The Effects of Three Modes of Presenting Art Reproductions in Art Education.

Daniel Gene Vidrine
Louisiana State University and Agricultural & Mechanical College

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THE EFFECTS OF THREE MODES OF PRESENTING ART
REPRODUCTIONS IN ART EDUCATION.
THE LOUISIANA STATE UNIVERSITY AND
AGRICULTURAL AND MECHANICAL COLLEGE, PH.D., 1979
THE EFFECTS OF THREE MODES OF PRESENTING ART REPRODUCTIONS IN ART EDUCATION

A Dissertation
Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of
Doctor of Philosophy
in
The Department of Education

by

Daniel Gene Vidrine
B.A., University of Southwestern Louisiana, 1966
M.Ed., Louisiana State University, 1975

May 1979
ACKNOWLEDGEMENTS

The writer wishes to thank the members of his committee, Dr. Charlie W. Roberts, Jr., Dr. Sam Adams, Ms. Janie R. McWhirter, Dr. Spencer J. Maxcy, and Dr. Pauline M. Rankin, for the assistance and cooperation they gave in the preparation of this dissertation.

Special appreciation is extended to his major professor, Dr. Roberts, for his advice, guidance, and support during this study and throughout the writer's doctoral program. Additional appreciation goes to Ms. McWhirter for the insights she contributed from the vantage point of friend, colleague, and professional art educator. Heartfelt thanks are given to his dear friends Roland, Emerson, and Charlene for their faith in him and their tolerance of him during the writing of this dissertation.

The author wishes to express a very special "thank you" to his parents, Eunice and Leman Vidrine, whose unselfish love, encouragement, and generosity were present every step of the way. This dissertation is hereby dedicated to them, who understood the drive within him and gave him the strength needed to persist in this endeavor.
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The problem of this study was to compare the effectiveness of three modes of displaying or presenting art reproductions to students in art education, where the visual was essential to the presentation.

The study contributed information useful in making strategy decisions in art education where the mode of presentation could be optional.

Three experimental groups of Louisiana State University students enrolled in the sophomore level course, Fine Arts 2271, Art Education for Elementary Schools, were used in the study.

A total of thirty-nine different reproductions of original art works were presented to the three experimental groups. The thirty-nine reproductions were divided into three sets. Each set contained thirteen visuals, with each visual being prepared in three presentation versions -- slides, prints, and photographs. Each of the three groups of subjects received the same instruction for the same amount of time and viewed the same complementing visuals, but through three different and alternating presentation modes.

Investigator-prepared pre tests and post tests were administered to all three groups. An analysis of covariance was performed to compare treatment means of the total scores on the achievement tests for each presentation mode. That
is, mean scores of the totals of like-treatments among each
group were analyzed. Results were tested at the .05 level
of significance. All analyses resulted in non-significant
F-ratios; thus, no one mode of presentation tested affected
learning appreciably more than another.

Suggestions for further research include replica­
tions with changes in the mode, sample and audio sources,
and studies that emphasize affective achievement and opinion.

Specifically, the investigator believes there is a
need for further study and makes the following recommenda­
tions:

1. Investigation of textbook prints, postcard
prints, and all other media versions, as modes of presenting
art reproductions.

2. Replication using subjects from other universi­
ties, from high schools, and from elementary schools, and
from other curriculums.

3. Replication using recorded content presentations
to accompany visual presentations.

4. Explore the problems of affective learning that
results in cross-media comparisons.

5. Conduct opinion polls that determine mode pre­
sentation preferences.

6. Survey cost differences in establishing and main­
taining art libraries featuring slide, print, and photograph
reproductions of original art works.
Chapter 1

INTRODUCTION

During the past two decades certain educational researchers have focused their attention on the use of visual materials for instructional purposes.

Berry (1975) maintained that research has positively established the need for visual materials to augment or complement oral and verbal instruction. But no attempts have been made at systematically determining the most effective method of presenting or displaying visuals where the visual is inherent to the presentation. Such a situation exists in art education instruction where the visuals, art reproductions, are essential to the instruction.

Clark (1972) presented evidence indicating that students at all grades are able to form visual concepts from their observation of art reproductions. Barkan (1966) and Eisner (1969) stated that art education programs should include visual experiences with emphasis on aesthetics and the analytic viewing of art. Art reproductions, therefore, become a valuable and necessary teaching tool to the art educator.

For art education, Gaitskell and Hurwitz (1975) indicated that visual sensibility is crucial to the understanding and appreciation of art and without the accompanying visuals, art reproductions, instruction is impossible. Yet,
an examination of the literature has produced no studies which examined learner reactions to variations in the methods of presentation of art reproductions. Dwyer (1967), moreover, pointed out that certain modes of presentation of visuals other than art reproductions may actually impede rather than foster the learning process.

An investigative inquiry into the effects of the use of art reproductions in various presentation modes, therefore, seemed appropriate for educational research.

STATEMENT OF THE PROBLEM

This study sought to answer the following question: what were the effects of three modes of presenting art reproductions to students in art education, where the visual was essential to the presentation?

SIGNIFICANCE OF THE STUDY

The study contributed information useful in making instructional strategy decisions in art education where the mode of presentation was optional.

Specifically, in art instruction, where the original art work was unavailable or unattainable for study, the best appropriate alternative, a reproduction of the original, was essential.

Positive benefits from this study were gained by:
Art students in maximizing learning and aesthetic understanding.
Classroom teachers in the planning and execution of art education instruction.

Curriculum developers in the initiation and development of new programs in art education.

Resource centers personnel in the acquisition of media equipment.

Additionally, this study yielded information of value in decisions involving the acquisition of art reproductions for art department libraries.

LIMITATIONS OF THE STUDY

Population Limitations

1. The study was limited to those students attending Louisiana State University in Baton Rouge during the Fall Semester, 1978.

2. The study was limited to students enrolled in Fine Arts 2271, Art Education for Elementary Schools.

3. The study was limited to six sections of Fine Arts 2271, assuming classroom sizes of approximately twenty students each.

Limitations of Instruments and Materials

1. Responses measured were limited to the kind that could be recorded through the medium of pencil and paper, multiple choice types of tests.

2. Photographs and slides were prepared from prints of original art works.
3. Prints of original art works were selected from the investigator's collection.

DEFINITION OF TERMS

For the purposes of this study, the following definitions were used throughout the proposed research.


2. Slide Reproduction: A copy of a two-dimensional work of art, produced photographically as a 2" X 2" 35mm slide film transparency.

3. Photograph Reproduction: A 3" X 5" image of a work of art photographically recorded on opaque, photosensitive paper.

4. Original Art Work: A two-dimensional piece of art composed firsthand, as a painting, drawing, collage, etching, etc., from which a copy or reproduction is made.

5. Mode of Presentation: The manner or method of presenting or displaying (slides, prints, photographs) reproductions of original art works.

6. Fine Arts 2271, Art Education for Elementary Schools: Lectures, readings, discussions, and studio activities. Analysis and evaluation of concepts of art education, with view toward developing functional art programs.

7. Achievement: Results as measured by the total number of correct responses completed for the post test.
PROCEDURE

Description of the Groups

Subjects for this study were comprised of Louisiana State University students enrolled in the sophomore level course, Fine Arts 2271, Art Education for Elementary Schools. Subjects were divided into three experimental groups.

Group I consisted of two intact classes of Fine Arts 2271, who viewed slides from Set Cl, prints from Set C2, and photographs from Set C3 of art works as complementary visuals to art instruction (see Figure 1).

Group II consisted of two intact classes of Fine Arts 2271, who viewed prints from Set Cl, photographs from Set C2, and slides from Set C3 of art works as complementary visuals to art instruction (see Figure 1).

Group III consisted of two intact classes of Fine Arts 2271, who viewed photographs from Set Cl, Slides from Set C2, and prints from Set C3 of art works as complementary visuals to art instruction (see Figure 1).

The slide projections were group-viewed, that is, a single projection viewed by all subjects at the same time in a particular test group.

All prints were group-viewed, that is, a single print was strategically placed so that it could be viewed by all subjects in a particular test group.

All photographs were individually-viewed, that is, each subject in a particular test group viewed individual photographs of art works.
The limitations cited previously applied to all three groups.

**Experimental Design**

When the group presentation modes are shown as a factorial design with repeated measures, the overall experiment can be represented as shown in Figure 1.

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**Figure 1**

A= Test Groups  B= Presentation Modes  C= Sets of Art Works

A1= Group I  B1= Slides  C1= Set C1

A2= Group II  B2= Prints  C2= Set C2

A3= Group III  B3= Photographs  C3= Set C3

**Experimental Variables**

There were three variables in this study. The independent variable was presentation modes, specifically, slide presentation, print presentation, and photographic presentation.
The dependent variable was the learners' achievement as measured by the total correct responses completed for the post tests. The covariant was the learners' achievement as measured by the total correct responses completed for the pre tests.

Treatments

A total of thirty nine different reproductions of original art works were presented to three experimental groups.

The thirty nine reproductions were divided into three sets, Set C1, Set C2, and Set C3. Each set contained thirteen visuals, with each visual being prepared in three presentation versions, those being slides, prints, and photographs.

Each of the three groups of subjects received the same instruction for the same amount of time and viewed the same complementing visuals, but through three different and alternating presentation modes.

Thus, when Group I viewed Set C1 in the slide version, Group II viewed Set C1 in the print version, and Group III viewed Set C1 in the photograph version. When Group I viewed Set C2 in the print version, Group II viewed Set C2 in the photograph version, and Group III viewed Set C2 in the slide version. When Group I viewed Set C3 in the photograph version, Group II viewed Set C3 in the slide version, and Group III viewed Set C3 in the print version.
All subjects in all three groups were given an investigator-prepared pre test. The administration of this pre test was carried out one class period prior to the presentation of the treatments.

The pre and post tests were exactly the same test, except that the post test was restructured through the use of a random number table to reduce question recall due to numerical position.

Tests were of the multiple choice kind with each question being accompanied by an art visual. Each group was asked questions from each of the three Sets, C1, C2, and C3. Subjects of a particular group viewed accompanying visuals in the same presentation mode in which the treatment was administered. For example, Group I was tested and viewed slides from Set C1, prints from Set C2, and photographs from Set C3. Group II was tested and viewed prints from Set C1, photographs from Set C2, and slides from Set C3. Group III was tested and viewed photographs from Set C1, slides from Set C2, and prints from Set C3.

The investigator-prepared post test was administered immediately following each group presentation. The exposure to the treatment for all three modes of presentation to one group and the test following it took place in one class period.

A pilot study of the investigator-constructed test was conducted during the Summer Semester, 1978, at Louisiana State University using one section of the course entitled,
Art Education for Elementary Schools, Fine Arts 2271. Both a pre test and a post test were used.

Collection of Data

The investigator presented the art instruction and the complementing visuals, as well as administered both the pre test and the post achievement test.

The investigator-constructed test was submitted to an expert committee of art historians and art educators for validation.

The validation committee was composed of the following art experts:

Marchita B. Mauck: Area Director of Art History and Associate Professor of Fine Arts, Louisiana State University

Janie R. McWhirter: Area Director of Art Education and Associate Professor of Fine Arts, Louisiana State University

Willemina B. Minster: Slide Curator, Fine Arts Department, Louisiana State University, Member, The Committee to Set Up National Standards for Slide Curators.

Data Analysis

Analysis of covariance was used to compare the group means of the total scores on the achievement test among the three groups.

Results were tested at the .05 level of significance.
Reporting of Results

The adjusted scores of the three groups are presented in a series of tables in order to demonstrate graphically the differences among the groups receiving different treatments. Test results were examined, and conclusions were drawn from the results.

PLAN OF PRESENTATION

The remainder of the report of this study is organized into four additional Chapters. Chapter 2 is "Review of the Literature," Chapter 3 is "Design and Procedures," Chapter 4 is "Analysis of the Data," and Chapter 5 is "Conclusions."
Teachers have been confronted with the problem of selecting and organizing effective visualized materials to complement classroom instruction (Lamberski, 1975).

Twyford (1969) indicated that the value of visual instructional materials in facilitating instruction had been recognized. Berry (1975) maintained that research positively established the need for visual materials to effectively augment oral and verbal instruction.

The use of pictures as illustrations or examples has played an important part in the development of educational materials. Vollan (1972) pointed out that with the rapid advance of technology and the invention of more sophisticated printing technology an abundance of pictorial materials have been brought to the educational setting.

Many visual instructional materials and devices are on the market. With the widespread use of these materials it would appear to be beneficial to educators to know which instructional materials are most effective (Dwyer, 1973).

Thousands of drawings, photographs, paintings, and other graphic works have been converted into reproductions through various techniques. Fleming (1966) found through analysis of forty textbooks that his sample contained 1.58
illustrations per page. Slide sets, filmstrips, and collections of study prints contributed further to the rapidly growing quantity of still pictorial images available to the classroom teacher.

As early as the 1960's the effectiveness with which visuals could be used to improve student achievement had been documented by several researchers (Gropper, 1962; Kopstein and Roshal, 1954; Trichler, 1967). Gropper (1963) showed that visual presentations can teach concepts and that visual lessons can lead to performance on visual test items superior to that following verbal presentations. Gibson (1954) stated that just as children are said to think when their sounds become symbols, a person can learn to think in terms of visual symbols. He theorized that in certain instances such thinking may be formed more easily than verbal thinking.

Olson and Bruner (1974) commented that learning through various systems of visual representation makes certain assumptions about the learner. The ability to think visually can be assumed.

Visual thinking has been characterized by visual imagery: the kind that we see (sensory), the kind that we imagine (the mind's eye), and the kind we draw (generative) (McKim, 1972). Nelson (1975) cited research that indicated that 83 percent of all sensory learning is visual, while some researchers project as much as 90 percent (Dale, 1969).
Retention has been related to visual thinking and sense experience. Research by Phillips (1947) provided evidence that people generally remember:

10 percent of what they read,
20 percent of what they hear,
30 percent of what they see,
50 percent of what they hear and see,
70 percent of what they say,
90 percent of what they say as they do a thing.

Kinder (1973) indicated that direct instruction through the senses has become very important, and from this kind of thinking has emerged a movement for visual literacy, aimed at improving the extent to which students and others can respond to and derive information from visual stimuli.

The perceptual processes of seeing, imagining, and reconstructing visual images comprise visual thinking, thus, visual literacy. The First National Conference on Visual Literacy adopted a definition:

Visual literacy refers to a group of vision competencies a human being can develop by seeing at the same time he has and integrates other sensory experiences. The development of these competencies is fundamental to normal human learning. When developed, they enable a visually literate person to discriminate and interpret the visible actions, objects, and/or symbols, natural or man-made, that he encounters in his environment. Through the creative use of these competencies, he is able to communicate with others. Through the appreciative use of these competencies, he is able to comprehend and enjoy the masterworks of visual communication. (1970:14)
Debes (1969) used the verbal analogy to define a taxonomy of visual literacy skills. A visually literate person, he characterized, would possess the abilities:

- to read visuals with skill,
- to write with visuals expressing oneself effectively,
- to know the grammar and syntax of visual language and be able to apply them,
- to be familiar with the tools of visual literacy and their use,
- to appreciate the masterworks of visual literacy,
- and to be able to translate from visual language to verbal language and vice-versa.

Nelson (1975) conceived of visual literacy as the abilities of those who are able to intercept accurately, interpret, understand, and create communication in a non-print mode. Furthermore, Kinder (1973) contended that learning and retention are inextricably interwoven with the mode of instructional communication used.

Marshall McLuhan (1964) declared that the medium itself constitutes much more than merely a channel for transmission, but is in fact the message. Although Dale (1969) did not fully support the McLuhan theory, he did, however, adhere to the premise that the medium influences the message and the message influences the medium. Moreover, he indicated that we should consider the kind of vehicle used to transport messages, keeping in mind that medium/message characteristics influence what can be sent to a receiver.
Kinder (1973) stated that media have been important in their own right, not just as transmission vehicles. Thus, the design and production of media assume an importance rivaling that of their utilization.

Art instruction, it would appear, which depends so heavily on visual imagery makes up one area where the superiority of presentation mode is critical. Yet, relatively few attempts have been made at determining the most effective mode for presenting or displaying visuals (Dwyer, 1973).

Visual sensibility has become an important aspect of general education, critical to a full participation in the visual arts (Arnheim, 1962).

Clark (1972) spoke of the visual arts and art education:

Visual sensibility is the ability to make a knowledgeable response to visual experience, i.e., to demonstrate learning as a consequence of visual experience. It has shown that numerous writers have speculated on the appropriateness of extended visual experiences in school art curricula and that research findings conducted outside of art education have supported the feasibility of visual learning as a curricular experience. Because many writers believe art is based on visual experience, there is pressure to extend the art program to include directed visual experiences with art works and reproductions. (1972:4)

Malraux (1951) offered a meaningful approach to aesthetic interpretation based upon the fact that everyone can see the art productions of the world regardless of where the originals are found. In one of his volumes, Museum Without Walls, he elaborated:
Nowadays an art student can consult color reproductions of most of the world's great pictures, can discover for himself a host of second-rank pictures, archaic arts, Indian, Chinese, and pre-Columbian sculpture...

Hitherto the connoisseur duly visited the Louvre and minor galleries and memorized what he saw, as best he could. But there were many more significant works in the Louvre than even the best trained, most retentive mind could register, whereas the modern connoisseur has far more great works accessible to his eyes than those contained in even the greatest of museums. For an Imaginary Art Museum without precedent has come into being... (1951:17)

Dale (1969) pointed to the fact that the availability of a vast range of excellent reproductions has brought about important implications for the teaching of art. He further suggested that reproductions make possible comparative analyses that can not be completed otherwise. Students witness as much of the world's art as their school's collection of reproductions contains.

Clark (1972) gathered evidence that indicated that students at all grades form visual concepts from their observations of selected sets of art reproductions. Students at all grade levels can learn to generalize visual concepts to previously unencountered examples.

Some conflicting evidence exists concerning the comparative effectiveness of two or three visual media. Several studies (Kale and Grosslight, 1955; Vernon, 1946; Heidgerken, 1948) found no significant differences in the effectiveness of two or more visual media. Other studies (Carson, 1951; Ortgiesen, 1954) showed the superiority of
one medium over another, for example filmstrips over films. However, in these studies the illustrations were seldom equivalent. Valid comparisons of mode of presentation and their effects on learning can only be made when the visuals are equivalent in both instruction and visual content (Dwyer, 1973).
Important elements in the design and procedure of this study were (1) the selection of the students to be tested, (2) the construction of the achievement tests, (3) the preparation of the art lecture, (4) the preparation of the visuals. This Chapter includes an account of the performance of the experiment, and concludes with a precise statement of the research design.

SELECTION OF THE STUDENT: THE SAMPLE

Prior to the beginning of the study, permission was received from the Committee on Humans and Animals as Research Subjects to work with Louisiana State University undergraduate students enrolled in the course entitled, Art Education for Elementary Schools, Fine Arts 2271. Consultations followed with the Head of the Fine Arts Department, Walter E. Rutkowski, and Area Director of the Art Education Division, Janie R. McWhirter.

Conferences were arranged with the Art Education Faculty. At these meetings it was decided that two classes of each of three teachers would be used in the experiment. Since it was necessary to combine two classes to form one group, the investigator drew numbered slips of paper to determine class groupings. Once this determination was made,
numbered slips of paper were again drawn to determine the group order of mode presentation.

With six classes composing three experimental groups, the original expectation had been that this stratified sample would produce numbers of scores and covariates on the order of forty for each of the presentation mode groups. Because of the small number of registered students in some of the classes, this expectation was not realized. The actual usable numbers were:

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<td>Group I</td>
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<td>Group II</td>
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<td>Group III</td>
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CONSTRUCTION OF ACHIEVEMENT TEST

The investigator-constructed art education achievement test was composed of three ten-item units, Test C-1, Test C-2, and Test C-3. The total of thirty items operate on the behavioral levels of knowledge, comprehension, analysis, and evaluation. Each of the thirty items was accompanied by a visual, an art reproduction presented or displayed in one of three presentation modes. The complete test, including the list of accompanying visuals, is located in the Appendices.

A pilot study of the achievement test was conducted on July 26, 1978, at Louisiana State University, using the students in one section of the course entitled, Art Education for Elementary Schools, Fine Arts 2271. All three
modes of visual presentation were employed in the art lecture, the pre test, and the post test.

The pilot study established the fact that no students required more than thirty seconds to respond to any of the thirty items on the test; consequently, students were allowed thirty seconds to respond to each test item during the main study, instead of the forty-five seconds originally proposed.

PREPARATION OF THE ART LECTURE

The investigator-designed art education lecture that preceded the post achievement test was composed of six major topics:

1. Line
2. Space
3. Color
4. Light
5. Shape
6. Texture

Two-topic combinations were used to form three lecture units, Lecture C-1, Lecture C-2, and Lecture C-3.

1. Lecture C-1 Line and Space
2. Lecture C-2 Color and Light
3. Lecture C-3 Shape and Texture

The approximate lecture times were twenty minutes per lecture unit for a total lecture time of one hour. Each unit lecture was accompanied by thirteen art reproductions, each prepared in three presentation modes.
PREPARATION OF VISUALS

A total of thirty-nine reproductions of original art works was utilized in the experiment, with each reproduction prepared in three visual modes:

1. Slides
2. Prints
3. Photographs

Large color print reproductions, professionally prepared, were selected from the investigator's personal collection. Slide reproductions were photographically prepared as 2" X 2", 35mm transparencies from the color print reproductions. Color photograph reproductions were prepared as opaque visuals in a 3" X 5" format. Both the prints and the photographs were mounted on appropriate heavyweight paper for easy handling and display.

PERFORMANCE OF THE EXPERIMENT

In the original conference with the area director and teachers, each interested party was told of the purpose and nature of the study, including a description of the activities and the class periods required. Each of the three participating teachers agreed to relinquish two two-hour class periods for the presentation and testing. Additionally, the agreement was established that thirty minutes of class time one week prior to the presentation would be used for pre testing.
The investigator-prepared pre test was administered one week prior to the presentation-post testing period. No lecture was given, only accompanying visuals in three presentation modes were used in conjunction with each test item. The approximate preparation and testing time for the pre test was thirty minutes, allowing thirty seconds for the viewing of each of the thirty test items.

The presentation of the art lecture and the test following it took place in one two-hour class period for each sub-group tested. Thus, two two-hour class periods were required to gather complete data for each group. The time required for each sub-group presentation and testing was approximately eighty minutes. The investigator delivered each lecture presentation, administered each test, and manipulated all accompanying visual aids for each sub-group in order to maintain consistency in presentation and testing. The investigator was also responsible for the scoring of all tests.

For each sub-group presentation and test, a packet was prepared for easy transportation and administration. Each packet, depending on the sub-group being tested, contained:

1. Slides of art works
2. Prints of art works
3. Photographs of art works
4. The lecture presentation
5. The test in class-sized numbers
6. Answer sheets for the test
7. A stopwatch and timer

Arrangements had been made previously to have available on scheduled days a slide projector designed for showing 2" X 2", 35mm slides, and a projection screen.

RESEARCH DESIGN

This study was designed to have three treatment groups: all three serving as experimental groups (slides, prints, photographs), with no control group. The groups were made comparable by the establishment of a covariate (pre test scores). The criterion variable was established by the post test scores. The group means were compared by analysis of covariance, and the results were tested at the .05 level of significance.
Chapter 4

ANALYSIS OF DATA

This study was designed to investigate the effects of three modes of presenting art reproductions in art education. In this Chapter, the data generated by the study are reported and analyzed.

The number of subjects in the three treatment groups -- Group I, Group II, and Group III -- was twenty-five, twenty-two, and thirty, respectively. Subject numbers within each sample group were adjusted by random selection for more accurate comparisons. Thus, for purposes of analysis of the data, each of the twenty-two subjects in the three groups was assigned a number within his group, and his pretest and post test scores were paired with this number.

The data presented in Table 1 show the scores achieved by each subject for each treatment in Group I. The data presented in Table 2 and Table 3 show the corresponding scores of Group II and Group III.

An analysis of covariance, using the pre test scores as the covariant, was conducted to determine whether differences in achievement had occurred. The results of the analysis are presented in Table 4.
Table 1

DISTRIBUTION OF BASIC DATA OF ART EDUCATION TEST: GROUP I

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Table 4

ANALYSIS OF COVARIANCE OF ART EDUCATION TEST SCORES: COMPREHENSIVE GROUPS

<table>
<thead>
<tr>
<th>Source</th>
<th>Sums of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Group (Between)</td>
<td>3.2697</td>
<td>2</td>
<td>1.6349</td>
<td>0.74 (N.S.)</td>
<td></td>
</tr>
<tr>
<td>Group (Within)</td>
<td>405.5456</td>
<td>63</td>
<td>6.4372</td>
<td>2.90 <em>(Confounded)</em></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>5.0920</td>
<td>2</td>
<td>2.5460</td>
<td>1.15 (N.S.)</td>
<td></td>
</tr>
<tr>
<td>Pre test (Covariable)</td>
<td>7.0559</td>
<td>1</td>
<td>7.0559</td>
<td>3.18 (N.S.)</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>281.9238</td>
<td>127</td>
<td>2.2198</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>195</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*P < .05  
N.S. = Not Significant
ACHIEVEMENT WITHIN GROUPS

Results of the analysis of covariance appeared to indicate significant differences in achievement among treatments (slides, prints, and photographs) within each group at the .05 level of confidence. However, a thorough examination revealed that due to the nature of the experimental design, the art works became confounded with treatments and groups for within group evaluation. Because of the compounding factor, and because of the possibility of erroneous conclusions being drawn, further analyses were not considered.

Mean scores on pre tests and post tests for Group I, Group II, and Group III are presented in Table 5, Table 6, and Table 7, respectively.

ACHIEVEMENT AMONG TREATMENTS

The pre test and post test mean scores for treatments among groups are given in Table 8.

Results of analysis of covariance, with the pre test scores as the covariant, resulted in an F-ratio of 1.15. This ratio was not significant when examined at the .05 level of significance; thus the experiment revealed no significant differences in achievement among treatments.
### Table 5
**Mean Scores of Art Education Test: Group I**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Post test</th>
<th>Pre test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (slides)</td>
<td>22</td>
<td>6.5909</td>
<td>2.2272</td>
</tr>
<tr>
<td>2 (prints)</td>
<td>22</td>
<td>6.3181</td>
<td>3.9545</td>
</tr>
<tr>
<td>3 (photographs)</td>
<td>22</td>
<td>6.0454</td>
<td>4.0454</td>
</tr>
</tbody>
</table>

### Table 6
**Mean Scores of Art Education Test: Group II**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Post test</th>
<th>Pre test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (slides)</td>
<td>22</td>
<td>5.8636</td>
<td>2.5909</td>
</tr>
<tr>
<td>2 (prints)</td>
<td>22</td>
<td>7.0909</td>
<td>3.0454</td>
</tr>
<tr>
<td>3 (photographs)</td>
<td>22</td>
<td>6.7272</td>
<td>3.3181</td>
</tr>
</tbody>
</table>

### Table 7
**Mean Scores of Art Education Test: Group III**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Post test</th>
<th>Pre test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (slides)</td>
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<td>7.3181</td>
<td>4.3181</td>
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<tr>
<td>2 (prints)</td>
<td>22</td>
<td>5.4545</td>
<td>3.5909</td>
</tr>
<tr>
<td>3 (photographs)</td>
<td>22</td>
<td>6.8636</td>
<td>2.6363</td>
</tr>
</tbody>
</table>
Table 8

LIKE-TREATMENT MEAN SCORES OF ART EDUCATION TEST: COMPREHENSIVE GROUPS

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Post test</th>
<th>Pre test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (slides)</td>
<td>66</td>
<td>6.5909</td>
<td>3.0454</td>
</tr>
<tr>
<td>2 (prints)</td>
<td>66</td>
<td>6.2878</td>
<td>3.5303</td>
</tr>
<tr>
<td>3 (photographs)</td>
<td>66</td>
<td>6.5454</td>
<td>3.3333</td>
</tr>
</tbody>
</table>
Chapter 5

CONCLUSIONS

Conclusions have been drawn from the evidence of this study by summarizing the results, and by suggesting some of the implications for teaching and further research. Investigator recommendations in relation to art education are also presented.

SUMMARY OF RESULTS

The purpose of this study was to investigate the effects of three modes (slides, prints, and photographs) of presenting art reproductions in art education. The three test groups were comprised of Louisiana State University students enrolled in the course entitled, Art Education for Elementary Schools, Fine Arts 2271. Each of the three groups of subjects received the same instruction for the same amount of time and viewed the same complementing visuals, but through three different and alternating presentation modes. Each of the subjects provided scores from two instruments, a pre test and a post test on the objectives of the unit of content.

The results of the post test were subjected to an analysis of covariance to determine whether significant differences in achievement existed among treatments (slides,
prints, and photographs) within each of the three experimental groups. A closer investigation revealed that due to the experimental design, the art works became confounded with treatments and groups for within group evaluation. Because of the compounding factor, and because of the possibility of erroneous or invalid conclusions being drawn, no further analyses were conducted within groups.

An analysis of covariance procedure was also used to analyze the results of the post tests to determine whether a significant difference in achievement existed among treatments (slides, prints and photographs) for all groups combined. According to the results of the analysis of the data, there were no significant differences in achievement among treatments. Thus, mode of presentation did not appear to be a major factor in achievement in this study.

IMPLICATIONS FOR TEACHING

The conclusions of this study that appear pertinent to art education and art teachers center on the relative lack of superiority of one mode of presentation over another in achievement gains. No one presentation mode investigated (slides, prints, and photographs) appeared to be superior to any other. The results of the study indicated that students achieve the same cognitive learning in art education when subject content is complemented with art reproductions presented in either of three versions: slides, prints, or photographs.
These findings should be beneficial to art educators in making strategy decisions where the mode of presentation is optional. Teachers, particularly in high school and elementary settings, often have difficulty finding complete sets of reproductions prepared in one medium. For example, the art teacher's entire unit of instruction may depend upon the availability of sets of art reproductions. If, indeed, as the study indicated, mode of presentation is not a factor in achievement, then teachers could use multiple presentation versions in a single unit of content and still expect maximum results. Art teachers are often dependent upon their own personal art libraries or state and local lending libraries for sources of art reproductions. Seldom do elementary or even high school systems have complete art library facilities. Thus, evidence gathered in this study would support the use of cross-media presentations of art reproductions in art education when necessary.

IMPLICATIONS FOR RESEARCH

Suggestions for further research include replications with changes in the mode, sample, and audio sources, and studies that emphasize affective achievement and opinion.

The present study should be replicated using subjects from other sections of the nation, from other universities, from high schools, from elementary schools, and from other curriculums.
Another worthwhile alteration in design for replication purposes would be to use recorded presentations to accompany visual presentations. Design modifications could be made so that areas such as programmed instruction in art education might be investigated.

The same general experimental design could be utilized with other areas of the art education curriculum. The design lends itself not only to higher education subjects, but also could be adapted for research with high school and elementary subjects.

Further studies might also explore the problem of affective learning that results in cross-media comparisons. Art educators are as concerned with affective outcomes as they are with cognitive ones. While this study makes available some needed information concerning the effects of modes of presentation on achievement, its effects in the affective domain remain virtually unexplored.

The investigator believes that there are other areas that require investigation and makes these additional recommendations:

1. Investigation of textbook prints, postcard prints, and all other media versions, as modes of presenting art reproductions.

2. Conducting of opinion polls to determine mode presentation preferences.
3. Determination of cost differences in establishing and maintaining art libraries featuring slide, print, or photograph reproductions of original art works.
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APPENDICES
LOUISIANA STATE UNIVERSITY
Baton Rouge Campus

From: Committee on Humans and Animals as Research Subjects

To: Vice Chancellor for Advanced Studies and Research
   David Boyd Hall

Re: Proposal of Daniel G. Vidrine, Fine Arts
   Principal Investigator

Entitled "The Effects of Three Modes of Presenting Art
   Reproductions in Art Education"

This is to certify that a quorum of the Committee on Humans and
Animals as Research Subjects reviewed the above proposal. The Committee
evaluated the procedures of the proposal with appropriate guidelines
established for activities supported by federal funds involving as sub-
jects humans and/or animals.

Recommendation of Committee Approved

Comments:

A review of this proposal by the Committee will be accomplished at
least on an annual basis and at more frequent intervals depending on the
element of risk.

Date July 7, 1978

[Signature]
Chairman, Committee on Use of
Humans and Animals as Research
Subjects
LINE

Drawing lines is one of the means that we use to record the appearances of objects in nature. A linear record of an object's appearance helps us to become familiar with the object itself.

To make a linear record of an object's appearance we may at times use only a single line instead of an outline shape. For another aspect of our visual experience is seeing objects in terms of a basic direction implicit in their form. For example, we may see a standing figure as a single, vertical line, or we may record a column, a tall building, or a tree in the same manner. When we use a line in this fashion, our record becomes a type of linear symbol for the object in the same way that the sign of an arrow is a symbol of a moving force.

Representing an object in terms of an implied line encourages us to see a similarity between objects that are quite different. The tree, the tall building, the column, or the standing figure become connected in our mind by virtue of their verticality. As our experience increases we assign to these vertical forms qualities more difficult to define, such as honesty, righteousness, superiority, or strength. Obviously, if the artist desires to impart similar qualities to his work, he will be led to the forms that engender reactions and encourage us to make such associations.
The painting by Tintoretto, *CHRIST BEFORE PILATE*, offers us an example of how we may perceive an object by its form. Christ is the dominant figure because the artist makes this figure appear to us as a single, strong vertical accent within the composition. Tintoretto emphasizes this effect by relating the figure only to the architectural background, where the many pillars and columns of the buildings echo and reinforce the verticality of the figure of Christ. All the figures surrounding Christ are depicted by a series of twisted, convoluted curves; no other figure possesses the verticality given to the Christ figure. Christ remains the dominant figure, the one to which we devote our attention and feelings.

The artist produces his lines with instruments — pens, pencils, etching needles, crayons and paint. The marks made by these instruments are measurable in two dimensions, but when they result in what we call "line," one of the dimensions is disregarded. This is particularly true of a line that maintains a fairly constant thickness, as in Picasso's *THREE DANCERS*. The viewer should consider the linear elements as both lines and forms. As lines they provide two-dimensional webs, forming an arabesque over much of the canvas surface; but they also act as slender forms of color, contributing to a complex, interdependent color-form composition.

Line is a powerful element in the hands of the graphic artist. Toulouse-Lautrec, in this poster *AT THE MOULIN ROUGE*, has used line techniques borrowed heavily from Japanese art.
Lautrec uses diagonal lines and curves to give a sense of motion to this almost photographic image. Heavy black lines in the dance floor help create a deep perspective, with figures strongly separated from each other in distinct planes. The pinkish-violet silhouette of the figure in the foreground creates a shadow play contrasting sharply with the more solid figure in white and red, who in turn stands out against a black silhouette frieze.

Uccello (THE BATTLE OF SAN RAMANO) also utilizes line for creation of perspective effect. This painting was created prior to our mathematical understanding of perspective. Yet, the artist has made use of tall jousting poles held high in the air and broken poles carefully placed on the ground, in much the same way as Lautrec's floor lines are used. Even the hillside is severely sculpted to form lines leading the eye up the hill and down again into the battle zone.

A line becomes a symbol when a specific meaning is attached to it. The lines of letters and numbers have particular symbolic meanings. Joined together in ways that are generally understood, lines represent words (and therefore ideas), mathematical quantities, or musical notes.

Nearly every civilization has practiced some form of calligraphy (a word from the Greek meaning "beautiful writing"). They have included decorative forms of letters in the Western alphabet, the Semetic scripts of the Middle East, or the highly stylized brushstrokes of Oriental characters.
Painters did not fail to recognize the beauty of calligraphy and have often incorporated it into their works. In *Riders in the Forest* by Raoul Dufy, his quick, calligraphic use of line and broad bands of color are in ample evidence. Early in his career, Dufy observed that line moves more rapidly than color does and that the human eye receives the sensation of color more easily than that of movement, thus holding this mental image longer. This perception led to his application of color in "diffusions" that were not strictly confined to outlines but sometimes swept across a work in broad bands, coloring objects perhaps half-green and half-blue, and thus making them part of a lively, moving world held together in tight compositions in which both color and line dance and sparkle. Dufy has used line in the portrayal of leaves and grass, but not as outlines of these plants, rather as quick marks that represent the character of those plants. Leaves often look like clusters of quick marks that perhaps represent what leaves do when blown by the wind, rather than what a leaf actually looks like.

**SPACE**

In any discussion of space as a design element, we must distinguish two kinds. Actual space is that which in fact exists in a composition. It may be the two-dimensional space within the borders of a canvas, the three-dimensional spaces inside and around a sculpture or within a building. Pictorial space is the illusionary space that we see in a
two-dimensional work, such as a painting or drawing. We might analyze it in terms of the number of planes, or flat surfaces in depth that we apparently see. Pictorial space can vary from a perfectly flat, patterned surface to the illusion of deep space.

In dealing with non-objective shapes in a composition, the spatial relationships can become very complicated. Not only does each shape relate to the space of the canvas, but they also relate to each other in space.

Henri Matisse (THE SNAIL), late in his life, was too feeble to hold a brush or stand before an easel. Instead he took to making cutouts of colored paper, then arranging and pasting them on a paper background. By taking several cut out shapes and moving them around Matisse was able to arrive at compositional relationships that were most effective.

An art work that emphasizes deep space denies the picture plane except as a starting point from which the space begins. WINTERSCAPE WITH BIRD TRAP is aimed at the maximum illusion of visual reality, emphasizing the infinite space concept. Diminishing sizes of objects and hazy effects of atmospheric perspective give the viewer a sense of seeing into the far distance.

Present day art is largely dominated by the shallow space concept. Limited or shallow space could be compared to the restricted spatial feeling of a box or stage as seen in this Renaissance painting by Sasetta (ST. ANTHONY DISTRIBUTING HIS WEALTH TO THE POOR). The work is composed in
terms of two flat planes represented by the figures in front and the architectural structure in back.

Modigliani's *GYPSY WOMAN WITH A CHILD* illustrates how an artist can limit shapes which restrict the vision of the viewer. Modigliani deals with a simplified monumental form given plasticity by subtle linear and value treatment and enriched by sensitive paint application.

Man generally interprets largeness of scale as meaning nearness. A smaller scale conversely suggests spatial distance. If we are to use depth-scale as our guide, a figure regardless of all other factors must assume a scale to correspond to its distance from us. In this painting by Seurat (*SUNDAY AFTERNOON ON THE ISLAND OF LA GRANDE JATTE*) the obvious progression of sizes in the figures is a strong indication of spatial recession. At the same time, these figures are carefully placed to give balance to the pattern of space and shape relationships. Another example is *BREEZING UP* by Winslow Homer. The horizon line in this painting describes a separation of space into ground plane below and a sky plane above. The smaller size and higher position of the distant boat helps to achieve the spatial effect.

The radically changed environment of the artist has been instituted for a new graphic vocabulary to describe visual discoveries. Since one outstanding feature of the modern world is motion, new artistic representations must move, at least illusionistically. Motion has become a part of space, and this space can be grasped only if a certain
period of time is allotted to cover it. A new dimension is added to spatial conception; often referred to as the 4th dimension, the elements of time, space, and motion have presented an important graphic challenge. This challenge is the discovery of a practical method for the representation of things in motion from every viewpoint on a flat surface.

Paul Cezanne, in painting a picture of a stilllife (STILLLIFE WITH APPLES AND ORANGES), was concerned with the plastic reality of forms as well as their organization into a unified design. Although the plate, dish, and pitcher are present in the same picture, they are depicted as seen from different viewpoints. For example, the plate would seem to have greater reality if drawn as seen from a higher angle, on the other hand, the dish placed behind this object seemed to be observed from a lower viewpoint.

Another representational device used for the suggestion of movement is the superimposition of many stationary views of the figure or its parts in a single picture.

The subject in Marcel Duchamp's NUDE DESCENDING A STAIRCASE is not the human body but the type and degree of energy it emits as it passes through space.

In the effort to conceive a solution to the problem of suggesting motion as it is involved in time and space, cartoonists use the idea of repeated contours. This device is often seen in comic strips where suggested motion is necessary.
COLOR

The perception of color is the single most strongly emotional part of the visual process. Our reactions to color are often strong and immediate, and we associate the most diverse experiences and emotions with certain colors. Blue, for example, is a color that can cause us to feel wistful, sad, or lonely. El Greco's VIEW OF TOLEDO is an example of how blues are used to create mood. The boiling blue sky and the reflected blues of the stone city give it a cold and forbidding feel. Red, on the other hand, can give us the feeling of heat. In another instance, red might create in us an impression of violence or destruction. And these same two colors may even affect our perception of depth. A red color generally appears to be closer to us than does a blue color; cooler colors appear to recede, and warmer colors to advance toward us. These same colors may have a purely sensuous appeal.

But colors do not have to strike in full force for effectiveness. In THE DESCENT FROM THE CROSS, the artist has actually distorted color. His reds are not pure and his yellows are putrid and lifeless. The artist has used color to help create the horrible and sickening mood of the depicted scene.

Matisse (HARMONY IN RED), on the other hand, takes liberties with color simply for aesthetic expression. He
chooses to paint a room in red and pink and then deliberately use the same pattern on the table as on the wall. His colors are rather ambiguous, used primarily for creating and emphasizing atmosphere. Then, as if to make our eyes jump, he carefully places the fruits about the table, all painted in high intensity hues.

Because the number of colors or hues is infinite, and the possible variations and combinations of these colors endless, the range of impressions that the artist is able to create through the use of color is equally vast. This very diversity of causes and effects, that makes color such a rich, expressive element, also makes it difficult, however, to describe precisely how we feel and experience color. No single system has yet been established that successfully organizes the study of observable phenomena into an orderly science. How the hues relate to one another, and what reactions certain hues and their combinations may produce, still are questions for which no single answer exists. Ultimately each artist, on the basis of his experience, determines his own theory of the nature of color and its effects.

Certain observations of our experience with color are so frequently made, however, that the majority of those concerned with perception accept them as being valid. One such observation, for example, comes from our experience in looking at a variety of hues. Some appear dominant over others. We discover our eye to be strongly attracted to the hues red, blue, and yellow -- the primary colors. Our attraction to
these colors obviously is taken into account by the artist when he creates his work. In the painting THE LOVERS, by Picasso, the two figures are depicted in primary colors. The male figure is enveloped in a robe of red, and the female in yellow. Although equal in size to some of the areas of primary color, the green garment worn around the female's head does not strike our eye with the same force.

We tend to see all other colors in terms of their relationship to these dominant hues. The other hues are characterized to us according to whether they are more or less closely associated with one of the primary colors. We know, for example, that green paint can be created by bringing together yellow and blue paint. Even without this knowledge we actually see the color green as being more closely related to either yellow or blue than to red. Unlike green and yellow, the colors green and red do not appear to merge with one another.

In the STILL LIFE by Courbet, the mass of red color is capable all by itself of giving us a great sense of delight. At other times this color, as others as well, may displease us or even appear revolting. The ease with which these varied associations can be provoked demonstrates the impact that color has on our visual experience.

That we see different hues as either closely or distantly related to one of the primary colors is an observation that the artist may use to create different effects. Courbet places in the center of his canvas the single, most brilliant
piece of red fruit. All of the surrounding red pieces are markedly duller; the only pieces depicted with the same degree of brilliance are those of a dominantly green color. Together with the central red fruit they create a large bright area in the foreground which makes us see this part of the scene as caught in a strong light. Combined with the effect the red areas create of advancing toward us, this impression makes us feel that it is we ourselves who are holding the light that illuminates the scene. Courbet is able to convey this impression primarily because of the way our eye reacts to the combination of red and green. Without the presence of the green, the central area might well become a blinding spot of red before our eyes. The green anchors the red area within the composition while still creating the effect of distance and light.

We might note here that the intensity of the central red fruit is what makes it dominant as well as its being a primary color. A green fruit of equal intensity in that same position could also have dominated the picture.

This work (JOCKEYS) by Degas is another painting in which the relationships that we sense among different hues determine our impressions of the work. The most brilliant area of color is located in the center of the canvas. Degas gives the silks of the jockey occupying this spot the colors yellow and blue. Our eye is immediately drawn to this central area, the only one in which these two primary colors are to be found. Almost instantaneously, our eye picks up
three dots of red, nearly all we see of the racing colors worn by an adjacent jockey. These small dabs of red color literally make our eye jump. We move quickly, for example, to the red jockey cap in the upper right-hand corner of the canvas -- an area that most nearly matches in size and brilliance the central area of yellow and blue. From the red cap our eye moves among the colored silks of the other jockeys. Again, it is the primary hue that is dominant; however, it is also due to its intensity. It is a primary color, but it is also the most intense hue in the painting. Another hue of equal intensity in that same position in the painting would have had the same dominating effect.

The movement that our eye makes in response to color reinforces the disorganized, snapshot appearance that Degas wishes to convey. By attracting our eye first to the blue and yellow area, Degas moves us back into the midst of the crowd, but the red dots send our eye forward again where we continue to move in and out among the figures. All these movements are intensified because the dark areas and relative absence of brilliant hues in the foreground keep our eye within a compact area surrounding the central blue and yellow composition. The nature of this movement is controlled by the three small dots of pure red. The hues that Degas has chosen and the way he has arranged them, visually express the constant shifting, restless actions that characterize this group gathering for the race.
The farther apart two hues are from each other, in relation to the color wheel, the more contrasting they are in character. The hues which appear directly opposite each other afford the greatest contrast and are known as complementary colors: red and green, yellow and violet, orange and blue. No hard and fast rule can be made about complementary colors. In Chagall's *I AND THE VILLAGE*, the complementaries red and green dominate the canvas, but in such a way that the fantasy scene depicted is strangely cool and animated. Blue is used to pull our senses toward a cool and vibrant feel.

In direct contrast is the painting, *THE WOMEN OF TAHITI*, by Gauguin. Although the same red and green complementaries are used in almost equal amounts as in the Chagall work, here the painting takes on a warm and somber feel. The use of yellow is intended to force a warm atmosphere to prevail. This was not the case in the Chagall. In both paintings it was a third hue that was responsible for determining the temperature of each canvas.

**LIGHT**

The infinite number of ways in which an artist may vary the contrasts between light and dark afford him the possibility of evoking in us an equally vast number of sensations, for we make many different associations in response to a change of values. A distinct contrast between pure black and white represents clarity, as expressed by the phrase, "Everything is as clear as black and white." Light and dark is as expressive an element for the artist as we have seen line to be.
Caravaggio (THE CALLING OF ST. MATTHEW) has used light in a most dramatic way. The light coming from the top right side of the painting serves to highlight the faces, hands, and clothes of the assembled group. The almost hidden figure in the far right side is Christ. Our eyes are led from hand to hand as they point to St. Matthew who is the principal figure of the painting.

This kind of dramatic painting was mastered by Rembrandt in his NIGHT WATCH. The painting depicts Captain Banning Cocq's military company inside the large vaulted hall used for its guild meetings. The canvas is more than twelve feet high by more than fourteen feet wide. This complex composition was painted during the middle of Rembrandt's career, when he developed his use of light -- golden and rich, yet mystical in quality. The painting is Baroque in composition, with figures half-hidden, placed in shadow, and some even in animated positions. The light comes from high unseen windows at the left, illuminating the little girl and the two principal figures, the captain in black and the lieutenant in yellow. Strangely, it is the girl who occupies the spotlight, yet she is but one of the crowd, not a principal figure. Rembrandt's mastery of theatrical lighting and soft use of shadows creates a depth not seen in Caravaggio's St. Matthew.

In his MUSIC AT THE TUILERIES, Manet depicts a crowded scene portrayed freely, with no formal compositional arrangement. The colors are clear and light. His clever use of light causes our eye to bounce around the canvas from top
to bottom, left to right, and from background to foreground. This deliberate use of light and color made this painting a forerunner of the open-air effects of later impressionist works. Unlike Rembrandt's use of a central light source and deep shadows, Manet's principal preoccupation was with tones and values throughout the whole canvas. He always lighted his models from the front and made little use of shadows. The effect of his canvases is to present sharp, almost photographic impressions of his subjects, but with a combination of lights and textures beyond the power of the camera to capture. He made considerable use of black; a black that became a living color in his works.

Yet another approach to the use of light can be seen in the Andrew Wyeth painting, CHRISTINA'S WORLD. The lone figure is placed in the foreground of a canvas depicting a tranquil meadow somewhere in Maine. There is no light focus. The neutral sky appears almost as a flat grey color. Wyeth has deliberately neutralized the effect of light so that he can concentrate his efforts on creating space relationships.

Another unusual use of light can be seen in El Greco's BURIAL OF COUNT ORGAZ. Unlike Caravaggio's St. Matthew, there is no specific focus of light. El Greco has succeeded in enhancing the drama of the scene by creating an almost supernatural lighting effect. His deliberate use of thin, pointed and angular shapes tease the eye into feeling these flickering flames. All this to create the drama of mystery that surrounds the spiritual world.
SHAPE

Shapes exist primarily in terms of the illusion which they create. The artist's role is to use the illusionistic property of this element of shape so as to lend credence to the fantasy which is inherent in his art. The illusion created may be one of pure fantasy developed along non-representational lines. It may be a semifantasy in which the artist originates his work with identifiable objects but enhances their aspects in order to create a unified expression.

Natural shapes are often used by artists to imitate things in the natural world. This generally is taken to mean overall human, animal, and plant shapes.

One art movement that set out deliberately to build an aesthetic around natural shapes was Art Nouveau. As seen in Aubrey Beardsley's THE PEACOCK SKIRT, Art Nouveau patterns and designs feature curving, intertwined plant and animal shapes -- leaves, tendrils, flowers, and women with flowing hair. Beardsley worked intricate decorative patterns of natural shapes into his drawings and book illustrations.

When a natural shape is distorted in such a way as to reduce it to its essence, we say that it has been abstracted. This means that, while the source of the shape is recognizable, the shape has been transformed into something different.

In the painting THREE MUSICIANS by Picasso, we see an example of shape abstraction. On one hand the individual
figures emerge because of the way the shapes are brought together; on the other, the shapes interlock with one another in such a way that the single figures are simultaneously obscured. The shapes create a screen of color and pattern between us and what we feel to be the real figures of the musicians. Despite the painting's gaiety of color, and frivolity of subject, it seems to mask a more sinister image. Because these figures are bound together in this fashion, we are apt to see the hound on the floor and the hooded figure to the right, as objects whose presence is somehow ominous. Whatever meaning we may eventually see in these images, the effect of the painting rests in our sensitivity to shapes and to their possible combinations on a flat surface.

Artist Joan Miro (COMPOSITION 1963) combines a network of geometric and non-objective shapes into a highly abstracted composition. What Miro has done here is to play with shape relationships in building his composition. Miro's painting has often been called "biomorphic abstraction." The carefully composed canvas of curvilinear shapes seems as mobile and fluid as the changing shapes of the amoeba.

In direct contrast to biomorphic shapes are the "rectilinear" or straight line, geometric shapes. As seen in this Picasso SEATED WOMAN, the shapes seem to bear the precisionistic imprint of man's invention. The use of such shapes, as we know them today, was given its original impetus in the Cubist design tradition. These shapes are inherently rigid and an enduring and sometimes impersonal design.
Such shape families as the biomorphic and rectilinear are used by artists to unify, through repetition, their picture surfaces.

Although Picasso used interlocking shapes to knit the individual figures into a screen of color and simulated texture, he also created for the figures a setting separate from the surface of the painting itself. He sets the figures against a black background.

In the painting THE SWINEHERD, however, Gauguin uses flat shapes of strong hues and contrasting textures not only to define the individual objects, but to unite them with the setting itself. The entire surface of the painting is made up of these interlocking shapes in such a way that there no longer exists any distinction between objects and setting.

By this union of shapes, Gauguin creates an image that separates the objects from one another. The painting, somehow, resembles a scene glimpsed from a quickly moving train, a scene which, for some unknown reason, remains stored in our memory until it suddenly presents itself with startling clarity to our inner eye. Because of this combination of shapes, the images remain forever locked in place.

When Gauguin works with shapes, he tends to distinguish among them through the use of different colors and different textures. As he does so, the individual shape loses its importance in favor of a new sense of the entire surface. Gauguin has dealt with the surface in such a way that although we are conscious of the particular combination of shapes, we
also begin to see the surface as having much the same appearance as a textile.

Surrealists, like Salvador Dali, (PREMONITION OF CIVIL WAR) used shapes to create unreasonable, irrational, and often erotic dream-like scenes. Considerable symbolic significance has been given to these amorphic shapes, some animated, some distorted and dismembered, and others unrecognizable. They remind one of basic organic matter, or flowing and changing shapes in dreams.

TEXTURE

Both texture and pattern are surface elements. Texture in particular refers to the surface quality of a thing, the way it might feel if we were to run our fingers over it — smooth, bumpy, rough, fuzzy, and so forth. However, designers identify two kinds of texture: Tactile and visual. Actual changes in plane result in tactile textures that can be felt, whereas variations in light and dark produce visual textures. A chunk of porous lava rock has definite tactile texture; by passing the fingers over it, we could feel bumps and hollows. But, a smooth granite pebble has visual texture as the result of flecks in the composition of the stone. A glaze on pottery may be perfectly smooth to the touch, yet be textured to the eye by fragments of chemical oxides suspended in the glaze. When a texture is repetitive and/or decorative, we call it pattern. Textures have become so much a part of our environment that we generally take them for granted.
Artists may choose to employ actual textures in their work. This is particularly so in the case of the sculptor (PRINCE RAHOTEP AND HIS WIFE NOFRET). Here the sculptor has treated areas of his work with highly polished surfaces in order to bring out the textural quality of the limestone. Other areas, like the wife's hair, has been roughened for the simulation of subject characteristics.

The illusionistic representation of tactile surfaces has long been a concern of painters and draftsmen. By the sixteenth century, European painters had developed representational skills and techniques to extraordinary levels. No tactile surface was too difficult for them to simulate. There is a magical quality in the painted illusions of glittering silks, transparent and reflective glass, burnished metal, and the intricately woven patterns of cloth that can be found in the paintings of Hans Holbein. In his HENRY VIII we can see the artist's observation of these materials is as keen and insightful as the examination he has given the facial and figurative character of his subject.

The pictorial effects achieved by the artist in paintings that stress tactile illusions are the result of consistent and precise drawing, accurate perception and rendition of small differences in tonality, painting techniques that utilize opaque and transparent applications of pigment, and the ability of the painter to form sharp, hard contours, or edges that are blurred and atmospheric. The surface on which Holbein painted was conventionally flat, and his brush
strokes smoothed to an even, glassy finish. The artist conceived of his work as an illusion, and he did not wish to attract the viewers' attention to the medium, the paint, which is the real tactile surface.

Though illusionistic painting still has its adherents, the contemporary interest in tactile surfaces is more frequently expressed by the use of actual three dimensional elements bonded physically to the painting support.

For centuries, artists have tried to simulate textures on the flat surface of canvas, but texture in painting can also be quite real. Certain artists, among them van Gogh (WHEAT FIELD AND CY Press TREES), developed a technique of laying oil paint on canvas in a thick, paste-like impasto. This effect not only contributes to the illusion of reality on the flat surface, but it also lends an energetic physical texture to the work.

In this century, a number of artists have experimented with pronounced textures in painting, to the extent that it became difficult to classify such works as painting or sculpture. The Cubists, particularly Braque (BOTTLE, GLASS, AND PIPE), pasted bits of newspaper and other "real" objects onto the canvas and then integrated them with the painted portions. This type of composition is known as collage.

Visual texture plays a vital role in all the pictorial arts. In a painting by Seurat (SIDE SHOW), the visual textures seem to pulsate with energy. This effect comes from Seurat's unique method of working, the application of
tiny dots of paint to the canvas in a manner known as pointillism. This technique results in a visual texture that is nearly independent of the subject matter.

Every drawing, painting, sculpture, or other work of art can be characterized by its textural qualities, whether tactile or visual. The artist must be aware that this element has a strong bearing on a viewer's reaction to a piece of work.

In contrast to impasto build-up of texture is the technique whereby the artist scrapes away painted areas from the surface of the canvas. Klee (HEAD OF A MAN) used this scratching or scraping technique to create exciting textural patterns. Top layers of paint are removed to reveal the underpainting beneath, or perhaps even the canvas. Here, Klee has created a simple design by manipulating color, form, and texture.

Pattern has been created by the artist to play basically the same role as texture in a painting. Matisse (PLUM BLOSSOM, GREEN BACKGROUND) makes wonderful use of overall pattern. The two vases of flowers shown by dabs of color create a pattern that is as textural in feel as the impasto wheat fields of van Gogh. Matisse incorporated the wall design into the overall pattern of the painting creating an Oriental-like harmony of pattern. He has carefully manipulated hues in order to create his texture. This dynamic use of pattern and the vibrant use of colors emerge as a joyful, harmonious expression of life.
ART EDUCATION EXAMINATION

Read the statements, view the accompanying reproductions, and mark your answers on the answer sheet provided. You will have exactly 30 seconds to view each reproduction, read the statement, and mark your answer. You will be cued at the beginning of each new viewing.

SET Cl

1. The architectural pillars and columns in this composition serve to:
   (a) Give credence to the religious theme of the work
   (b) Reinforce the verticality of the Christ figure
   (c) Suggest the humility of man in the presence of Christ
   (d) Emphasize "deep space" concept

2. A primary characteristic of this work would be:
   (a) "Box or Shape" space
   (b) Spatial recession
   (c) Restricted space
   (d) Simplified monumental form

3. Which element of design is one primary emphasis of this work:
   (a) Line
   (b) Space
   (c) Color
   (d) Light and dark

4. In this work the use of line techniques is borrowed heavily from:
   (a) Semetic writing styles
   (b) Greek calligraphy
   (c) Japanese art
   (d) The Western alphabet

5. Indicate whether this work represents:
   (a) Restricted space concept
   (b) Limited space concept
   (c) Shallow space concept
   (d) Infinite space concept
6. In this work the primary emphasis is on:
(a) Compositional relationships  
(b) "Collage" techniques  
(c) Color diffusion  
(d) Visual reality

7. In this work a new 4th dimension of spatial conception includes the elements of:
(a) Color, line, light  
(b) Shape, texture, form  
(c) Time, space, motion  
(d) Light, dark, unity

8. The line technique used in this work is:
(a) Diffused line  
(b) Calligraphic line  
(c) Strict contour line  
(d) Pencil line

9. The primary emphasis in this work is:
(a) Space/shape relationships  
(b) Color/line relationships  
(c) Texture/form relationships  
(d) Light/movement relationships

10. In this work the artist was primarily concerned with:
(a) Distortion  
(b) Plastic reality of forms  
(c) Background/foreground relationship  
(d) Abstraction

SET C2

11. In this work the focal point is created by:
(a) Placement and size  
(b) Complementary and warm hues  
(c) Intensity and primary hue  
(d) Color diffusion and contrast

12. Indicate the location of the light source in this work.
(a) High left  
(b) High right  
(c) Frontal  
(d) Low back.
13. A characteristic of this work is the use of:
   (a) Distorted colors
   (b) Complementary colors
   (c) Primary hues
   (d) Illumination

14. Which element of design is the primary emphasis of this work?
   (a) Shape
   (b) Line
   (c) Color
   (d) Light

15. Indicate the hue primarily responsible for the temperature of this work.
   (a) Red
   (b) Green
   (c) Yellow
   (d) Pink

16. This work might be characterized by:
   (a) Central light source and deep shadows
   (b) Frontal lighting and few shadows
   (c) No light focus and soft shadows
   (d) Spot lighting and no shadows

17. Color in this work is used primarily for:
   (a) Aesthetic expression
   (b) Texture and pattern formation
   (c) Creation of space
   (d) Shape manipulation

18. This work is a good example of:
   (a) Warm color dominance
   (b) Complementary dominance
   (c) Monochromatic dominance
   (d) Neutral dominance

19. The lighting effect in this work is one of:
   (a) Theatrical
   (b) Artificial
   (c) Neutralization
   (d) Illumination
20. The artist of this work uses color to create:

(a) Deep perspective  
(b) Texture and pattern  
(c) Mood and emotion  
(d) Warmth and tranquility

SET C3

21. The emphasis in this work is on:

(a) Pattern as texture  
(b) Color as light  
(c) Line as movement  
(d) Shape as space

22. This work is an example of:

(a) Biomorphic abstraction  
(b) Rectilinear composition  
(c) Geometric precision  
(d) Interlocking shapes

23. The art movement that best exemplifies this work is:

(a) Cubism  
(b) Surrealism  
(c) Art Nouveau  
(d) Baroque

24. Which element of design is the primary emphasis in this work:

(a) Shape  
(b) Texture  
(c) Light and dark  
(d) Color

25. Indicate whether this work is an example of:

(a) Actual texture  
(b) Simulated texture  
(c) Combination of actual and simulated texture  
(d) Natural texture
26. The technique used in the execution of this work was primarily:
   (a) Impasto
   (b) Scraping
   (c) Pointillism
   (d) Simulation

27. An important aspect of this work is one use of:
   (a) Amorphous shapes
   (b) Rectilinear shapes
   (c) Biomorphic shapes
   (d) Interlocking shapes

28. The kind of texture used in this work is:
   (a) Simulated
   (b) Actual
   (c) Invented
   (d) Natural

29. The primary emphasis of this work is on:
   (a) Exaggerated shapes
   (b) Abstract shapes
   (c) Natural shapes
   (d) Negative shapes

30. The technique used to create this surface is called:
   (a) Scraping
   (b) Underpainting
   (c) Collage
   (d) Impasto
ANSWER SHEET

NAME__________________________  SECTION_______________________
SEX______  CLASSIFICATION__________________________
TEST GROUP_______________________  DATE_______________________

1. (a) (b) (c) (d)  21. (a) (b) (c) (d)
2. (a) (b) (c) (d)  22. (a) (b) (c) (d)
3. (a) (b) (c) (d)  23. (a) (b) (c) (d)
4. (a) (b) (c) (d)  24. (a) (b) (c) (d)
5. (a) (b) (c) (d)  25. (a) (b) (c) (d)
6. (a) (b) (c) (d)  26. (a) (b) (c) (d)
7. (a) (b) (c) (d)  27. (a) (b) (c) (d)
8. (a) (b) (c) (d)  28. (a) (b) (c) (d)
9. (a) (b) (c) (d)  29. (a) (b) (c) (d)
10. (a) (b) (c) (d)  30. (a) (b) (c) (d)

11. (a) (b) (c) (d)
12. (a) (b) (c) (d)
13. (a) (b) (c) (d)
14. (a) (b) (c) (d)
15. (a) (b) (c) (d)
16. (a) (b) (c) (d)
17. (a) (b) (c) (d)
18. (a) (b) (c) (d)
19. (a) (b) (c) (d)
20. (a) (b) (c) (d)
ART REPRODUCTIONS

Titles and Artists

Set C-1 Lecture

1. Christ Before Pilate
   Jacopo Tintoretto

2. Three Dancers
   Pablo Picasso

3. At The Moulin Rouge
   Henri de Toulouse-Lautrec

4. The Battle of San Ramano
   Paolo Uccello

5. Riders in The Forest
   Raoul Dufy

6. The Snail
   Henri Matisse

7. Winterscape With Bird Trap
   Pieter Brueghel

8. St. Anthony Distributing His Wealth to The Poor
   Sassetta
9. Gypsy Woman With A Child
   Amedeo Modigliani

10. Sunday Afternoon on the Island of La Grande Jatte
    Georges Seurat

11. Breezing Up
    Winslow Homer

12. Still Life with Apples and Oranges
    Paul Cezanne

13. Nude Descending A Staircase
    Marcel Duchamp
Set C-2 Lecture

14. View of Toledo
   El Greco

15. The Descent From The Cross
   Rosso Fiorentino

16. Harmony In Red
   Henri Matisse

17. The Lovers
   Pablo Picasso

18. Still Life
   Gustave Courbet

19. Jockeys
   Edgar Degas

20. I and the Village
   Marc Chagall

21. The Women of Tahiti
   Paul Gauguin
22. The Calling of St. Matthew
   Caravaggio

23. Night Watch
   Rembrandt van Rijn

24. Music at The Tuileries
   Edouard Manet

25. Christina's World
   Andrew Wyeth

26. Burial of Count Orgaz
   El Greco
Set C-3 Lecture

27. The Peacock Skirt
   Aubrey Beardsley

28. Three Musicians
   Pablo Picasso

29. Composition 1963
   Joan Miro'

30. Seated Woman
    Pablo Picasso

31. The Swineherd
    Paul Gauguin

32. Premonition of Civil War
    Salvador Dali

33. Prince Rahotep and His Wife Nofret
    Egyptian

34. Henry VIII
    Hans Holbein
35. Wheat Fields and Cypress Trees
   Vincent van Gogh

36. Bottle, Glass, and Pipe
   Georges Braque

37. Side Show
   Georges Seurat

38. Head of a Man
   Paul Klee

39. Plum Blossom, Green Background
   Henri Matisse
ART REPRODUCTIONS
Titles and Artists

Set C-1 Test

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    Rosso Fiorentino

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30. Wheat Fields and Cypress Trees
   Vincent van Gogh
VITA

Daniel G. Vidrine was born on March 1, 1944, in Oakdale, Louisiana. He received a Bachelor of Arts degree in Fine Arts from the University of Southwestern Louisiana with a major in advertising design. His Master of Education degree in Supervision is from Louisiana State University. His Doctor of Philosophy degree in Education, with an emphasis in Educational Media and a minor in Art Education, is also from Louisiana State University. His professional career includes five years as an elementary teacher in Evangeline Parish, Louisiana, five years as a secondary art teacher in Lafayette Parish, Louisiana, and one year as an art supervisor at the Louisiana State University Laboratory School in Baton Rouge, Louisiana.
EXAMINATION AND THESIS REPORT

Candidate: Daniel Gene Vidrine

Major Field: Education

Title of Thesis: The Effects Of Three Modes Of Presenting Art Reproductions In Art Education

Approved:

Charlie W. Roberts, Jr.
Major Professor and Chairman

James H. Frizahn
Dean of the Graduate School

EXAMINING COMMITTEE:

Sam Adams
Pauline M. Rankin
Spencer J. Murray
Jamie R. McPhister

Date of Examination:

April 20, 1979