

THE RELATIVE EFFECTS OF FREESTYLE VS.
COPYING ON CREATIVITY OF THIRD AND
FOURTH GRADERS

By

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CHAPTER I

INTRODUCTION

Purpose of the Study

Background

Since the early 1960s, creativity has become a major concern in education in the United States. Students with an increased creative capacity are needed to solve the problems of an increasingly complex and interdependent society. Many believe that the development of creativity in school age children is the key to the solution of mankind's most serious problems (Guilford, 1966). Others believe that creativity also plays an integral role in coping productively with changes needed in the future (Torrance & Goff, 1989).

Therefore, it is natural to investigate the effects of teaching strategies on children's creativity. Several reasons exist for the study of creativity by teachers in art education. The most important is that the development of creative thinking in children is strongly influenced by the teacher. Also, the teacher is responsible for nurturing creative thinking in the classroom and creative students need creative teaching and teachers (Williams, 1967).

However, there is a significant controversy in the field of art education about the use of copying or copy-work as a teaching strategy. Those in support of copying believe that copying enables the student to gain essential skills needed to produce art and that it is a natural and necessary form of learning (Duncum, 1988; Bloom, 1985; Gardner, 1980; Pariser, 1980). Proponents also believe that

copying is a necessary stepping stone which establishes basic skills. After achieving basic skills, a child will deviate from the established norm and creativity will not be decreased. Opponents to copying believe that it is a negative influence on the development of original thinking and the creative process which incorporates fluency, flexibility, elaboration and originality. Opponents also believe that a student should work within and develop his/her own imagery based on his/her own experiences rather than have society's norms forced upon him/her by copying an established model (Harrison, 1960; Arnheim, 1956; Lowenfeld, 1954; Viola, 1936).

If copying does hinder creative and individual expression, are we not limiting our capacities as a society? By modifying teaching methods can we develop more creative problem solving abilities in children, and will more divergent thinking lead to more effective problem solving?

Statement of the Purpose

The intent of the study was to determine whether copying or copy-work deters the creativity of third and fourth grade children. The study explored the following questions:

1. Is a child's capacity to develop a large number of ideas (fluency) affected after a program of copying?
2. To what degree is one child's work different from other children's work (originality) after a program of copying?
3. Is a child more or less able to accept change readily (flexibility) after a program of copying?
4. Is a child's work more detailed or complex (elaboration) after a program of copying?

Hypotheses

Research Hypothesis. Students participating in the freestyle program will have significantly higher creativity test scores than students participating in the copy-work program.

Null hypotheses. A copy-work teaching program has no significant influence on the creativity of third and fourth graders. A freestyle teaching program has no significant influence on the creativity of third and fourth graders.

Working hypotheses. Children taught by the freestyle method will have significantly higher creativity test scores than children taught by the copy-work method.

Children taught by the copy-work program followed by the freestyle program will have significantly higher creativity test scores than children taught by the freestyle method followed by the copy-work method.

Children taught by the copy-work method will have significantly lower creativity test scores than children taught by copy-work followed by freestyle or freestyle followed by copy-work.

Definitions

The following terms used throughout this study require definition:

Copying. Borrowing imagery from another [printed] source either while that source was present at the time of drawing or studying a picture or source with the express purpose of being able to duplicate it at a later time (Duncum, 1988). Forms of copying used in this study include tracing and drawing from black and white photocopies of modern and great master works reproduced from books, selected color reproductions purchased from University Prints, coloring sheets, and recipe art. Independent variable.

Creative behaviors. Personality traits or behaviors prevalently exhibited by creative people. They are self-directed, can tolerate ambiguity, display a bulldog tenacity, are somewhat free from conventional mores, are spontaneous, have a sense of humor, are flexible, are not neat, are intuitive rather than logical, may be seen as disorganized, appear playful, radical or eccentric, appear marginal to society, dislike tradition or authority, abhor routine and organized tasks (Torrance, 1962).

Creative teaching techniques. Strategies which enhance creative development:

(1) Value or praise the unusual; (2) are willing to lose time; (3) encourage unusual questions; (4) demonstrate testing of ideas; (5) treat all ideas with respect; (6) vary assignments and activities; (7) avoid perfect examples; (8) are informal and flexible; (9) are tolerant of ambiguity; (10) use positive criticism; (11) Teach students how to resist peer pressure; (12) encourage self-initiated learning. (Reilly & Lewis, 1983, p.331).

Creativity. Creativity is the forming of associative elements into new combinations (Mednick, 1962) or, according to Haefele (1962), creativity is the ability to formulate new combinations from two or more concepts already in the mind.

Freestyle. A program of instruction in which teaching is based on developing all of the senses with emphasis on production and problem solving. The child's work is developed through his/her own personal experiences and perceptions of those experiences.

Torrance Tests of Creative Thinking. Torrance Tests of Creative Thinking, also called TTCT, are a series of tests first developed in 1958 and revised in 1974 to measure creative thinking abilities of people from kindergarten through graduate school. TTCT includes verbal tests, figural tests, movement tests and sound tests. For this study, the figural test will was used and scores will were achieved on the following four subscales.

Fluency. Fluency reflects the ability to produce a large number of ideas with pictures;

Flexibility. Flexibility represents the ability to produce a variety of ideas and to shift from one approach to another or to use a variety of strategies;

Originality. Originality represents the ability to produce ideas that stray from the obvious, commonplace, banal, or established;

Elaboration. Elaboration reflects the ability to develop, embellish, carry out, or otherwise elaborate ideas. Fluency, flexibility, elaboration, and originality in a work of art enhance a person's probability of making artistic decisions. Artistic decisions are expressive and unique and result in aesthetically pleasing forms. Artistic decisions are expressive in that they reflect the ideas and feelings of the artist. Artistic decisions yield unique forms that may be aesthetically pleasing (Carter, 1991).

Delimitations

The study was limited to third and fourth grade subjects from an elementary school in a rural northeastern Oklahoman town with a population of 1,500.

Limitations

The subjects for this study were third and fourth grade voluntary students from an elementary school in a rural northeastern Oklahoman town. Four classroom teachers participated in the study who had varied backgrounds and used varied teaching strategies. A variety of scoring instruments were used. Widely accepted by researchers of creativity is TTCT figural form A. To this the researcher developed and added several survey instruments.

Significance of the Study

This study explored the relationship between copying and fluency, copying and originality, copying and flexibility, and copying and elaboration. With this

knowledge educators may re-examine teaching methods. Questions concerning emphasis of skill development via copying should be considered. Are there other ways to achieve basic skills that will also encourage creativity or the components therein? Are educators using the best teaching methods possible to aid the student in becoming the best that he/she can be in an increasingly complex and interdependent society.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature was conducted to identify varied philosophical perspectives of copying. Sources included: Dissertation Abstracts 1970-present, Eric 1970-present, Psych-lit 1983-present. The key descriptors were copying, copy-work, copy, coloring book, tracing, and creativity.

The literature is organized by the following subheadings: (1) History of Copying as a Teaching Strategy; (2) Teacher Training in Creativity; (3) Teacher perceptions of Creativity ; (4) Traditional Perspective on Copying; (5) Opposition to Copying; and (6) Other Views on Copying.

History of Copying as a Teaching Strategy

From the earliest of times copying has been used as a dominant teaching strategy. Guilds stressed practical training and craftsmanship during the Middle Ages. Sons followed fathers copying step by step to gain essential building and sculpting skills. In the monasteries, monks also copied to acquire skills for painting illuminated manuscripts.

In later centuries training at the Ecole des Beaux-Arts followed a rigid formula which barely changed through the early nineteenth century. The great encyclopedia, compiled by the French writer, Denis Diderot (1713-1784) and published in the latter half of the eighteenth century describes the training of students preparing for entry into the Ecole. Students began their skill development by copying either drawings or engravings of previous masters. This was followed by copying low-

relief sculpture and then a plaster model. After many years students were introduced to drawing from a live model and only when proficient were they allowed to use color. As described in Techniques of the Great Masters of Art, " The master generally gave a brief introduction to the materials and tools of painting and their care, and then the students began copying a painted head. This was either an example specially executed by the master, or, students were sent to the Louvre to copy an Old Master head" (p. 109). Even after being admitted to Ecole, students continued to learn skill by copying master works at the Louvre (Chartwell ,1985). Today one can visit the Louvre or any museum around the world and see students copying master works to develop skill.

In the United States art education was also introduced to students via copying during the Industrial Revolution (Green, 1966). Walter Smith was hired by a group of Boston industrialists to aid America in competing with world trade. He developed a sequential curriculum for industrial drawing. Smith wrote *Art Education, Scholastic and Industrial*, as well as many other drawing books for instructional purposes. "Rote learning, copying, and repetition were common aspects of sequential curriculum" (Gaitskell, Hurwitz,& Day, 1982, p 34).

Since the Industrial Revolution the majority of art educators have discovered through the work of the humanist movement and the research of Rhoda Kellogg (1969) and Viktor Lowenfeld (1957), as well as their own experiences in the classroom, that copying is detrimental to the creativity and self-esteem of young children. However, one can enter most elementary classrooms across the nation and find evidence of copying or recipe art pasted to the walls and windows in the name of skill building such as color identification, staying in the lines, shape identification, and scissor control.

Teacher Training In Creativity

Teachers' knowledge is very important to the development of creative thinking (Reilly & Lewis, 1983) and teachers' attitudes toward creative thinking are also important (Treffinger, Ripple & Dacey, 1968). Reilly and Lewis (1983) presented 12 guidelines to help teachers enhance students' creativity. Three of these require highly creative minds in teachers. They were to (1) encourage unusual questions, (2) demonstrate a testing of ideas, and (3) vary assignments and activities.

A study by Schaefer (1970) found that teachers who were provided with special training on creative thinking could raise the creativity level of their students higher than teachers who were not offered this assistance. Observer ratings of classroom behavior revealed that creativity-trained teachers surpassed control group teachers in exhibiting a more democratic and original teaching style and the students of the creativity-trained teachers showed more original behavior in the classroom.

A teacher education program should be responsible for the enhancement of creative thinking in their students. Successful teaching places a great demand on personal development and creativity. Good teachers are always creative (Miller & Rose, 1975; Torrance, 1970; Hart, 1934). Also, teachers are direct agents who bridge the gap between the new knowledge from research findings and application in real teaching situations. It is necessary that teachers possess a creative attitude to keep looking for new ways for better teaching and that they possess the ability to apply new general findings from research to their specific situations in a creative manner.

Teachers' Perceptions of Creativity

There is little literature on the subject of teachers' views of creativity despite the fact that teachers are thought to play a crucial role in the development of creativity in children (Torrance & Myers, 1970). Two exceptions are a study by Bjerstedt (1976) which is now 16 years old and a study by Fryer (1989). They both affirmed that teachers are able to accurately describe creativity and personality traits of the creative child (Fryer, 1989; Bjerstedt, 1976). The studies also indicated that teachers believe letting students have some degree of choice over learning methods is important in developing creative students. However, a study by Wassermann (1984) identified four means-ends discrepancies in teachers who say they really want to promote creative thinking but behave in ways that are counterproductive to those goals.

The Traditional View of Copying

Proponents believe that copying is a necessary stepping stone which reinforces the learning of basic skills. After achieving basic skills, the child will deviate from the established norm and creativity will be enhanced. In his research, Bloom (1985) actually found this to be wise advice. His data showed that the young and talented had received support and instruction in basic skills from parents and teachers before developing their specific creative skills. Therefore, he exhorted this type of early training of the basics along with the freedom to explore a variety of experiences that lead to matching the child with a highly skilled mentor in the area of promise for that child.

In "Two Methods of Teaching Drawing Skills," David A. Pariser, an art teacher, conducted an experiment in which he brought a 5 ft. copy of Albrecht Durer's "Rhinoceros" into the classroom of first, second, and third grades. He then read the

Kipling story "How the Rhinoceros Got His Skin." After the story Pariser urged the children to use the Durer as an aid in illustrating some part of the Kipling story. The results of the study indicated that student works described a wide range of visual interpretations. Pariser commented "the act of copying need not result in the stereotyped and stunted responses which Lowenfeld so rightly feared" (p. 39, 1979).

The study "How 35 Children Born Between 1724 and 1900 Learned to Draw" by Paul Duncum (1988) also supports the theory that copying is an essential learning device and that copying is a stepping stone in a child's creative development. The child will use the copy to expand his/her own ideas and expressions. The subjects in his study were selected by two criteria: quantity of biographical information available and great masters.

Recently, prominent art educator and author, Guy Hubbard (1991), indicated that students learn more from copying excellent art than from direct observation.

Other studies that support the stepping stone theory (copying develops basic skills needed before creativity can develop) are: Gardner, 1980; Wilson and Wilson, 1977; Schools Council, 1974; Churchill, 1970; and Lark-Horovitz, Luwis,& Luca 1967. Peck (1936) found a positive correlation between the ability to copy and "school success." He explained this finding on the basis that such success, like copying, appears to depend on the flexibility of forming new concepts and changing old ones.

Opposition to Copying

The opponents to copying range from vehemently opposed to moderately opposed. One view is that under no circumstances should copying be allowed. Children should draw from their own experiences and imaginations (Viola, 1936); "technique should be the outcome of original thinking" (Harrison, 1960, p. 151). The

art experience for children should not be concerned with realistic representation. The process of painting and drawing for children should be a meaningful experience (Lowenfeld, 1954).

According to Arnheim, copying is damaging to expression. It is also unnecessary because learning occurs naturally while manipulating the medium (1978)

Lowenfeld believes copying stunts creative and mental growth. According to Lowenfeld's self-expression theory called "creative and mental growth," creativity results from self-expression and is produced spontaneously without limitations (1957). It is commonly believed that during middle childhood children begin to compare their drawings to those of adults and begin to lose confidence in their work (Gardner, 1980; Kellogg, 1969; Lindstrom, 1957). Consequently they adopt conventional schemata from comic books, coloring books, dittoed drawings, and copying exercises found in workbooks (Lowenfeld & Brittain, 1964). Children become dependent on these images and are unwilling to develop their own.

Two frequently cited examples of the detrimental effects of copying are the use of two joined arcs for a bird and the stick-figure human. Based on two experimental studies (Heilman, 1954; Russell & Wagman, 1952) researchers found that prior to being exposed to school workbooks children represented birds pictorially. The majority of students drew birds and humans in an ideographic way (the "m" bird and stick figure) after studying with workbooks. The researcher determined that copying is easy for students, compared to making art which involves real effort. Kaufman (1966), Lindstrom (1957), and Richardson (1948) agree.

Also, it is proposed that during copying exercises children "do not think for themselves" (Harrison, 1960, p. 151) . Copying eliminates the opportunities "for children to make artistic decisions" (Chapman, 1978, p. 7).

People throughout the world equate the word of art with creativity. However, it is ironic that art is sometimes taught in linear ways that discourage creative thinking. Much learning in art is focussed on copying magazine pictures, masters' drawings, and paintings; tracing, coloring ditto sheets, formula art, complete the picture art, and use of patterns or stencils for children to cut or paste. All hinder the students' ability and desire to think creatively about visual imagery, content and form (Roland, 1991).

Other Views

Other studies indicate that although direct copying is undesirable, it can be condoned in limited amounts for the purpose of gaining skill or acquiring knowledge of absent subjects (DeKing, 1981; Conant, 1967; Conant & Randall, 1957; D'Amico, 1942).

There are also many contradictory studies concerning ages of students influenced by copying. In Creativity, Art and the Young Child (Brittain, 1979), the research data supports the detrimental effects of copying on young children only. Some art educators have applied the injunction to all ages (Arnheim, 1978; Lindstrom, 1957; Conant & Randall, 1957). Others have adopted a more relaxed attitude toward copying for older children (Pariser, 1980; DiLeo, 1977; Wilson & Wilson, 1977; Derham, 1976; Gardner, 1976; Burt, 1921).

Summary

There are conflicting schools of thought on the subject of copying. The traditional view is that copying enables the student to gain essential skills needed to produce art and that copying is a natural and necessary form of learning. Opponents to copying believe that copying is a negative influence on the development of original thinking and the creative process which incorporates fluency, flexibility, elaboration and originality. The debate does not end there. Paul Duncum conducted

an extensive review on the topic and found there is no universal agreement.

Opinions such as the following exist, that copying is:

1. Always undesirable for expression.
2. Always undesirable for expression, though influence is acceptable.
3. Antithetical to expression, but can contribute to learning.
4. A substantial contribution to learning.
5. Necessary for learning. (Duncum, 1988, p. 205)

CHAPTER III

METHODOLOGY

Design

The purpose of this study was to investigate the effect of copying on the creativity of third and fourth graders. The study explored the following questions:

1. Is a child's capacity to develop a large number of ideas (fluency) affected after a program of copying?
2. To what degree is one child's work different from other children's work (originality) after a program of copying?
3. Is a child more or less able to accept change readily (flexibility) after a program of copying?
4. Is a child's work more detailed or complex (elaboration) after a program of copying?

Subjects

The participants in the study were two third and two fourth grade classrooms of students from a rural elementary school in northeastern Oklahoma. The school was located 20 miles from a major institution of higher learning and 30 miles from a city with a population of over a million. The town had at one time contained five thousand occupants. The oil crisis of the seventies reduced the availability of employment. Much of the population moved; others found employment in the neighboring metropolis and at the institution of higher learning. However, the population of the town was reduced to fifteen hundred and the average family

income was \$12,000 at the time of the study. Many of the students were from commuter families; 20 % were from farm families. Slightly more than half of the initial 87 students were female.

The four classes contained between 19-23 students each. During the study five students moved to other schools. Data from 9 subjects were eliminated from the study because of incomplete information or because special conditions existed which were not evenly distributed among the four treatments. The data was compiled from seventy-eight subjects evenly distributed among the four treatment groups. The classrooms of students and their regular classroom teachers were randomly assigned to treatments.

Also, data were obtained from the four regular classroom teachers, as well as, the two art instructors who taught the four treatment methods. The regular classroom teachers had been teaching for seven or more years and were either currently pursuing advanced degrees or had recently obtained an advanced degree in education. No art teacher was employed by the school. The regular classroom teachers had the responsibility of teaching art, a typical situation for eighty-two percent of elementary schools in the United States (Chapman,1982).

The instructors of the treatment methods were master's candidates in education at the institution of higher learning. Their backgrounds and teaching styles determined the assignment of teaching methods. The instructor for the copying method was obtaining an advanced degree in Curriculum and Instruction with an emphasis in instructional media at the time of the study. The instructor is extremely competent in computer art and has created many instructional video tapes. The instructor has three children and is currently pursuing a doctoral program in education with an emphasis in creativity.

The instructor of the freestyle program was pursuing an advanced degree in Curriculum and Instruction with an emphasis in art education. She had recently completed a Bachelors degree in art education.

Research Design

The research design employed in the study was an experimental counter-balance design. The study also utilized the qualitative methods of participant observation, and indepth interview. Equal emphasis has been placed on both qualitative and quantitative research methods.

Experimental Counter-balance Design

Teaching Method One - freestyle program - 12 weeks

Teaching Method Two - copying program - 12 weeks

Teaching Method Three - freestyle - 6 weeks; copying - 6 weeks

(Treatment One followed by Treatment Two)

Teaching Method Four - copying - 6 weeks; freestyle - 6 weeks

(Treatment Two followed by Treatment One)

Creativity test scores were the dependent variable. The teaching method was the independent variable. There were four teaching methods for the two grade levels. Each teaching method lasted 1 hour a day, 2 days a week for 3 months. Teaching Methods One and Two were conducted at the fourth grade level; Teaching Methods Three and Four were conducted at the third grade level.

Teaching Method One. A freestyle program in which students were encouraged to create imagery based on their own personal experiences and observations. The program incorporated elements of sense development, brainstorming, image conjuring, and problem solving (see Appendix A).

Teaching Method Two. A teaching program of skill development taught in the tradition of Ecole des Beaux-Arts in which copying was a crucial element. "Copying was intended to familiarize students with the techniques of the past, and to inspire them to emulate the compositional ideas and techniques of the great masters" (Chartwell, 1985, p. 109). Throughout the three month program, the students were asked to copy drawings and engravings by master artists. The students experimented with varieties of line quality such as, bold, fine, irregular, curved, diagonal, horizontal, and vertical, as well as, various shading techniques such as, hatching, crosshatching, and irregular crosshatching. Once these skills were mastered the students drew to develop the technique of chiaroscuro, "light and dark". The final stage was for the students to copy the completed masters' works. The students were encouraged by seeing reproductions of the works of the great artists who trained in the tradition of Ecole des Beaux-Arts, David, Delacroix, Ingres, & Gericault and also by hearing about their lives. Students' works were praised and students were encouraged to copy in their spare time (see Appendix B).

Teaching Method Three. A teaching program utilizing both freestyle and copying. The first six weeks of instruction was taught using the freestyle method; the second six weeks of instruction was taught using the copying method.

Teaching Method Four. A teaching program utilizing both freestyle and copying. The first six weeks of instruction was taught using the copying method; the second six weeks of instruction was taught using the freestyle method.

Data Collection

Indepth Interview

The regular classroom teachers were interviewed at the beginning and end of the study. Instructors were interviewed at the end of the study. Interview questions used for the study can be found in Appendix C.

Survey

Several survey instruments were developed for the study. Two were designed for students and one was designed for the instructors and regular classroom teachers.

Student Attitude Profile. The Student Attitude Profile (see Appendix D) was developed during the pilot program. The researcher decided that the wide range of responses from teacher interviews during the pilot study failed to indicate a general consensus on creative behavior of students. The Student Attitude Profile was administered to instructors and regular classroom teachers after six weeks and again after three months.

The survey instrument was designed to contain questions asking for either negative or affirmative responses as well as comments about the behavioral traits of each subject in the experiment . The criteria for establishing behavioral traits of creative individuals were:

Creative persons are self-directed, can tolerate ambiguity, display a bulldog tenacity, are somewhat free from conventional mores, are not neat, are often intuitive rather than logical, and may be seen as disorganized. They often appear playful, radical, or eccentric and marginal to society, and they dislike tradition or authority, abhorring routine and organized tasks (Torrance, 1962 p. 35).

"In other words, creative persons tend to be unique and different "(Reilly and Lewis, 1983, p.326).

Responses were converted to the affirmative to make scoring easier.

Thirteen creative traits were possible for each subject.

Student Interest Profile. The Student Interest Profile (see Appendix E) was designed by the researcher to enhance the current knowledge base in creativity. The survey instrument was administered to all subjects to determine common individual interests and attitudes of highly creative students.

Student Background Profile. The student background profile (see Appendix F) was designed by the researcher to determine if any subjects had had any previous extensive art training, or close relationships with artists which might contaminate the results of the study.

Participant Observation. Treatment instructors were required to keep detailed journals and records in which they noted normal subject behavior as well as unusual subject behavior.

Limitations of the Study

The study was limited to third and fourth grade students from a rural population in northeastern Oklahoma.

Mortality rate of students was controlled by encouraging and praising student work and by teaching the four treatment methods during school hours. Although students were told before the study began that they could drop out of the program at any time, none did.

The amount of copying or freestyle work taking place outside of the program was controlled by encouraging students to continue the school lesson whenever drawing outside the classroom. Also, occasionally homework assignments were given. The homework assignment for students participating in the copying program was to copy something out of their favorite coloring book, or a character from a cereal

box, cartoon strip or book. A homework assignment for students participating in the freestyle program was to draw a toy that can wash the dishes and swat bugs at the same time.

Consent forms (see Appendix G) were sent to parents explaining the significance of the study, involvement in the study, and contribution each child would make. The study was conducted during regular class hours and no other regular curricular subjects were eliminated to allow for the study. Participation in the study was voluntary and confidential. Students were allowed to withdraw at anytime. None did. Only one parent refused to allow his/her child to participate.

The subjects had been previously tested by school administrators on intelligence tests. The data from four subjects was eliminated because special conditions existed which were not evenly distributed among the four treatments.

Five students moved to other cities during the study; however, the distribution of subjects among treatments remained stable.

A research proposal including copies of all instruments and treatment methods was submitted to and approved by the Institutional Review Board at Oklahoma State University, Stillwater, Oklahoma (see Appendix H).

Instruments

One testing instrument used in this study to measure subjects' creativity was Thinking Creatively with Pictures, Form A, from the Torrance Tests of Creative Thinking series. The Torrance Tests of Creative Thinking were designed to measure creative thinking abilities of people from kindergarten through graduate school. The Picture Booklet Form A includes three parts with a ten minute limit for each part; thus, the entire test took 30 minutes. The test was administered by the treatment instructors who read the instructions from the test booklets three times to the students

before they began the test. The test was administered at the regularly scheduled treatment time.

Figural Form A measures four dimensions of creativity--Fluency, Flexibility, Originality, and Elaboration. Fluency reflects the ability to produce a large number of ideas with pictures. Flexibility represents the ability to produce a variety of ideas and to shift from one approach to another, or to use a variety of strategies. Originality is the ability to produce ideas that stray from the obvious, common place, banal, or established. Elaboration reflects the subject's ability to develop, embellish, carry out, or otherwise elaborate ideas (Torrance, 1974).

The Torrance Tests of Creative Thinking have been used in research in various areas for more than 20 years, and their validity and reliability have been well established (Buros, 1978). The correlation coefficients for the inter-score reliability on the four measures of creativity have been established as $r=.99$ on fluency, $r=.93$ to $r=1.00$ on flexibility, $r=.95$ on originality, and $r=.98$ on elaboration. The correlations for test-retest reliability have been documented as $r=.82$, $r=.59$, $r=.85$, and $r=.83$ on the four measures, respectively. The long-range predictive validity was given as between $r=.51$ to $r=.59$.

The Torrance Tests of Creative Thinking were given to all treatment groups at the end of the study.

A second measure was administered to students of counter-balance groups 3 and 4 by treatment instructors. Students were asked to create an original drawing of an animal or an imaginary creature 6 weeks into the treatment. Students in all four treatment groups were asked to create an original drawing of their favorite room at the end of the study. Students were given 30 minutes to complete these drawings. These works were scored blindly by two judges. Both judges from different areas of the country were experts in the field of children's art. The judges rated the works on a 3 point scale with the least creative equaling 1 point and the most creative

equaling 3 points according to the previously defined components of creativity; originality and elaboration.

Also, to support the evidence of the findings the regular classroom teacher, as well as the two instructors teaching the four treatment methods were asked to respond to a survey instrument for each of their students. The attitude profile designed by the researcher was developed from personality and behavioral traits of creative students described by Reilly and Lewis (1983) (see Appendix D). The instrument was administered after six weeks and again at the end of the study.

A fourth measure was a student interest profile designed by the researcher to enhance the current knowledge base in creativity (see Appendix E). The survey instrument was administered to all subjects to determine common individual interests and attitudes of highly creative students.

A fifth measure was a student background profile designed by the researcher to determine if any subjects had had any previous extensive art training, or close relationships with artists which may have contaminated the results of the study (see Appendix F).

Treatment instructors were required to maintain detailed journals in which they noted normal subject behavior as well as unusual subject behavior.

Interviews of instructors and the regular classroom teachers were conducted at the beginning and end of the study. Noted were teacher's and instructor's general impressions of student behavior during the study (see Appendix C).

Statistical Analysis of the Data

Kruskal-Wallis one-way analysis of variance by ranks was used to determine if the average differences between independent groups were due to chance or to a treatment effect.

Gain scores were used to describe creative improvement or degradation of child original art works. Spearman's Rho was used to determine the strength of the relationship between the two judges' decisions. Gain scores were used to describe creative improvement or degradation on the student attitude profile. The acceptable level of significance was .05 for all statistical procedures unless otherwise noted.

Instructor field notes, student interest profile, and student background profile were summarized and described by the researcher.

Pilot Study

A pilot study was conducted four months before the experiment was implemented. Three children, ages 8, 9, and 10, were selected as the subjects. The pilot began with the introduction of the copying treatment.

Treatments

Copying Method. The first lesson lasted one hour. A discussion of machines and inventions was encouraged by the researcher. Children shared knowledge about machines. Children were asked to think of inventions created during their lifespan. The computer was mentioned and then eliminated. Students talked about changes which have occurred in computers during their lives. They offered many current uses of computers such as, telephones, video games, and word processors. The children were asked to look at a drawing of a gumball machine. They were then asked if they thought the gumball machine was a valuable invention. All students answered in the affirmative. Next, students were asked why. One child replied that gum tasted good. The researcher asked if one had to have a gumball machine to taste gum. Another child responded that the gumball machine just gives you gum. The researcher asked if there were other ways to get gum. The children laughed and responded that gum could be purchased at the store and sometimes people give it

to them. The researcher asked why bother with a gumball machine. One student responded that he had a gumball machine that was also a bank. The researcher asked what the purpose of a bank was. Students responded to save money. Students were asked if gumball machines in stores and restaurants were used to save money. Students responded that one had to put money in to get gum out which led to a lively discourse by one child who put money in a vending machine and received twenty candy bars. Students were then asked to look at the drawing again.

Students were asked to look at the different shapes in the drawing. The children identified circles and squares. The researcher introduced the terms cylinder and sphere to the students. Students were asked to count the cylinders and spheres in the drawing. The youngest child asked if the gumballs counted as circles or spheres. An older child responded that they are the same thing. The researcher clarified the difference. The children were asked to identify light and dark areas of the picture. The researcher led students in a discussion about the use of contrast and the effects artists achieve when using it. The children were asked to copy the drawing of a gumball machine. All three children eagerly approached the task.

After ten minutes the youngest student asked if he could use markers to make the gumballs different colors. The researcher responded that for this particular lesson pencil was preferred. The student offered no argument. The oldest child asked if he had to draw all the gumballs. The researcher responded that he should do the best that he could. The student continued drawing all the gumballs. The middle student added a gumball machine stand to his drawing without asking. The researcher made no comments about the addition.

The lesson was concluded by sharing drawings with the other students and reviewing terminology. Students were asked if they enjoyed the art lesson. The younger two indicated that they did. The oldest indicated that there were too many

gumballs. Students were asked if the lesson was too long or short. They responded that it was fine. Students were told that when they returned the next day they would have another drawing lesson. They appeared eager and asked if they could take drawings home to show parents. Researcher responded by explaining that their drawings would be kept in a portfolio so that they could see the progress they made. Students offered no resistance.

Freestyle Method. The second lesson introduced the freestyle method and was also one hour long. The lesson began with the researcher suggesting a discussion about pets. The three students who participated in the pilot copying treatment talked about their pets-- pets they'd like to have, and pets they used to have. The researcher asked why people have pets. Students offered a range of responses from, "because they're fun to play with," to "they warn us if there is a burglar." The researcher brought a dog into the class. Students were invited to play with and pet the dog. As students interacted with the animal, the researcher drew attention to the anatomy of the dog. The pet's toenails and teeth were examined and bones were felt. A discussion about pet care followed. The two youngest squabbled about who would get the animal a drink of water. The researcher asked how the animal's fur felt and how the animal's tongue felt when it licked the children. The researcher asked how the animal was similar or dissimilar to their pets. The researcher asked how students felt when they played with the dog. Students responded they felt happy.

The researcher told students to take drawing pads and pencils and sit anywhere they wanted to draw the dog. If they wanted to draw their own pet they could. Students sat on the floor next to the pet. Students had difficulty drawing the pet because it wiggled. All students made several attempts before beginning the final draft. Student drawings were involved and unique. The session ended with students sharing their work with each other.

Both the copying method and freestyle method were determined by the researcher to be appropriate for the study. No changes were made.

Interview

Several local elementary school teachers volunteered to pretest interview questions. Respondents were asked to repeat their understanding of the questions. Questions were revised until they were understood by most respondents. One question was eliminated from the document. Interview questions used during the experiment can be found in Appendix C.

Survey

Several survey instruments were constructed by the researcher.

Student Attitude Profile. The Student Attitude Profile (see Appendix D) was pretested on voluntary elementary teachers in the community. Respondents were asked to repeat their understanding of the questions. Questions were revised until they were understood by most respondents. Responses were converted to the affirmative to make scoring easier. Thirteen creative traits were possible for each subject.

Student Interest Profile. A student interest profile was designed by the researcher to enhance the current knowledge base in creativity (see Appendix E). The survey instrument was administered to all subjects to determine common individual interests and attitudes of highly creative students. It was pretested on three subjects ages eight, nine, and ten. Respondents were asked to repeat their understanding of the questions. Questions were revised until they were understood by most respondents.

Student Background Profile. The student background profile was designed by the researcher to determine if any subjects had had any previous extensive art

training, or close relationships with artists which may contaminated the results of the study (see Appendix F). The instrument was pretested on three subjects ages eight, nine, and ten. Respondents were asked to repeat their understanding of the questions. Questions were revised until they were understood by most respondents.

Summary of the Pilot Study

The researcher was able to test the treatment methods and instruments during the pilot study in order to decide if they would be appropriate for and easily understood by students and adults participating in the experiment. Volunteers in the pilot were able to understand and respond to the survey instruments. Students participating in the treatments indicated that they would like to continue the art lessons. The Student Attitude Profile was added to the study as a result of the teacher interviews. Other than rewording an occasional question, no changes were made.

CHAPTER IV

RESULTS AND ANALYSES OF THE DATA

Quantitative and Qualitative Data

This chapter describes and analyzes the quantitative data collected during the experiment. The results are presented with tables, and discussion. The end of the chapter describes the qualitative data. The intent of the study was to investigate the effect of copying on the creativity of third and fourth grade children. The study explored the following questions:

1. Is a child's capacity to develop a large number of ideas (fluency) affected after a program of copying?
2. To what degree is one child's work different from other children's work (originality) after a program of copying?
3. Is a child more or less able to accept change readily (flexibility) after a program of copying?
4. Is a child's work more detailed or complex (elaboration) after a program of copying?

Hypotheses

Research Hypothesis. Students participating in the freestyle program will have significantly higher creativity test scores than students participating in the copy-work program.

Null hypotheses. A copy-work teaching program has no significant influence on the creativity of third and fourth graders. A freestyle teaching program has no significant influence on the creativity of third and fourth graders.

Working hypotheses. Children taught by the freestyle method will have significantly higher creativity test scores than children taught by the copy-work method.

Children taught by the copy-work program followed by the freestyle program will have significantly higher creativity test scores than children taught by the freestyle method followed by the copy-work method.

Children taught by the copy-work method will have significantly lower creativity test scores than children taught by copy-work followed by freestyle or freestyle followed by copy-work.

Quantitative Measurement

The statistical procedures which are used are explained. The raw test data are presented in Appendix J. These four tables correspond to the four treatments utilized in the study. Each table contains data from 18 to 21 subjects, none being duplicated. Two tables apply to third grade students and two tables apply to fourth grade students. Genders are evenly distributed among the test groups.

Definition of Treatments

Treatment One-Freestyle. This is a teaching method in which students are encouraged to create imagery derived from student interpretations of personal experiences and observations. It is presumed that this approach will lead to greater creativity. Three months of teaching was devoted to this treatment.

Treatment Two-Copying. This teaching method provides guide-lines for skill development. The students were asked to reproduce master works, thereby

gaining valuable necessary skills which enhance art. It is presumed that this approach will discourage creativity. Three months of teaching was devoted to this treatment.

Treatment Three-Freestyle Followed by Copying. This approach devotes the first half of the teaching period to Treatment One and the second half to Treatment Two. Six weeks were spent on each treatment.

Treatment Four-Copying Followed by Freestyle. This approach devotes the first half of the teaching period to Treatment Two and the second half to Treatment One. Six weeks of teaching were spent on each treatment.

TTCT Measurement

One testing instrument used in this study to measure subjects creativity was Thinking Creatively with Pictures, Form A from Torrance Tests of Creative Thinking series. The Torrance Tests of Creative Thinking were designed to measure creative thinking abilities of people from kindergarten through graduate school. The Picture Booklet Form A includes three parts with a ten minute limit for each part, thus, the entire test took 30 minutes. The test was administered by the treatment instructors who read the instructions from the test booklets three times to the students before they began the test. The test was administered at the regularly scheduled treatment time.

Figural Form A measures four dimensions of creativity--Fluency, Originality, Flexibility and Elaboration. Fluency reflects the ability to produce a large number of ideas with pictures. Originality is the ability to produce ideas that stray from the obvious, common place, banal or established. Flexibility represents the ability to produce a variety of ideas and to shift from one approach to another, or to use a variety of strategies. Elaboration reflects the subjects ability to develop, embellish, carry out, or otherwise elaborate ideas. (Torrance, 1974).

The Torrance Tests of Creative Thinking have been used in research in various areas for more than 20 years, and their validity and reliability have been well established (Buros, 1978). The correlation coefficients for the inter-score reliability on the four measures of creativity have been established as $r=.99$ on fluency, $r=.93$ to 1.00 on flexibility, $r=.95$ on originality, and $r=.98$ on elaboration. The correlations for test-retest reliability have been documented as $r=.82$, $r=.59$, $r=.85$, and $r=.83$ on the four measures respectively. The long range predictive validity was given between $r=.51$ and $r=.59$.

Analyses of Quantitative Data

The scoring of TTCT corrects for differentiation between third and fourth graders in TTCT results. Also, previous studies have shown that there is no difference between boys and girls in TTCT results. Therefore, grades and sex were not considered to be factors in scoring. This 78 subject data base has the appearance of being a normal population with each of the four groups being a homogeneous part of the total group. However, normality was not established. Kruskal-Wallis one-way analysis of variance by ranks (KWANOVA) was the nonparametric statistical procedure determined to be the most appropriate to describe the data.

Results of TTCT Testing

Kruskal-Wallis one-way analysis of variance by ranks (KWANOVA) was selected to compare the means of two or more groups in order to decide whether the observed differences between them represent a chance occurrence or a systematic effect. KWANOVA compares groups which differ on one independent variable with two or more levels. For example, in this study of creativity, one variable was systematically manipulated--type of instruction. This variable had four

levels: freestyle, copying, freestyle followed by copying, copying followed by freestyle. KWANOVA compares the variability of scores within a group--variability due to sampling error alone-- with the variability between the group means-- variability due to sampling error and possible treatment effects. If the variability between groups is considerably greater than the variability within groups, the result is evidence of a treatment effect. KWANOVA is the nonparametric analog to one-way ANOVA and assumes that the scores are measured on an ordinal scale but come from an underlying continuous distribution (Shavelson, 1988). Acceptable probability level is .05 unless otherwise noted.

Fluency. The raw scores reported in appendix I produced the results in Table I. KWANOVA results of TTCT test scores for fluency indicate that there is no significant difference between treatments.

Originality. The raw scores reported in Appendix I produced the results in Table II. KWANOVA results of TTCT test scores for originality indicate Treatment One is significantly better ($P < .05$).

Flexibility. The raw scores reported in Appendix I were produced the results in Table 3. KWANOVA results of TTCT test scores for flexibility indicate no treatment was significantly different.

Elaboration. The raw scores reported in Appendix I produced the results in Table IV. KWANOVA results of TTCT test scores for elaboration indicate Treatment One is significantly better ($P < .05$).

Summary of KWANOVA Results for TTCT

A summary of the rank means found in Table V indicates that Treatment One is consistently best in fluency, originality, flexibility, and elaboration. Treatment Four is second highest in originality and elaboration. Treatment Two is second highest in fluency only and Treatment Three is second highest in flexibility only.

TABLE I
KWANOVA ANALYSIS OF FLUENCY DATA

TREATMENT	N	MEAN RANK
1	21	54.57
2	18	48.00
3	19	24.89
4	20	29.90
TOTAL	78	
CORRECTION FOR TIED SCORES		23.3557

TABLE II
KWANOVA ANALYSIS OF ORIGINALITY DATA

TREATMENT	N	MEAN RANK
1	21	54.90*
2	18	37.56
3	19	24.16
4	20	39.65
TOTAL	78	
CORRECTION FOR TIED SCORES		8.5621

*P <.05.

TABLE III
KWANOVA ANALYSIS OF FLEXIBILITY DATA

TREATMENT	N	MEAN RANK
1	21	43.81
2	18	33.06
3	19	42.66
4	20	37.77
TOTAL	78	
CORRECTION FOR TIED SCORES	2.725	

TABLE IV
KWANOVA ANALYSIS OF ELABORATION DATA

TREATMENT	N	MEAN RANK
1	21	53.57*
2	18	32.92
3	19	32.66
4	20	37.15

TOTAL 78
CORRECTION FOR TIED SCORES 3.5181
*P <.05.

TABLE V
SUMMARY OF THE MEANS FOR TTCT TEST SCORES

TREAT ELABORATION MENT	N	FLUENCY MEAN	ORIGINALITY MEAN	FLEXIBILITY MEAN	MEAN
1	21	54.57	54.90*	43.81	53.57*
2	18	48.00	37.56	33.06	32.92
3	19	24.89	24.16	42.66	32.66
4	20	29.90	39.65	37.77	37.15

*P<.05.

Results of Original Drawings

Counter-balance Treatment Three and Four students were asked by treatment instructors to create an original drawing of an animal or imaginary creature 6 weeks into the treatment. Students in all four treatment groups were asked to create an original drawing of their favorite room at the end of the study. Students were given 30 minutes to complete these drawings. These works were scored blindly by two judges. Both judges from different areas of the country were experts in the field of children's art. The judges rated the works on a 3 point scale with the least creative equaling 1 point and the most creative equaling 3 points according to the previously defined components of creativity, elaboration and originality.

The terms, Draw 11, 12, 21, and 22, are used to identify the judge and test order. The first digit of the number after the word "Draw" indicates that the results being discussed pertain to either the pretest or posttest. The second digit of the number indicates the results were determined by either the first or second judge.

Gain scores were used to describe creative improvements or degradation of child original art works. Spearman's Rho correlation was used to determine the strength of the relationship between the two judges decisions. The decision to use Spearman's Rho was based on the ordinal level of the data.

Draw 11 and Draw 21. Results were determined by examining drawings produced by students at the end of Treatment Three and Treatment Four with Judge One doing the scoring. Pretest and posttest results were scored.

On a gain score basis, Table VI presents the changes between Treatments Three and Four reported by Judge One. Scores indicate that Treatment Four outperformed Treatment Three.

Draw 12 and Draw 22. Results were determined by examining the same drawings produced by students at the end of Treatment Three and Treatment Four

TABLE VI
SCORING BY JUDGE One

TREATMENT	N	POSITIVE	NEGATIVE	NO CHANGE
3	19	0	11	7
4	20	9	2	9

with Judge Two doing the scoring. Pretest and posttest results were scored and are described in Table VII. The scores indicate that students in Treatment Four outperformed students in Treatment Three in originality and elaboration.

Correlations Between Judges

Correlations of the judges scores are described in Tables VIII and IX. The correlation coefficient is a measure of the strength of association between two variables. Spearman rank correlation coefficient was selected because the original data was ordinal. Pretest scoring is described by a positive $r=.53$; posttest scoring is described by a positive $r=.35$.

Results of the Student Attitude Profile

To support the evidence of the findings the regular classroom teachers, as well as the two instructors teaching the four treatment methods were asked to respond to a survey instrument for each of their students. The Student Attitude Profile designed by the researcher was developed from personality and behavioral traits of creative students described by Reilly and Lewis (1983) (see Appendix E). The instrument was administered after six weeks and again at the end of the study. Gain scores were used to describe creative improvement or degradation on the Student Attitude Profile.

The results of the Student Attitude Profile scored by the teachers are described in Table X. Students in Treatment One and Treatment Four at the end of the study show the strongest creative personality traits.

The results of the Student Attitude profile scored by instructors is described in Table XI. Students in the Treatment One and Treatment Four at the end of the study show the strongest creative personality traits.

TABLE VII
SCORING BY JUDGE TWO

TREATMENT	N	POSITIVE	NEGATIVE	NO CHANGE
3	19	0	12	6
4	20	12	2	6

TABLE VIII
CORRELATION OF JUDGES SCORING FOR PRE-TEST

	DRAW 11	DRAW 12	N	MEAN	STD DEV
DRAW 11	1.000	.5298*	38.00	2.210	.577
DRAW 12	.5298*	1.000	38.00	2.290	.768

*P < .01 (2 tailed)

TABLE IX
CORRELATION OF JUDGES SCORING FOR POST-TEST

	DRAW 21	DRAW 22	N	MEAN	STD DEV
DRAW 21	1.000	.3472*	38.00	2.079	.632
DRAW 22	.3472*	1.000	38.00	2.20	.64

*P < .01 (2 tailed)

TABLE X
ATTITUDE SURVEY, SCORED BY TEACHER

TREATMENT	N	POSITIVE	NEGATIVE	NO CHANGE
1	21	14	4	3
2	18	4	9	5
3	19	5	9	4
4	20	16	0	4

TABLE XI
ATTITUDE SURVEY, SCORED BY INSTRUCTORS

TREATMENT	N	POSITIVE	NEGATIVE	NO CHANGE
1	21	17	0	4
2	18	0	14	4
3	19	0	19	0
4	20	19	0	1

Correlations Between Teachers and Instructors

Treatment groups One, Two, Three and Four began as separate classes; two as third graders and two as fourth graders, each with its assigned teacher. It is natural for a teacher to want her class to perform well. To guard against contamination of the test results from teacher bias, pre-testing was planned and conducted. Teacher survey responses on the Student Attitude Profile (see Appendix E) were correlated with instructor survey responses. The correlation coefficient is a measure of the strength of association between two variables. Spearman rank correlation coefficient was selected because the original data was ordinal.

The results indicate a positive correlation between the instructors' scoring and the teachers' scoring of the Student Attitude Profile. Table XII describes the correlation coefficient of each treatment. These are close groupings. There is no evidence that the teachers or instructors have biased the scores of their students.

Table XIII provides a comparison of teacher to instructor scoring. The figures indicate that students in Treatments One and Four show increased creative behavior or personality traits at the end of the study while students in Treatments Two and Three show a decrease. The data also indicates that both teachers and instructors have made similar decisions.

Qualitative Analyses

Participant Observation: Instructor Journal Responses

At the beginning of each treatment Instructors introduced themselves to their students and spent a few minutes discussing the types of art activities the students would be doing. Also, instructors told students that they would each be given a secret number to put on their work instead of writing their names on their pictures. Students were not told why. They were also told that they could not take any of their

TABLE XII
CORRELATION BETWEEN TEACHERS AND INSTRUCTORS

TREATMENT	<u>TEACHER SCORING</u>				<u>INSTRUCTOR SCORING</u>			
	#1	#2	#3	#4	#1	#2	#3	#4
N	21	18	19	20	21	18	19	20
MEAN	5.29	7	6.9	5.9	5.7	6.4	6.4	6.2
STD DEV	1.8	1.5	1.3	1	1.8	2.2	1.3	1.0
CORRELATION	1 to 1			2 to 2	3 to 3			4 to 4
	0.49			0.43	0.3			0.34

TABLE XIII
TEACHER TO INSTRUCTOR COMPARISONS

	1 TO 1	2 TO 2	3 TO 3	4 TO 4
MEAN	5.3/5.7	7/6.4	6.9/6.4	5.9/6.2
STD DEV	1.8/1.8	1.5/2.2	1.3/1.3	1/1
CHANGE	INCREASED	DECREASED	DECREASED	INCREASED

pictures home. Students were told that if at any time they did not want to participate in the activity, they could read to themselves at their desks.

Each art instructor kept a detailed journal during the experiment. They were told to log each lesson for each class of students. They were asked to describe each art lesson as well as student responses to the lessons. Instructors were told that it was important to describe ordinary behavior as well as inordinary behavior. At the end of each day they should reflect on the days events and add any thoughts or comments pertinent to the study. The researcher has analyzed the journals and describes below an account of each instructor's journal responses by treatment.

Instructor of Treatment One, Freestyle. 12 weeks. Students were asked to invent a machine for the first lesson. Many students wanted to copy each others inventions and found it difficult to think of an idea. Students were encouraged to think of their own ideas. If they persisted in copying each others work they were allowed. However, original work was praised more fervently than copied work.

Students were asked to draw a live dog which belonged to the classroom teacher. Students were frustrated in the begining because the animal moved from child to child. Once the animal settled down, the children became excited about their work. Most students made several drafts. One student drew from a 'how to' book. By the end of the second week two students were still copying from each other. At the end of the first six weeks the instructor noted that the students were not as reliant on their peers as they were during the beginning of the study. "Students are now trying to do their own work. They also get started earlier. It doesn't take them as long to think of an idea."

As the freestyle lessons progressed comments such as "students enjoyed this project more than others to date" followed by "this was the best project yet" and "every student had a different idea." During the ninth week the instructor comments that "there is a noticable variety of artwork even though the students desks have

been pushed together." This comment indicates that the instructor anticipated that the close proximity of students desks would encourage copying or sharing of ideas. However, copying did not occur.

Other interesting observations were "Most students do not finish drawing in enough time to color their pictures" and "most students are drawing larger than life." It has been noted that as children become self conscious of their artistic shortcomings compared to adult standards, their drawings become increasingly miniscule (Kellogg, 1969).

During the final drawing activity in which students were asked to draw their favorite room, students did not ask what media they could use. They used whatever they wanted such as, torn and cut paper, pencil, markers, glue lines, and ink. Students also enlarged their original surface by gluing and taping additional sheets of paper together. Many students made three-dimensional rooms by folding and gluing paper. "Students never lost enthusiasm for the program."

Instructor of Treatment Three. Freestyle followed by copying. First 6 weeks. Students were asked to invent a machine. Students were enthusiastic about the lesson. They had read a book earlier in the week about a homework machine. Many students drew homework machines. These students were also excited about drawing a live animal and asked if they could bring their pets in. Students also drew more than one sketch.

Comments during the second week were "Students took their time and did not finish until time was up. More variety in work is apparent. One student used a stencil and was told to put it away. Much interaction between students during drawing activity. One student was drawing a stork from a 'how to' book." At the end of the six-week period, students continued to be excited about the art program. When asked to draw an imaginary animal during the free choice test several students

asked if they could use markers. Instructor responded with "do what you think is right." Students used markers, crayon, and pencil.

Instructor of Treatment Four. Copying followed by freestyle. Second six-weeks. "Students are having a horrible time getting started. They don't know what to do with themselves, having so much freedom with markers, crayons, and pencils." One student wouldn't try even though encouraged by instructor three times. "This class is very concerned with the way things are supposed to look rather than how they can make them look. The other group (freestyle followed by copying) was not at all concerned with how things should look." The instructor noted very little interaction.

Nine weeks into the study instructor began to notice behavioral changes of students. "Students are starting to experiment with different materials without being told to try something different. A wide variety of drawings are becoming apparent."

Instructor of Treatment Two. Copying. 12 weeks. Students began this program by copying an invention, the gumball machine. "Students were excited about the lesson in the beginning and seemed defeated toward the end." Common responses were "I can't" and "I don't like it because it doesn't look right." Students seemed to need strong reinforcement to complete the lesson. By the fifth lesson students were enjoying the process. None responded that the picture being copied was too hard. Students began to finish early. Fourth week, students asked if they could trace. Students asked if they had to use color. The instructor noted persistent complaining and reluctance to participate in activity. Instructor expressed desire to change teaching strategy. Researcher encouraged instructor to stay with original plan.

Fifth week instructor modified instruction by letting row leaders determine copying procedures. Students responded well. They all took a turn being in control, deciding what, how, and when lines, and shapes should be drawn.

End of sixth week students again became disillusioned. Students finished early. One asked if she could clean her desk instead of draw. "Students are not trying as hard as usual." Instructor notes that in the free-choice art test some of the drawings contained visual aids copied from the classroom.

During the eighth week the instructor commented, "I hope that I haven't caused the fourth grade students to dislike art." Students were asked to bring a picture from home to copy. Students enjoyed drawing their pictures as well as talking about them.

Tenth week students enjoyed the change of media from pen, pencil, and marker to cut paper and watercolor. Students no longer finished early.

Final week students asked when they'd get to take their work home. Again students were finishing early and putting little effort into their work. General disrest was noticed in students. Instructor comments, "I'm glad this is over."

Instructor of Treatment Four. Copying followed by freestyle. First six weeks. Students began by copying a drawing of a gumball machine. Students were eager in the beginning and slightly disillusioned at end of the first lesson. Students sought constant reinforcement, "Does this look right? Is mine okay?" Most students were interested in drawing many details. One student rushed through the work.

Third week, students became bored easily. Instructor notes subject matter seems to make a difference in keeping students attention. "Seems students preferred copying ugly or unusual subjects to pretty, or ordinary subjects. Seems like there is less pressure to make drawings perfect when copying something ugly." (Researcher note: Could be ugly pictures are more unusual and therefore more interesting). Students began to express concern that pictures didn't 'look right.' "Students want to quit or hide their work." During the fifth week the instructor modified

instruction by letting row leaders determine copying procedures. Students responded well. They all took a turn being in control, deciding what, how, and when lines, and shapes should be drawn.

Students were very respectful of peer instructors' suggestions. Art instructor discussed measuring and perspective. "Students have learned the terminology. Students are rushing through work. I can see a lot of progress in skill. Students are not trying as hard as usual." Instructor notes that during the Free-choice test- objects were copied from classroom visuals.

Instructor of Treatment Three. Freestyle followed by copying. Second six weeks. Students began second half of the program by copying Matisse's "Stillife." Instructor talked about line, shape, and form. Students were eager and attentive to instruction. Students used entire period to complete the work.

Second week students continued to work intently. Third week students began to need more reinforcement. Students asked to take work home. "Students rush through work (20 minutes)." By the fifth week students became critical of master works. Student statement about Picasso's "Bull"-- "This isn't what a real bull looks like. His horns are wrong."

Indepth Interview

Interviews of the four regular classroom teachers were conducted by the researcher at the beginning and end of the study. Instructors participated in training sessions and were in regular contact with the researcher throughout the study as well as interviewed at the end of the study.

Teachers' responses. At the beginning of the study teachers were interviewed. (See Appendix I for interview questions). General findings were inconclusive. It was not determined if the regular classroom teachers were able to accurately describe creative personality traits or behaviors of their students.

However, all indicated that they would notice a change in behavior if one should occur. They also indicated that they used teaching strategies which encourage creative development in students such as allowing students to make decisions, showing students how to resist peer pressure, and brainstorming.

Exit interviews were also conducted. Emphasis was placed on changes teachers may or may not have noticed in their students. All four teachers believed that the art program was beneficial to students, regardless of treatment. All four teachers indicated that their students were more creative after the program than before. When asked specifically how their students were more creative, one responded that student drawings "looked more like what they're supposed to be." Another indicated that students drew on their own more often.

General findings were that teachers were not able to accurately describe increased or decreased creative behavior during interviews. However, teachers were able to identify behavioral changes when asked specific questions concerning the behavior and personality traits of individual students on the Student Attitude Profile.

Instructors' responses. Exit interviews conducted by the researcher revealed that the instructor of the copying program was relieved to see the program end. The instructor responded, "They started out so eager at first, and turned into cranky little monsters" when asked if any changes in student behavior were noted during the program. The instructor also indicated that as the program progressed, students seemed to need more extrinsic rewards for drawing. "It was not unusual for one or two students to put their heads on their desks and refuse to finish on any given day."

The instructor of the freestyle method indicated that students never became bored. "In the beginning a few students struggled with original ideas and wanted to draw from books or each other. After several weeks even they saw how much fun it was to think of ideas no one else in the class had thought of. I really stressed original

work. I also encouraged them to develop their ideas. The group that copied first and then had my program really struggled. I wasn't sure they were going to respond at first. They acted like everything I asked them to do was too hard. But, at the end of nine weeks they weren't hesitant at all. Their work had much variety to it."

Student Interest Profile

The Student Interest Profile (see Appendix H) was administered by instructors half-way into the program. It was designed by the researcher to determine if the most creative students had any specific interests in common. Most students in all treatments said they watched approximately three hours of TV a day. Most students in all treatments indicated that "Simpsons" was their favorite TV show. The second most common response was the generic 'cartoons.' Most students in all treatments indicated that they enjoyed bike riding and playing with friends outside. And most students in all treatments indicated that they had pets or had had pets in the past. Dog was number one followed by cats, rabbits, and horses.

The Student Interest Profile revealed nothing unusual with one exception. When students were asked if they enjoyed coloring in coloring books, the students in Treatments Two and Four more frequently indicated that they would rather color freely. At the time that the survey was given, students in Treatments Two and Four were participating in the copying program.

Student Background Profile

The Student Background Profile (see Appendix F) was designed to identify any students who may have had extensive art training. It was administered by instructors on the day of the second lesson. Students responded that the art

lessons they had had were conducted at school or Bible school. None were extensive. Most students lived in town; 20 percent lived on farms.

Summary

The TTCT scores indicate that the use of copying yields low creativity test scores in fluency, flexibility, originality, and elaboration. However, the results of KWANOVA indicate that only the originality and the elaboration scores describe a significant difference. The evaluation of original art work indicates that copying yields less original and elaborate art work. Instructors and teachers responses from the Student Attitude Profile indicate that after a program of copying creative behavior diminishes. Evaluation of the instructors' journals indicate that students develop lower self-esteem, become bored and restless, resent loss of control, and display less creative behavior during a copying program.

The researcher rejected the null hypothesis as a result of both quantitative and qualitative analyses. The KWANOVA results of the TTCT scores show a significant difference for originality and elaboration only. Originality and elaboration are only two of the four traits ascribed to creativity. However, the overwhelming evidence described in the qualitative responses justifies the rejection of the null hypothesis.

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate the effect of copying on the creativity of third and fourth graders. The study explored the following questions:

1. Is a child's capacity to develop a large number of ideas (fluency) affected after a program of copying?
2. To what degree is one child's work different from other children's work (originality) after a program of copying?
3. Is a child more or less able to accept change readily (flexibility) after a program of copying?
4. Is a child's work more detailed or complex (elaboration) after a program of copying?

The research project was a field-based experimental counter-balance study conducted in a small rural town in northeastern Oklahoma. The study was enhanced by the qualitative methods of participant observation, indepth interview, and survey. Equal emphasis has been placed on both qualitative and quantitative research methods. The findings conclude that the qualitative anlayses support the quantitative analyses.

The KWANOVA results of TTCT scores indicate that the use of copying yields low creativity test scores for, originality, and elaboration. The evaluation of original art work indicates that copying yields less original and elaborate art work. Determined from both instructors and teachers, results from the Student Attitude

Profile indicate that after a program of copying creative behavior diminishes. Interviews with instructors indicate that students who copied became reliant on others ideas and struggled when assigned original tasks. Evaluation of the instructors' journals indicate that students develop lower self-esteem, become bored and restless, resent loss of control, and display less creative behavior during a copying program.

Journals also indicate that students accepted both copying and freestyle programs readily in the beginning. However, after two weeks instructors reported behaviors of students in copying programs ascribed to inflexibility. Students participating in the copying programs resisted instruction and several refused to finish their work. Several attempts were made to motivate students. One was to empower students with control, allowing them to take turns leading the class in determining what shapes and lines should be drawn where and when to accurately describe the artist's intent. This was an encouraging tactic however it was short lived. After two weeks the students again became restless and bored. Students in copying groups required constant reinforcement and external stimuli to prevent them from quitting. There may be ramifications here for "at risk" students.

The children who were expected to think and make their own decisions (those in the freestyle treatment) never expressed the desire to quit or give up. Making artistic decisions was stimulating and fun. Those students ended each lesson with comments such as, "What will our next lesson be?" and "Can we do this all year?" Encouraging students in all curricular activities to think and express their own ideas could easily be one way for educators to decrease the drop-out rate. Of course, adults must be supportive of students' ideas. A child who offers original ideas and whose ideas are not recognized in a positive manner is quick to realize that some adults say one thing but mean something entirely different.

The results from the counter-balanced groups indicate that the effects of copying may be more devastating than originally determined. The change from freestyle to copying had a debilitating effect not unlike that of downward mobility in social strata. When changing from copying to freestyle, students were very cautious, inhibited, and displayed a distrust that their own ideas and images were worthy of acceptance. Findings from the counter-balanced groups indicate that the behavioral traits of flexibility and fluency were diminished by the mixed signals and inconsistency of instructional methods. Originality and elaboration were the creative traits which seemed to recover during the limited time span of the study.

Implications of the Study

Although the results may be interesting to art educators because so little research based on sound empirical data in art education exists today, most art educators are in agreement that copying should be avoided for young children. Most art educators have studied the works of Viktor Lowenfeld (1957) and Rhoda Kellogg (1969) and find the spontaneous scribbles of young children to be both delightful and aesthetically pleasing. However, the results of the study should make a considerable impact on the 82 percent of elementary school teachers who receive little or no help with art methods (Efland, 1990).

There are many reasons that children copy besides being told to. Many comedians include jokes about their children's scribbles in their routines. More common than not is the parental response, "What is it?" when the child hands the adult a picture. However, these remarks, plus disapproving facial expressions and body language indicate to the child that his/her own work and ideas aren't good enough. Children are quick to realize that adults appreciate children's art only when images are realistic. They are also quick to realize that reproducing someone else's images is far easier than creating one's own.

It is common for young students to be fascinated with super heroes. Many of the images drawn by students in the copying treatment during the free choice exercise were mutant ninja turtles. It would be beneficial to children for teachers to insist that students create their own images rather than allow them to mass produce replications of currently popular super heroes. It may be likely that the values and critical decisions mass produced in comic books, television and the movies are being adopted by students. It is likely that little critical thinking takes place when students repeatedly produce images in the same way.

There are many forms of copying prevalently practiced in schools today. Copying from books, artists drawings, other students' works, recipe art, tracing, stencils, coloring sheets, and complete the picture are just a few. None allow the child to make critical decisions.

The challenge of creating one's own images requires cognitive, affective, and psycho-motor skills. The child makes many critical decisions while manipulating the medium. During both the copying and freestyle treatment children had the opportunity to investigate the hard and soft edges of cut and torn paper. While working with charcoal children experimented with value. When drawing with pen or pencil students explored hard and soft lines as well as wiggly, curved, straight, and jagged lines. However, the freestyle group remained the highest scoring on creativity throughout the experiment. The reason this may be is that no new learning was taking place for those students who copied. Students' ideas and imaginations were being stifled and confined to fit the nice neat expectations of adults. Children naturally and spontaneously press harder on a pencil or pen when an important decision is being made. Anyone who has looked at many children's drawings knows that even in the scribbles of the very young a range of soft and hard lines can be seen. The child's excitement of making an important line or image will determine the boldness of the image. However, the children who were allowed to make their own

images had the opportunity to make far more critical decisions than students who were asked to copy.

Freestyle students were always asked to solve a series of problems. The first problem was to decide what image to create. This in itself takes many critical thinking skills. The child must decide what he likes and dislikes as well as know why. These decisions change with time as the child adds information to his/her knowledge base. The child changes his/her mind many times within the realm of a single work. For instance, after a lesson or classroom discussion about sealife, a child is asked to imagine life beneath the sea. The child quickly renders an aspect of sea life which he/she finds facinating at the moment. One particular aspect of sealife most children and adults find fascinating is the shark, probably because the shark recieves much publicity. The child draws a shark. The child must also decide what the shark's world is like. The child then includes the shark's prey. As the child thinks about the prey, he/she must determine the size, shape, color, and importance. Many of these decisions are determined by the way the child feels about the shark and/or it's prey. The child may feel remorse for the prey and depict the prey making a narrow escape. The child may decide to describe the ferocious nature of the shark during a feeding frenzy. The child may relate to the shark as a family member and describe mother, father, and baby sharks. The child may empower the shark with human intellectual capacities. Describing the shark involves many critical thinking skills that children who copy never have the opportunity to experience.

Adults recognize the fact that copying literature is plagiarism. It would be unacceptable for a child to turn in a copy of "Roses are red, Violets are blue" as an original work of poetry. Nor would the child learn anything by copying the poem. And yet in the visual arts, not only has this behavior been encouraged but many times in the schools, children are offered no other alternative.

For example, many parents have visited their children's classrooms on parent/teacher nights to discover that their child is unable to identify his/her snowman from the other twenty-five snowmen glued to the window. The students' snowmen were constructed using a step by step process known as recipe art. Normally, a child would be beginning to develop his/her own artistic style during these formative years (Kellogg). The only distinguishing trait of the snowmen might be the spot of paint that ran because the work was hung before it was dry. No wonder the child shows little interest when asked to complete the step by step process.

Such controlled activities in the name of art education have long been discouraged by most art educators. Arthur Efland, noted author and art educator refers to this form of education as social control. "Education in this sense is a form of social control, and though control may be used for humane purposes, its exercise is invariably conservative, since the intellectual freedom of the learner is not trusted to achieve socially valued results "(Efland.1990, p262). Not only are students having adult norms forced upon them, but many times are not allowed to express their own ideas.

It is also common to visit classrooms and see children copying drawings and photographs of animals from books. I have yet to see a classroom teacher take a book away from a child and ask the child to make his/her own images. However, the results of this study came from exactly that form of copying.

More emphasis should be placed on creativity training and art methods for preservice and inservice teachers. Teacher education programs should prepare teachers to recognize unique ideas and nurture and support the child's creative ideas and efforts. Teachers should not hesitate to discourage copying by taking the the books away and expecting children to think and express their own ideas.

Recommendations for Further Research

The researcher encourages duplicate studies for upper and lower grade levels to determine if the effects of copying are similar. Replication of the study in urban schools as well as across socioeconomic boundaries should be conducted. This would enable the field to attain a better understanding of the extent of copying and may determine if some students are more "at risk" than others.

A study of teacher backgrounds, both artistic and educational, and copying would indicate if those teachers trained in technical skills were more apt to promote copying as a teaching strategy.

Also, studies should be conducted about the creativity of teachers. Little information is available in these areas. If, as Williams (1967) suggests, the key to creative thinking in students is the teacher, then more research in these areas is a necessity to enable children with the skills needed to solve mankind's most serious problems.

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APPENDICES

APPENDIX A

TEACHING METHOD ONE

A freestyle program in which students are encouraged to create imagery based on their own personal experiences and observations. This program will incorporate development of the senses, brainstorming, and problem solving.

Lesson One. Drawing from nature. It is autumn. The children have seen the leaves change colors and fall to the ground. The teacher will direct a class discussion about the leaves, seeds, and changing plants. Talk about the colors involved in the changing seasons. Talk about how the changing seasons make us feel. Students will take a short nature walk to gather natural objects. Encourage children to examine the objects and feel the textures. Students will return to the classroom to draw a scene that depicts the feeling of fall. Crayon and collected natural objects.

Lesson Two. Drawing pets. Pets are a significant part of most children's lives. Children are either directly or indirectly familiar with domestic animals. The teacher will bring several domestic animals (cat, dog, turtle, rabbit, etc.) to class. The class will discuss these pets. What does the animal feel like? What does it sound like? What needs does this animal have? Why do people keep pets? Why do students have or not have pets? How does your pet make you feel? After the discussion students will be allowed to touch, hold, or listen to the pets. Students will draw one of the pets and will be encouraged to think about the animals as they draw. Pencil and charcoal.

Lesson Three. Drawing a portrait. Pairs of students will turn their desks facing each other. The teacher will ask students to look at each others' facial features. How

far down are the eyes? How far apart are they? What shape are they? What other objects remind us of eyes? How large is the nose compared to the eyes? Where is it located on your partner's face? How is it shaped? How large is the mouth compared to the nose? How wide is the mouth? How long is the chin? What shape is the face? Student will be asked to draw each other. They will be asked to look at facial features and their relationship to the whole. Students will also be asked to notice how facial features change when their partners smile or talk while they draw. Pencil and/or charcoal.

Lesson Four. Non-representational drawings of moods or feelings. Students will fold paper into halves and then thirds. They will then be asked to label the tops of the boxes with different feelings such as: anger, happiness, sadness, peace, loneliness, and sharing. The class will briefly discuss how line, shape, and texture describe specific feelings. Students will be asked to make lines, shapes and textures that depict the feeling written in each box. Each student will then select one emotion and draw it on a full sized sheet of paper. Students will be encouraged to add color using markers or crayon. They will then share their drawings with the class. Black ball-point pen and markers.

Lesson Five. Drawing animals. The class will take an imaginary trip to a natural wildlife habitat totally untouched by man. They will explore the lush green fauna and look for interesting animals. Volunteers will share their real or imaginary animals with the class in detail. What do the animals look like, sound like, feel like? What do they eat? Where do they sleep? Students will be asked to close their eyes and focus on their favorite part of the imaginary trip and the animals involved. They will then draw these images. Students will be encouraged to use the entire page. Pencil, markers, and crayon.

Lesson Six. Drawing fish and other waterlife. We are aboard an imaginary submarine that is going to take us far below the ocean's surface. We will see many

kinds of brilliantly colored fish and amazing plant life. Students will describe imaginary waterlife during the journey. Students will discuss non-living objects under the sea such as wreckages, volcanoes, and coral formations. What temperature is the ocean? Is it the same all over? Can all animals live in all temperatures? Do students hear any sounds? What colors do students see? Students will be encouraged to experiment with a variety of shapes and color as they draw waterlife. The class will be encouraged to press heavily with crayon to make colors bold.

Lesson Seven. Scenes from another planet. Are there other worlds besides ours? If so, what would one look like? What would the climate be like? landscape? life forms? If the climate is hot, what colors could be used to suggest heat? What shapes would we see? What textures? How would life look in order to survive such a place? Not all aliens would look like "E.T.." How would students' creatures vary? Students will draw a scene from another planet (existing or fantasy) incorporating ideas gained in class discussion. Students should try to incorporate landscape, climate, and life forms in their work. Crayon or marker.

Lesson Eight. Secret things. If you had a secret cabinet, that nobody else in the world knew about, what secret things would you keep inside? Why do we keep personal things that we like to keep secret? The class will talk about things they share with a few special people, such as secret clubs, secret passwords, and special objects. The students will have had a chance to bring to class any secret objects that they would like to draw. Students will draw any kind of cabinet that might be used to store secret things. Details will be stressed. Ball-point pen.

Lesson Nine. Drawing a neighborhood scene. Ask students to describe some interesting things about their neighborhood. What happens there? Are the houses close together or spread far apart? Have students talk about what their neighborhood would look like if they were sitting on a telephone wire. Are there many fences? What kinds of pets are kept in the backyards. Are there children

playing in the yards? What do students do in their neighborhoods? Have students draw a scene from their neighborhood. The entire page should be filled with some activity. Pencils and crayon.

Lesson Ten. Special places. Is there a special place that you like to go that only a few people know about? If you don't have a special place, what would your special place look like if you could make it anyway you wanted. Is it dark or well lit? Is the place hidden or is it in plain view? Is it inside or outside? Are there other people there?.. animals? Is it cool or warm? How does it smell? What do you like to do there? How does your special place make you feel? Students will draw their special place. Students will emphasize light and dark through the use of markers. Pencil and colored markers.

Lesson Eleven. Drawing your own invention. In the last 50 years Americans have come along way through the use of inventions. Have students name some recent inventions. What purposes do they serve? Have students imagine what the world will be like in the next fifty years. What kind of device would they invent?..Does it have movable parts? What can it do? Ask students to draw a large detailed invention. Explain to students that their invention doesn't have to do anything useful or be mechanically correct but it should be unique. Pencil and ball-point pen.

Lesson Twelve. Drawing birds in their habitat. Have students share their concepts of birds. What colors are they? What sizes are they? How many different kinds can they think of? Offer information about several interesting birds such as, flamingos, Toucans, ostriches, and hummingbirds. Are there birds that can't fly? What do birds look like when they're flying? Discuss the different environments birds live in. Compare parrots to penguins and owls to condors. What do they all have in common? Have students draw a bird and its environment. Students should be encouraged to draw large and use detail. Students have the option to make a

fantasy bird and its environment. Use of contrasting colors will be explained and encouraged. Pencil, crayon, and markers.

Lesson Thirteen. Drawing a worm's eye view of the world. If you were a little worm, the world around you would look very different indeed. Grass blades would seem as tall as trees, the flapping of a butterfly's wing might blow you away, and a puddle of water would seem like a lake. Have students talk about different points of view and how a bird's-eye view would differ from a worms. Have students talk about similarities as well. Talk about the movie, "Honey, I Shrank The Kids," and ask students to think of some interesting situations that might arise if they were that small. Would noises still sound the same? Would odors still smell the same? How could students make the best of things if they were really that small? Students will draw a picture of the world from a worm's-eye view. Have them draw a situation that could be either fun or scary. Encourage a variety of sizes and much detail. Pencil and crayon.

Lesson Fourteen. Drawing imaginary creatures. Fantasy creatures are any kind of creature that isn't real. These figures have been created in the mind of man since the day man came into existence. Man has always tried to find ways to explain the unknown, so he created creatures to help explain it for him. Have students ever created a fantasy creature? What was it like? Have students talk about features of a fantasy creature. Draw the product on the board. Talk about other features the creature could have. Does it talk?..wear clothes? Is it more human than animal? Erase the figure from the board. Have students draw their own original fantasy creature. Encourage students to draw large and incorporate detail. Pencil, ball-point pen, and markers.

Lesson Fifteen. Going to the circus. There is something magical about a circus. Students will share their experiences of the circus. What actions were taking place? What did the costumes look like? What kind of animals were present?

What kind of sounds did students hear? What kind of smells?--peanuts? cotton candy? popcorn? Discuss action with the students and demonstrate how to show movement in drawing. Have students draw a circus scene. Their drawings should be lively and energetic. Have students add bright colors by using layered crayon. Pencil and crayon.

Lesson Sixteen. Drawing textures. Teacher should bring some textured items (cotton balls, sand paper, a bristle brush) from home for students to examine. Have students examine the bottom of their shoes and the classroom floor and walls. Talk about how art and texture are interrelated. Ask students what objects they think of when they touch something soft, hard, rough, smooth. Ask students why we might not think to draw a porcupine when we're touching cotton? Ask students what the opposite of the objects their touching might be. Talk briefly about abstract expressionism. Have students draw a picture of something brought to mind when touching textured items. Encourage students to be original. Ball-point pen and markers.

Lesson Seventeen. Drawing a still life. Students will have been instructed to bring a show-and-tell object from home. Students will be asked to share their items with the class and tell why these objects are important to them. The students will display their objects on their desks and draw from observation. Encourage students to use the entire paper. Students who have forgotten show-and-tell items may pull their desks up to a neighbor and draw their objects. Pencil, charcoal, and markers.

Lesson Eighteen. Drawing flowers from live observation. Students will have been asked to bring from home a few real or artificial flowers. Students will gather around a large table where the flowers will be placed for discussion. Talk about the parts of flowers and how they feel and smell. Why do flowers have a smell? Why are flowers colored the way they are? How do flowers make students feel? What

do students think of when they look at or smell flowers? Students will then return to their desks with their flowers. Students will make an enlarged detailed drawing of their flowers. Students will be encouraged to really "look" at their flowers as they draw. Charcoal, pencil, and markers.

Lesson Nineteen. Drawing the sky at night. Why do things look the way they do at night? Is it the light or lack of it? How do students feel when they look at the sky at night? What do you see? Is it cooler at night? Have students think about the effect of lights in the night. Talk about star light, street lights, porch lights, neon lights, and the light from a campfire. Why do they look the way they do? What do trees look like in the dark? Houses? People? Talk about colors at night and why they are so subdued. Talk about the properties of white light. Have students draw a night scene or the night sky. Remind students about the use of color at night. Pencil, crayon, or markers.

Lesson Twenty. Drawing babies. Have students talk about younger brothers and sisters. At what age do babies become children? What does a baby look like when it's sleeping? When it smiles? In its mother's arms? How do babies move? How does baby skin look and smell? How do students feel about being big brothers and sisters? What responsibilities do big brothers and sisters have? What kinds of things do babies dream of when they're sleeping? Do students remember when they were babies? How are their baby brothers and sisters like or different from the way they were when they were babies? Talk to students about the proportions of a baby's body. Students will draw an enlarged drawing of their baby brother or sister. If they don't have one they can draw a cousin, niece, nephew, or neighbor's baby.

Lesson Twenty-One. Drawing a portrait of someone you admire. Have students talk about virtues we admire in people. Why are certain people famous? Does being famous necessarily mean that we admire them? Why or why not? Talk

about historical artwork done of famous people. Ask if they have ever seen a painting or drawing of a famous person. Have students talk about people in their lives that they admire. Have them explain why. Have students draw a portrait of a person they admire in any setting they choose. Encourage students to work large. Have them show why the person is important to them. Pencil and crayon.

Lesson Twenty-Two. Drawing cats. Have students talk about their experiences with cats. What do cats look like? How does the fur feel? Do they make any sounds? What special thing does your cat do? Talk about the history of cats from the time that they were worshiped by the Egyptians to the times that they were persecuted during the Salem witch trials. Have students make a large detailed drawing of a cat. Encourage them to use their imagination and show the cat in an interesting environment or scenario. They may even want to draw the cat from an historical perspective. Pencil, crayon, and markers.

Lesson Twenty-Three. Drawing a horse. Ask the class to talk about horses they have either read about, seen on T.V., owned, or seen at a farm, ranch, or rodeo. What colors are the horses? Do they ever have markings or patterns? What do they look like? Talk about the relationship between horse and man. How have horses helped man? Has man helped the horse? Why? Why not? If students had horses, what could they see their horses doing? How would their horses respond? Point out the physical features of a horse. Have students draw a horse. Encourage students to show their horse in an original or unusual situation. Pencil and/or markers.

Lesson Twenty-Four. Drawing an imaginary farm scene. Have students ever visited a farm? Talk to the children about farm life. What do people do on a farm? What different kinds of animals can be found on a farm? What's the most unusual type of animal students have ever seen on a farm? Ask students what kinds

of animals they would keep on their farm. What would they feed the animals? What would their farm look like? How would life in the city be different than life on a farm? How would they be similar? Would students like to live on a farm? Why or why not? Have students draw their version of life on the farm. Encourage children to include as many details of farm life as possible. Suggest varied use of color through layered crayon. The page should be filled. Pencil and crayon.

APPENDIX B

COPYING PROGRAM FOR TEACHING METHOD TWO

Teaching Method Two. - A teaching program taught in the tradition of Ecole des Beaux-Arts in which copying was a crucial element. (Copying was intended to familiarize students with the techniques of the past, and to inspire them to emulate the compositional ideas and devices of the great masters (Chartwell, 1985, p. 109) Throughout the three month program, the students will be asked to copy drawings and engravings by artists. The students will experiment with varieties of line quality such as bold, fine, irregular, curved, diagonal, horizontal, and vertical, as well as various shading techniques such as, hatching, crosshatching, and irregular crosshatching. Once these skills are mastered the students will draw to develop the technique of chiaroscuro, "light and dark". The final stage will be for the students to copy the completed paintings from great masters' works. The students each have a packet of selected 8"x10" black and white photocopied reproductions and some 5"x7" color reproductions, of the works of modern masters and great artists who trained in the tradition of Ecole des Beaux-Arts, David, Delacroix, Ingres, & Gericault. Students will also be given oral histories of the artists lives. Students' work will be praised and students will be encouraged to copy modern artists' works in their spare time or as homework.

Glossary of Art Terms

Anatomy-The study of bone and muscle structure of humans and animals and how muscles and bones form surface shapes.

Area- The flat surface within the edges of the paper.

Art- Anything produced by skill and taste that moves people to see beauty in it or experience emotions resulting from its impact on their senses and intelligence.

Artgum- A soft eraser free of grit, used for cleaning drawings.

Background- The portion of the picture which appears to be faraway. The figures will look smaller and fuzzier than figures in the foreground.

Center of Interest- That part of a picture that attracts the most attention.

Character- The distinctive qualities belonging to an individual, thing or place.

Charcoal- Charred wooden sticks used for drawing on paper.

Chiaroscuro- A drawing or painting in which strong emphasis is placed on light and dark.

Contrast- Strong differences in shape, line, texture, or color.

Cool Colors- Blue, green, and violet.

Crosshatch- Parallel lines drawn to cross other parallel lines to obtain the effect of tone.

Depth- The illusion of distance in a picture.

Dominant- The most important part of a picture.

Drawing-The art of making objects, ideas, and emotions on paper using line and tone.

Edge- The outline of a shape. If the outline is sharp and distinct, it is called a hard edge; if it is light and blurred it is called a soft edge.

Emphasis- Dominance on any part of a picture.

Fixative- A light protective coating sprayed over art work to prevent charcoal and pencil from smearing.

Flat Tone- An even darkness or lightness in a specific area of a picture.

Foreground- The portion of the picture which appears closest to the viewer.

Geometric Shapes-Basic regular shapes, such as sphere, square, cylinder, and rectangle.

Gradation- A gradual change from lightness to darkness in a picture.

Hatching- A series of parallel lines used to create tone.

Horizon Line- An imaginary horizontal line representing the observer's eye level.

Illustration- A picture designed to tell a story.

Irregular shapes- Shapes with no regular form, such as rocks and clouds.

Line- A continuous unbroken mark made by pen, pencil, or charcoal.

Line Drawing- A drawing that contains lines, dots, and solid black areas, no gray tones.

Outline- The outside edge of a shape or form.

Outline Drawing- A drawing in which only the outer edges of forms are drawn. There are no degrees of light or dark.

Overlap- To cover part of one shape with another.

Rhythm- The repetition of similar elements, such as colors, shapes, and lines.

Secondary Colors- Orange, green, and violet which can be made by mixing primary colors.

Shade- A color mixed with black or a shadow.

Shading- Lines and values added to a picture to create volume.

Silhouette- The outline of a shape filled in with black.

Sketch- A quick practice drawing to help the artist develop skill.

Still Life- A picture of inanimate objects.

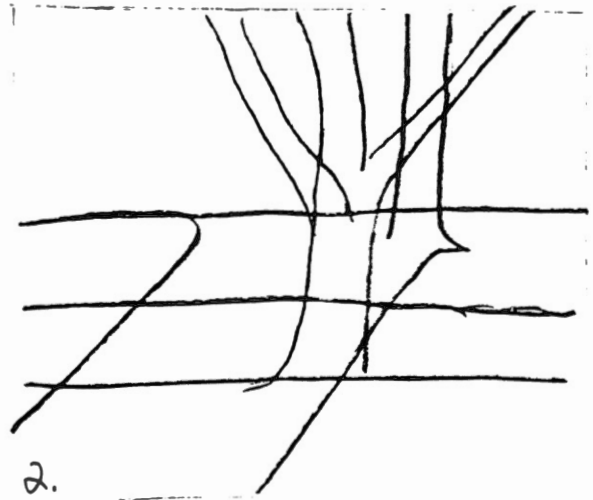
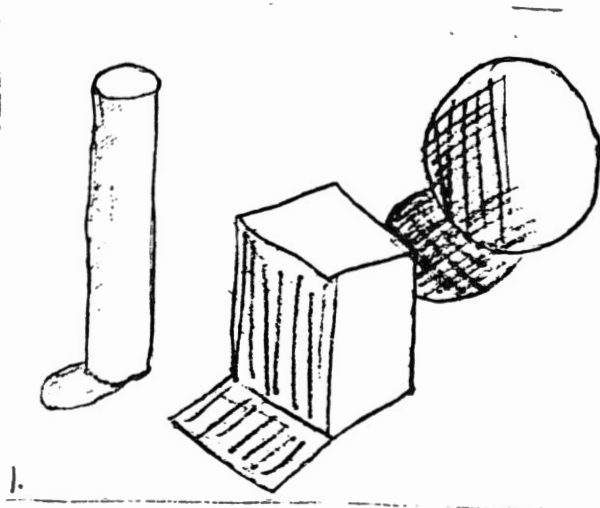
Texture- To make a drawing look like it is rough, smooth, hard, soft, dull, or shiny.

Tone- Varying degrees of light and dark.

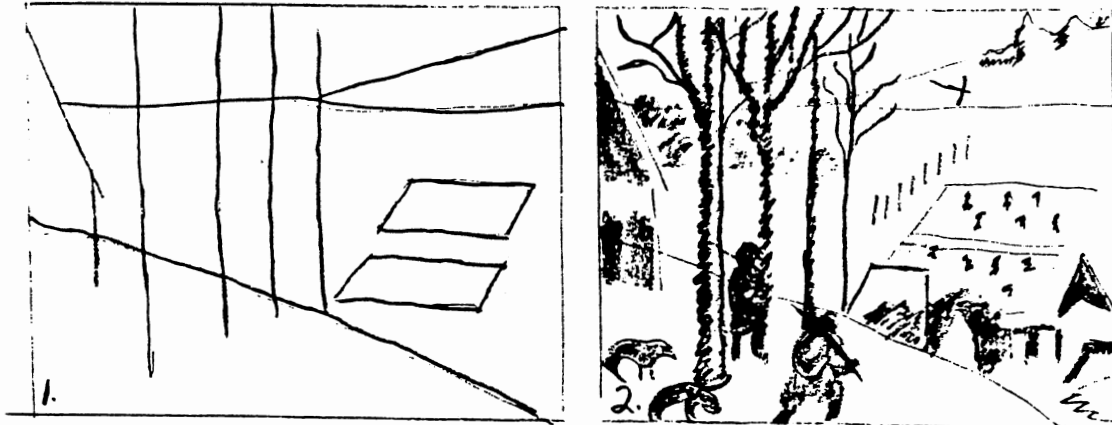
Value- The lightness or darkness of a color.

Warm Colors- Colors associated with heat or fire like red, orange, and yellow.

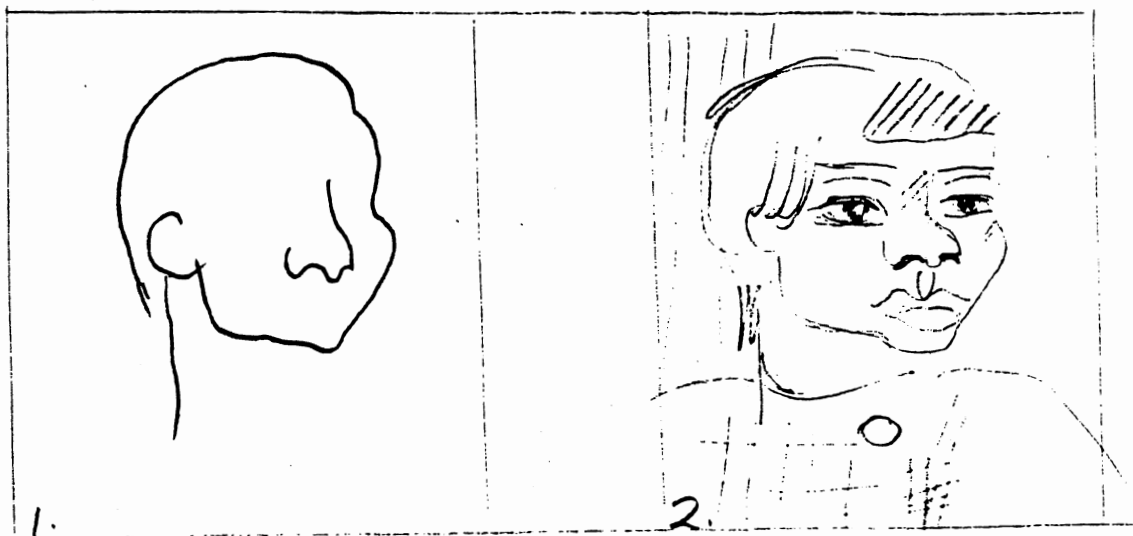
Lesson One. Identifying geometric shapes in a work of art. Have students look at Sidney Goodman's "East River Drive." What time of the year is it? How do they know that? Have students identify the squares, rectangles, sphere, and cylinders in the piece. Ask students where in the classroom do they see geometric shapes. Show students how to make squares, cylinders, spheres, and rectangles. Demonstrate how to shade these shapes to make them look like Goodman's work. Have students copy Goodman's work paying careful attention to how to draw trees. Pencil. An excellent copy of Goodman's work was found in 100 American and European Drawings: A Portfolio by Nathan Goldstein (1982, Englewood Cliffs, New Jersey: Prentice-Hall).



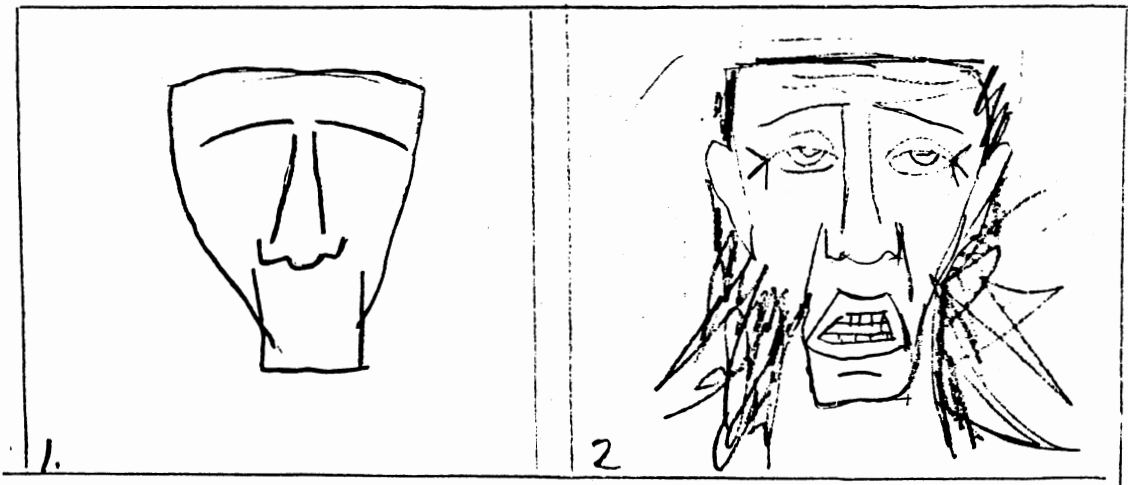
Lesson Two. Drawing pets. Have students look at "The Return of the Hunters" by Pieter Bruegel The Elder. Talk about dogs. What kind of dogs do the children in the class have? What kind of dogs are in the picture? Have they ever been hunting? Do they have family members who hunt? What time of the year do they hunt? What time of the year is this picture? Look closely at the painting with the children. Ask the students to identify geometric shapes. What shapes are the trees? What shapes are the frozen ponds? What shapes are the rooftops, the mountains, the hill in the foreground? Show children how to divide the page to make copying this busy painting easier. Show children how to make light pencil lines. Start with the triangular shaped hill in the foreground. Define foreground and background. Point out the second triangular shape, the background. Draw with the children. Draw the rectangular ponds next. Draw the cylinder shaped trees. Add the triangular rooftops and square houses. Talk about the curved shapes of the dogs and people as they head home. Show them how to draw these curved shapes. Have children add color with markers or crayon. An excellent copy of Bruegel's work was purchased from University Prints, Boston, Massachusetts.



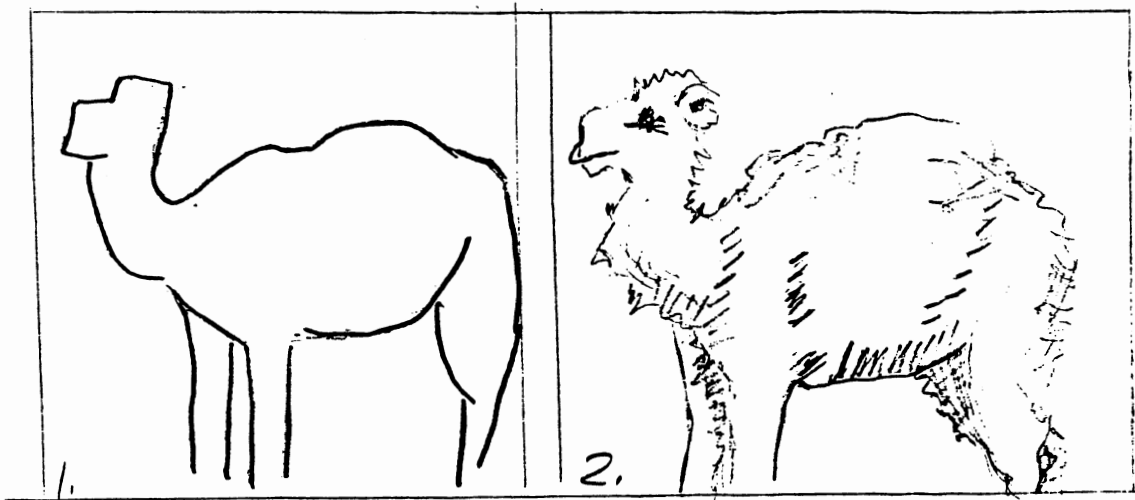
Lesson Three. Drawing a portrait. Have students look at Carl Schmidt Rottluff's "Head of a Girl." How old do they think the child in the drawing is? What is the child doing? Where is she? Talk about the different types of line in this work. Identify hatching, crosshatching, and irregular hatching. Demonstrate how to make these lines. Talk about the shapes and shadows in the picture. Have children copy this portrait of a young girl. Pencil. An excellent copy of Rottluff's work was found in XXth Century Drawings and Watercolors by Raymond Cogniat (New York: Crown).



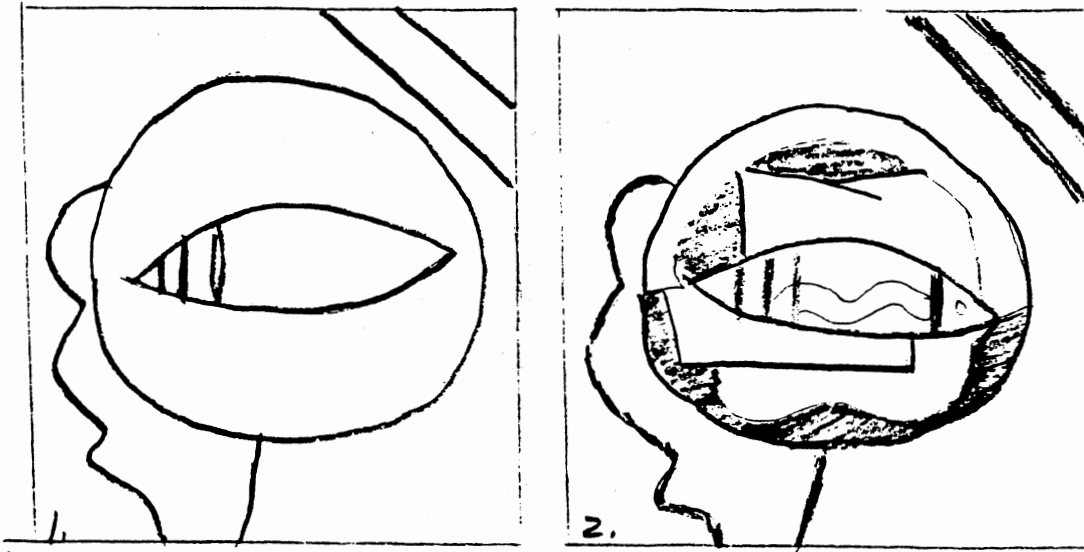
Lesson Four. Drawing moods or feelings. Have students look at Bernard Buffet's "Head." How do the students think the figure feels? What kind of mood do they think the figure is in? Have they ever felt this way? Do they think this is a pretty picture? Explain that sometimes art does not have to be pretty. Sometimes the artist just wants his picture to express the way he/she feels. Sometimes when the artist expresses these types of feelings with bold lines, the picture is called strong. Explain how the dark (bold) lines are like other strong things (steel, muscles when flexed). Draw attention to the jagged, irregular lines in the picture. Tell them that sometimes when you are frustrated, tired, or angry, that you feel just like jagged lines too and that it is alright to feel like jagged lines sometimes. Ask students to identify the lines that they made in the last lesson. Praise them for remembering hatching, crosshatching, and irregular hatching. Ask them if the jagged lines are like the irregular hatching. Have children copy Bernard Buffet's piece. Ink pen and/or pencil. An excellent copy of Buffet's work was found in XXth Century Drawings and Watercolors by Raymond Cogniat (New York: Crown).



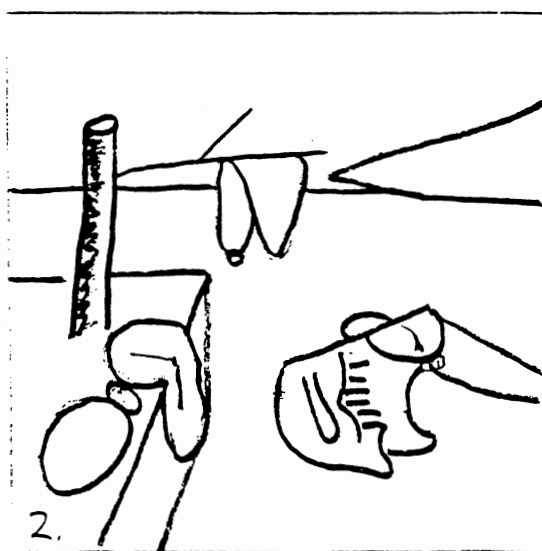
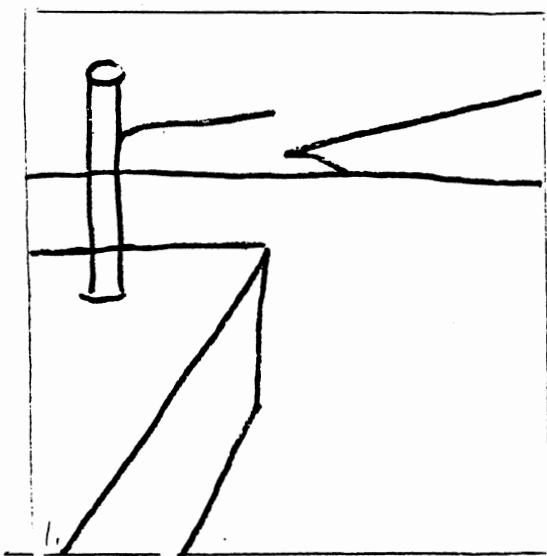
Lesson Five. Drawing animals. Have students look at Jean Antoine Watteau's "Five Studies of a Dromedary." Ask them what the word study means. Define artist's study. How are the two definitions similar? How many different ways did the artist study the camel? Ask them what they know about camels? Where do they live? What do they eat? How big are they? Talk about their humps and water. Have we ever had camels in the USA? Where? What would it feel like to ride on a camel? How do their feet hold them up in the sand? How would a camel's fur feel if you touched it? Define the word texture for the children. Write the word on the board. Talk about the type of lines the artist used to make the camel look furry. Ask children to copy your furry lines as you demonstrate. Ask students to copy the camel. Pencil only.



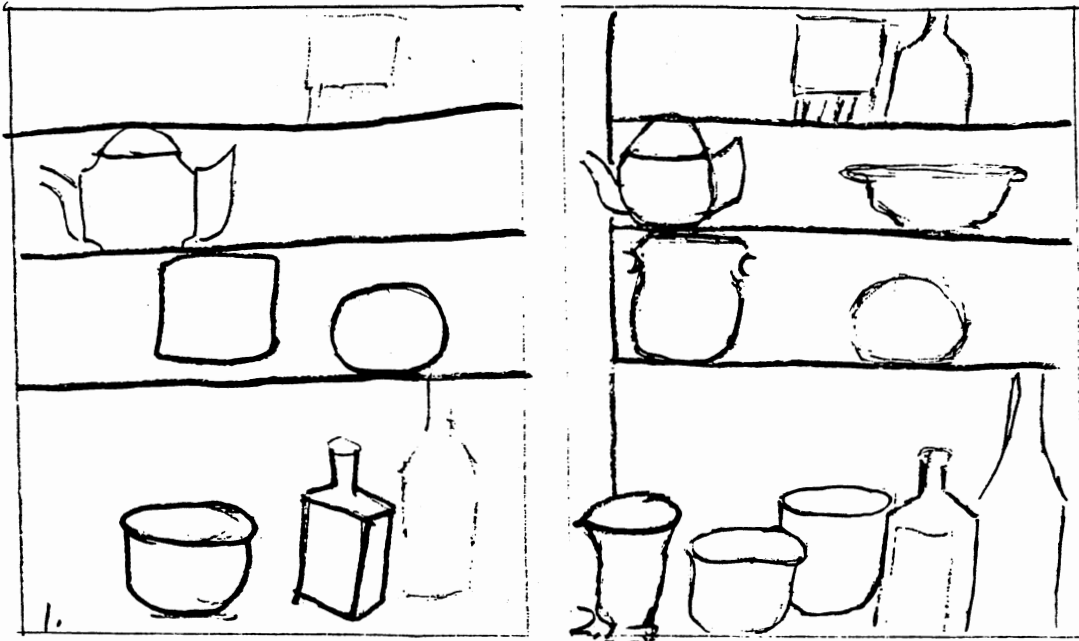
Lesson Six. Drawing a fish. Have students look at Georges Valmier's "Still Life with Fish." Define still life. Have students identify geometric shapes. Ask students what the round object behind the fish could be. What could the other shapes be? How about the white squiggly shape tucked under the plate? Have they ever seen a live fish? Have they ever had fish for dinner? Explain how in some restaurants fish is served with the head on it. Explain how in some cultures fish heads are boiled to make soup and sauces. And that raw fish is a delicacy. Talk about Alaska. Tell students that they are going to use a new material to draw with called charcoal. Define charcoal for them. Write the word on the board. Show students what charcoal can do--blend it, make it light, make it dark. Show students what happens if they try to erase it. Ask students to copy the still life using the charcoal. Pass out the charcoal. When students have finished their pictures, spray them with fixative. Tell students what you're doing and why. An excellent copy of Valmier's work was found in XXth Century Drawings and Watercolors by Raymond Cogniat (New York: Crown).



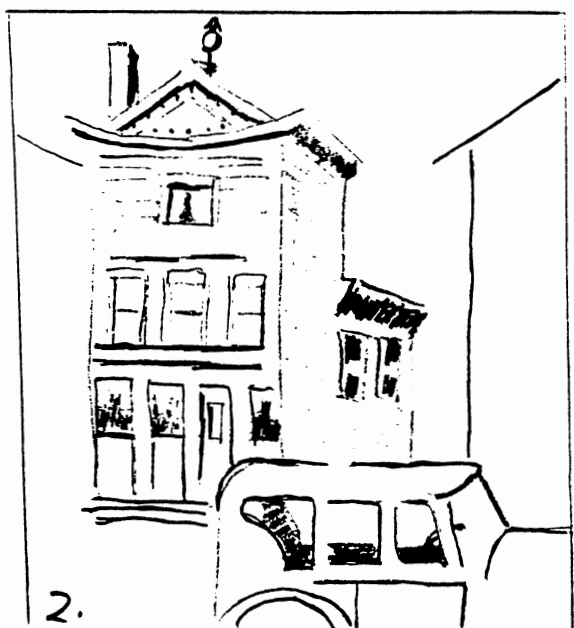
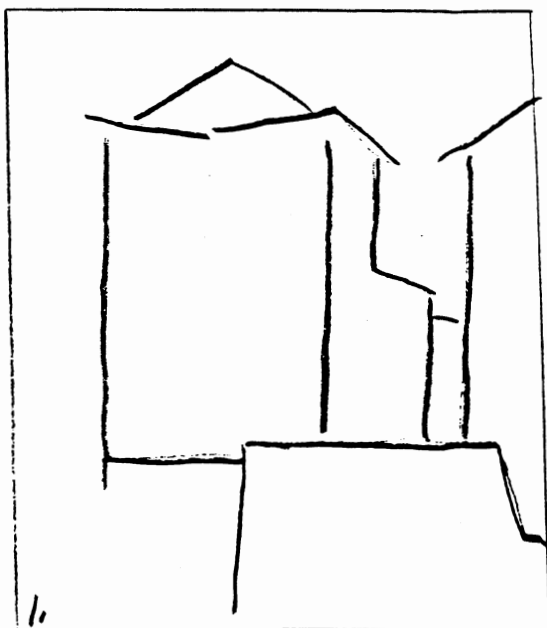
Lesson Seven. Scenes from another planet. Ask students what planets are. Show students Salvador Dali's "Persistence of Memory." Ask students what kind of planet could this be. Have them identify things in the picture. Ask students if they ever had dreams that seemed strange like this. Ask them if this place is hot or cold? Ask them how they know. Talk about warm colors and cool colors. Write them on the board...Talk about opposites. Besides colors, what else seems opposite in this picture. Do eyelashes grow under eyes or over eyes? Do clocks melt? What shapes are in this picture? What do they think the artist wants to tell us in this picture? Have students copy "The Persistence of Memory" by drawing the basic shapes first. Have students use markers and pencils. An 5'x7' color copy of Dali's work was purchased from University Prints, Boston, Massachusetts



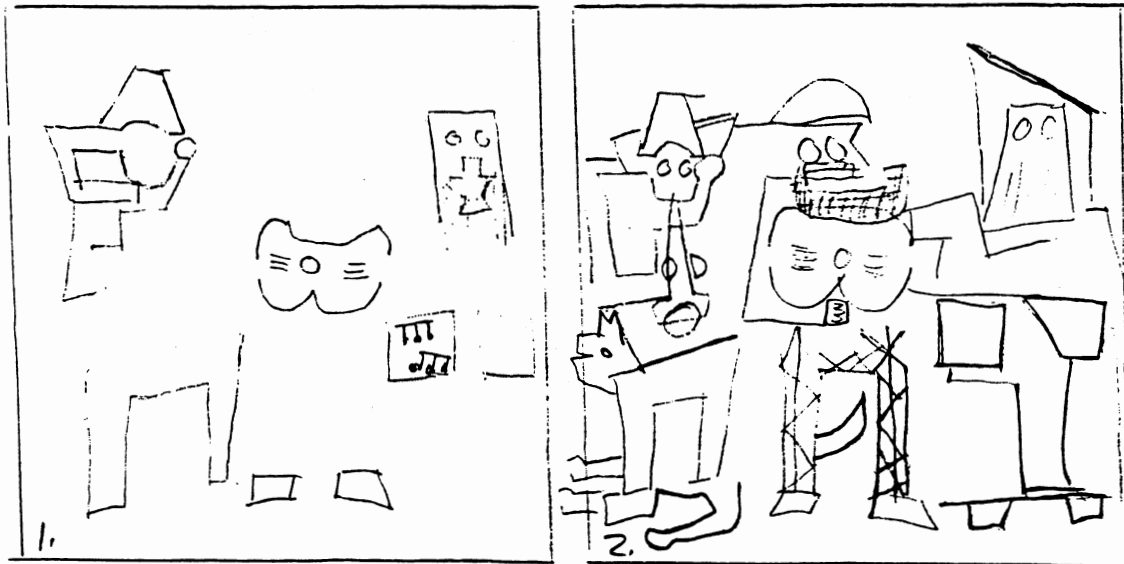
Lesson Eight. Secret Things. Have students look at Mary Schechter's work "Many Shelves." Have students identify the uses for the different containers. Ask students what could be inside the different containers. Ask students if they have ever put a special rock or ring in a container to hide it or save it. Ask students what other things they might put in secret places. Ask students if they can think of other secret places. Ask students to identify the light areas and dark areas of the work. Ask them if they see any geometric shapes. Have students copy this piece starting with the four shelves. Ask them to think about what could be inside the containers as they work. Pencil. An excellent copy of Schechter's work was found in 100 American and European Drawings: A Portfolio by Nathan Goldstein (1982, Englewood Cliffs, New Jersey: Prentice-Hall).



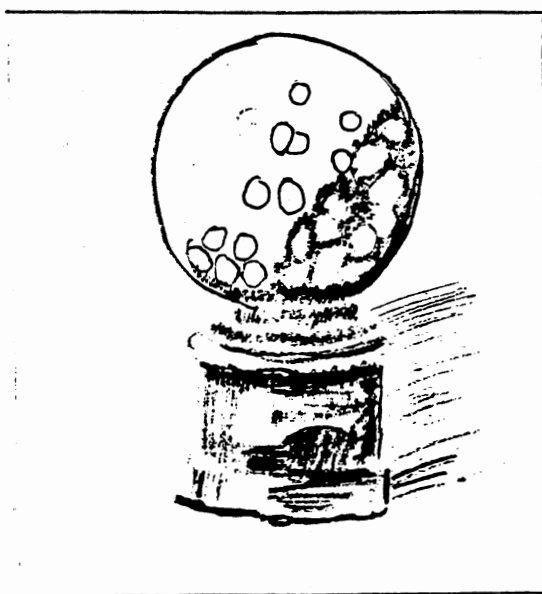
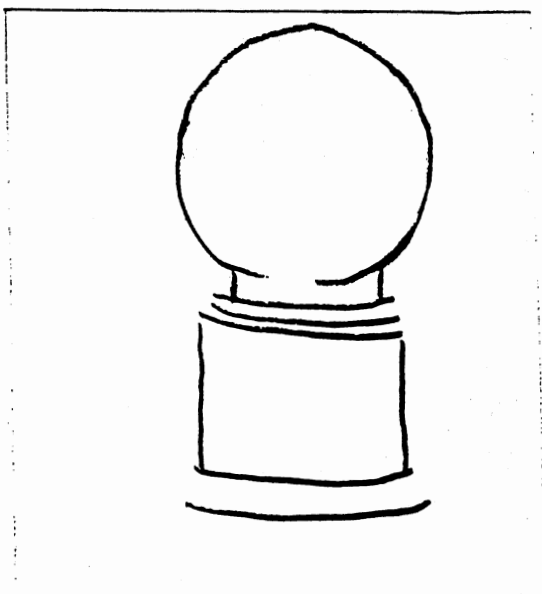
Lesson Nine. Drawing your hometown. Have students look at Charles Burchfield's "Store Front, Late Afternoon." Are there any similarities between the artist's picture and the town of Yale? Can students name some old buildings in Yale? Are there any differences between the artist's drawing and Yale? Have students talk about the differences. Talk about store fronts and why stores do not always look the same from all sides. How has the artist made the picture look like late afternoon (shadows)? Look at the cars in the picture. Look at the date in the lower right hand corner. Have students subtract 1935 from 1991. How many years ago was this picture drawn? Have students identify the geometric shapes. Have students identify types of lines. Have students copy the Burchfield work. Have them start with the rectangular building. Discuss how the cars overlap. Explain how the big car is in the foreground and it overlaps the building in the background. Pencil. An excellent copy of Burchfield's work was found in Drawings of Charles Burchfield by Edith Jones (1968 New York: Drawing Society & Preagert).



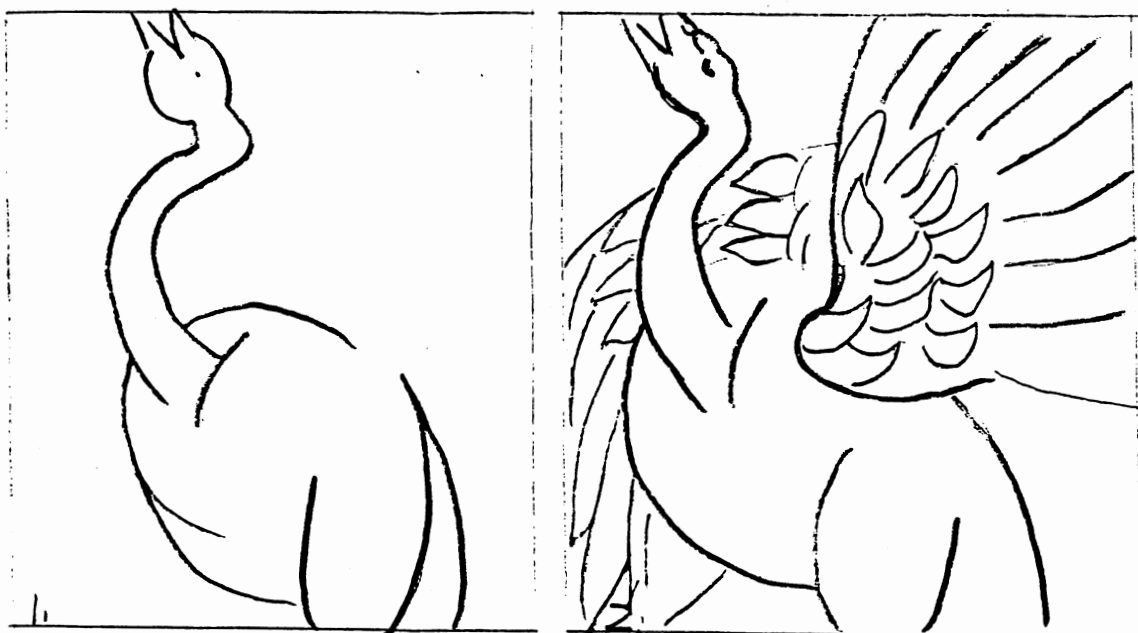
Lesson Ten. Drawing secret hiding places. Have students look at Picasso's painting, "Three Musicians." Ask students to find the objects that the artist has hidden in the picture. Can they find the instruments? Can they find the musicians? What kind of musicians are they? Can students identify the costumes the musicians are wearing? Why would these musicians wear these types of costumes? What kind of costumes do musicians wear today? One musician has a beard. Can the children see it? There are also two dogs in the picture. Can they find the dogs? The artist has used basic geometric shapes in this work. Have students identify the basic shapes. How many different types of lines are in this picture? Ask students if the work appears flat. Why? Why not? Define the word contrast for students. Write the word on the board. Ask students where they see contrast in the picture. Have students copy the piece starting with the light colored shapes, followed by the dark shapes. Use pencil and markers. An excellent copy of Picasso's work was purchased from University Prints, Boston, Massachusetts



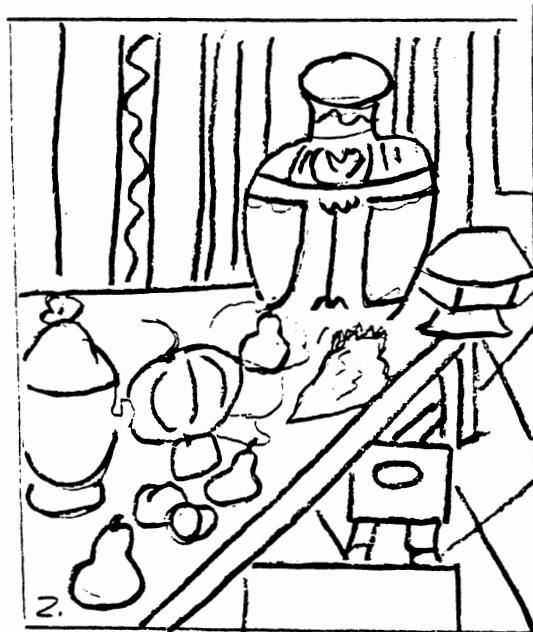
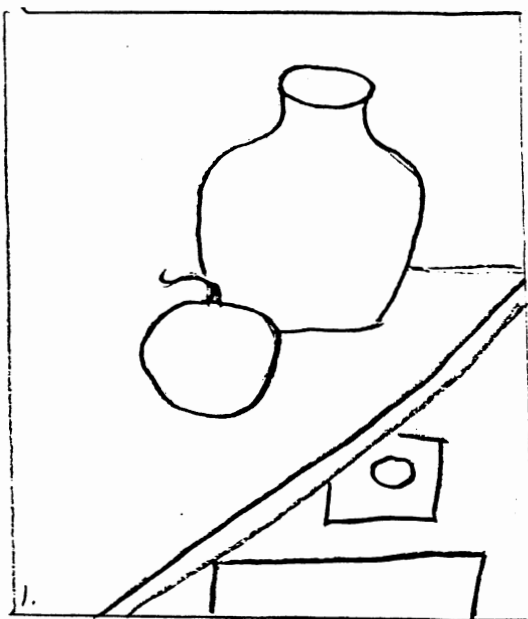
Lesson Eleven. Drawing inventions. Have students look at Wayne Thiebaud's drawing "Gumball Machine." Do students think this is a good invention? What other inventions can students think of? Talk about where gum comes from and what is in it. Talk about the colors of gumballs and where they come from. This drawing is in black and white. How has the artist made the gumballs look different from each other? Some are dark, some are light, some are gray--this is called tone. Where else in the drawing does the artist use tone? Have students identify geometric shapes. Point out the shadow behind the gumball machine. What type of lines that the children have already learned, does the artist use here? Have students copy this work. Ask students where the best place to start would be. An excellent copy of Thiebaud's work was found in 100 American and European Drawings: A Portfolio by Nathan Goldstein (1982, Englewood Cliffs, New Jersey: Prentice-Hall).



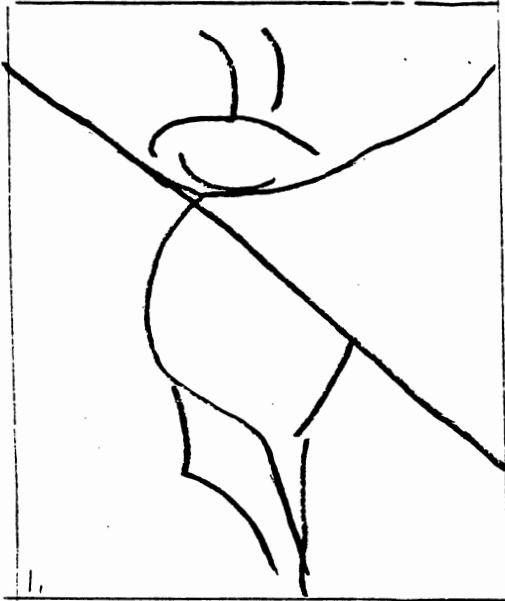
Lesson Twelve. Drawing birds. Have students look at Henri Matisse's "The Swan." Have students ever seen a swan before? Where could students go fairly close by to see a real swan? What is the swan doing in this picture? What type of lines does the artist use to convey this action? Do the curved lines help the artist convey the idea of graceful? Notice how the artist uses the entire page and how part of the wings, beak, legs, and tail are chopped off in the picture. The artist uses this cropping technique to make the swan appear majestic and bigger than life. Have students practice making wide sweeping curved lines. Show them how. Have students copy the swan starting with the body. Pencil.



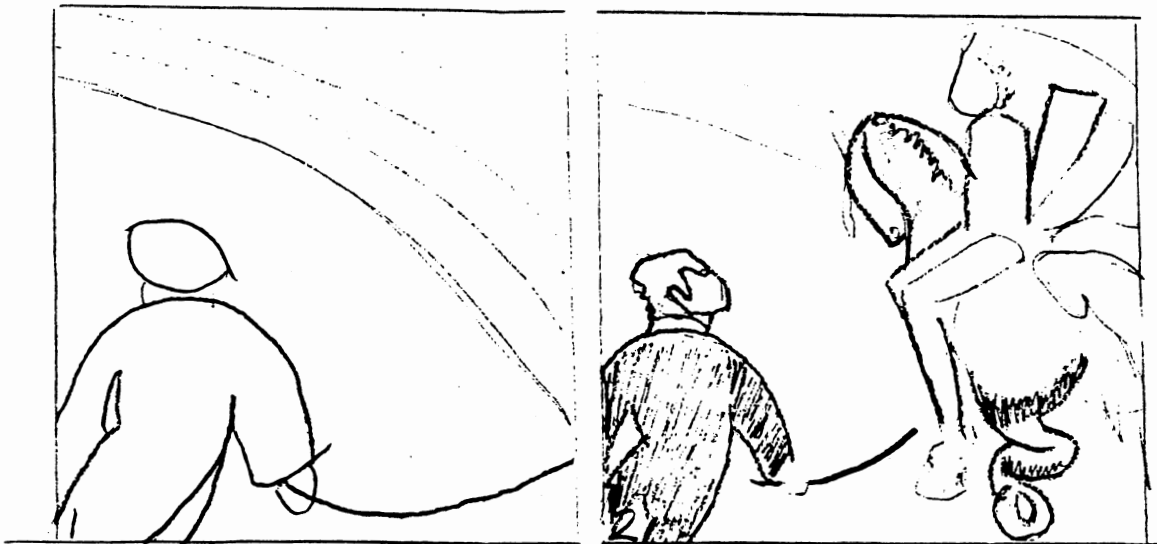
Lesson Thirteen. Drawing things from a different viewpoint. Have students look at Henri Matisse's "Still Life." Have students identify the objects in the picture. Talk about the abundance of different shapes in the picture. Ask students if they have ever stood on a chair and looked down at a table top. Explain how their point of view has changed because their eye level is different. What eye level is this picture drawn from? Ask students if they know what a pattern or design is. Explain design by showing them designs in their clothes and patterns on the floor and walls. Ask students to identify the patterns or designs in the picture. Ask students if they notice anything different about the two drawings by Matisse compared to all the other drawings that they've done so far. Explain to the students that this piece has no shadows. Explain also, that a picture with no shading or shadows is called a simple line drawing. Have students suggest a place to start copying this work. An excellent copy of Matisse's work was found in XXth Century Drawings and Watercolors by Raymond Cogniat (New York: Crown).



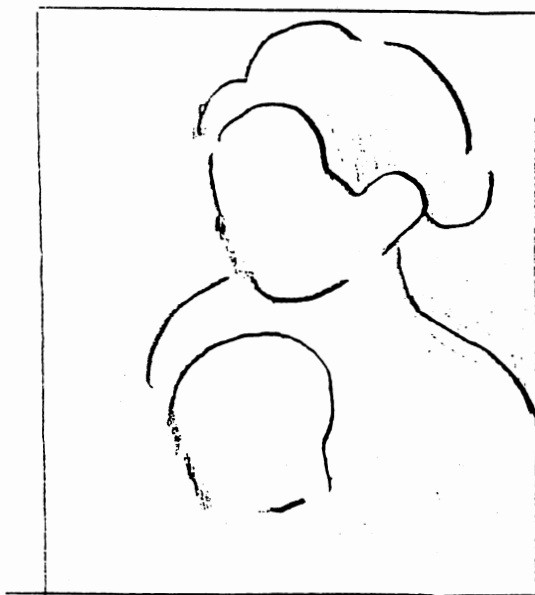
Lesson Fourteen. Drawing fantasy creatures. Have students look at "The Cockatoo-poet" by Grandville. Talk about the words fantasy and real. Ask students how they know what is fantasy and what is real. Is the cockatoo-poet fantasy or real? Have students ever seen a real cockatoo?..or a parrot? The artist uses diagonal lines in this picture. Point them out to the students and write the word diagonal on the board. The cockatoo-poet looks like he is dancing. What role do the diagonal lines play in the movement of the cockatoo-poet? Ask students to identify other types of lines that they have already used. Have students decide where to start first when they copy this picture. Ink pen and pencil.



Lesson Fifteen. Drawing circus scenes. Have students look at "In The Circus Fernando: The Ringmaster." This picture is by Henri de Toulouse-Lautrec. When this artist was a small child he fell off a horse and broke several bones which never mended right. This accident left the artist crippled and he never grew very big. His family was very rich and he had many friends. But, Henri felt like he never fit in very well because he was crippled. He did find friends that he fit in with at the circus. At the circus he met many different kinds of people and spent many hours drawing scenes from the circus. Ask students if they can think of some of the people Henri may have met at the circus? What's happening in this scene by the artist? What is the job of the ringmaster? In the last lesson we talked about diagonal lines. Are there diagonal lines in this picture? Is there movement in this picture? How fast is the horse running? Copy this picture starting with the diagonal lines. An excellent copy of Toulouse-Latrec's work was found in Great Drawings of All Time edited by Ira Moskowitz (1962, New York: Shorewood).

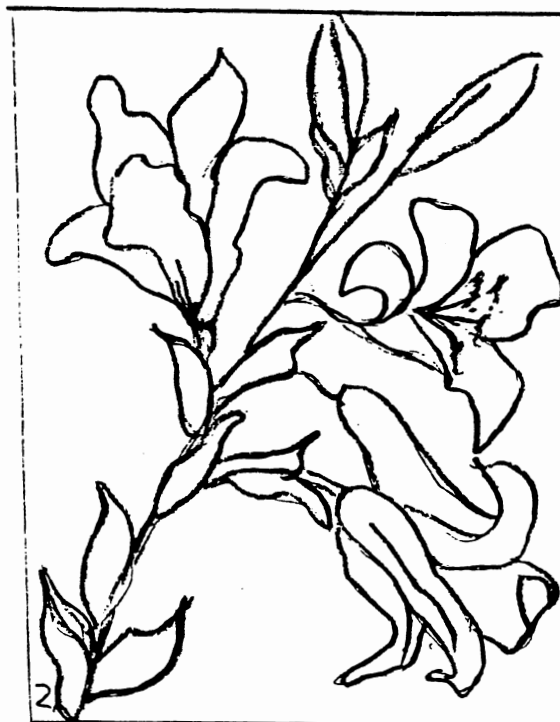
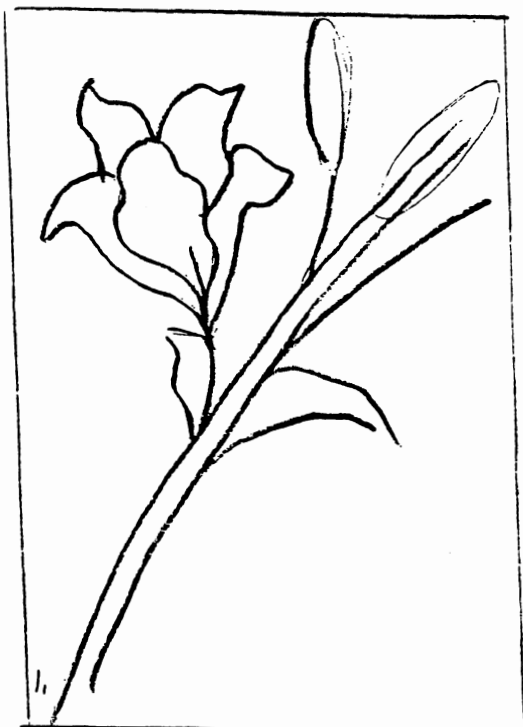


Lesson Sixteen. Drawing with charcoal. Have students look at "Maternity" by Charles Angrand. Ask students if they have any baby brothers or sisters. Let them tell you about them for a few minutes. Ask students how this work is different from previous art works we've studied so far. Hopefully they will eventually say it is dark around the outside and light in the middle. When they do, talk about a technique called chiaroscuro. Write the word on the board and tell students that it is an Italian word which means light and dark in the same picture. Ask students if they remember the word contrast. Ask them to tell you what it means. Ask students if light and dark are opposites? Tell students that contrast and chiaroscuro help create emphasis. Emphasis is what you see first in a picture. In "Maternity" you see the light area first. Ask students if they have ever made a silhouette. Describe one to them. They may have made one and not known the word. Explain to students that in a silhouette the dark areas are in the opposite place of chiaroscuro. Tell students that they are going to use charcoal again. Remind them of the properties of charcoal so they won't need erasers. Have students copy this piece starting with the dark areas. Have them blend the medium areas with their fingers. At the end of this lesson tell students that they need to bring a picture from home out of a magazine or advertisement for your next lesson. Tell students that they will have a chance to share their pictures with the rest of the class and then they will draw them. The pictures should be of something they would like to have for Christmas or a birthday. An excellent copy of Angrand's work was found in XXth Century Drawings and Watercolors by Raymond Cogniat (New York: Crown).

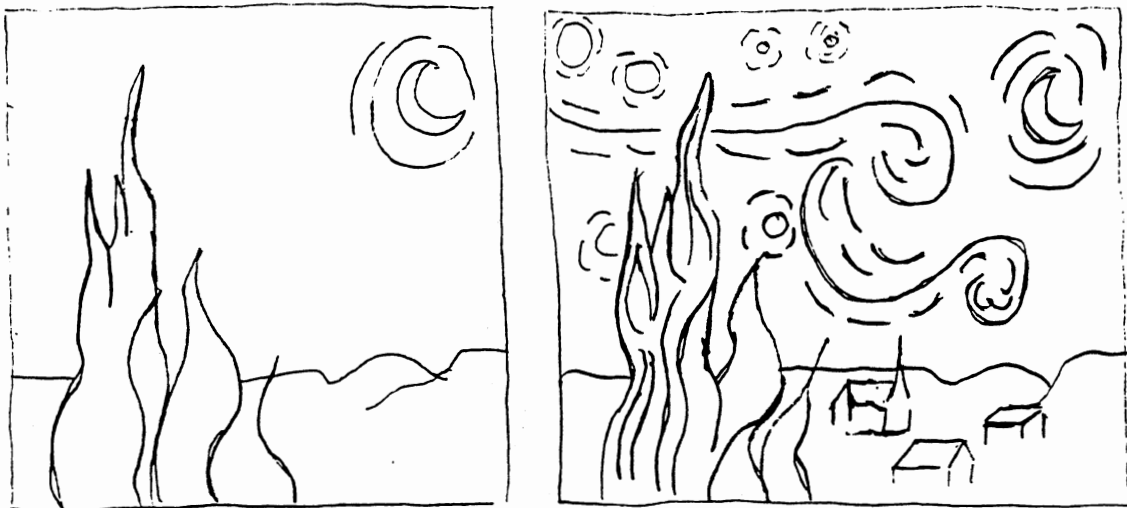


Lesson Seventeen. Drawing show-and-tell items. Have students tell about the items they have selected. Have a few magazines for students who have lost or forgotten their pictures. Have students draw their pictures using pencil and markers. Share their pictures with the rest of the class.

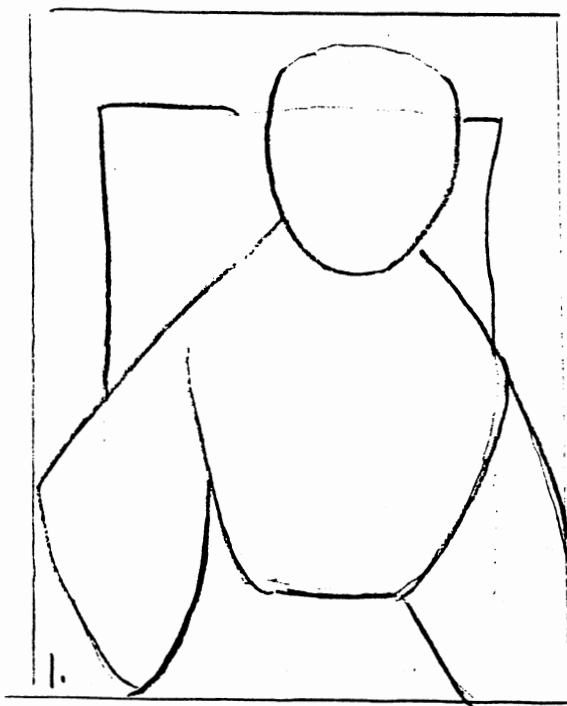
Lesson Eighteen. Drawing flowers. Ask students if they have ever heard of Leonardo Da Vinci. Tell them a little about the man, that he was a painter and sculptor and inventor. Have students look at "A Lily" by Leonardo Da Vinci. Ask students if they have lilies in their yards or know people who do. Show them your photographs. Talk about the parts of the flower. Ask them to look closely at the picture. Ask if they can see all the parts. Ask students if they remember talking about simple line drawings. Ask them what one is. Ask if this is a simple line drawing. Why? Why not? Talk about diagonal lines. Do the diagonal lines in this work make the flower look like it is growing upward? Have students draw the picture starting with the diagonal lines. Pencil. An excellent copy of Da Vinci's work was found in 100 American and European Drawings: A Portfolio by Nathan Goldstein (1982, Englewood Cliffs, New Jersey: Prentice-Hall).



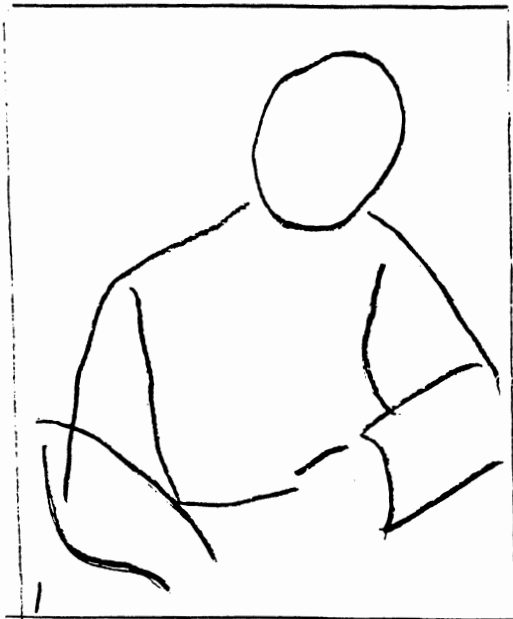
Lesson Nineteen. Drawing nightfall. Have students look at "Starry Night" by Vincent Van Gogh. Ask students if they have ever looked straight up at the sky on a crisp, clear, dark evening. Ask them what they saw. Ask them how they felt. Have students stand up and look straight up at the ceiling. Do they feel a little dizzy? Have them sit down again and this time close their eyes. Ask them to imagine being outside on a cool evening. Can they feel the gentle breeze on their faces? Does it feel a little bit damp? Can they see the stars swirling in the sky? Have students look at "starry Night" again. Where do they think Van Gogh was when he painted this picture? What feelings do they think he may have been experiencing when he painted this picture. Ask students about the swirling lines. Do they think the swirling lines help convey the dizzy feeling they had when they looked up at the ceiling? Tell students that Van Gogh was an artist who tried to express his feelings about nature in his pictures. Ask students if Van Gogh succeeded. Have students copy "Starry Night." Markers and ink pen. An excellent copy of Van Gogh's work was purchased from University Prints, Boston, Massachusetts



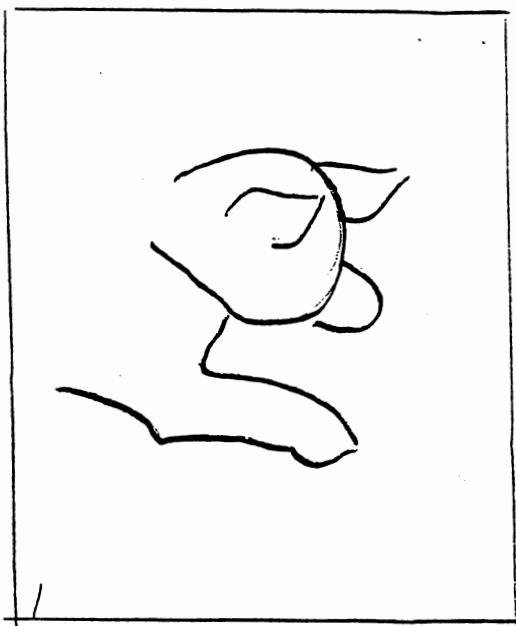
Lesson Twenty. Drawing other children. Have students look at "Portrait of Henry Leroy as a Child" by Jean Corot. Define the word portrait for students. Explain that this is a picture of a young boy who lived two hundred years ago. Ask students if hair styles have changed since then. Ask students if clothes have changed since then and how. Ask students how old the child appears to be. Ask students what the child is doing? Ask students to identify all the types of lines in the picture. Ask students if they see tone and contrast in the picture. Have students point them out for you. Have students distinguish between contrast and tone. Ask how they know the difference. Have students identify basic shapes. Talk about the light speck in the child's eyes and how it makes the child's eyes look real. Ask students if this is real or fantasy. Ask students if "Starry Night" is real or fantasy. Have students copy the piece. Pencil. An excellent copy of Corot's work was found in 100 American and European Drawings: A Portfolio by Nathan Goldstein (1982, Englewood Cliffs, New Jersey: Prentice-Hall).



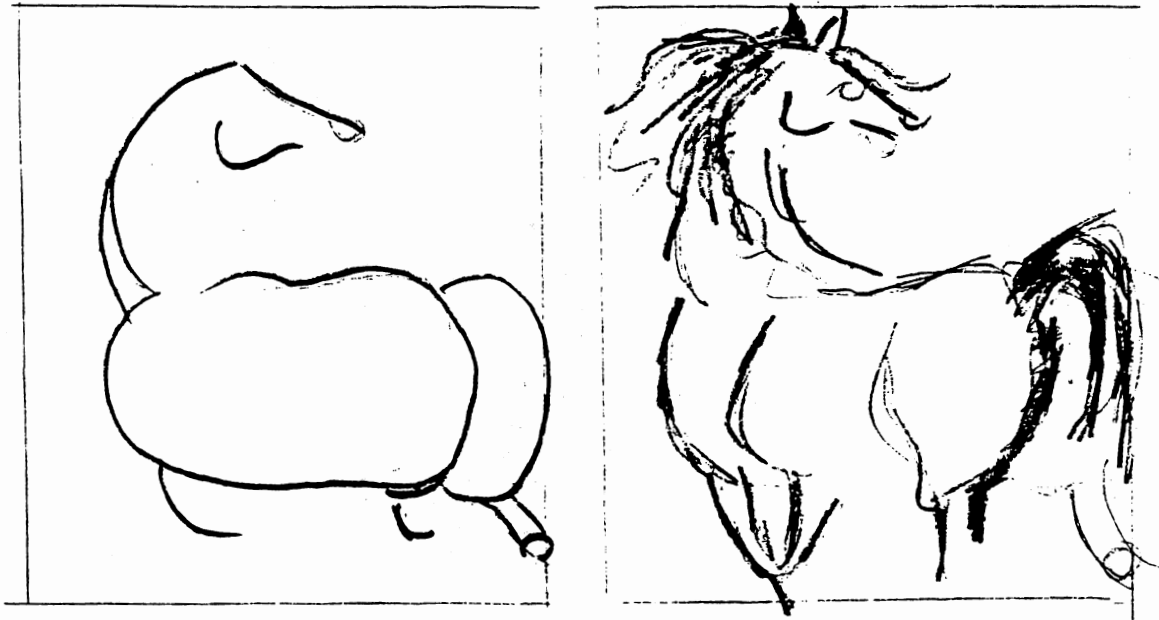
Lesson Twenty-One. Drawing someone you think is important. Have students name people they think are important. Ask why. Ask students if they think their friends are important...parents? babies? policemen? teachers? Try to establish the idea that everyone is important. Some of us see others as more important at specific times in our lives than at other times depending on our needs at a given moment in time. For example, a baby needs her parents and therefore the parents are important to the baby. However, you may not even know the baby's parents so, the baby's parents may not be important to you. Ask students to look at "Portrait of a Man" by Amedeo Modigliani. Tell students that this is a portrait of someone's father. Have students tell you what portrait means. Have students identify types of lines. Have students identify basic geometric shapes. Ask students if this is a simple line drawing. Have students copy this picture of someone who is important. Pencil. An excellent copy of Modigliani's work was found in XXth Century Drawings and Watercolors by Raymond Cogniat (New York: Crown).



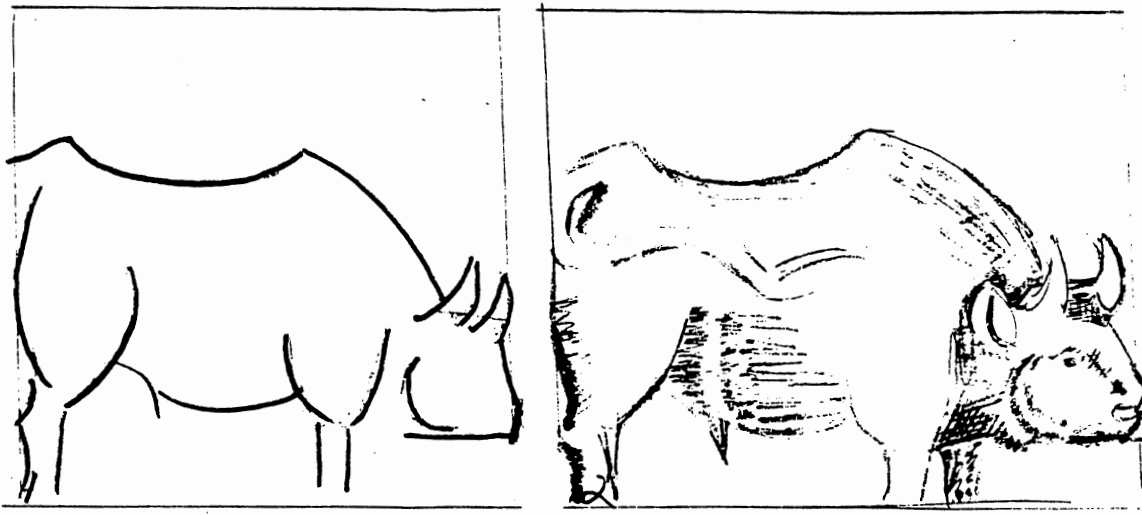
Lesson Twenty-Two. Drawing cats. Ask students if they remember what an artist's study is. Have students look at "Studies of a Wild Striped Cat" by Theodore Gericault. Explain that the artist studied this cat in many different positions. While the artist drew these sketches (define sketch) he also looked very closely at the cat's anatomy. Define anatomy and write the word on the board. Ask students if they've ever seen cats in these positions. Ask students if they can think of any more positions that the artist might have wanted to draw the cat in. Ask students to identify the different types of lines in the studies. Ask students if the artist used tone. Ask students what shape the cat's head is...ears? legs? eyes? Have students draw as many or few of these cats as they would like. Pencil. An excellent copy of Gericault's work was found in 100 American and European Drawings: A Portfolio by Nathan Goldstein (1982, Englewood Cliffs, New Jersey: Prentice-Hall).



Lesson Twenty-Three. Drawing a horse. Have students look at "Horse" by Luigi Spazzapan. Ask students what direction the horse is going. Allow students to talk about horses. Have they ever ridden a horse? Do any of them own a horse? What do horses eat? What do horses feel like? What do horses smell like? What colors do horses come in? What do horses do for a living? Have students talk about the lines in the picture. These are action lines. Why are they called action lines? Do students see any basic shapes in the drawing?... the horse's head?... neck?... rump?... ears? Explain to students that they will be using charcoal again. However, they will be using it wet to help capture the really dark lines in this picture. Remind students that the water you will give them is for drawing only. Pass out water containers with a little water in each. You may want two students to share one cup. Show students the difference between lines made with wet and dry charcoal. Have students copy the horse. An excellent copy of Spazzapan's work was found in XXth Century Drawings and Watercolors by Raymond Cogniat (New York: Crown).



Lesson Twenty-Four. Drawing farm animals. Have a general discussion about animals one would see on the farm. Hopefully a child will mention bulls. Direct students to a discussion about bulls. Are bulls dangerous? Why? Do all bulls have horns?..Why are rings put in bulls' noses? Have students look at Pablo Picasso's "Bull." Pablo Picasso was a very famous Spanish artist who painted hundreds of bulls. Do any students remember what other painting we studied that Picasso painted? Did Picasso do a good job describing the characteristics of a bull? Have students talk about texture, lines, shapes, and tone. Have students copy the bull. An excellent copy was found in Lithography 200 Years of Art. History and Technique edited by Domenico Porzio (1983, New York: Harry Abrams).



APPENDIX C

INTERVIEW QUESTIONS FOR CLASSROOM TEACHERS AND INSTRUCTORS OF TEACHING METHODS

- Grade level taught
 - Years of teaching experience
 - Educational background
 - Personal background
1. What is creativity? Define creativity. What isn't creativity?
 2. Describe behavioral characteristics of a creative child. Think of your most creative student. What was it about him/her that leads you to believe that he/she is creative? How does your least creative student act?
 3. What are some creative teaching techniques? What techniques do you use when you want students to perform above and beyond doing just the required assignment? How do you get students really involved? Do the techniques you're describing work for less eager students as well?
 4. What does a really creative art work done by a child look like? What is it about the art work that makes it creative? What does noncreative child art work look like? Why doesn't the noncreative child artwork qualify as creative?
 5. Can children become more or less creative with time? Describe such a change. How did you first notice these changes?

APPENDIX D

STUDENT ATTITUDE PROFILE

Student Attitude Profile- To be filled out by instructors and classroom teacher.

- 1. Does student have a good sense of humor?
yes__ no__ comments_____
- 2. Is student overly neat?
yes__ no__ comments_____
- 3. Does student request clarification of instruction?
yes__ no__ comments_____
- 4. Does student work for long periods of time on his own?
yes__ no__ comments_____
- 5. Is student easily distracted when working on his own?
yes__ no__ comments_____
- 6. Are student's ideas well thought out?
yes__ no__ comments_____
- 7. Does student adapt well to change?
yes__ no__ comments_____
- 8. Is student intuitive rather than logical?
yes__ no__ comments_____
- 9. Is student disorganized?
yes__ no__ comments_____
- 10. Does student enjoy routine?
yes__ no__ comments_____
- 11. Is student stubborn?
yes__ no__ comments_____
- 12. Is student spontaneous?
yes__ no__ comments_____
- 13. Is student nonconforming?
yes__ no__ comments_____

Student code number_____

------(cut and remove to maintain confidentiality)-----

Student name_____

APPENDIX E

STUDENT INTEREST PROFILE

1. How many hours of TV do you watch in a day? _____

2. What is your favorite program? _____

3. What other programs do you watch? _____

4. How many hours do you play outside? _____

5. What are your favorite things to do outside? _____

6. Do you like coloring books? yes _____ no _____

7. How many times a week do you color in a coloring book? _____

8. Do you like to draw or color? yes _____ no _____

9. Would you rather color freely or color in a coloring book?

Coloring book yes _____ no _____

Color freely yes _____ no _____

10. If you have a pet what kind is it? _____

11. How many hours do you spend with your pet each day? _____

Student code number _____

APPENDIX F

STUDENT BACKGROUND PROFILE

1. Do you have a relative or a friend who is an artist?
yes _____ no _____
2. What kind of art does he or she make? _____
3. How often do you see this artist? _____
4. Have you ever had art lessons? yes ____ no ____
5. If you have had art lessons what did you make in one of the lessons. _____
6. How long did the lesson last? _____
7. How often did you have lessons? _____
8. How many lessons did you have? _____
9. Do you live on a farm? yes ____ no ____
in the town? yes ____ no ____
in the country but not on a farm? Yes ____ no ____

Student Code Number _____

APPENDIX G

LETTER OF CONSENT

August 19, 1991

Dear Parent,

The study in which your child is invited to participate will be used to determine creative art teaching methods for elementary students. This study will involve 24 sessions of 1 hour each twice a week during regular classtime hours. As a participant your child will be asked to attend each art lesson, complete required drawing assignments in pencil, marker, charcoal, or crayon, and complete a final project consisting of 3 creative activities with paper and pencil. This will be part of the regular classroom curriculum and your child will not be missing other regular curricular subjects such as reading, math, science, etc. in order to participate.

Your child's participation will enable the researcher to assess creative teaching methods. The results will make a significant contribution to the understanding of creativity in art education. Scores will be completely confidential. You will be asked to provide your child's age, year of study, previous art experiences, as well as indicate art experiences that you or other close relatives may have had. There are no determined risks or expenses for your child.

Your child's participation in this study will be completely voluntary. If your child decides to withdraw from the art activities he will remain in the classroom and be allowed to read.

Your child will be assigned a code number that will be used to identify his/her work. The only ones who will have access to the data will be the investigator, Anne Munson, and her advisor, Dr. Sally Carter. All information will be held in the strictest confidence.

You are free to refuse to participate in this study and may withdraw at any time. Your decision will in no way be held against you. If you have any questions, you may contact Anne Munson or Dr. Sally Carter at 744-7125 or University Research Services, Oklahoma State University, Stillwater, OK 74078; (405) 744-5700.

I have read the above information and understand the purpose and procedure of the study. My signature below indicates that my child may participate in this study.

Signature of parent or guardian

Date

August 19, 1991

Dear Parent,

The study in which your child is invited to participate will be used to determine creative art teaching methods for elementary students. This study will involve 24 sessions of 1 hour each twice a week during regular classtime hours. As a participant your child will be asked to attend each art lesson, complete required drawing assignments in pencil, marker, charcoal, or crayon, and complete a final project consisting of 3 creative activities with paper and pencil. This will be part of the regular classroom curriculum and your child will not be missing other regular curricular subjects such as reading, math, science, etc. in order to participate.

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I have read the above information and understand the purpose and procedure of the study. My signature below indicates that my child may participate in this study.

••• This is a duplicate copy to keep for your records. •••

APPENDIX H

**OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS RESEARCH**

Proposal Title: The Relative Effects of Free Styles vs. Copying on
Creativity of Third and Fourth Graders

Principal Investigator: Sally Carter/Anne Munson

Date: 7-24-91 IRB # ED-92-003

This application has been reviewed by the IRB and

Processed as: Exempt Expedite Full Board Review
Renewal or Continuation

Approval Status Recommended by Reviewer(s):

Approved Deferred for Revision
Approved with Provision Disapproved

Approval status subject to review by full Institutional Review Board at
next meeting, 2nd and 4th Thursday of each month.

Comments, Modifications/Conditions for Approval or Reason for Deferral or
Disapproval:

Signature: *Marcia D. Tilley* Date: 8-23-91
Chair of Institutional Review Board

APPENDIX I

RAW SCORE DATA

RAW SCORES FOR FOURTH-GRADERS FROM TTCT TREATMENT ONE

SUB- JECT	SEX	FLUENCY	ORIGINALITY	FLEXIBILITY	ELABORATION
1	M	90	100	78	65
2	M	57	65	78	64
3	F	85	142	133	93
4	F	95	107	83	79
5	M	90	131	94	79
6	F	90	117	138	72
7	F	107	145	116	79
8	F	110	120	78	79
9	F	120	135	100	72
10	M	87	128	138	79
11	M	97	128	83	65
12	F	100	131	83	72
13	F	92	121	105	79
14	F	140	184	149	93
15	F	105	117	94	65
16	F	117	156	116	72
17	F	110	121	116	79
18	M	100	145	127	72
19	F	107	163	89	79
20	M	110	173	0	65
21	M	77	114	94	72

RAW SCORES FOR FOURTH-GRADERS
FROM TTCT TREATMENT TWO

SUB- JECT	SEX	FLUENCY	ORIGINALITY	FLEXIBILITY	ELABORATION
22	M	97	125	83	72
23	M	95	125	89	65
24	F	135	142	100	65
25	M	80	105	0	65
26	F	112	130	100	65
27	F	75	65	100	65
28	M	90	111	78	59
29	F	105	114	78	65
30	F	107	117	89	65
31	M	75	91	89	72
32	M	100	111	105	72
33	M	92	119	122	72
34	F	87	104	111	79
35	M	75	104	111	65
36	M	97	125	94	72
37	F	82	91	83	65
38	M	100	124	78	65
39	F	92	110	0	65

RAW SCORES FOR THIRD-GRADERS
FROM TTCT TREATMENT THREE

SUB- JECT	SEX	FLUENCY	ORIGINALITY	FLEXIBILITY	ELABORATION
40	F	67	88	89	65
41	M	95	115	0	65
42	M	77	110	127	72
43	F	92	104	111	72
44	F	110	135	111	65
45	F	60	100	89	72
46	M	60	78	100	59
47	F	85	110	94	65
48	M	37	67	0	65
49	F	70	86	100	65
50	F	95	120	111	66
51	M	65	85	94	65
52	F	87	110	112	65
53	M	67	97	83	58
54	F	85	133	155	79
55	M	75	101	122	79
56	F	77	94	105	65
57	F	57	79	83	65
58	M	0	64	83	65

RAW SCORES FOR THIRD-GRADERS
FROM TTCT TREATMENT FOUR

SUB- JECT	SEX	FLUENCY	ORIGINALITY	FLEXIBILITY	ELABORATION
59	F	55	91	116	65
60	F	82	109	89	72
61	F	95	133	127	86
62	M	75	136	116	72
63	F	70	94	78	65
64	M	80	103	0	65
65	M	72	139	111	65
66	F	60	82	122	65
67	F	83	115	122	72
68	F	110	151	89	72
69	F	97	139	111	66
70	M	87	115	78	65
71	F	65	100	78	65
72	M	75	103	94	72
73	F	72	106	83	65
74	F	85	133	100	72
75	M	97	127	78	65
76	M	102	121	94	79
77	F	60	73	78	65
78	M	72	115	89	65

AVERAGED RAW SCORES FROM STUDENT
ATTITUDE PROFILE

TREATMENT	<u>TEACHER SCORING</u>				<u>INSTRUCTOR SCORING</u>			
	#1	#2	#3	#4	#1	#2	#3	#4
	3	8	6	7	3	7	8	5
	3	5	7	6	4	7	4	5
	8	7	8	5	7	9	6	8
	4	7	5	6	4	7	6	7
	6	8	9	7	6	8	9	7
	5	7	9	8	7	4	6	5
	6	5	7	5	7	7	7	6
	3	5	8	6	6	3	6	6
	7	7	8	5	8	4	7	7
	9	5	8	5	4	8	7	7
	5	6	6	6	5	8	6	8
	5	7	6	4	5	5	6	7
	4	9	5	7	5	8	5	6
	8	9	6	5	9	9	5	6
	3	9	7	6	3	9	9	6
	7	6	6	5	7	5	5	5
	4	9	7	6	5	8	7	6
	6	7	8	6	6	5	6	7
	5	0	5	7	9	0	7	5
	5	0	0	5	8	0	0	5
	5	0	0	0	3	0	0	0

VITA^r

ANNE MUNSON

DOCTOR OF EDUCATION

Thesis: THE RELATIVE EFFECTS OF FREESTYLE VS. COPYING ON
CREATIVITY OF THIRD AND FOURTH GRADERS

Major Field: Curriculum and Instruction

Biographical:

Personal Data: Born in Washington, D.C., March 6, 1947, the daughter of
Ivan K. Munson and Ella B. Munson

Education: Graduated from Moorestown Senior High School,
Moorestown, New Jersey, in June 1966; received Bachelor of Arts
Degree in Art History and English from University of Missouri at St.
Louis in 1976; received the Master of Education at University of
Arkansas in Fayetteville in 1990; and completed requirements for
Doctor of Education at Oklahoma State University at Stillwater in July
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