

USING SYNECTICS TO ENHANCE  
THE EVALUATION OF  
WORKS OF ART

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## PREFACE

This study is concerned with the effects of Synectics on seventh grade art students' pre- and posttest responses written while viewing a reprint of a famous painting. The primary objective of this study is to present the results of using this alternative approach for teaching art history and allow my fellow educators the opportunity to consider those results.

I wish to express my heart-felt appreciation to my major adviser, Dr. Audrey Eleanor Oaks, for her unforgettable friendship, encouragement, support, and assistance throughout this project. She remains an inspiration and motivational force in my life. Special thanks are also extended to the other committee members, Dr. Katherine Castle and Dr. Joe Pearl, who have been very conscientious about making suggestions for the improvement of this study and who inspired a renewed love of learning. Thanks are also extended to Dr. Paul Miller for diagnosing the analytical problems. From that point, Dr. Nancy Fagley provided many hours of assistance to help decipher the statistical formulas and jargon utilized in the analysis of this study. Her assistance and patience was deeply appreciated. Special thanks are due to the College of Education for bestowing upon me several academic scholarships,

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always nearby when I needed assistance.

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## CHAPTER I

### INTRODUCTION

This study was conducted to compare the effects of two teaching methods upon the written responses of students. Through this research the author was interested in discovering an approach which would energize the study of works of art within the art curriculum while increasing the students' potential for creative thinking.

#### Problem Statement

Works of art have traditionally been presented via the lecture approach. Students are asked to view slides or prints of works of art while the teacher talks about the artist's background, the style utilized, and various aspects of the particular work on display that day. Students are not actively involved in the process and, therefore, are often not very enthused about the incorporation of art history into the art curriculum. As a result, the major curricular emphasis was in the area of the production of works of art by the students.

In light of the current emphasis on accountability, Discipline-Based Art Education suggests a four-pronged approach to teaching art which includes art history, art

criticism, and aesthetics in addition to production.<sup>1</sup>

Goals and objectives written to fit these four major areas reflect a broad spectrum of skills, attitudes, and knowledge available to students within today's art classes.

One group of subjects within this study was presented the traditional lecture approach while the other group experienced an innovative approach adapted from Synectics, a creative thinking exercise created by William J.J. Gordon for industry. Scientists needed to create new products but were having some trouble. This exercise utilizes metaphors and analogies to gain conceptual distance from the original concept. As a result, the scientists were able to look at something familiar in a new way. The resultant stretching of their imaginations increased their creative capacity.

Adaptions of this exercise have been implemented in over 10,000 classrooms across the country<sup>2</sup>. It would seem to be a logical assumption, therefore, that this exercise could be successfully adapted to fit the study of art history. Synectics has the potential to make the incorporation of art history into the art curriculum more stimulating for students in addition to exercising their ability to think creatively.

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<sup>1</sup>Elliot W. Eisner, "The Role of Discipline-Based Art Education in America's Schools," Art Education (September 1987), p. 15.

<sup>2</sup>William J.J. Gordon, "On Being Explicit About Creative Process," The Journal of Creative Behavior (Fourth Quarter), p. 295.

### Purpose of the Study

The purpose of this study is to determine the effects of a Synectics exercise by comparing responses written by seventh grade art students as they viewed a reprint of a famous work of art. These responses were recorded before and after treatments consisting of either a Synectics exercise or a traditional lecture presentation.

### Hypotheses

**Research Hypothesis:** There is a significant increase in the area of creativity exhibited by seventh grade art students in written responses after a Synectics exercise when compared to responses written after a traditional lecture. **Null Hypothesis:** There is no significant difference in the area of creativity exhibited by seventh grade art students in written responses after a Synectics exercise when compared to responses written after a traditional lecture.

### Definitions

The following terms were used to determine the level of creativity present within the students' written responses. Presence of the quality was determined in light of these definitions utilizing the checksheet included in Appendix A. Further description of the rationale and design of the instrument is included in Chapter III.

**Analysis:** The response records a descriptive listing

of objects.

**Elaboration:** The response adds to the basic plot in such a way that enhances and lengthens the story.

**Empathy:** The response reflects the feelings of the subjects, an identification with the subjects, or may convey a mood.

**Insight:** The response reveals the inner nature of the objects or subjects included.

**Interpretation:** The response presumes to explain the meaning communicated by the artist through the painting.

**Original Thought:** The response has an independent spontaneous translation beyond that which is obvious when viewing the painting.

**Rationale:** The response offers some underlying reason for objects being included.

**Syntax:** The response has well-structured sentences containing prepositional phrases, conjunctions, and/or clauses.

**Use of Adjectives:** The response incorporates descriptive adjectives and phrases to enhance objects or ideas.

**Vocabulary:** The response reveals a level higher than basic words necessary to communicate ideas about the painting.

## CHAPTER II

### REVIEW OF LITERATURE

The world's constant motion symbolizes a corresponding state of change in all arenas of life. This state of change and its increasing rapidity is clearly evident in the trend for technical information to double every ten years.<sup>1</sup> Futurists calculate that the speed of communication, transportation, and computation, as well as the power available has increased since 1945 "by figures of 10 to the seventh and eighth power over all the rest of human history since man first appeared on earth."<sup>2</sup>

In view of this ever-expanding body of information the traditional view of the teacher as the fountainhead of all knowledge becomes absurd. Yet studies show schools have changed very little in the last 100 years.<sup>3</sup>

#### Achieving a Focal Point

A need arises to clarify the goal of education in order to achieve a focal point. An accumulation of knowledge is no longer enough to equip students for dealing

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<sup>1</sup>Arthur W. Combs, A Personal Approach To Teaching: Beliefs That Make A Difference (Boston, 1982), pp. 122.

<sup>2</sup>Ibid., p. 123.

<sup>3</sup>Kenneth A. Sirotnik, "What you see is what you get-- Consistency, Persistency, and Mediocrity in Classrooms," Harvard Educational Review (February 1983), p. 29.

with an unforeseeable future which is ever-expanding. Education, therefore, must prepare students by "the conversion of brain to mind."<sup>4</sup> Educators must concentrate their curriculum development efforts on providing opportunities for their students to become familiar with higher-level thought processes, especially creative problem solving techniques.

### Origin of Synectics

Through research in an industry setting, William J.J. Gordon developed activities for use with creativity groups in the areas of problem solving and product development. In 1956, Gordon coined a name, Synectics, for these activities. This word comes from the Greek word "synecticos", meaning "the joining together of different and apparently irrelevant elements."<sup>5</sup>

Contrary to traditional views of creativity, he based these activities on the principle that everyone can be creative.<sup>6</sup> Since creativity is a thought process, it can be learned and enhanced by conscious analysis. To this end he purposed various group activities to generate fresh ideas. Each individual and all ideas were valued for their catalytic effect upon the group. In fact, the more irrational the ideas were, the greater their catalytic potential would be. The goal of a Synectics exercise is to

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<sup>4</sup>Eisner, p. 7.

<sup>5</sup>William J.J. Gordon, Synectics: The Development of Creative Capacity, (New York, 1961), p. 3.

<sup>6</sup>Ibid, p. 166.



create conceptual distance from the original task or concept through the application of a series of analogies and metaphors. The exercise cycles through a series of sequential phases back to the original task or concept. The scientists have then gained fresh insight which provides an innovative approach to handling the task or concept. This learned approach provides a tool for their creative problem solving.

#### Adaption to the Classroom Setting

Creative achievement depends on many factors beyond that of imaginative thought. Its use is not restricted to artists or experts. It is a necessary and vital aspect of everyone's daily activities which helps to enrich life. Consequently, the next step in the development of Synectics was its adaption to a moderately structured teaching model.<sup>7</sup> Through Synectics procedures the teacher is able to create a stimulating and productive learning environment conducive to overall student growth. Creativity will be prized and utilized. Students will be allowed the freedom to become self-actualized. According to Combs, the self-actualized person is knowledgeable, sees his or herself in a positive way, is open to experience, and has deep feelings of identification with others.<sup>8</sup> The pressure to conform is virtually eliminated since all answers are viewed as

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<sup>7</sup>William J.J. Gordon, The Metaphorical Way of Learning and Knowing (New York, 1971), p. 233.

<sup>8</sup>Combs, p. 104.

acceptable and valuable contributions to the process which is emphasized over the end product.

#### Description of the Model

These exercises can take either of two approaches. The intent may be to make the familiar seem strange, and therefore new, or to make something new seem more familiar. To achieve these goals, Synectics incorporates stretching exercises developing metaphoric thinking through sequential phases. The first type of metaphoric thinking the student will experience is a direct analogy. They are asked to link the subject at hand to some known phenomenon that has a similar relationship.<sup>9</sup> Another type of metaphoric thinking utilized is a personal analogy. This encourages the students to identify with the feelings and function of the subject.<sup>10</sup>

Sequential phases have been established through years of research by Gordon.<sup>11</sup> Each phase serves a specific function within the exercise. The object of the first phase is to purge the students of their immediate conclusions. These are usually less creative and tend to remain in the back of their minds as possible solutions unless they are tossed out during the initial phase of the exercise. The next phase is intended to familiarize the stu-

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<sup>9</sup>Lynn Hardie Springfield, "Synectics: Teaching Creative Problem Solving by Making the Familiar Strange," G/C/T (July/August, 1986), p. 15.

<sup>10</sup>Ibid.

<sup>11</sup>Gordon, p. 243.

dent with the subject of the exercise. Direct and personal analogies are then included to gain conceptual distance from the original task. The greater the distance created, the greater the mental flexibility.<sup>12</sup> It is this flexibility that serves as the springboard essential for generative thinking. Next, the teacher will reroute the students to the original task through the point of view designated by the last direct analogy. The acquired conceptual distancing coupled with mental flexibility will stimulate new approaches.

#### Qualities to Increase Effectiveness

The effectiveness of this model rests upon the participation of its members. "Conformity pressures tend to elicit kinds of motivation in the individual that are incompatible with the creative process."<sup>13</sup> Great care must be taken to convey a pervading atmosphere of acceptance. Acceptance of the students is conveyed when the teacher maintains eye contact, casual physical contact, focused attention, and discipline.<sup>14</sup> The teacher must develop a "third ear" so the student speaking is sure the teacher knows what he or she is trying to communicate.<sup>15</sup> This

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<sup>12</sup>Bruce Joyce and Marcia Weil, Models of Teaching, 2nd ed. (New Jersey, 1980), p.169.

<sup>13</sup>Richard S. Crutchfield, "Conformity and Creative Thinking," Contemporary Approaches to Creative Thinking, eds. Howard E. Gruber, Glenn Terrell, Michael Wertheimer (New York, 1963), p. 121.

<sup>14</sup>Ross Campbell, How to Really Love Your Child (Wheaton, 1960), p. 36.

<sup>15</sup>Combs, p. 50.

helps convey a feeling of acceptance for the response in addition to the student. Questioning needs to be handled in a patient manner allowing ample time for students to reflect and formulate their analogies. Silence must be viewed as acceptable in order to reap its productive benefit to the exercise. Silence is actually only another individualized response. The teacher needs to challenge without threatening the students. After repeated experiences with Synectics, the students grow accustomed to the playful atmosphere and are able to make the cognitive shifts with ease.

#### Summary

Synectics has been described as the "free license to dream and fantasize."<sup>16</sup> This is a luxury rarely afforded to students these days. Yet, it is through this type of activity that the student learns how to make conscious some of the subconscious processes involved in creativity.<sup>17</sup> The student is able to exercise intrinsic motivation during the thrill of the chase when the group is hot on the trail of the next analogy.

Benefits from involvement with Synectics exercises are also found in the areas of language development and verbalization skills. Development of a general creative power can be transferred to enhance learning in a variety of sub-

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<sup>16</sup>Nicholas Roukes, "What-if's Make Things Happen," School Arts (March, 1984), p. 20.

<sup>17</sup>Springfield, p. 15.

ject matter areas as well as other aspects of life. In addition, students become more aware of a dependence on the perceptions of others within the group. As a unique shared experience is created, an interpersonal closeness is developed within the group. These qualities facilitate the modification of this exercise to an array of learning ability levels.

Most current literature on Synectics was found in journals dealing with the education of gifted and talented students. This unfortunately infers an unnecessary limitation in the application of Synectics within that specified grouping. Synectics can be utilized by all learning levels. Everyone can benefit by increasing their capacity for generative thinking and creative problem solving.

## CHAPTER III

### METHOD AND PROCEDURE

The study was restricted to seventh grade students currently enrolled in an art class. The entire pre-existing classes were used within the Ponca City School District. This resulted in a total of 85 participants receiving the Synectics exercise. The total sample size from the Stillwater School District was limited to the 27 participants who returned their parental permission slips. These students were designated to receive a traditional lecture experience as a control group. The researcher conducted the Synectics treatment because of her familiarity with the procedure. A fellow graduate student, filling the role of research assistant, was trained to conduct the one-shot lecture treatment rather than utilizing the classroom teacher. Assignment of treatment to groups was determined arbitrarily by the geographic location of the persons conducting the treatments.

A print of the painting La Terrasse a Sainte-Adresse by Claude Monet was placed on display for continuous visual reference during all sessions. This print was chosen from the researcher's collection because the variety of disparate objects provided avenues for multiple interpretations.

A black and white halftone of the reproduction appears in Appendix B.

### Population

This study utilized seventh grade art students from East and West Junior High Schools in Ponca City, OK and from the Stillwater Middle School in Stillwater, OK. There were 52 students from East Junior High, 33 students from West Junior High, and 27 students from Stillwater Middle School.

Seventh grade students were chosen because they are developmentally capable of the abstract thinking involved in forming analogies and metaphors.<sup>1</sup>

### Instrument

Although names were written on the responses, they were not utilized in the scoring or tabulation. Responses for the control group were assigned a number from 1-27 whereas the experimental group was numbered from 1-85. Each response was subjectively rated by the researcher to evaluate the presence of predetermined attributes of creativity. A review of literature revealed a list of attributes including insight, rationale, original thought, interpretation, analysis, empathy, elaboration, and fluency.<sup>2</sup> The attribute of fluency cannot stand alone but

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<sup>1</sup>William C. Crane, Theories of Human Development: Concepts and Applications, 2nd ed. (New Jersey, 1985), p. 106.

must be quantified through its expression in some media.<sup>3</sup> Since this instrument is based upon the use of a written response, the attribute of fluency was subdivided into three parts that tend to reflect fluency within that medium. The use of adjectives, vocabulary, and syntax were chosen for the purpose of evaluating fluency within this study.

The ten point evaluation form seen in Appendix A, was devised by the researcher for the evaluation of responses. Five examples of typical responses from both groups can be seen in Appendix E. As each response was read, a mark was placed on that row under the attribute determined to be present. The marks were then totaled resulting in an interval score from zero to ten. Since all responses reflected some attribute of creativity, a score of zero actually indicated a lack of response rather than a lack of creativity. The recorded scores appear on Tables II through XIII in Appendix C.

#### Treatment One Procedure

Treatment One for the control group consisted of a teacher-dominated lecture devoid of student participation. Actions such as asking questions or attempting to comment on the painting were discouraged. This was not an attempt to create special conditions, but an enactment of Goodlad's

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<sup>2</sup>Viktor Lowenfeld and W. Lambert Brittain, Creative and Mental Growth, 8th Ed. (New York, 1987), pp. 81-87.

<sup>3</sup>Kenneth M. Lansing, Art, Artists, and Art Education (New York), pp. 91-92.



research which indicates that less than 5% of classtime is spent on direct questioning.<sup>4</sup> These questions typically anticipate a specific response such as "yes" or "no" with less than 1% of classtime spent asking open-ended indirect questions which call for more complex cognitive or affective responses.<sup>5</sup> The teacher's wait-time for a student's response averages around one second.<sup>6</sup> Corrective feedback or other types of reinforcement were rarely observed in these studies.<sup>7</sup> The research assistant's supplies were at hand which eliminated a typical time of confusion that encourages many unsolicited behaviors from the students.

The research assistant was provided with instructions for conducting the exercise and an outline of information to be presented. After this training, the research assistant began the session by introducing herself and handing them a blank sheet of paper and a pen. The students were asked to write their name in the upper right-hand corner followed by a number one. The students were then asked to write a paragraph about what the artist was trying to communicate through the painting. The students were instructed not to talk during the writing period. Students finished this task within 5 minutes and the session continued.

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<sup>4</sup>Sirotnik, p. 20.

<sup>5</sup>Ibid.

<sup>6</sup>David C. Berliner, "The Half-Full Glass: A Review of Research on Teaching," Using What We Know About Teaching, ASCD (Alexandria, 1984), p. 65.

<sup>7</sup>Sirotnik, p.20

Students were asked to turn their paper over and write a number two in the upper right-hand corner. During the lecture a multitude of interesting facts about the artist and the painting were conveyed to the students. The research assistant began by introducing the painting by its title, La Terrasse a Sainte-Adresse. The students then learned the artist's name, Claude Monet. Next, the students were presented with an array of factual data about his life and accomplishments.<sup>8</sup> This impressionistic painter was the son of a grocer. He also spent two years in military service in Algeria. He was first known for his caricatures. At the Gleyre's Academy he rebelled against prescribed painting techniques. He wanted to be free to paint in his own style from nature. His studies reflected the effects of the sun on his subjects. Light preoccupied him more than the expression of his own thoughts. One of his paintings, Impression Sunrise, inspired the name of the Impressionistic school of painting.

The research assistant then listed the objects included in the painting. There were two elegantly dressed couples on a terrace overlooking a harbor full of ships. They were surrounded by lush vegetation. The couples were dressed in costumes of the period. The ladies were in long gowns and carrying parasols. The men were wearing suits and hats.

Elements and principles of design were then described

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<sup>8</sup>Pierre Courthion, The Impressionists (New York, 1985), pp. 106-116.

to the students. Color was used to indicate light. Lines included had a strong horizontal emphasis. Space was expressed through varying the sizes of objects. Objects placed higher on the picture plane and smaller objects tended to indicate further distance. A variety of textures was found in the flowers, fabrics, and the pavement. Some of the shapes utilized in this painting were the triangle sails on the boats, rectangular fence, and oval parasols.

A second written paragraph was then requested from the students. When they finished writing, the responses were collected and the students thanked for participating.

#### Treatment Two Procedure

Treatment Two involved a Synectics exercise. As with Joyce and Weil's adaption, this treatment was divided into sequential phases. Phases must be passed through in order since each provides a specific function which builds upon the foundation established in previous phases. The purpose of this type of exercise is to provide conceptual distance between the students and the original task of evaluating the painting. This distancing fosters fresh insights and ideas which enhances generative thinking. The sequential phases have a cyclical nature. When passing through them the participants are routed back to the original task. It is here that the fresh insights and ideas are applied in creative expression.

PHASE 1 began with the quote that "a picture is worth

a thousand words." Students were asked to describe what that means. A few responses were enough to piece together a definition that it would take a thousand words to describe what was visually conveyed through one painting. "Artists are aware of this and often use their paintings to tell a story or communicate an idea to the viewer," said the researcher as she carried the painting among the students so they could closely observe the details. The painting and artist were introduced. "Everything he painted here is a clue to help us figure out what he is trying to say," said the researcher. One student passed out blank sheets of paper while another student passed out the pens. Students were instructed to write their names in the upper right-hand corner along with a number one. "On this paper write a short paragraph about what you think the artist is trying to say. What's the story here?" said the researcher. This phase is essential to purge impulsive first-impressions and preconceived ideas about the painting. It was requested that there be no talking during the response period. Students finished within 5 minutes and were asked to turn their papers over. After writing a number two in the upper right-hand corner, the exercise continued.

In PHASE 2, the students' attention was drawn to the word "Synectics" written on the chalkboard. Students were told that this creative thinking exercise was created by William J.J. Gordon for industry. "Scientists needed to

create new products, but were having some trouble. Through this exercise they were able to look at something familiar in a new way," said the researcher. She explained that imaginations were stretched through this exercise resulting in more creative solutions to problems.

After directing the students attention back to the painting, the researcher asked students to verbalize what they saw first. The researcher acknowledged all responses and a list was begun on the chalkboard. Students were asked what they saw next. "The artist has included each of these items to lead your eye through the painting," said the researcher. This exploration process continued until a sufficient listing had been made. Among the items listed were the couple standing, the old man and a woman seated in the foreground, the lush vegetation, the ships, the terrace, the fence, the white parasols, the flags, and the water. The students found it relatively easy to observe and list objects from the painting. This aspect was crucial for establishing a tone of acceptance which valued all responses for their catalytic effect. Care was taken to call upon several different people. This important aspect increased the groups awareness of the details included in the painting. Overlooking one or more details may greatly alter an interpretation of the painting.

In PHASE 3, the goal was to make a direct analogy between selected objects from the list formed in the previous phase and a machine. "Let's consider the charac-

teristics of one item from our list and think of a machine that has those same characteristics," said the researcher. She began by choosing the example of the old man sitting in the foreground observing the standing couple, the ships, and the scene. She asked, "What machine can you think of that has the characteristic of observing?" Ample time was allowed for the students to reflect upon the analogy. Since no responses were forthcoming, they were primed with elaborations on that theme. "Think of a machine that can observe a scene and record it? What type of machine would constantly scan the surroundings like the old man is doing?" she prompted. Students came up with a variety of responses related to types of cameras. Again, responses were enthusiastically received. Another object from the list compiled in the previous step was selected as the presenter continued, "What machine has the same characteristics that the fence has? What are the characteristics of the fence?" The mood of the exercise had been so well established that student responses were eagerly offered and free-flowing. It was determined that the fence served as a boundary, a divide, and it could also box things in. From here students listed several containers including a car and a cupboard. The most interesting direct analogy compared the fence to a refrigerator. The researcher continued through the list as time permitted. This phase further removed the students from the original task of evaluating the painting. Students had to link a new concept to

previous information structures. This resulted in fresh insight as input was gathered from several individuals throughout the group.

PHASE 4 asked the students to form a personal analogy by assuming the characteristics of a selected machine from the previous list. "What do you think it would feel like to be that machine. Put yourself into the machine." The higher-level thought-processes were beginning to become taxing. At first, this train of thought seemed quite foreign to the students. To bring the association to their level, the researcher reminded the students of the many inanimate objects which are "brought to life" in cartoons where they are given the powers of speech and movement. The students were refocused on the task at hand by asking them to imagine what this machine would say if it could talk. "How did your refrigerator feel the day after Thanksgiving? How would a refrigerator feel in the middle of the night in the dark kitchen?" the researcher prompted. Students were soon back into the flow of the exercise. They realized that there were indeed no "right" answers. All responses were incorporated within the list which encouraged more participation. Typical responses included ordinary feelings such as cold, full, empty, tired, and heavy. Every list included a number of unusual responses also, such as overused, abused, popular, scared, confined, responsible, dependable, important, wanted, jealous, lazy, bored, and energized. During this phase students

progressed further away from the original task of evaluating the painting. The links established in the previous phase took an abrupt turn during this phase. The analogies were developing and even transforming into newer versions as the conceptual distance from the original task was increased.

In PHASE 5, students were asked to look at this list of feelings and select two that seemed to argue with each other. Responses were written on the chalkboard as time allowed. This new list provided the compressed-conflict which provided even greater conceptual distancing for the students. The most frequently cited examples were full-empty and lonely-popular; but the lists contained several even more unusual responses. The list included responsible-lonely, bored-happy, running-heavy, happy-jealous, lonesome-wanted, wanted-used, dead-alive, energized-sleepy, and busy-dead. To assure commitment to the one selected for the next phase, the students voted anonymously.

In PHASE 6, the exercise continued by asking the students to think of an example from the animal world that had both qualities of the compressed-conflict at the same time. They had difficulty applying this compressed-conflict. They had a tendency to want to list animals that might feel that way. The analogy of a bullfight was used to illustrate the compressed-conflict of an angry game.<sup>9</sup>

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<sup>9</sup>Joyce and Weil, p. 175.



This helped clarify the objective of this phase although the challenge of executing the higher-level thought processes was showing again. The train of thought took another abrupt turn during this phase as students became even further removed from the original task.

An interesting example was the application of the compressed-conflict "full-empty" to the way one feels at a funeral. The student explained that you eat and eat until you feel stuffed at the meal provided by the church, but you still have an empty feeling because of the loss of the loved one. After three examples were listed, the researcher selected the most promising compressed-conflict for the final phase.

In PHASE 7, the last direct analogy was explored to obtain information about the essential characteristics of the chosen compressed-conflict. To help students expand their thinking about the concepts involved, they established a working set of characteristics. Then the discussion centered around how that information could be applied to the original task of evaluating the artist's intent. "Let's talk about the painting in terms of the characteristics we've defined for our last analogy," said the researcher. After a few applications had been verbalized, the students were instructed to write another paragraph on the second side of their paper which evaluated the painting in terms of the last direct analogy. This return to the original task completed the cyclical nature of

Synecletics' conceptual distancing through analogies and metaphors to produce fresh insight in the second evaluation of the painting.

Treatment Two for the experimental groups is illustrated in the following flowchart adapted from research.<sup>10</sup>

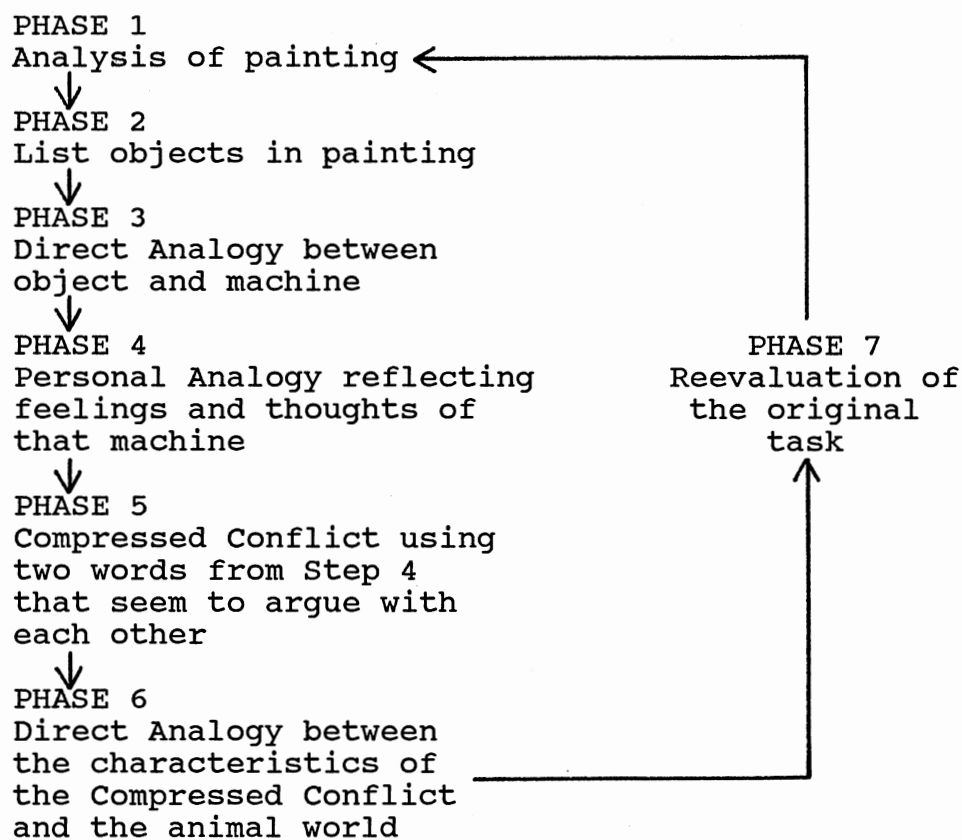


Figure 1. Synectics Flow-Chart

<sup>10</sup> Springfield, p. 16.

## CHAPTER IV

### EXPERIMENTAL DESIGN AND STATISTICAL ANALYSIS

This experimental study involved two groups. Both groups were asked to write an interpretation of the same painting. This interpretation provided the pretest score. The control group then received a traditional lecture treatment whereas the experimental group received an innovative treatment. The students then wrote another interpretation of the same print. This response provided the posttest score. These scores were utilized to gain insight into the degree of creativity found within the students' written responses.

The control group receiving Treatment One had a total of 27 participants. The experimental group receiving Treatment Two had 85 participants. Utilizing the Table of Ten Thousand Random Numbers<sup>1</sup>, the researcher picked an arbitrary starting point to determine which 27 of the 85 participants receiving Treatment Two were to be randomly matched with the other group.

After determining a score in light of the ten point evaluation form, raw scores were tabulated for both groups.

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<sup>1</sup>L.R. Gay, Educational Research: Competencies for Analysis & Application, 2nd Ed. (Columbus, 1981), p. 412.

This data is listed in columns labeled B1, pretest scores, and B2, posttest scores appearing on tables XIV and XV found in Appendix D. A two(group) by two(pre-posttest response) mixed ANOVA was computed according to formulas provided by Kirk.<sup>2</sup> These calculations appear on Tables XVII through XXI in Appendix D. The results are reported in the following ANOVA Summary Table.

TABLE I  
ANOVA Summary Table

Source	SS	df	MS	F
Between Subjects	490.417	53	9.253	24.925*
A(Treatment)	158.897	1	158.897	
Subj. w/gr.	331.52	52	6.375	
Within Subjects	252.5	54	4.675	
B(Response)	12.675	1	12.675	3.883
AB(Interaction)	70.085	1	70.085	21.472*
BxSubj. w/gr.	<u>169.74</u>	<u>52</u>	3.264	
<b>Total</b>	<u>742.917</u>	<u>107</u>		

\*Significant at .05 level (and at .01 level)

Although the analysis yeilds three F tests, only one is relevant to the research hypothesis under consideration in this study. Therefore, discussion will focus on the F test for the interaction effect. This interaction is of interest because, if there is no treatment effect, the treatment group and the control group would be expected to perform the

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<sup>2</sup>Roger E. Kirk, Experimental Design: Procedures for the Behavioral Sciences (Belmont, 1968), pp. 245-251.

same over time of testing yielding a nonsignificant interaction. However, a significant interaction suggests that the groups diverge over time, as would be expected if the treatment had an effect.

A statistically significant interaction effect was found between the group variable and the pre- and posttest scores. This is reflected in the F value of 21.472. It is significantly higher than the critical value of F determined to be 4.03 at the .05 significance level. The same held true for the critical value of F at the .01 level which was 7.17. The nature of this interaction has been dramatically depicted on the graph in Figure 2.

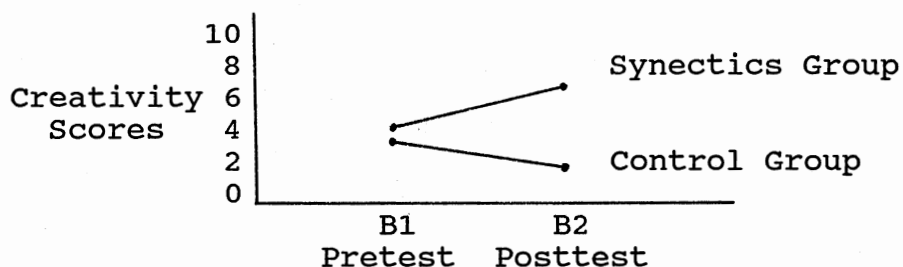


Figure 2. Interaction

This graph reflects the interaction between treatment group and time of testing. Parallel lines would have indicated no significant interaction effect; but these sharply diverging lines indicate a definite effect. The groups have similar pretest points. From there, the level of creativity decreased after the traditional lecture treatment.

Conversely, a significant increase in the level of creativity occurred after the Synectics treatment.

Therefore, the null hypothesis contending that there is no significant interaction is rejected which supports the research hypothesis. The effect of time of testing differs depending on whether or not subjects were in the treatment group.

## CHAPTER V

### SUMMARY

#### Conclusions

Application of a mixed Analysis of Variance to the data indicated a statistically significant interaction between the scores of the two groups from pre- to post-test response. On this basis, the null hypothesis was rejected. This rejection supports the research hypothesis which contends that it was the Synectics treatment that increased the level of creative thinking exhibited in the written responses.

#### Problems and Limitations

Various problems exist with aspects of this innovative study which the reader should be cautioned about. As mentioned in the preceding section, the rejection of the null hypothesis "supports" the research hypothesis. It does not actually "prove" that the increase was due to the Synectics experience. Further research would need to be conducted in order to strengthen this contention. This study should actually be considered a pilot study.

The groups were utilized as they existed with arbitrarily assigned treatments. Most educational research

utilizes established classrooms which makes random assignment of treatment to individuals difficult. To counter this problem, the groups were matched in size by selecting random respondents from the experimental group. Randomly assigning treatments to the groups would have added further strength to the results.

The experimental groups were from Ponca City and the control group was from Stillwater. Therefore, it is less reliable that the resulting scores were totally due to the method of treatment. There may have been extenuating geographical influences before the study began which had some effect upon the level of creativity. For example, Ponca City has an elementary art program in the public schools for the third through sixth grades taught by art specialists. Art on the elementary level in Stillwater is taught by the classroom teacher. Perhaps the elementary years preceding this study gave a creative advantage to the Ponca City students.

Another problem arises when the treatments were conducted by different individuals. Would the results have been reversed if these roles had been reversed? Were the resulting scores due to their degree of expertise? This influence could be diluted by increasing the number of available assistants conducting the exercises and through randomly assigning treatments to those assistants.

All responses were rated by one evaluator. Although this lead to a certain amount of consistency in applying the



definitions, determination of the presence of an attribute of creativity was highly subjective. Subjective evaluation is an unreliable method.<sup>1</sup> Having the responses rated by two or more evaluators would strengthen the results through inter-rater reliability and reduce the tendency toward biased evaluations due to the "halo effect"<sup>2</sup> which alters scores due to the evaluator's subconscious anticipations.

There was no standardized instrument available which fit the qualifications of this particular study. A custom designed instrument may result in an invalid assessment of performance.<sup>3</sup> The instrument utilized in this study needs additional research to refine the definitions, procedures, and other fine points. This would increase the reliability of the resulting scores.

#### Recommendations

With today's emphasis on Discipline-Based Art Education, many quality art educators are hungry for new approaches to energize their programs. Studies like this provide the data necessary for them to make sound decisions during curriculum development. This researcher contends that Synectics would be a valuable addition to any educator's repertoire of teaching approaches.

This study indicates a need for further research to strengthen the results found within this study. In

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<sup>1</sup>Gay, p. 179.

<sup>2</sup>Ibid, p. 128.

<sup>3</sup>Ibid, p. 122.

addition, other areas seem to invite further investigation. The clusters of responses that occurred on the Creativity Evaluation Forms indicated different patterns of scores emerging during the pre- and posttest responses. Further study would indicate whether these patterns occurred consistently and spotlight any developing trends. Also, students were remarkably creative in their first evaluation of the painting. The number of written responses interpreting the painting as a war scene surprised this researcher. The study of student choices for interpretation avenues would provide another intriguing topic. Further studies would indicate whether certain trends would be prevalent. indicate another area for study.

#### Summary

It can be inferred in light of the studies findings, that the Synectics exercise was successfully adapted for use within the art curriculum. The students' written data supports this contention. Their oral responses reflected enthusiasm and an enjoyment of Synectics. The students seemed eager for a chance to verbally communicate with their fellow human beings during the school day. The verbal responses often reflected an insight not anticipated For example, the student who responded that the full-empty compressed-conflict would be like a funeral.

It is through activities like these that educators can provide opportunities for students to get in touch with

their feelings and attitudes. Synectics exercises give students opportunities to analyze, reflect, compare, and evaluate. Although Synectics provides an ideal opportunity for students to hone their language skills, development can occur whether or not the feelings are verbalized.

Students are also provided an opportunity to inter-relate. Social skills are not innate. They are learned behaviors. Learned through activities such as Synectics as the students become aware of their dependence on the perceptions of others within the group. As a unique shared experience is created, an interpersonal closeness was developed within the group. Since futurists anticipate the problems of the future will be inter-personal in nature<sup>4</sup>, it becomes even more crucial for educators to implement opportunities within the educational experience for students to practice these skills.

Synectics also provides a transferable general creative power which can enhance learning in a variety of subject matter areas as well as other aspects of life. The beauty of this approach to teaching is that it can be implemented on various levels of student learning ability. After learning a creative thinking tool, such as Synectics, anyone can become more productive. Creative achievement depends on many factors beyond that of imaginative thought. Creativity is a skill that can be developed through consciously focusing on the subconscious process involved.

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<sup>4</sup>Combs, p. 123.

Today's curricular emphasis on Discipline-Based Art Education incorporates not only art production, but also, art history, art criticism, and aesthetics. Synectics exercises could easily interface with this curricular approach. It would help the art teacher achieve a broad range of diverse goals. As a result this would benefit the student by providing a more well-rounded education for students by infiltrating their lives more completely. The skills learned through Synectics would continually help students throughout their lives.

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<sup>18</sup>Lynn Hardie Springfield, "Synectics: Teaching Creative Problem Solving by Making the Familiar Strange," G/C/T (July/August, 1986), p. 15.

<sup>19</sup>Robert S. Witte, Statistics, 2nd ed. (New York, 1985), pp. 225-255.

**APPENDIXES**



APPENDIX A

CREATIVITY EVALUATION FORM



Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											

Figure 3. Creativity Evaluation Form

APPENDIX B

REPRINT OF PAINTING



Figure 4. La Terrasse à Sainte-Adresse  
By Claude Monet

APPENDIX C

DISTRIBUTION OF RESPONSES

TABLE II  
CONTROL GROUP  
RESPONSE 1

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
1		X				X					2
2					X		X	X			3
3	X						X	X			3
4		X	X		X		X	X			5
5	X		X			X		X			4
6		X				X	X	X	X		5
7			X	X			X	X	X		5
8		X			X		X	X			4
9			X		X			X			3
10					X						1
11		X	X				X	X			4
12					X						1
13		X			X		X	X	X		5
14	X	X	X	X				X	X		6
15		X	X								2
16			X		X						2
17			X		X			X	X		4
18					X		X	X			3
19					X						1
20					X						1
21		X			X		X	X	X		5
22		X	X		X				X		4
23						X					1
24		X	X			X		X			4
25					X						1
26			X		X		X	X	X		5
27		X			X			X			3

TABLE III  
CONTROL GROUP  
RESPONSE 2

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
1					X						1
2					X			X	X		3
3	X	X	X	X	X	X	X	X	X	X	10
4	X	X	X		X	X	X	X			7
5					X						1
6		X			X						2
7		X	X		X			X	X		5
8											0
9		X			X						2
10					X						1
11					X						1
12											0
13	X				X		X	X	X		5
14		X	X		X			X			4
15					X		X	X	X		4
16					X						1
17											0
18					X						1
19		X			X						2
20					X						1
21					X						1
22			X		X		X				3
23					X						1
24			X		X						2
25					X						1
26			X		X						2
27					X						1

TABLE IV  
 EXPERIMENTAL GROUP 1  
 RESPONSE 1

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
1	X	X		X		X					4
2		X	X	X		X					4
3		X			X						2
4		X	X	X		X					4
5			X		X		X	X	X		5
6		X		X							2
7				X							1
8				X							1
9		X		X		X	X	X			5
10					X						1
11			X	X				X	X		4
12		X	X				X				3
13		X	X			X		X	X		5
14		X	X	X				X			4
15		X	X	X		X		X			5
16						X	X				2
17				X		X	X	X			4
18		X	X	X		X		X			5

TABLE V  
EXPERIMENTAL GROUP 1  
RESPONSE 2

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
1		X	X	X	X						4
2	X	X	X	X	X	X					6
3	X	X	X	X	X			X	X	X	8
4		X	X	X		X				X	5
5		X	X	X	X				X		5
6		X		X	X						3
7		X	X		X			X			4
8		X	X		X						3
9	X	X	X	X	X		X	X	X	X	9
10											0
11		X	X	X		X	X		X		6
12		X	X	X	X	X					5
13	X	X	X	X		X			X	X	7
14	X	X	X	X	X	X	X	X	X	X	10
15		X	X	X		X		X	X	X	7
16	X	X	X	X	X	X		X		X	8
17	X		X	X			X	X	X	X	7
18		X	X	X		X	X	X	X	X	8



TABLE VI  
EXPERIMENTAL GROUP 2  
RESPONSE 1

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
19		X	X								2
20		X	X					X			3
21		X	X		X			X	X		5
22		X	X	X			X				4
23		X	X		X	X	X	X			6
24	X	X	X		X		X	X	X		7
25		X			X		X				3
26				X		X			X		3
27	X	X	X	X		X		X	X	X	8
28		X	X			X					3
29		X									1
30		X	X	X		X	X	X	X		7
31		X				X					2
32		X		X		X		Y			4
33				X				X			2



TABLE VIII  
EXPERIMENTAL GROUP 3  
RESPONSE 1

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
34		X	X			X	X	X	X		6
35		X						X			1
36	X	X		X		X	X	X	X		7
37	X		X	X	X	X					5
38		X			X						2
39	X			X		X		X			4
40		X			X	X					3
41		X			X	X					2
42			X		X	X					3
43	X	X	X		X						4
44					X			X			2
45			X		X						2
46	X	X	X	X	X			X			6
47				X							1
48		X			X						2
49	X	X		X	X		X	X			6
50	X	X			X						3
51		X			X			X			3
52	X				X	X		X			4

TABLE IX  
EXPERIMENTAL GROUP 3  
RESPONSE 2

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
34	X	X	X	X	X	X	X		X	X	9
35		X	X	X	X		Y				5
36	X	X	Y	X	X	Y			X	X	8
37	X	X	X		X	X					5
38	Y	X	X	X		Y					5
39	X	X	X	Y		Y		X	Y		7
40					Y						1
41		X	X		X		X	X		X	6
42		X	X		X		Y				4
43			X		X						2
44					X			X	Y		3
45					Y			X			1
46	X	X	X	X		X		X	X	X	8
47			X	X	X	X					4
48					X						1
49	X	X	X	X	Y			X			6
50		X			X		Y		Y		4
51	X	Y	X	Y	X	X		X	X		8
52	X	Y	X	X		X	X				6

TABLE X  
EXPERIMENTAL GROUP 4  
RESPONSE 1

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
53		X		X			X	X	X		5
54		X	X	X			X				4
55		X	X	X			X				4
56	X	X	X	X	X		X	X	X	X	9
57	X	X	X	X		X	X	X			7
58		X	X	X		X	X	X			6
59		X	X	X	X			X	X		6
60	X	X	X	X	X	X	X	X	X	X	10
61		X			X	X	X	X	X	X	7
62		X			X						2
63		X	X	X		X		X	X	X	7
64		X	X		X		X	X	X	X	7
65		X	X	X			X				4
66		X	X		X						3
67				X	X		X	X	X		5
68			X		X						2
69	X	X	X	X	X			X	X		7
70	X		X	X			X	X	X	X	7
71		X	X	X		X	X	X	X		7
72		X	X	X		X	X	X	X	X	8



TABLE XII  
EXPERIMENTAL GROUP 5  
RESPONSE 1

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
73					X		X				2
74	X	X			X	X	X				5
75		X	X	X		X			X		5
76		Y	X	X	X	X	X	X	X	X	9
77		X	Y	X	X	X	X				6
78											0
79					X			X			2
80				X	X	X					3
81		X			X				X		3
82		X	Y	X	X	X		Y	X		7
83											0
84		X	X	X		X	X				5
85			X		X	Y	X				4

TABLE XIII  
EXPERIMENTAL GROUP 5  
RESPONSE 2

Response Number	Insight	Rationale	Original Thought	Interpretation	Analysis	Empathy	Use of Adjectives	Vocabulary	Syntax	Elaboration	Total
73		X	X		X	X	X		X		6
74	X	X	X	X	X	X	X			X	8
75		X	X	X		X		X	X	X	7
76	X	X	X	X	X	X	X	X	X	X	10
77		X	X	X		X		X	X	X	7
78		X	X	X		X	X			X	6
79		X	X	X	X			X	X	X	7
80		X		X	X						3
81		X	X	X							3
82	X	X	X	X	X	X	X	X	X	X	10
83		X	X	X	X	X	X	X	X	X	9
84	X	X	X	X	X	X	X	X	X	X	10
85	X	X	X	X		X			X		6



APPENDIX D

STATISTICAL ANALYSES

TABLE XIV  
STATISTICS FOR CONTROL GROUP

Response	B1	B2	B1**2	B2**2	AS1	AS2
1	2	1	4	1	3	4.5
2	3	3	9	9	6	18
3	3	10	9	100	13	84.5
4	5	7	25	49	12	72
5	4	1	16	1	5	12.5
6	5	2	25	4	7	24.5
7	5	5	25	25	10	50
8	4	0	16	0	4	8
9	3	2	9	4	5	12.5
10	1	1	1	1	2	2
11	4	1	16	1	5	12.5
12	1	0	1	0	1	.5
13	5	5	25	25	10	50
14	6	4	36	16	10	50
15	2	4	4	16	6	18
16	2	1	4	1	3	4.5
17	4	0	16	0	4	8
18	3	1	9	1	4	8
19	1	2	1	4	3	4.5
20	1	1	1	1	2	2
21	5	1	25	1	6	18
22	4	3	16	9	7	24.5
23	1	1	1	1	2	2
24	4	2	16	4	6	18
25	1	1	1	1	2	2
26	5	2	25	4	7	24.5
27	3	1	9	1	4	8
Sum	87	62	345	280	149	543.5
Mean	3.2	2.3	12.8	10.4	5.5	20.1

Number of subjects = 27

TABLE XV  
STATISTICS FOR EXPERIMENTAL GROUP

Response	B1	B2	B1**2	B2**2	AS1	AS2
1	2	8	4	64	10	50
2	2	3	4	9	5	12.5
3	5	9	25	81	14	98
4	3	5	9	25	8	32
5	5	7	25	49	12	72
6	2	8	4	64	10	50
7	4	7	16	49	11	60.5
8	3	9	9	81	12	72
9	8	6	64	36	14	98
10	2	6	4	36	8	32
11	4	7	16	49	11	60.5
12	3	1	9	1	4	8
13	2	1	4	1	3	4.5
14	2	1	4	1	3	4.5
15	4	6	16	36	10	50
16	6	9	36	81	15	112.5
17	10	8	100	64	18	162
18	2	10	4	100	12	72
19	7	7	49	49	14	98
20	3	8	9	64	11	60.5
21	7	6	49	36	13	84.5
22	2	6	4	36	8	32
23	5	7	25	49	12	72
24	2	7	4	49	9	40.5
25	3	3	9	9	6	18
26	7	10	49	100	17	144.5
27	4	6	16	36	10	50
Sum	109	171	567	1255	280	1651
Mean	4.0	6.3	21.0	46.5	10.4	61.1

Number of subjects = 27

TABLE XVI  
OUTCOME OF MIXED ANOVA

Treatment Groups	Response		Row Mean
	Pretest	Posttest	
A1 (Control)	3.2	2.3	2.75
A2 (Synectics)	4.0	6.3	5.15
Column Mean	3.6	4.3	Overall Mean = 3.95

TABLE XVII  
VALUES FOR ANOVA CALCULATIONS

Source	Formula	Value
ABS	$2 + 3 + 3 \dots + 6 =$	429
[ABS]	$(2)^2 + (3)^2 + (3)^2 \dots + (6)^2 = 2447$	
[X]	$(429)^2 / (2)(54) = 184041/108 =$	1704.083
[AS]	$1651 + 543.5 =$	2194.5
[A]	$(149)^2/54 + (280)^2/54 =$ $22201/54 + 78400/54 =$ $411.129 + 1451.851 =$	1862.98
[B]	$(196)^2/54 + (233)^2 =$ $38416/54 + 54289/54 =$ $711.407 + 1005.351 =$	1716.758
[AB]	$(87)^2/27 + (62)^2/27 + (109)^2/27 +$ $(171)^2/27 =$ $7569/27 + 3844/27 + 11881/27 + 29241/27 =$ $280.333 + 142.370 + 440.037 + 1083 = 1945.74$	

TABLE XVIII  
ANOVA CALCULATIONS FOR SS

Source	Formula	SS Value
SS Total	$[ABS] - [X] = 2447 - 1704.083 =$	742.917
SS Btwn Subj	$[AS] - [X] = 2194.5 - 1704.083 =$	490.083
SS A	$[A] - [X] = 1862.98 - 1704.083 =$	158.897
SS Subj w/gr	$[AS] - [A] = 2194.5 - 1862.98 =$	331.52
SS w/in Subj	$[ABS] - [AS] = 2447 - 2194.5 =$	252.5
SS B	$[B] - [X] = 1716.758 - 1704.083 =$	12.675
SS AB	$[AB] - [A] - [B] + [X] =$ 1945.74 - 1862.98 - 1716.758 + 1704.083	= 70.085
SS BxSubj w/gr	$[ABS] - [AB] - [AS] + [A] =$ 2447 - 1945.74 - 2194.5 + 1862.98	= 169.74

TABLE XIX  
ANOVA CALCULATIONS FOR df

Source	Formula	df Value
Total	$npq - 1 = [(27)(2)(2)] - 1 =$	107
Between Subj	$np - 1 = (27 \times 2) - 1 =$	53
A	$p - 1 = 2 - 1 =$	1
Subj w/gr	$p(n - 1) = 2(27 - 1) =$	52
Within Subj	$np(q - 1) = (27 \times 2)(2 - 1) =$	54
B	$q - 1 =$	1
AB	$(p - 1)(q - 1) = (2 - 1)(2 - 1) =$	1
BxSubj w/gr	$p(n - 1)(q - 1) =$ $2[(27 - 1)(2 - 1)] = 2[26 \times 1] =$	52

TABLE XX  
ANOVA CALCULATIONS FOR MS

Source	Formula (SS/df = MS)	MS Value
Between Subj	$490.417 / 53 =$	9.253
A	$158.897 / 1 =$	158.897
Subj w/gr	$331.52 / 52 =$	6.375
Within Subj	$252.5 / 54 =$	4.675
B	$12.675 / 1 =$	12.675
AB	$70.085 / 1 =$	70.085
BxSubj w/gr	$169.74 / 52 =$	21.472



TABLE XXI  
ANOVA CALCULATIONS FOR F

Formula	F	Critical F	
		.05	.01
MS (A) / MS (Subj w/gr) =	24.925	4.03	7.17
MS (B) / MS (BxSubj w/gr) =	3.883	4.03	7.17
MS (AB) / MS (BxSubj w/gr) =	21.472	4.03	7.17

APPENDIX E

EXAMPLES OF RESPONSES

## EXAMPLES OF RESPONSES

The researcher has selected five examples of responses from each treatment group that seem to reflect major trends within the responses. These examples appear as they were written by the student. No attempt was made to correct grammar or syntax errors.

## TREATMENT ONE RESPONSES

## RESPONDENT 21

FIRST RESPONSE: "The painting is very interesting and full of color. I like the way the water is in the background, it makes it more colorful and the way the people are fitted in front of it makes more interesting. and I like the way the flower are in the middle. and the fence is situated. The two flags make it look better and stand out more."

SECOND RESPONSE: "He uses straight, round, shaded, rippled and dark and light areas. He uses close things and far things. He also uses many different colors. and things that stand out."

## RESPONDENT 13

FIRST RESPONSE: "I see ships in the harbor, it looks like it's in a different country. I also see a man sitting down in a chair and a woman on his left. Also I see another man standing visiting with a lady over looking the harbor. there are several different types of plants and flowers. And there are two flags. I see clouds also.

SECOND RESPONSE: "I see the way the sun strikes the surface and the ways the shadows are. he uses broad bursh strokes, and strong horizontil lines. He also used contrasting texture. He use different shapes like rectangles, triangles, ovals. He made stuff in the shadows darker and the things in the light lighter. He also used colors for his light and dark."

## RESPONDENT 17

FIRST RESPONSE: "I think it is very pretty, but, you kinda have to look over it slowly to see all of it. I mean it's pretty but it also very complex. Personnely I like paintings with more color and action but this one's OK, It's really kinda unreal-Fiction. I don't believe it would ever really be like that."

SECOND RESPONSE: "I still think of it the same. Now I just know the stuff he used to paint and how he did. It does make it seem a little bit more real."

## RESPONDENT 2

FIRST RESPONSE: "Romantic scene  
beautiful water  
nice background  
pretty blue sky  
friendly looking people"

SECOND RESPONSE: "I think the painting is very interesting because of the way Monet uses light, colors, and certain designs, it makes the painting look better when he uses different shades of one color. I'm beginning to enjoy paintings more because some artists have different technique to show their artwork. It's good to see that he put the most important structures in the foreground and the others are in the back to show they are far away."

## RESPONDENT 4

FIRST RESPONSE: "Lots of pretty flowers in it. Nice boats in the background gives it tast (pleasure to the eye.) People in nice clothing. Two different flags in the background makes it look like two countries in one (maybe just a State flag and a country flag)"

SECOND RESPONSE: "Small boats in the background large ones in front. People sitting in the sun it might be a cool day so the people are staying warm by sitting in the sun. Shrubs lining the fences and gates many flowers growing in the middle and on the sides of the picture. The sky and the

water looks fairly calm. but you can see that it looks like the flags are flapping in the wind. There are many different shapes and designs in the picture. They give it character."

#### TREATMENT 2 RESPONSES

##### RESPONDENT 14

FIRST RESPONSE: "The couple has just gotten married and they are about to board a boat and sail off to Rome on their honeymoon."

SECOND RESPONSE: "The couple is saying good-bye becuz the man is going to be out on the sea for a few days hunting for a lost whale. All the boats are all ready out searching. The last boat is waiting on the man. The flags represent the countries from which the couple are both from."

##### RESPONDENT 79

FIRST RESPONSE: "There was a lady and a man on a kind of like a bacony. There was water in the background and ships and boats in the background. There were tables and chairs and there was two flags, a fence around the bacony, and some bushes around the fence and there was red flowers on the bushes."

SECOND RESPONSE: "Well, they were on a tour and they took a lunchbreak and the people on the sail boats were getting ready to take the tour after they got done eating."

go buy and watched the waves of the water and some other people were sitting down the chairs watching the sail boats and the waves of the water. The flags tell what state they are in. The bushes tell us that it is summer or spring."

RESPONDENT 23

FIRST RESPONSE: "People are on vacation enjoying the sun and the breeze. They are watching the boats sailing. They are having a good time. They ladies are trying to keep shaded with their umbrellas while they enjoy the flowers, boats, and water."

SECOND RESPONSE: "The people here are feeling sad because they want outside the fence and they can't get out. They feel confined and lonely. They are tired of seeing the same things every day. They would like to get on one of the boats that come by every day but they can't. They wish they were free to go anywhere they want to. The people want to see and make new friends. All of them want out. There is only one person who doesn't care where he is. He likes to look over everything. This person is the old man."

RESPONDENT 76

FIRST RESPONSE: "Two people saying good-bye, because he has to go to war. The woman wants to go, but can't because she has to watch the house. Two other people, in love, get to sit and watch the battleships going by, and not

be in it, because they're not young enough. The two flags are of freedom, and war. The red flowers are not roses, because they will be parted soon, they are red, because they are, indeed in love. The sea was picked for a dramatic scene."

SECOND RESPONSE: "It's lunchbreak. Man got off work to see woman, and guy is talking about after work...so they won't tell each other about plans when too late. Older man taking a breath of fresh air, and waiting for wife in powder room. Widow beside him is there for her 1st anni-versary without her husband. Ships blow horns for lunch-break on the deck, and stop for a while. Cool breeze blows to cool off tension. Flags, flowing in wind, are for freedom. Ships are making secret plans by radio, so spies can't tell what's going on. That's why man is watching them. Flowers are for the sweetness of the moment. Terrace is for supporting the liberties. Meaning is the freedoms of life."

#### RESPONDENT 24

FIRST RESPONSE: "In this picture there are two people standing by the water watching the boats. It's a windy day at this beautiful look-out point. There is a garden with many flowers to add to the somewhat romantic scene. There are chairs to sit in if you do not want to stand. The ladies have umbrellas to give themselves shade from the sun. The flags represent the country."



The flags represent the country."

SECOND RESPONSE: "This painting is similar to a zoo animal because they might feel confined because of the fence. They can see out but they cannot get out. The flowers and bushes would be like decorations in the cage. The chairs would be like the rocks that they can sit on and sort of pose while people look at them. The old man is like an observer who watches the people and sees what they're doing, sort of like a zoo keeper. The people probably feel lonely and wish that they could go home to be with their family. The flags would be like the sign to the cage. The boats would also be like people going by to look at the animals."

VITA

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