (cont.)

Conception of visual forms and organization

My sky is always too dark of a blue

I feel if you let yourself interact with your media, changes will naturally evolve

Purpose held throughout making an art work

I hate to leave something in which I feel secure and go to something in which I feel insecure

Then I decided to distort the walls a bit, and soon I was adding more colors to see what kinds of designs I could find

EVALUATION CHART: FOCUS ON TASK

BEHAVIORAL PRINCIPLES

Limited to amorphous conceptions and readily apparent solutions to problems

Seeks for clarity of conception and depth of solution to problems

BEHAVIORAL MANIFESTATIONS

Conception of ideas in art work

Relies on amorphous conception of idea without clarification

Seeks clarification of conception of idea

Conception of problem-solving in art work

Depends in irrelevant aspects of situations to arrive at solution

Seeks out relevant aspects of situation to arrive at solution

Purpose held throughout making an art work

Abandons problem in face of difficulty

Maintains search for solution to problem in face of difficulty

(continued)
EXAMPLES

Conception of ideas in art work

I paint the main object, but then don't know how to make a picture around it.

I feel that part of the ability to create is to be able to conceive an idea and feel it so clearly that the conception itself is a guide that suggests what to do next.

Conception of problem-solving in art work

I never know whether to make each detail realistic or just give a suggestion.

Sometimes this requires thinking about the work and studying it, comparing it to your conception of the things you're creating.

Purpose held throughout making an art work

I thought of an animal in this picture, but left it out because of the difficulty I imagined I'd have with it.

When I returned to painting, I found a problem with colors that I wanted to solve, and in tackling it, I found a new motivation.

EVALUATION CHART: AESTHETIC FORMING

1

BEHAVIORAL PRINCIPLES

Limited to non-visual, non-aesthetic interpretation of experience

Seeks for visual, aesthetic interpretation of experience

(continued)
BEHAVIORAL MANIFESTATIONS

Standard for art works

Relies on literal, non-visual qualities of art work for evaluation  Relies on visual, aesthetic qualities of art work for evaluation

Conception of artist's function

Function seen as literal reproduction of visual "facts" about a subject  Function seen as aesthetic visual interpretation of ideas

Conception of visual forms and organization

Relies on literal, factual conceptions to form symbols and organization  Seeks visual aesthetic qualities to form symbols and organize them

EXAMPLES

Standard for art works

The pitcher gives one the feeling of something old, and the artist has taken great pains to paint the design  The way the objects are placed gives it continuity, a flowing line that makes your eye follow around the picture by repeated curves and tints of color

Conception of artist's function

I would choose Norman Rockwell. This is because he captures the exact image of his subject  I like to feel a rhythm in an artist's work, whatever it is

Conception of visual forms and organization

I do not see how you can put feeling into an inanimate object like a building  The brightness of the sand and bird are supposed to make the observer almost feel the hot sun
APPENDIX II
REVISED CRITERIA FOR EVALUATING BEHAVIORAL PRINCIPLES DEMONSTRATED IN VERBALIZATIONS

EVALUATION CHART: INvolVEMENT

INvOLvEMENT: Capacity to rely on sources within self in an art activity

<table>
<thead>
<tr>
<th>LOW</th>
<th>HIGH</th>
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</table>

CONCEPTION OF IDEAS FOR ART WORK

<table>
<thead>
<tr>
<th>Pays little attention to personal attitudes and feelings about an idea for art work; may select stereotyped ideas</th>
<th>Pays much attention to personal attitudes and feelings about an idea for art work; selects interpretive, personal ideas</th>
</tr>
</thead>
</table>

CONCEPTION OF VISUAL FORMS AND ORGANIZATION

<table>
<thead>
<tr>
<th>Pays little attention to personal attitudes and feelings in developing visual forms and organization in art work; may pay attention to the &quot;right way&quot;, or to rules</th>
<th>Pays much attention to personal attitudes and feelings in developing visual forms and organization in art work; pays little or no attention to the &quot;right way&quot; or to rules</th>
</tr>
</thead>
</table>

EVALUATION CHART: FLEXIBILITY

FLEXIBILITY: Capacity to remain open to alternative conceptions and actions in art activity

<table>
<thead>
<tr>
<th>LOW</th>
<th>HIGH</th>
</tr>
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</table>

CONCEPTION OF IDEAS FOR ART WORK

<table>
<thead>
<tr>
<th>Pays little attention to other than one conception for an idea; may ignore or reject possibility of other conceptions</th>
<th>Pays much attention to alternative conceptions for an idea; may ignore, alter, or change first conception to follow alternatives</th>
</tr>
</thead>
</table>

(continued)
<table>
<thead>
<tr>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONCEPTION OF VISUAL FORMS AND ORGANIZATION</strong></td>
<td></td>
</tr>
<tr>
<td>Pays little attention to other than one conception of visual forms and organization; may ignore or reject alternatives as &quot;wrong&quot;</td>
<td>Pays much attention to alternative conception of visual forms and organization; may ignore or change first conception to follow alternatives; pays much attention to changes in form and organization as &quot;possibilities&quot; as work proceeds</td>
</tr>
</tbody>
</table>

<p>| <strong>EVALUATION CHART: AESTHETIC FORMING</strong> |
| AESTHETIC FORMING: Capacity to recognize aesthetic visual qualities in art works and to develop these qualities in an art activity |</p>
<table>
<thead>
<tr>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CRITERIA FOR EVALUATING ART WORK</strong></td>
<td></td>
</tr>
<tr>
<td>Pays little attention to aesthetic criteria for evaluating own or others' art works; may pay attention to aspects irrelevant to aesthetic judgments, rather than to aesthetic criteria</td>
<td>Pays much attention to aesthetic criteria for evaluating own and others' art works; pays little attention to aspects irrelevant to aesthetic judgments in evaluating</td>
</tr>
<tr>
<td><strong>CONCEPTION OF VISUAL FORMS AND ORGANIZATION</strong></td>
<td></td>
</tr>
<tr>
<td>Pays little attention to aesthetic relationships to develop visual form and organization in art work; may pay attention to literal, rather than to aesthetic relationships and forms</td>
<td>Pays much attention to aesthetic relationships to develop visual form and organization in an art work; pays little attention to literally descriptive forms and organization</td>
</tr>
</tbody>
</table>
APPENDIX III

INITIAL FORM OF CRITERIA FOR EVALUATING BEHAVIORAL PRINCIPLES DEMONSTRATED IN ART PRODUCTS

EVALUATION CHART: INVOLVEMENT

<table>
<thead>
<tr>
<th>BEHAVIORAL PRINCIPLES</th>
<th>BEHAVIORAL MANIFESTATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior in art activity dependent on sources outside self</td>
<td>Uses literal, objective forms; may be stereotyped or copied from other art works</td>
</tr>
<tr>
<td>Behavior in art activity dependent on sources within self</td>
<td>Uses subjective, interpretive, forms; may distort or exaggerate meaningful parts</td>
</tr>
</tbody>
</table>

Symbol formation

Uses literal, objective forms; may be stereotyped or copied from other art works | Uses subjective, interpretive, forms; may distort or exaggerate meaningful parts |

Space representation

Does not vary from objective spatial relationship of objects; often uses stereotyped formula or derivations from other art work | Varies spatial relationships, with emphasis on subjective value of objects in space |

Formal organization

Does not vary from objective formal organization; may be stereotyped or copied from other art works | Varies formal organization in works embodying different ideas; emphasized value relationships |

Color and/or texture

Uses objective color and texture; may be stereotyped or copied from other art works | Uses subjective, interpretive color and texture; emphasized value meanings of color and texture |

(continued)
EVALUATION CHART: INVolVEMENT (cont.)

Techniques

Techniques may (or may not) show hesitancy, or lack of security in skill

Techniques may (or may not) show determination and confidence

EVALUATION CHART: FLEXIBILITY

BEHAVIORAL PRINCIPLES

Behavior in art activity guided by single arbitrary conceptions permitting no alternatives

Behavior in art activity guided by search for inclusions of alternative conceptions

BEHAVIORAL MANIFESTATIONS

Symbol formation

Establishes arbitrary form for objects which remains unchanged from one work to another

Varies forms given to objects within a single work and from one work to another

Space representation

Establishes arbitrary space formula which remains unchanged throughout other works

Varies spatial relationships in succeeding works. Work may show development of increasingly mature spatial conceptions

Formal organization

Establishes arbitrary formula for organization of work which remains unchanged throughout succeeding works

Varies formal organization in succeeding works. Evidence of changes in organization may be present in single works

(continued)
### EVALUATION CHART: FLEXIBILITY (cont.)

<table>
<thead>
<tr>
<th>1</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color and/or texture</strong></td>
<td></td>
</tr>
<tr>
<td>Establishes arbitrary color and textures for objects which remains unchanged throughout other works</td>
<td>Varies color and texture for same objects in a single work and in a succession of works</td>
</tr>
<tr>
<td><strong>Techniques</strong></td>
<td></td>
</tr>
<tr>
<td>Does not vary or refine techniques in single works or in successive works</td>
<td>Varies techniques within single works and in a succession of works</td>
</tr>
</tbody>
</table>

### EVALUATION CHART: FOCUS ON TASK

<table>
<thead>
<tr>
<th>1</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEHAVIORAL PRINCIPLES</strong></td>
<td></td>
</tr>
<tr>
<td>Behavior in art activity guided by amorphous conceptions and need for simple solution</td>
<td>Behavior in art activity guided by search for clarity of conception and depth of solution</td>
</tr>
</tbody>
</table>

### BEHAVIORAL MANIFESTATIONS

| Symbol formation |  
| Gives no emphasis to significant characteristics of objects in work; includes little or meaningless detail | Gives emphasis to significant characteristics of objects in work; includes meaningful, related details |

(continued)
EVALUATION CHART: FOCUS ON TASK (cont.)

Space representation

Places objects with no regard either for objective or subjective spatial relationships; portfolio may contain a number of unfinished works of this description

Formal Organization

Gives no meaningful emphasis (position, size, repetition) to significant parts of work; often emphasizes irrelevant details

Color and/or texture

Uses color and texture with no regard for either subjective or objective meaning in work

Techniques

Use of techniques is irrelevant to meaning in work; may use techniques indiscriminately

EVALUATION CHART: AESTHETIC FORMING

BEHAVIORAL PRINCIPLES

Behavior in art activity guided by non-visual, non-aesthetic interpretation of experience

Behavior in art activity guided by search for visual, aesthetic interpretation of experience

(continued)
EVALUATION CHART: AESTHETIC FORMING (cont.)

<table>
<thead>
<tr>
<th>BEHAVIORAL MANIFESTATIONS</th>
</tr>
</thead>
</table>

**Symbol formation**
Uses literal forms with no regard for visual qualities of objects or visual relation to other objects

Emphasizes visual qualities of objects and visual relations to other objects

**Space representation**
Places objects with no regard for visual spatial meaning; emphasizes literal space relations

Places objects with regard for visual spatial meaning

**Formal organization**
Places objects with no regard for visual unity and consistency in work

Places objects with regard for visual unity and consistency in work

**Color and/or texture**
Uses color and texture without regard for visual unity and consistency in work

Uses color and texture with regard for visual unity and consistency in work

**Techniques**
Techniques used without regard for visual unity and consistency; often overemphasizes technical aspects

Uses techniques with regard for visual unity and consistency in work
### APPENDIX IV

**REVISED CRITERIA FOR EVALUATING BEHAVIORAL CHARACTERISTICS DEMONSTRATED IN ART PRODUCTS**

**EVALUATION CHART: SYMBOL FORMATION**

<table>
<thead>
<tr>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INVOLVEMENT:</strong> Degree of dependence on sources within or outside self</td>
<td></td>
</tr>
<tr>
<td>Uses stereotyped forms, either literally descriptive or abstract</td>
<td>Uses personal, interpretive forms</td>
</tr>
<tr>
<td><strong>FLEXIBILITY:</strong> Degree of dependence on pre-conception or alternative conception</td>
<td></td>
</tr>
<tr>
<td>Uses unchanged forms for same objects throughout work</td>
<td>Varies forms for same objects throughout work</td>
</tr>
<tr>
<td><strong>FOCUS ON TASK:</strong> Degree of recognition and development of intrinsic qualities and characteristics of idea and objects in work</td>
<td></td>
</tr>
<tr>
<td>Gives little emphasis to intrinsic qualities of objects; includes few or meaningless details</td>
<td>Gives much emphasis to intrinsic qualities of objects; includes relevant details</td>
</tr>
<tr>
<td><strong>AESTHETIC FORMING:</strong> Degree of recognition and development of aesthetic visual qualities of idea and objects in art work</td>
<td></td>
</tr>
<tr>
<td>Emphasizes non-visual qualities of objects; emphasizes non-aesthetic relationships of parts</td>
<td>Emphasizes visual qualities of objects; emphasizes aesthetic relationships of parts</td>
</tr>
</tbody>
</table>
EVALUATION CHART: VISUAL ORGANIZATION

<table>
<thead>
<tr>
<th>INVOLVEMENT: Degree of dependence on sources within or outside self</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
</tr>
<tr>
<td>Uses stereotyped organization, unrelated in terms of attitude and feelings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLEXIBILITY: Degree of dependence on pre-conception of alternative conceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
</tr>
<tr>
<td>Uses unchanged organization and relationships of color, position, size and shape throughout work</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOCUS ON TASK: Degree of recognition and development of intrinsic qualities and characteristics of idea and objects in work</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
</tr>
<tr>
<td>Gives little emphasis to significant parts in relation to intrinsic quality of idea; includes few or meaningless details</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AESTHETIC FORMING: Degree of recognition and development of aesthetic visual qualities of idea and objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
</tr>
<tr>
<td>Gives little emphasis to visual unity and consistency; gives little emphasis to aesthetic relationships of forms</td>
</tr>
</tbody>
</table>
## EVALUATION CHART: TECHNIQUES

<table>
<thead>
<tr>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INVOLVEMENT:</strong> Degree of dependence on sources within or outside self</td>
<td></td>
</tr>
<tr>
<td>Gives little emphasis to personal interpretation of texture, feeling, or movement of objects in use of techniques</td>
<td>Gives much emphasis to personal interpretation of texture, feeling, or movement of objects in use of techniques</td>
</tr>
<tr>
<td><strong>FLEXIBILITY:</strong> Degree of dependence on pre-conception or alternative conceptions</td>
<td></td>
</tr>
<tr>
<td>Uses same techniques without variation throughout work</td>
<td>Varies techniques to great extent throughout work</td>
</tr>
<tr>
<td><strong>FOCUS ON TASK:</strong> Degree of recognition and development of intrinsic qualities and characteristics of idea and objects</td>
<td></td>
</tr>
<tr>
<td>Gives little emphasis to intrinsic textures, feeling, or movement of objects</td>
<td>Gives much emphasis to intrinsic textures, feeling, or movement of objects</td>
</tr>
<tr>
<td><strong>AESTHETIC FORMING:</strong> Degree of recognition and development of aesthetic visual qualities of idea and objects</td>
<td></td>
</tr>
<tr>
<td>Uses techniques with little regard for visual unity and consistency</td>
<td>Uses techniques with much regard for visual unity and consistency</td>
</tr>
</tbody>
</table>
### APPENDIX V

**RATING FORMS FOR EVALUATIONS OF BEHAVIORAL PRINCIPLES DEMONSTRATED IN VERBALIZATIONS**

<table>
<thead>
<tr>
<th>INVOLVEMENT: ATTITUDES EXPRESSED IN VERBALIZATIONS</th>
<th>SUBJECT #</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATTITUDE EXPRESSED</strong></td>
<td>LOW</td>
</tr>
<tr>
<td>Conception of ideas for art work</td>
<td></td>
</tr>
<tr>
<td>Conception of visual forms and organization</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLEXIBILITY: ATTITUDES EXPRESSED IN VERBALIZATIONS</th>
<th>SUBJECT #</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATTITUDE EXPRESSED</strong></td>
<td>LOW</td>
</tr>
<tr>
<td>Conception of ideas for art work</td>
<td></td>
</tr>
<tr>
<td>Conception of visual forms and organization</td>
<td></td>
</tr>
</tbody>
</table>
AESTHETIC FORMING: ATTITUDES EXPRESSED IN VERBALIZATIONS

SUBJECT #

ATTITUDE EXPRESSED

LOW MIDDLE HIGH

Criteria for evaluating art work

Conception of visual forms and organization

RATING FORMS FOR EVALUATIONS OF BEHAVIORAL PRINCIPLES

DEMONSTRATED IN ART PRODUCTS

IN涉及：BEHAVIOR DEmONSTRATED IN ART PRODUCTS

SUBJECT #

BEHAVIOR DEmONSTRATED

LOW MIDDLE HIGH

Symbol formation

Visual organization

Techniques
FLEXIBILITY: BEHAVIOR DEMONSTRATED IN ART PRODUCTS

<table>
<thead>
<tr>
<th>SUBJECT #</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
</tr>
<tr>
<td>MIDDLE</td>
</tr>
<tr>
<td>HIGH</td>
</tr>
</tbody>
</table>

**Symbol formation**

**Visual organization**

**Techniques**

---

FOCUS ON TASK: BEHAVIOR DEMONSTRATED IN ART PRODUCTS

<table>
<thead>
<tr>
<th>SUBJECT #</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
</tr>
<tr>
<td>MIDDLE</td>
</tr>
<tr>
<td>HIGH</td>
</tr>
</tbody>
</table>

**Symbol formation**

**Visual organization**

**Techniques**
<table>
<thead>
<tr>
<th>Abesthetic Forming: Behavior Demonstrated</th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbol formation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual organization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Techniques</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX VI

INSTRUCTIONS GIVEN TO THE RATERS FOR EVALUATING THE ART PRODUCTS OF STUDENTS

DESCRIPTIVE CRITERIA FOR EVALUATING LEVELS OF BEHAVIORAL PRINCIPLES DEMONSTRATED IN ART PRODUCTS

Each of the behavioral principles used in this study is conceived as a component of creative behavior in art activity. The assumption is made that the creative person demonstrates capacities for involvement, flexibility, focus on task, and aesthetic forming in some degree as he discusses and participates in art activity. This list of principles is not assumed to be exclusive of others. These were chosen because they are assumed to be important, and because they are currently ascribed to creative behavior in art education literature. No assumption is made, however, that any of these principles alone is an index of creativity, or that creative persons will demonstrate any specific levels of any principle. The purpose of the study is to investigate possible relationships among these principles as they are demonstrated in both verbalizations and art products.

The rater's task is to evaluate the degree to which a subject demonstrates these principles in his verbalizations and his art products. These evaluations cannot be made at specific cutting points in the total sequences of
the subjects' art works, although most of the subjects may be found to demonstrate low degrees of the principles in their beginning work. Neither can evaluations be made on the basis of the highest level of the principle demonstrated in a subjects' work, for this may represent only a few works done by the subject. The raters will have to look at all the work, and then make judgments taking into account the highest degree attained by the subject in enough examples to warrant the judgment. A "rule of thumb" for "enough" examples should roughly be one-third to one-half of the sequence of work, with emphasis given to the last half of the entire sequence. This should allow fair judgments of those subjects who begin at low levels and later attain higher levels of manifestation of the principles.

The task of the raters should be seen primarily as differentiating "high" and "low" degrees of manifestation of the principles. Subjects who do not fall into either of these categories should be placed in the middle category. The person who demonstrates a middle degree of principle may be conceived as demonstrating both "high" and "low" in about equal degrees. He may also be conceived as demonstrating "some" as differentiated from "little" or "much." A typical example might be a sequence of work in which alternate swings from "high" to "low are demonstrated.
A definition for each of these principles as they are conceived in the study, and descriptions for "high," "low," and "middle" degrees of behavioral manifestations follow.

**INVOLVEMENT: BEHAVIOR DEMONSTRATED IN ART PRODUCTS**

The creative person is conceived as being involved in some degree in his art work. The rater's evaluation of the degree of involvement is not an evaluation of creativity, but of involvement as it is manifested in the subject's art work. The key concept for describing involvement in this study is the degree of the subject's reliance on his own attitudes and feelings as guides for carrying out his ideas in his art work.

**Low Degree of Involvement Demonstrated in Art Products**

The subject who demonstrates a low degree of involvement in his art work uses primarily stereotyped symbols to carry the meaning of the idea in his art work. These symbols may tend to focus on literally descriptive aspects of the idea, rather than on interpretation of the subject's feelings and attitudes about it. A typical example of this degree of involvement might be the "party picture," in which the cocktail glass, mask, balloons, etc., are included. The rater will need to note how these symbols are
related in order to infer their use as stereotyped or personal. If they are included as unrelated forms, the rater can infer the subject was very little involved in conceiving or organizing them.

It must also be recognized that a subject may use abstract as well as literally descriptive forms and yet demonstrate little involvement in his artwork. Here again, the way the forms are organized is the key to their evaluation. A typical example of the "low" degree might be the use of certain colors which have stereotyped associations with an idea, which as "pink for happiness." The rater can infer that very little involvement entered into the choice of "pink" if the color has little relationship to sizes, shapes, and other elements in the work. He can then infer that the subject has not expressed his idea with the choice of "pink," but has merely taken over a stereotype.

The techniques demonstrated by this subject will show little or no regard for his own attitudes and feelings about the objects he is representing. A typical example would be not using brush strokes to follow the movement of a form, or lack of textural treatment for surfaces which should have definite textural feeling to the person. While it may be difficult to determine, evidence may also be present that the person has borrowed a technique without its having any relation to his own attitudes and feelings.
High Degree of Involvement Demonstrated in Art Products

The person demonstrating a high degree of involvement in his art work will use primarily personal symbols to carry the meaning of the idea in his art work. While these symbols may be descriptive, they will be interpretive rather than literal. There may be meaningful forming of these symbols which will distinguish them from those made by the subject who is involved to a low degree, however crudely they may be formed. In contrast to the person who demonstrates a low degree of involvement, this person may also use cocktail glasses, masks, etc. for a "party-picture," but the differences to note are the meaningful forms given to these objects and their relationships to express personal attitudes and feelings about "party."

The techniques used by this person will reflect his personal feelings and attitudes in such ways as following the feeling, texture, or movement of forms with brush strokes, or other handling of different forms within a particular work. If there is any evidence that a technique has been borrowed, it will be adapted as a personal means for handling particular forms within a work.
Middle Degree of Involvement Demonstrated in Art Products

If the person fits neither the "low" nor the "high" degree of involvement, he should be placed in the "middle" category. He should also be placed in this category if he demonstrates either extreme in about equal amounts over the latter part of the entire sequence of his work.

FLEXIBILITY: BEHAVIOR DEMONSTRATED IN ART PRODUCTS

The creative person is conceived as being flexible in some degree in his art work. Again, the degree of flexibility he demonstrates is not an index to his creativity. The key concept for defining flexibility in this study is the reliance the subject places on his preconceptions and his admission of alternatives in his art work.

Low Degree of Flexibility Demonstrated in Art Products

The person demonstrating a low degree of flexibility in his art work will use primarily unchanged forms for the same objects throughout his work. The quality of the forms themselves is irrelevant for judgments of the degree of flexibility demonstrated. A typical manifestation of a low degree of flexibility might be the use of essentially
the same form for such objects as trees throughout a sequence of work, regardless of the organization or meaning of the work. If there are no essential changes in these forms, the rater can infer that the subject has held to a pre-conceived form for trees. These forms may be either stereotyped or personal.

The organization this person uses in his work will show little change from his initial means for organizing forms. For example, if he begins with a literally descriptive organization, he will continue this. If he begins with other kinds of organization, whatever he uses will remain essentially the same.

The techniques this person uses will also show little evidence of experimentation. It may be possible that some evidence of experiment is present to a slight degree at the beginning of work with a new medium, but succeeding works in this same medium will not vary to any great extent. The key for the evaluation is the degree of change throughout most of the sequence of work.

High Degree of Flexibility Demonstrated in Art Work

The person demonstrating a high degree of flexibility in his art work will use a variety of different forms for the same objects in his work. Again, the quality of these forms is irrelevant to the judgment of flexibility. The
visual organization of this person's work will also vary. For example, his work may show a number of different organization tried for the same idea, or emphasis on different aspects of the same idea in different works. If these changes appear in the forms and organization, the rater can infer a high degree of flexibility. The techniques this person uses will show variations and experimentation throughout most of the sequence.

**Middle Degree of Flexibility Demonstrated in Art Work**

If the person does not consistently demonstrate either "high" or "low" flexibility, he should be placed in the "middle" category.

**FOCUS ON TASK: BEHAVIOR DEMONSTRATED IN ART PRODUCTS**

The creative person is conceived as having the capacity to focus on a task to some degree in his art work. I am describing focus on a task as the capacity to focus on the intrinsic meaning of an idea and to achieve this meaning in an art work. The key concept, then, is the emphasis the person gives to intrinsically significant characteristics of an idea or objects in his art work. This may be seen also in the amount and kinds of details he includes in his work and the way he includes them.
The quality of the emphasis this person gives to ideas and objects in his work insofar as his personal involvement is concerned is irrelevant for the judgment of his capacity to focus on a task. Either a high or low degree of involvement may be present simultaneously with any degree of focus on a task. The intrinsic quality of the ideas or objects in themselves is the key to this evaluation.

**Low Degree of Focus on Task Demonstrated in Art Products**

The person demonstrating a low degree of focus on task will give little or no emphasis to the intrinsic qualities of ideas or objects in his art work. He will include few details in the forms he makes, or if there are many details, they will be primarily irrelevant to the intrinsic quality or characteristics of the idea or objects.

He will place objects with little regard for significance to their intrinsic meaning. For example, he may over-emphasize irrelevant details or parts, thereby obscuring the characteristics of the idea or objects.

The techniques he uses will show little relationship to the intrinsic characteristics of the idea or objects. He may use techniques indiscriminately.
High Degree of Focus on Task Demonstrated in Art Products

The person demonstrating a high degree of focus on task will give much emphasis to the intrinsic qualities of ideas or objects in his art work. The details he includes will be relevant to the intrinsic quality and characteristics of objects. If he over-emphasizes details or parts, it will enhance the quality of the idea or objects. For example, he will include the salient details of a tree which give it "treeness," and may over-emphasize these details to include its "roughness," "tallness," or some other intrinsic characteristic. Again, the personal involvement which may or may not be demonstrated simultaneously with focus on task is irrelevant to this judgment.

Middle Degree of Focus on Task Demonstrated in Art Products

The same rationale applies to the middle degree of this characteristic as to others.

AESTHETIC FORMING: BEHAVIOR DEMONSTRATED IN ART PRODUCTS

The creative person is conceived as one who has the capacity to form and organize symbols with regard for their aesthetic visual relationships. The key concept for
evaluating this characteristic is the emphasis the person gives to aesthetic visual unity and consistency in his art work.

**Low Degree of Aesthetic Forming Demonstrated in Art Products**

This person will give little emphasis to the visual qualities of his idea in forming the symbols for objects to carry the meaning of his ideas. A typical example might be the "party picture," in which he may include such symbols as musical notes or other non-visual elements to convey the idea of music. Another example might be the inclusion of "realistic" details which have nothing to do with the visual meaning of his idea. Aesthetic forming may be distinguished from focus on task by the emphasis given to aesthetic unity and consistency, rather than to isolated intrinsic qualities. These principles may also be demonstrated simultaneously, however.

This person will organize his work with little or no regard for visual or aesthetic relationships among the forms. His work will lack unity and consistency. Techniques will be used with no regard for their contribution to the visual aesthetic quality of the work.
High Degree of Aesthetic Forming Demonstrated in Art Products

The person demonstrating a high degree of aesthetic forming in his art work will give a great deal of emphasis to visual and aesthetic qualities of his ideas and objects. He will symbolize music with line, color, and other visual elements rather than with musical notes. The details he includes will be related visually and aesthetically, and will contribute to the unity and consistency of his work.

The visual organization of the forms he makes will show a high degree of aesthetic visual relationship. He will use techniques to contribute to the unity and consistency of his work.

Middle Degree of Aesthetic Forming Demonstrated in Art Products

The same rationale applies to the middle degree of this characteristic as to the others. Some works may show a "high" degree and others a "low" degree of capacity of aesthetic forming. It should also be noted that there is a midpoint at which this evaluation can be made, however. If a person demonstrates neither a high nor a low degree of the characteristics as described, but rather demonstrated "some" capacity for aesthetic forming, he should be placed in the "middle" category.
Again, a word about the cutting point for making evaluations of any of the characteristics demonstrated in the art products. The question to ask is: after this person got his feet on the ground in this course, how did he behave? By "getting his feet on the ground," I do not mean an arbitrary point in the sequence of a person's work. It could reasonably be expected, however, that after a few weeks in the course, the person would have some conception of the principles of behavior being studied, and would also be fairly comfortable in the classroom. He would then begin to show his characteristic behavior.
APPENDIX VII

INSTRUCTIONS GIVEN TO THE RATERS FOR EVALUATING THE

STUDENTS' VERBALIZATIONS

DESCRIPTIVE CRITERIA FOR EVALUATING LEVELS OF BEHAVIORAL

PRINCIPLES DEMONSTRATED IN VERBALIZATIONS

IN VolVEMENT: ATTITUDES DEMONSTRATED IN VERBALIZATIONS

Involvement is defined as the capacity to rely on sources within the self in an art activity. Evidence of this capacity can be found in the data in two kinds of statements: (1) about the idea the student used in his art work, and (2) about the way he conceived and organized the visual forms in his art work. Judgments of the degree to which a student demonstrates this capacity are to be made on the basis of how much or how little attention is paid to personal attitudes and feelings as bases for conceiving the ideas and visual forms, and organization to embody the meaning of ideas.

Students who pay much attention to personal attitudes and feelings about ideas, visual forms, and organization should be judged as demonstrating "high" involvement. Students who pay little attention should be judged as demonstrating "low" involvement. Students who demonstrate both "high" and "low" involvement should be placed in the "middle" category. In cases where judgment is made difficult by ambiguous statements or by lack of clear evidence
of either "high" or "low", the evaluation should be "middle."

Additional evidence for the evaluations may be found in what the students pay attention to if they give little attention to their own attitudes and feelings. Some students may reveal dependence on sources outside themselves. In such cases, attention might be given to opinions of others, "right" standards, or to literal (photographic) reproduction as a goal for art work. The student's choice of a stereotyped idea may also reveal dependence on sources outside self.

FLEXIBILITY: ATTITUDES DEMONSTRATED IN VERBALIZATIONS

Flexibility is defined as the capacity to remain open to alternative conceptions and actions in an art activity. Evidence of this capacity can be found in the data in these kinds of statements: (1) about the idea the student used in his art work, and (2) about the way he conceived and organized the visual forms in his art work. Judgments of the degree to which a student demonstrates this capacity are to be made on the basis of how much or low little attention is paid to alternative conceptions as bases for selecting ideas and for conceiving and organizing the visual forms to embody the meaning of the ideas.

Students who pay attention to alternative aspects of ideas for their art work and to alternative ways of
conceiving and organizing visual forms should be judged as demonstrating "high" flexibility. Students who ignore or pay little attention to alternatives should be judged as demonstrating "low" flexibility. Students who demonstrate both "high" and "low" flexibility should be judged "middle." Those whose statements are ambiguous, or who do not present clear evidence of "high" or "low" should be placed in the "middle" category.

Additional evidence may be found in what the subjects pay attention to if they ignore or pay little attention to alternatives. Some students may report ignorance of alternatives. Others may report reliance on "knowing the rules." These students should be placed in the "low" category. On the other hand, some students may report trying out many alternatives resulting in no satisfactory resolution, or in complete change or abandonment of an idea in favor of another. These students should be placed in the "high" category.

AESTHETIC FORMING: ATTITUDES EXPRESSED IN VERBALIZATIONS

Aesthetic forming is defined as the capacity to recognize aesthetic qualities in art works and to develop these qualities in an art activity. Evidence for this capacity can be found in the data in statements about: (1) criteria used by the subject to evaluate, conceive, and organize visual forms in his own art work, and (2) criteria used
by the student to evaluate selected art works. Judgments of the degree to which a student demonstrates this capacity are to be made on the basis of how much or low little attention is given to aesthetic criteria as the bases for evaluating art works and for conceiving visual forms and organization in an art activity.

Students who pay much attention to aesthetic relationships of color, line, shape, size, position, etc., should be judged as demonstrating "high" aesthetic forming. Those who pay little attention to these aspects of their art work should be judged "low." Students who demonstrate both "high" and "low," or who present no clear evidence of either, should be judged "middle."

Additional evidence may be found in what the student pays attention to if he pays little attention to aesthetic criteria. Some students may pay attention to irrelevant recollections of other experience to evaluate art works, such as "it reminds me of grandmother." Other subjects may pay attention to such criteria as "self-satisfaction," or to achievement of literal reproduction in art work. These students should be rated "low" on aesthetic forming if there is no other evidence of the use of aesthetic criteria.
APPENDIX VIII

SELECTED SAMPLES OF DAILY RECORDS OF TEACHING PROCEDURES

Friday, June 22

I had these purposes for the first painting session:

1. To establish an "easy" atmosphere, so that the students would feel free to work.

2. To get the students involved with an idea common to all of them.

3. To demonstrate that each individual would paint differently.

4. To demonstrate that whatever they painted was acceptable.

5. To identify some of the problems they would have; to find the levels of development represented within the group.

6. To begin to direct their attention to the visual implications of their own ideas.

The first painting assignment was to paint something they saw today - at school, on the way, or at home. I asked them to try to show in their pictures how they felt about whatever it was they painted.

As the students finished the first pictures, I put them on the boards. The discussion was directed toward the purposes outlined above. These other points were raised by the students:
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1. Getting proper perspective; making things look flat in the picture.

2. Learning how to handle the brushes and paints.

Next painting was a "tree" - no specific instructions were given other than this. Discussion of these paintings followed.

Next assignment was a "tree that they had had some experience with," and to tell something through the picture about the experience.

Monday, June 25

Purpose for the second session, in addition to those of the first session:

1. To begin directing attention to ways of exploring visual meaning of the idea.

2. To get students to identify with the ideas they would choose.

3. To begin helping with some of the technical problems the students are aware of.

4. To begin helping the students become aware of their own problems as I see them, at this time.

Procedures followed:

The painting assignment was to make a picture about some kind of feeling or emotion. Discussion of various kinds of emotion possible to choose to put into a picture. Students suggested; fear, happiness, peace, contentment, etc.
Asked for suggestions on how to paint one of these. Assignment was changed then to paint a picture, using objects or people, which would communicate the kind of feeling they chose to paint.

Decided not to discuss the pictures with students, but to have them write about them, and then to discuss them later.

The writing assignment: (written on the blackboard)
"You have just spent an hour painting a picture. Please number it, and use the number in your paper. I'd like to know: (1) what you thought while you were painting the picture, and (2) what problems you had.

Most of the students wrote the papers in about half an hour, but some were not yet finished.

Some students worked further on the pictures they had started; others began new pictures, again using the idea of a feeling or emotion. There was no time for final discussion.

Wednesday, June 27

Began the session with a discussion of the students' papers written on Monday. Reported what I found in the papers:

What they thought about as they were painting the pictures:

1. Their feelings about the emotion or experience they were painting. This was important to some of them, but not to all. Stressed the importance of clarifying their feelings in order to communicate what they felt in the picture.
Asked them how they did this. Discussion followed.

2. What the emotion they were painting would "look like." A few of them wrote about this. Stressed the notion that a picture is a visual image of their feelings - that the colors, shapes, etc., go to make up this image, and that they can choose colors, etc., which they think will carry the meaning of their idea or feeling. Asked them again how they made decisions like this. Discussion followed.

3. Selecting the subject to convey the idea they chose to paint. Most all were concerned with this as they painted. Some chose stereotyped subjects; others chose subjects which had personal meaning for them in terms of the emotion they were trying to communicate. Talked about the importance of choosing a subject which had personal meaning; pointed out importance in terms of making their work individual and personal.

Problems they identified in painting the pictures:

Problems seemed to fall into 3 categories: techniques, ideas, behavior. Discussed each of these kinds of problems with purpose of showing relative importance of each one, and that each is somewhat dependent
on the others for solution.

1. Technical problems
   a. Proportion and perspective.
   b. Getting "right" colors; handling colors and brushes.
   c. Relating objects in a picture; adding to the main object after it is painted (working all over the picture).
   d. Getting a picture to a finished stage; making it complete.
   e. Not having enough time to finish when the rest of the class is done.

Did not minimize the importance of these kinds of problems; but pointed out that their solution did depend a great deal on their feelings about the picture and how they visualized the idea.

2. Problems about the idea and the picture
   a. Not being satisfied with the image they can make; feeling that it isn't what it "should" be.
   b. Being able to find the right visual symbols for the idea they chose; not being sure that the ones they choose carry the meaning.
   c. Getting the picture to have "life" and to communicate the idea clearly.
   d. Trying to include too many things in the picture; being able to select.

3. Problems about the behavior of the artist
   a. Being sensitive to the visual aspects of the subject; feeling that it was difficult to decide what made a thing have the particular quality it had visually.
   b. Feeling inadequate to paint pictures.
   c. Feeling pressed for time.
   d. "No doubt I am having trouble visualizing, or perhaps what I am trying to say is that I am having trouble putting on paper the things I visualize." (Having trouble trying to paint the picture before it is begun on the page; not being able to "match" the picture in the mind.")
Talked about importance of all these problems; pointed out that these were the problems we would try to solve during the quarter, but not in any 1, 2, 3 sequence. Told them I felt the 3rd category might be most important, but we would not neglect any of them. Asked for responses from students throughout discussion. Noted that students who identified problems in their papers were ones who led discussion.

Worked in flash room remainder of the session. Began with position slides, using only one object and progressed through more complex ones. Showed about 5 or 6 slides and then let them compare slides to their drawings. Pointed out they were not drawing what they saw on the screen — outlined shapes, too small, not in right positions, etc. Repeated this procedure after about 5 or 6 more slides, and then again. Showed 20 slides but threw them completely with a white shape on a black background. Most students finally were able to draw what was on the screen. Then showed a Braque still life, upside down and out-of-focus. Let them draw in the red light. Asked several who were drawing on only one area to come up on the bridge and look at their work. Adjusted focus gradually until image was clear and then asked them to turn their drawings right-side-up. A good many of the drawings were fair reproductions of the slide. Discussed the experience after adjournment to 101. Asked them how they had to draw, how
they had to "look," when they began to draw, whether this was like drawing the picture they had done before.

**Friday, June 23**

Brief discussion of the flashroom experience at beginning of session - some principles: relating "things" in the picture; visualizing things in relationship; drawing all over the page; putting your body into the drawing act.

Beautiful, cool day - took chalks and went outside to draw. Some students stayed on oval; others went to Mirror Lake. Walked around and talked with them about problems as they worked. Most persistent problems:

1. Working on one object at a time; losing relationship with other things.
2. Trying to put in everything in sight.
3. Trying to put the actual tree on the paper.
4. Having a personal feeling about the drawing - colors mainly local; not personal interpretations, etc.

Discussed pictures on bulletin boards when students came in. Above points were stressed by students. Asked them questions:

1. How did you decide what to put in?
2. What helped you get your buildings the right size?
3. What did the scene you chose mean to you?
4. Why did you make the objects these particular colors?

5. How do your lines affect the feeling the picture gives you now?

6. How did you get this feeling of distance into the picture?

Most of these questions were initiated by the students themselves as questions about how they should do it. I turned the questions around to them and they selected pictures which seemed to have solved the problems for discussion. The students seem to be losing fear of talking about their own pictures.
July 16

Truthfully, I cannot see too much improvement in my pictures. The harder I try to do things as I know they should be done the worse they seem to get. I have the feeling that I know what is supposed to be done, but cannot put it down on paper. I get especially discouraged because I cannot conceive the objects as a whole instead of just detailed outlines. Sometimes I think I have a good idea, and am expressing it well only to find that I'm working in exactly the opposite way that I am supposed to be. I have not learned to express any feeling into my pictures - regardless of how strong a feeling I may have within myself.

It worries me that I can see no significant changes or improvements in my pictures. They all look like my typical way of doing things with no obvious deviations.

When working in the flash room I thought I was doing things as they should be done. I caught the black borders the first time, etc. It only took me a few stabs at it to get things into seemingly correct proportions - yet this evidently had very little effect on my actual
paintings, drawings, etc.

My problem seems to be in the fact that I can learn the essentials but cannot apply them. I still cannot even begin to conceive what you mean by doing the shape of the whole instead of the outlines. Perhaps someday (I hope not too late) the light will dawn and I will understand.

I enjoy very much looking at the slides. Yet, here again, I can see their purpose but cannot apply the reasoning to my own work.

It aggravates me to remain in this confused, dense (seemingly) state. Habit can be a mightly thing, I guess.

I feel I have gained a lot personally, so far - but that it has failed to show up in the pictures. I enjoy myself much more when looking at legitimate works now than I used to. Color, balance, impressions, etc., have more effect on me than ever before. Perhaps I’m just bound to be one of the admirers, and not much of a creator myself.

Something else I have discovered is that I can see changes, improvements, needs, etc., in other peoples' work and not in my own. Can't seem to be able to look
at it as an outsider and criticize objectively. It becomes
too much a part of me (or my ego). The whole thing is
obviously the result of a maladjusted personality—pro­
bably in dire need of a psychiatrist! Know any good ones?

August 17

At the beginning of the quarter I placed much em­
phasis on trying to find the criteria the teacher wanted.
I soon found that this was impossible, and began trying
to set up my own criteria. Since I have always placed
criteria a little too high for myself, I had much diffi­
culty being satisfied with my work. Eventually I learned
to use the criteria of "is the object portraying what I
want it to portray, and does it do the best job I am cap­
able of?"

The reaction of the teacher and other students often
is the deciding factor in my success or unsuccess. Natur­
ally the teacher is harder to please (perhaps she is more
honest) and "dis" or "en" courages with her comments and
hints as to how to make the object express itself or me
more thoroughly. I have always (as I think many students
have) had the notion that we should try to please our
superiors. Now I realize that though this is important
it should not become an ultimate goal. It is difficult
to change one's habits, and I still find myself trying
Gradually I am learning to evaluate my own work with a critical eye, and am becoming more capable of determining the successfulness of it. If it gives me a sufficiently satisfying feeling of completion, worth, and expressfulness, then I am content it is successful. However, if I feel frustrated, unable to complete an object, insecure in its conveyance of meaning, and generally at a loss as to how to better it, then the object is definitely unsuccessful in my eyes (and, most generally, in the eyes of others as well.)

I was very much at a loss as to how to make changes or what to do next in my work at the beginning of the quarter. Now, I am happy to say, things are beginning to dictate themselves and fall into their own rightful places.

When the object definitely does not do its job of communicating then I know something must be changed. Many things more or less dictate a change as: imbalance, no harmonious feeling, cockeyed sense of perception, or just plain out and out mistakes. Other changes come about in a not so obvious manner such as discovering different and better ways to convey the meaning than the original conception.
Knowing what to do next depends largely on the object itself - "letting the picture talk to you" becomes a method of knowing where to go next. The more one allows his work to talk to him (or as he interacts with it) the easier it is for him to create a desirable end. As one looks at his work from a distance, with a more critical eye, he can see obvious things which lead him on to the next step.

Knowing when to stop is the old bugaboo with any work. I suppose it could be said that when one can't find something that tells him what to do next he has about exhausted the conversation betwixt the work and himself and is therefore finished. This, of course, may not be the case, and the student should sometimes need to seek advise from someone with a wide knowledge concerning completion of art objects.

It is easier to evaluate another's work because one can look at it from a much more unemotional viewpoint and thus see through things the creator may not have thought of. It is also easier because the viewer does not know the goal or limitations the creator has set up, and he (the viewer) can only see the thing as it is and not what it should or could have been.
(August 17 (cont.))

It is becoming easier - through practice - to evaluate my own work. But I will never be able to evaluate it as I evaluate the work of another.

August 29

It is rather difficult to say which of these art experiences has been the most satisfactory, but I think working with clay was about the most.

I feel that this was so for the various reasons we were mentioning in class Wednesday. Clay is resilient, pliable, and easily handled and changed. This medium seemed to be more satisfactory because of its changeability.

Since all of the figures I did in clay were satisfactory to me, it is difficult to pick out one certain one. The mood I was in while working on these figures played quite an important part in the satisfying effect.

Both cats, since I am pretty familiar with cats, were enjoyable to work on and complete. I think I've observed so many of the various moods and characteristics of them that I can express their qualities easily. Of course, it
is possible to know too much about a subject and then in turn try to portray too much in the work. For this reason I tried to emphasize certain characteristics of a certain cat and this resulted in some nonunderstanding on the part of those observing. The communication was clear to me, but naturally not to others because of their unfamiliarity with the subject.

At first this failure to communicate disturbed me, but as I worked and handled the subject it became less important. I have the feeling we should not always have to try to make an object "say" something and the more we don't consciously try the better the object will communicate.

These cats both give me the feeling I desire to be felt - not anything especially dynamic - just plain old "cat."

Since I had already thought of modeling a cat in clay, I took special notice of the build and mannerisms of my own. This helped tremendously in getting the various parts of the body to look attached and belonging to one rather than being thrown together in a hit and miss fashion. Handling the animal also was a help because I could
transfer these sensations directly to the clay. This doesn't leave much to the imagination, and yet sometimes one needs the security of something plain and concrete.

While I was in a rather humorous state of mind, I made the pigtailed angel. She is somewhat incongruous insofar as angelic characteristics go, and yet she has expressed exactly what I wanted her to. As she was developing I was really having a tood time trying to let her look too humanistic to be an angel. Humans are rarely angels, anyway, so I felt no guilt in doing this.

The fact that I was making this angel for my mother may have been a good reason for my enjoying it so much. Our feelings about things are very similar and I was sort of sharing the experience with her mentally.

All the things that I made in a "good" mood were satisfactory to me, and gave me much enjoyment. Others only frustrated me and made me feel much worse. Perhaps I involve myself much more than I realize and let too much depend on the success of the object I am working on.

(My thoughts aren't hanging together very well today, so if this whole thing seems not very coherent, attribute
I was very engrossed in the first picture I did today, more than I have ever been before. Yet I was very upset when the reaction to it was entirely incongruous to the effect I was trying to give. WHY?

August 31

1. I would probably still choose human figures in action or expressing some definite feelings. I would choose this subject because I still feel I can handle it more adequately than landscape, etc. Naturally I would choose a subject I am more successful in. And I have more interest in humans and their actions than in any other subject.

2. A great artist is one who can handle his materials in such a manner that the result is balanced, harmonious, and expresses a definite communication. A great artist is one whose pictures have an enduring quality and not just a spur of the moment popularity. His work will have more than mere superficial and obvious meaning - it will contain a deeper and sensitive quality.

3. Breughel, Picasso, Marin
4. Truthfully, I think the most important thing was the great discovery of my personality in connection with the work I do. Even though I probably won't change much, I know reasons why I behave as I do in certain situations and can at least attempt to do something about it. Other important things were actual manipulations of materials in a desired fashion; more creativeness in my work; and reasons for liking certain pictures - valid reasons.

5. I most certainly would!

6. I prefer number three (even though I don't care much for any still lifes) it is more colorful, less drab, and just plain more exciting than the others. I don't really know why I usually prefer more color in pictures, but I do. Suppose I feel like Mrs. Christopher when she said "there's enough drabness in the world" and I prefer to see the colorful side. This picture also has a warmth to it that I feel the others lack.
ART PRODUCTS DATA FROM STUDENT "S" 13

PAINTING: NUMBER 5

DRAWING: NUMBER 7
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"S" 13: DRAWING: NUMBER 8

"S" 13: PAINTING: NUMBER 10
"S" 13: FIGURE DRAWING: NUMBER 5 IN SERIES
"S" 13: SKETCH FOR COLLAGE: NUMBER 20

"S" 13: COLLAGE: NUMBER 20
"S" 13: COLLAGE: NUMBER 21

"S" 13: PRINTING: NUMBER 26
"S" 13: PRINTING: NUMBER 27

"S" 13: PRINTING: NUMBER 28
"S" 13: PAINTING: LAST CLASS DAY
"S" 13: CLAY FIGURE

"S" 13: CLAY ANIMAL
July 16

I really don't feel that I have made much progress so far as painting is concerned. But I can see that my attitude is changing inasmuch as I know a little better what to look for.

In looking through my pictures I do think I see an indication of a little more understanding of size relationships. Also I believe I have learned something about color. Lighter shades being used to bring out the important aspects and darker tones in the less important.

In my mind I feel that I am becoming concerned about making the matter "real" but find that when I paint I am still in the same rut. I am sure that I try to reproduce what I think it should be rather than tell what I think and feel about it.

When you called my attention to the outdoors and how everything grows smaller in the distance, I began to really see things in a different way. I see that "what I see" and what I know about things I see are really
different. For instance, I know that the tree in the
distance is maybe larger than the tree right in front
of me, but my mind dictates what I shall see.

In the painting of the elephant and the polar bear,
nos. 13 and 14, I didn't get at all what I wanted. I
would like to indicate the strength and wildness of the
elephant, also his leathery hide. I really wanted to
show an elephant charging and trumpeting - not one eating
peanuts at the zoo. Likewise, I wanted to show the
restlessness of the bear, and his seeming resentment at
being caged.

I have really gotten a lot from looking at the slides
of paintings. I see that there are many ways of telling
a story, depending upon the viewpoint of the artist.

When I painted the picture of our house, no. 10, I
couldn't make it look like home. As I look at it now I
think, "It surely can't be that uninteresting." I suppose
that indicates further the idea I seem to have that every-
thing in a picture must be perfect. More so than nature
itself.

Also I can't see that my work shows any originality
or imagination at all. In fact, it has been rather frustrating to see all my ideas fall flat right before me, when I try to execute them.

But I really do feel that I can appreciate art much better, knowing a little better what to look for in a picture, and seeing how the artist solved his problem.

August 17

I would like to feel that the things I have done in my art experiences tell what I really feel about the subject. Are the colors, shapes, and sizes related to each other and is the effect of the whole pleasing? Does there seem to be a rhythm and movement about the whole, and has space been used to the best advantage? Have I used repetition of shape and color to obtain balance and accent what I am really trying to express?

As I review the criteria I have listed above in studying my own work, I feel that in many ways I fall short. In my picture of the clown in the circus I believe I have more nearly approached these standards. Visually, when I look at my own work it appears too uninteresting and like something you would expect - not in the least exciting or different.
August 17 (cont.)

Usually changes in my work are demanded by the things I have already done. When I made the little elephant in clay it started out to be a pig, but the body with the legs looked like, to me, more like an elephant so my idea changed and took on different characteristics. I enjoy working with paint more than any other media and find it a little more flexible and gratifying. I would like to experiment with paint and the new ideas I have discovered in working with the materials. The mobile on which I am now working has sent me into new channels of thought and experience. I think I am realizing more and more the need for repetition of colors and shapes to make it live and move.

Looking at another's work I do so impersonally. I see the whole object as a whole and it is either pleasing or not. When we did the printing the others had some designs that I really appreciated because they had character and I liked the shapes and colors.

When I examine my own work I suppose I don't see it as a whole but as a group of related or unrelated problems. Since the things I do in art are so much a part of me, I can't see them in the proper perspective.
August 29

I really enjoyed all the art experiences I have had this summer with the exception of the printing which never did come out as I intended it should. But I believe I was more interested in making the mobile, trying to get it to say what I wanted it to say, and trying to make it a "whole." Here I had the problem of balance, of color, shapes, patterns and sizes which I believe could be applied to any work of art.

In looking at other individual's work I feel that this has helped me to know what to look for and why a certain picture has appeal.

When I made the mobile, I found I could experiment without destroying what I had done or changing my original plan. New ideas could be hung on the wire or taken off if the effect was not pleasing. I found that the "swimmiest" fish didn't have to look like fish at all and that some materials work together to create an impression and some definitely do not. Only by experimenting with the material could this be determined.

When I finished with the mobile I felt that I really had done all that I could and that it communicated my original idea.
August 31

1. Now if I were going to paint a picture I think I would like to paint a landscape as I feel that the artist can put so much more how he feels into that type of painting.

2. I feel that a person's ability to communicate an idea through a medium makes him a great artist. I like to have the picture leave a little for me to imagine, thus I can put something of myself into it each time I look at it. I like to feel a certain rhythm about the work, whatever it is.

3. I think Breughel is a great artist. I also like Bellows and I liked Picasso's "Boy with Cattle."

4. I feel that the greater the appreciation of art, plus the satisfaction I have had from my art experience have been most valuable. Now I understand why boys and girls in the elementary school would get the same satisfaction out of working with various art materials, and how that same feeling would contribute a great deal to their emotional and personality development.

5. I really would like to take another art course as I am sure that I have only started to know the value of art experience. Also I would like to have more understanding
of the work of others.

6. I think I like no. 3 the best. However, I appreciate No. 1 definitely more than I did at first, and do not care for no. 2 at all, although I gave that as my first choice at the beginning of the quarter. No. 3 seems to be more alive and I like the color combinations.
ART PRODUCTS DATA FROM STUDENT "S" 16

PAINTING: NUMBER 6

DRAWING: NUMBER 8
"S" 16: PAINTING: NUMBER 10

"S" 16: PAINTING: NUMBER 13
"S" 16: FIGURE DRAWING: NUMBER 1 IN SERIES
"S" 16: FIGURE DRAWING: NUMBER 9 IN SERIES
"S" 16: SKETCH FOR PAINTING: NUMBER 15

"S" 16: PAINTING: NUMBER 15
"S" 16: SKETCH FOR PAINTING: NUMBER 16

"S" 16: PAINTING: NUMBER 16
"S" 16: COLLAGE: NUMBER 18

"S" 16: PAINTING: NUMBER 19
"S" 16:  DRAWING:  NUMBER 21

"S" 16:  PAINTING:  LAST CLASS DAY
"S" 16: CLAY ANIMAL
Sketching was a completely new experience to me and rather exciting. I first did outline sketches but it wasn't long before I realized that my sketches looked more real when I concentrated on the motion or whole of what I was sketching. I could always add darker lines after I had the motion down to give a general outline.

My first sketch was in Pomerene Lounge which didn't interest or please me at all. There was no feeling or motion in the picture. So I changed my environment and went to the University Hospital lobby. Once I sat down, I knew that I would be able to sketch. I have a strong feeling of love for hospitals, as my father is a doctor and I know what great things can be done in such a building. One can see or feel so many emotions, which are fairly well under control, in the lobby. The picture of the doctor turning from the lady he was talking to, to the old man and shake hands was to portray a feeling of anxiety, or how everyone tries to get to the doctor first for news. I also sketched the nurse holding a baby while waiting for the father to come in to take his wife and new daughter home. I thought this was a typical and warm,
After my time was gone and I had to attend other classes, I couldn't return to the hospital, but I was enjoying sketching so much I continued to sketch. Two of my sketches I did of girls in our Pine Room at my sorority house. The one where the girls are studying I wasn't too pleased with because I felt the back of the room I had made in too much detail. The next sketch of two girls getting ready to do a Siamese dance I liked better. My last sketch I did in the Ohio Union and I was very pleased with it. I felt motion while sketching and I think that one can see motion in the picture itself.

The aspects of my subjects which I found most interesting were the movements or positions of the people in the environment which I was sketching.

I feel that in my painting no. 31 it reflects the anxiety of the man in grey. He is most anxious for the doctor to recognize him and talk to him. The woman sitting by herself is calm and just waiting for any news.

In no. 32, I think it reflects a feeling of happiness with such a clear day outside and the fact that only two
November 2 (cont.)

people are in the picture portraying happiness and no one
is in background which might put a feeling of gloom and
worry into the picture.

No. 31 and no. 32 are not exactly like the sketches
as I suddenly didn't want to put as many details into the
paintings, but wanted the central points to be the people
and their shapes and movements.

My last painting, no. 33, was a water painting. I
still do not fully understand why I painted it, except
that all of a sudden I had the urge to paint the ocean
and surf. This was the first time that I put colors on
the paper and changed them, on paper, whenever I felt
like it without hesitation. I like the painting very much.
It gives me an extremely good, complete feeling.

I truly feel that this series of paintings has been
more successful on my part because I am beginning to de­
finitely put my feelings into my work, my sketches are
becoming more varied, and I am not afraid any more to
experiment with colors.
December 4

At first I used to judge my work according to what the majority of the class thought of it. I would go around and ask their opinions and then I would decide what to do with the present item. Now, however, I am not bothered by the opinions - that is, I won't change my idea to theirs unless I feel it is what I want. I judge my work now on how it resembles my first idea of it when it is finished. I look to see if I have changed somewhat from my first impression and am generally pleased if I can see a difference because then I realize that I have felt free to do what I felt and not a strict rule or idea. Also, I judge my work by my feelings as I did it and when it was finished. If I was pleased with it as I was doing it, this makes a lot of difference in my judgement of it.

I feel that I have been successful when I can look at my finished product and know that it represents an idea I had and yet has some added qualities to it that developed while I worked. I felt successful in the painting work we did because I finally lost my fear of trying to cover the entire paper with a picture instead of just a small corner. Also, at first I painted things as realistically as I could remember then and I feel my pictures were cold. Then, I started to be free all of a sudden and I tried to paint as I saw things as a whole and not in
December 4, (cont.)

individual parts. I was very pleased with my scenic paintings as to me they showed the whole of everything and I could see feeling in them and to me they portrayed the deep feelings inside me about them.

I was not completely satisfied with my clay gorilla because it did not end up as my first idea. However, the more I look at it, I can see traits of a human and a gorilla in it and this does portray my feelings of a gorilla. I see a gorilla as a human at times in actions as well as looks. Here again, I just worked and turned out something not completely realistic and yet filled with reality and imagination. My three-dimensional wire figure of a deer did portray the grace of a deer, and yet it lacked the many traits of a deer, but I feel I did get across my feeling of a deer. Then we come to the papier mâché work, and I am crazy about my "bunny." I had a definite picture of what my bunny would look like - realistic - but the more I worked on it, I started once again to mix bunny characteristics and my feelings. The finished product was of great satisfaction to me.

I decide to make changes according to my feelings toward the specific project. This is very hard to explain, but inside of me I can tell if I have done all I want to
do to my project or if there is a feeling of incompleteness I can tell it. Also, I can now put feelings of motion or reality into things by trying to place myself into the same situation.

It is easier to judge another person's work because you judge it by reality. However, it is difficult to judge, too, because each individual's feelings vary to different extremes and it is hard to know just how they were feeling at the time. You may see one emotion in it while they were trying to portray an entirely different one.

December 6

Yes, there are some objective criteria that I can use in evaluating my own work. They are the balance of my lines, a definite pattern following around the object, the proportions of parts to one another if you are trying to present a realistic form, if you want to show or attract attention to a certain part of the object - is there enough emphasis placed on that part and do all the other parts remain in the minority and yet point to the main part? Is the texture of what I am making best suited to the object I am making? I also look to see if there is appropriate shading and yet not too much on what I am
doing. I feel that if the object has some of the main characteristics of the real ideas, you are free to put in your own personal variations. Another good criteria is to be able to know if you used the right materials to portray your object. In my bunny I looked for the balance or pattern of lines and I feel they can be easily noticed. I gave the general characteristics of a rabbit to my bunny, and yet I know that my main interest was to show the ears and the tail. Therefore, they are not in true proportion to the bunny as it would be on a real rabbit, but they emphasize my main interest.

I feel I used the right medium for my rabbit, and by putting dry, dark brush strokes all over his body I think it gives him a furry, textured look. Also I made his face lighter on purpose and then shaded the rest of the body and am well pleased with the result.

In painting I found that the best medium for my scenic pictures is the water painting, as to me it gives my pictures a soft texture - exactly the way that I feel about my picture and the beauty I am attempting to create.

My deer - made out of wire - could have been made out of clay, but I feel that wire was the best medium to portray its gracefulness.
December 12

I am sure that the art experience which seemed most satisfactory to me will not surprise you in the least. Yes, it was painting. I never would have believed this had you told me in the beginning that I would like painting. I hated it! Now my feelings are entirely different.

Frustration isn't even the word for my feelings about painting at the beginning of the quarter. The first time that I felt I was really leaving the confinement of what my version of painting seemed to be was when we did chalk painting. All of a sudden I began seeing things as a whole. I could get shading and more feeling in my pictures. My favorite type of painting is when you wet the entire paper and paint - I really love to do this. Each stroke seems to be more satisfying that the one before. Painting satisfied me more than clay work as I had this in my industrial arts course and it didn't move me then. I would say that painting was more satisfying to me than any other experience, and that papier mache work was my next favorite.

This course has certainly helped me so far as painting is concerned. Never before in my life had I had any art experience, and so I was a complete beginner in this course. Now I am not ashamed to show my paintings or to try new ones. I have gained confidence in myself!
December 13

1. I feel that a great artist is a person who is full of feelings that he can tell only through painting. He is a person who is able to portray his feelings on paper. He is one who has a strong conception of reality, and yet can put some mystic things into a painting. His control of perspective is almost always with perfection. The use of colors together is not judged by other people, but what the artist feels best expresses his feelings at that time. A great artist has control over his painting — by that I mean when you look at his painting you are held within it, and it doesn't seem to lead you out of the picture. An artist is a person who enjoys painting and receives a great deal of self-satisfaction from it.

2. Picasso — painting of the woman ironing.

3. The most important things I accomplished in this course were: a confidence in my ability to paint, a definite satisfaction in my work, a feeling of perspective and looking at things as a whole and not in sections. I have always been a person who likes to be busy, especially with my hands. Before this class I always found a release for my emotions in knitting, sewing, playing the piano, or playing a game of tennis. Now I have found one more outlet and a very satisfying one at that — painting. I feel
that in this course I have learned to judge other's works by seeing if they portrayed what they felt in the painting - not whether it portrays what I think it should. I have learned many criteria for judging my own work, too.

4. Yes, because I am deeply interested in it now. It is somewhat of a challenge to me and I would like to see if I have any more ability in this line. Also, I believe in people's broadening themselves as much as possible and this is one of the many areas I have never attempted before.

5. I would like to learn how to use brighter colors and how to paint scenes I see, more than scenes I think of.

6. Number 2 painting. I like the soft colors, it does not let your eyes wander outside the painting. The shading is superb. It makes you think of olden days, and gives me a peaceful, content feeling.
ART PRODUCTS DATA FROM STUDENT "A" 24

PAINTING: NUMBER 4

PAINTING: NUMBER 6
"A" 24: DRAWING: NUMBER 9

"A" 24: DRAWING: NUMBER 15
"A" 24: FIGURE DRAWING: NUMBER 24

"A" 28: FIGURE DRAWING: NUMBER 28
"A" 24: SKETCH FOR PAINTING: NUMBER 31
"A" 24: SKETCH FOR PAINTING: NUMBER 32

"A" 24: PAINTING: NUMBER 32
"A" 24: PAINTING: NUMBER 35

"A" 24: PRINTING: NUMBER 36
"A" 24: PAINTING: NUMBER 37

"A" 24: PAINTING: NUMBER 38
"A" 24: CLAY FIGURE

"A" 24: PAPIER MACHÉ ANIMAL
BIBLIOGRAPHY


AUTOBIOGRAPHY

I, Coretta Waring Mitchell, was born in Ontario, Oregon, November 6, 1910. I received my secondary school education in the public schools of Nashville, Tennessee, and Tulsa, Oklahoma. My undergraduate training was received at the University of Tulsa and at The Ohio State University, which granted me the Bachelor of Science in Education degree in 1948, and the Master of Arts degree in 1949. During the Spring Quarter of 1948, I was Graduate Assistant in the School of Fine and Applied Arts. I was appointed University Scholar at The Ohio State University in June, 1948, specializing in Art Education. I held this position until January, 1949, when I was appointed to my present position as Instructor in Art Education in the School of Fine and Applied Arts.