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A STUDY OF FIFTH GRADER'S VERBAL RESPONSES TO SELECTED ILLUSTRATIONS IN CHILDREN'S BOOKS BEFORE AND AFTER A GUIDED STUDY OF THREE STYLES OF ART USED TO ILLUSTRATE FAIRY TALES

presented by

Denise Carol Storey

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Elementary Education

Patricia J. Cianciolo
Major professor

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By

Denise Carol Storey

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1977

STOREY

ABSTRACT

A STUDY OF FIFTH GRADER'S VERBAL RESPONSES TO SELECTED ILLUSTRATIONS IN CHILDREN'S BOOKS BEFORE AND AFTER A GUIDED STUDY OF THREE STYLES OF ART USED TO ILLUSTRATE FAIRY TALES

By

Denise Carol Storey

This five week experimental study was designed to measure fifth grader's verbal responses to selected illustrations in picture books before and after a guided study of three styles of art used to illustrate fairy tales. The purposes of this study were to develop an instrument measuring children's verbal responses to illustrations in children's books and to ascertain whether style study would influence children's usage of stylistic, emotional, and evaluative terms when discussing representational, expressionistic, and cartoon styles of art.

Sixty fifth graders were randomly selected from six elementary schools in three school districts in Western Michigan and randomly assigned to one of three treatment or one of three control groups. Children were pre-tested during the first week of the study and post-tested during the fifth week. During the individual interview sessions children responded to general and specific questions regarding three picture pairs from each of two fairy tales that were illustrated in the target styles of art. The testing instrument used in this study was designed by this investigator to measure children's Verbal

Expression Content Scores when responding orally to the target styles of art. Inter-rater reliability for the instrument was .976 and inter-rater reliability ranged from .790 to .995 for the eight subsections of the instrument.

For three consecutive weeks this investigator met with the treatment groups for one two-hour style study session where the children discussed and evaluated ten picture books which were illustrated in the target styles of art. The children also drew in the style of art under study during each session.

The major findings that emerged from the study were as follows: Group instruction did influence children's responses to art. Significant differences between groups at the .01 level with a t-value of 9.84 were noted; the treatment group responded with a higher amount of Total Verbal Expression Content Gain Scores. The control group had a loss of points between testing while the treatment group did not. Significant differences with a t-value of 1.962 at the .01 level were found between girls and boys in the treatment group with the boys responding with a higher amount of gain scores.

Significant differences at the .01 level with a t-value of 17.431 were found between groups when responding to art styles using stylistic terms with the treatment group responding with higher gain scores. At the .05 level with a t-value of .673 there were no significant differences in the emotional characteristics used when responding to art styles for the two groups. Both groups suffered loss in points when discussing art styles in evaluative terms. The

control group had a lower negative gain score and the differences between groups were noted at the .01 level with a t-value of 8. At the .01 level, the differences between groups in the amount of stylistic terms used to describe art styles were not found to be significant with χ^2 values of 1.849, 2.415, and 0.758 for representational, cartoon, and expressionistic styles, respectively.

Significant differences at the .01 level with χ^2 values of 14.773 and 22.133 were noted with both groups rejection expressionistic style of art over cartoon and representational styles, respectively. Significant differences at the .01 level with χ^2 values of 56.00 and 49.33 were noted with both groups preferring representational style of art over cartoon and expressionistic styles, respectively.

When describing illustrations the children had a tendency to give titles to pictures rather than offer style names and to discuss objects and subjects rather than stylistic characteristics. The verbal responses of the treatment group increased in length but not in the level of sophistication.

To two people who helped make a dream come true,

my mother, Marmie, and my father, Chuck.

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CHAPTER I

INTRODUCTION

Statement of the Problem

Many of the contemporary picture books for children contain illustrations that warrant recognition as works of art. These visuals do entertain children and they are vehicles for transmission of a story line. They are also capable of evoking an emotional response from the viewer and they often represent styles of art prevalent in art galleries.

Children's author-illustrator, Roger Duvoisin, commented that among the artists creating illustrations for children's picture books are those who delight in the experimentation of color and design and that such people are not isolated from the various movements in the world of art. According to Duvoisin, book art is pictoral literature for the artist includes new developments in art as well as expressing a story and its emotions in an abstract creation of a personal perception.[1]

In defining art, children's author-illustrator, Leonard Weisgard, stated that a distillation of sensation and spirit and

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[1]Roger Duvoisin, "Children's Book Illustration: The Pleasures and Problems," Top of the News 22 (November 1965): 23-33.

an artist's ability to re-present them are essential in creating an artistic visual. The artist must enhance meaning, communicate to and stimulate the viewer; book artists do all this.[2] He also commented on the impact the art world had on the art in children's books:

> Let us now look into some of the healthy influences of modern art has had on books for children. The rigid rules and regulations that governed art and design in children's books yesterday have banished. So has the marmalade school of sentimentality and over-decoration. A boldness and vitality are at such healthy play today that I wonder sometimes why the vigor of the art work does not grab the book and run off and away with its content.[3]

While many would say that the pictures in children's books are to be classified as text-extending illustrations, there are many such visuals that qualify as art; art as fine as that on display in a gallery. Art critic Barbara Bader commented:

> Artists are a source of art; subject and style as such, are immaterial. . . . Art is substance, not appearance. . . . Picture books that qualify [as art] are not lacking. Were they given their due, there might be more.[4]

In an article entitled, "The High Art of Illustration," Lee Kingman defended the position that many children's book illustrations can be considered as works of art. She stated that book artists are more than technicians, they possess creativity and artistic

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[2]Leonard Weisgard, "Contemporary Art and Children's Book Illustration," Horn Book 36 (April 1960): 155-158.

[3]Ibid, p. 158.

[4]Barbara Bader, "Picture Books, Art and Illustration," in Newbery and Caldecott Medal Books 1966-1975, ed. Lee Kingman (Boston: The Horn Book Co., Inc., 1975), p. 289.

integrity. The artistic vehicle, be it a gallery painting, a lithograph or a picture book illustration, demands that artists become absorbed in the moment of the visual creation. She further explains that book artists, like gallery painters or lithographers, are required to bring a high level of quality and imagination to their work and that book art is not to be relegated to a lesser degree of aesthetics because of the vehicle.[5]

Rather than defining a book illustration in a narrow sense, Kingman extended the meaning to include a wider scope of understanding:

> Many illustrations do indeed accomplish the essential functions of art: to change or intensify one's perception of reality; and thereby to produce a lasting effect on the beholder. In other words, illustration can perform that originally unsophisticated achievement of allowing heightened perception and information to coexist in a work of art.[6]

In recent years many highly trained, experienced, and competent graphic artists have created beautifully illustrated children's books in a variety of art styles, using various art media. Children are exposed to the expressionistic school of art by viewing the swirling visuals in Margaret Hodge's The Wave, illustrated by Blair Lent.[7] Award winning cartoonist Steven Kellogg has provided children with many hours of laughter due to the hysterical cartoons in his There Was an Old Woman.[8] Collage artists such as Ezra Jack Keats in Snowy

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[5]Lee Kingman, "The High Art of Illustration," Horn Book 50 (October 1974): 95-103.

[6]Ibid., p. 95.

[7]Margaret Hodges, The Wave, illustrated by Blair Lent (Boston: Houghton Mifflin Co., 1964).

[8]Steven Kellogg, There Was an Old Woman, illustrated by Steven Kellogg (New York: Parents' Magazine Press, 1974).

Day,[9] Eric Carle in The Tiny Seed,[10] and Leo Lionni in Inch by Inch,[11] have employed media and techniques in such a skillful manner that children at an early age can witness an artistic statement in the synthetic cubistic style: one that is semi-abstract in technique and design. Recently, the children's book publishers have been releasing titles illustrated with the surrealistic style of art. For example, in Eugene Ionesco's Story Number 2, Etienne Delessert[12] more than aptly employs artistic techniques to transmit a surrealistic, antirealistic comment about the certain inadequacies of society, especially among parents, and has depicted them by way of the absurdities found in the surrealist's dream world.

Although several research studies over the years have been conducted to survey children's preferences pertaining to art styles and colors in visual art pieces and their appreciation of the visuals in relation to specific art styles, there is still very little known about what reasons children have for making such choices. Few studies have required that children in the elementary grades verbalize their feelings about these styles and their understanding about the

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[9]Ezra Jack Keats, Snowy Day, illustrated by Ezra Jack Keats (New York: The Viking Press, 1962).

[10]Eric Carle, The Tiny Seed, illustrated by Eric Carle (New York: Thomas Y. Crowell, 1970).

[11]Leo Lionni, Inch by Inch, illustrated by Leo Lionni (New York: Astor-Honor Co., Inc., 1962).

[12]Eugene Inoesco, Story Number 2, illustrated by Etienne Delessert (New York: Harlin Quist Books, 1970).

characteristics inherent in each style of art used in any kind of visual art piece (gallery art or book illustration). Such verbalizing may bring insight to the reasons one prefers, selects, or rejects a certain artistic visual. This researcher designed and initiated this experimental study so as to contribute some needed information and insight to these yet unanswered questions.

Purpose of the Study

The purpose of this experimental study was as follows:

1. To measure fifth grader's preference or rejection for representational, expressionistic, and cartoon styles of art used to illustrate two fairy tales;
2. To measure whether fifth graders, as previous research has indicated, had a tendency to prefer representational art and to reject expressionistic art;
3. To analyze children's verbal response made about three styles of art to ascertain whether they reacted using vocabulary and terms pertinent to styles of art ("It is abstract," "It is cartoon," "It is realistic"), or whether they responded to styles of art using non-technical terms that approximate such characteristics ("It does not look real," "It has funny faces," "It looks like a photograph of a person");
4. To measure whether fifth graders, after a guided study of three styles of art, discussed the style of art they preferred using more stylistic and evaluative terms and whether they used fewer

stylistic and evaluative terms when discussing a style of art they did not prefer; and

5. To determine whether fifth graders, after a guided study of three styles of art, became more aware of the styles of art in illustrations of other children's books they have read.

Three experimental group sessions consisted of picture study and discussion related to three styles of art found in illustrations in children's trade books. After each discussion session, children listened to a fairy tale and then they were given an opportunity to illustrate the story in one of three styles of art talked about during each particular session. These procedures were employed with the Experimental Group to ascertain whether three combined measures were effective ways for fifth graders to (1) learn about three styles of art, (2) to learn about evaluative techniques in relation to picture study, and (3) to acquire a vocabulary used in discussing characteristic artistic style features. However, such group sessions were not intended to influence children's preference or dislike for a certain style of art. There was no attempt made to influence the childrens' preference or rejection for a style of art based on this researcher's preferences for the various styles of art.

Statement of the Hypotheses

1. Group instruction covering the relevant characteristics of three styles of art will have a significant effect on fifth grade children's verbal expression when they discuss illustrations exemplifying these three styles of art.

2. Group instruction covering the relevant characteristics of three styles of art will have a significant effect on the extent of stylistic terms used by fifth graders when discussing three styles of art.

3. Group instruction covering the relevant characteristics of three styles of art will have a significant effect on the extent of emotional characteristics of art terms used by fifth graders when discussing three styles of art.

4. Group instruction covering the relevant characteristics of three styles of art will have a significant effect on the extent of evaluative terms used by fifth graders when discussing three styles of art.

5. A larger proportion of children in both the experimental and control groups will reject expressionistic style of art than will reject representational and cartoon styles of art.

6. A larger proportion of children in both the experimental and control groups will prefer representational style of art than will prefer cartoon and expressionistic styles of art.

7. A larger proportion of the children in both the treatment and control groups will be able to discuss the representational and cartoon styles of art in stylistic terms, but will not be able to discuss the expressionistic style of art in stylistic terms.

8. The experimental and control groups will not change their preference and rejection for styles of art between the pre- and post-test interviews.

9. A larger proportion of the experimental group will remember looking at more of the "back-of-the-room" books than will the control group.

Need for the Study

Perusal of the related research led this researcher to recognize a need to study the verbal response made by elementary pupils regarding the artistic visuals found within their environment. This researcher was convinced that verbal responses could enable students

themselves and the educators interested in helping them gain sophistication and increased satisfaction from visual arts in general.

A child's education, if it is to be effective, should be reflective of their world, their interests, their needs, and their imagination. Part of that universe consists of a vast array of visual stimuli. These visual stimuli may be deemed artistic or aesthetic in form or they can be seen as practical and functional or they can be determined as visual pollution by the viewer and thus be discarded. Children's verbal responses to art, as measured in this study, could help educators understand how youngsters react to styles of art. It could be that fifth graders reject visuals because they do not understand the stylistic characteristics or they could prefer visuals because their favorite colors were being employed in the visual. Information obtained from this study regarding children's verbal responses to art could be helpful in planning aesthetic programs in the elementary school that could prepare children to react to and evaluate the visual stimuli surrounding them. All things considered, it is ultimately the child or the viewer who must select or reject the visual stimuli based on a number of factors which could include pleasure, critical evaluation/examination, need, or dislike.

Experiences designed to develop attitudes of aesthetics and appreciation of art would have great impact if they took place within a child's immediate environment and if the subject or content in the visuals were relevant to the child. It would seem from this researcher's acquaintance with the content of gallery art that

children's responses to the typical gallery art pieces might not be the best measure of their art or aesthetic preference or understanding. Instead, the art within a children's picture book could be used to provide a child with artistic visuals to examine, interpret, and judge. "We may even find someday that the adult level of taste [for art] may have been improved because of a child's response to art and design to find paper and binding . . . because he held in his hands a beautifully produced [artistic] book."[13]

Children's picture books could be used to help a child to understand a process, a product, and a method for critical evaluation; all such knowledge could be applied later when examining other artistic presentations such as those found in a gallery or museum. But important, too, is that the books would help children to be more open and alert in their responses to what they see in the world around them, to recognize that other people are sensitive to their world, but do so from different perspectives and these perspectives are expressed in the form of paintings, photographs, or other forms of graphics and that these forms of art can be found in children's books.

In a 1953 study, Gertrude Whipple had children with fourth grade reading ability examine pictures clipped from basal readers. She found that children preferred larger pictures containing human interest topics, fantasy, and adventure.[14]

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[13]Laurence Lustig, "An Adult Reaction to the Children's Book Show," Book Production Industry 49 (January 1973): 33.

[14]Gertrude Whipple, "An Appraisal of Interest Appeal of Illustrations," The Elementary School Journal 53 (January 1953): 262-269.

This study was influential in starting a trend of having the stories, and thus the illustrations, in basal readers deal with the children's here-and-now world.[15] Although this trend began earlier in the 1930s and 1940s for trade (library) books, during the child-centered/progressive educational movement, the makers of children's text books began to consider the child's world and present this within the realm of their educational experience. The illustrations in such books, as a result, could be used to introduce styles of art as the content of the pictures could be reflective of a child's interest. Perhaps the child would be more receptive to the manner in which the picture is created as they already have a partial basis for understanding it. Information from this study could assist educators and children's book publishers in the selection of picture books that artistically appeal to children and that could be employed in picture study sessions in art education.

Much of the educational theory surrounding art education revels in the picture study of the Great Masters or gallery works of art. Therefore, in art education, picture study lists of masters or gallery art have been constructed, how-to and project-orientated lessons have been devised and curriculum guides have been developed to encompass history and theory related to styles and meaning of various schools of art. All of these procedures were created with the intention of developing a sense of artistic and aesthetic awareness in the children

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[15] Gerald A. Yoakam, ed., Providing for the Individual Reading Needs of Children, A Report of the Ninth Annual Conference on Reading, The University of Pittsburgh (Pittsburgh: The University of Pittsburgh Press, 1953).

so that they will be informed in such matters and so that they can enjoy the artistic visuals around them. Such investigations are directed by knowledgeable adults yet there is an indication that adults and children differ in their preferences or their understandings of what constitutes an artistic visual statement.

In a study conducted by Mabel Rudisill, adults were asked to select pictures containing various styles of art found in text books that would appeal to six and seven year old children. Adults tended to over-emphasize the importance of color, while children selected and preferred illustrations that contained realistic portrayals of the subject rather than the color presented.[16]

The pictures selected in a study conducted by Eunice Waymack and Gordon Hendrickson were partially chosen from approved picture study lists and partially by the researchers; all pictures were juried by classroom teachers and an art director. Waymack and Hendrickson noted that the children's preferences for pictures were those most disliked by adults and over half of the children's choices did not come from the approved picture study lists.[17]

After examining some 100 picture study courses and 65 approved picture study lists for grades one through eight, Jeanette Morrison selected 40 pictures that appeared most often on such lists to show

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[16] Mabel Rudisill, "Children's Preferences for Color Versus Other Qualities in Illustration," The Elementary School Journal 53 (April 1952): 444-451.

[17] Eunice Waymack and Gordon Hendrickson, "Children's Reactions as a Bias for Teaching Picture Appreciation," The Elementary School Journal 33 (December 1932): 267-278.

to children and obtain their responses to these pictures. Morrison found that list divisions for primary and upper elementary grades often seemed arbitrary, for primary grade children tested in her study liked a wider range of pictures than list makers had indicated. Pictures which ranked high by primary aged children were often thought by adults to be of little interest to these same children; instead the adults ranked these same pictures as high interest to upper elementary students. Nine out of the ten pictures in most of the pictures used in the study outlines had children in them, yet only one in nine of the forty pictures in the Morrison study were ranked in the top ten by the children. The adults who constructed the picture lists voted one child-subject picture a fifth rating while the same picture was ranked thirty-first out of forty by the children. Pictures of children were rated fifth in five subject categories by children, yet they were ranked first by the adults. Animal pictures were the second subject choice pictures for most of the children in the study, yet these pictures were given low ratings by the picture study courses; the adults often felt the animal pictures were lacking in artistic merit. Although there were some discrepancies, the only place where children and adults seemed to agree on picture ratings were those of a religious nature, indicating that the subject matter of a more universal nature (as compared to animals) was preferred over the rendition of that subject.[18] This one factor could indicate that children have reached some level of

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[18] Jeanette Gertrude Morrison, Children's Preference for Pictures (Chicago: The University of Chicago Press, 1935).

conforming to adult selection of "appropriate" art as the religious pictures and subjects had been seen and studied by the children in Sunday School or in the Bible.

Morrison pointed out that picture study course lists were often arbitrary and that what adults select for children was not always preferred by children. She indicated that child interests should be considered and that curriculum builders, especially of art courses, and picture study list makers should be more flexible in setting up picture study courses. Adults should note that their interests are often different from children and they should then be willing to revise lists to reflect the differences.

However slight the implications of these research studies are, it is noteworthy that the interests of children need to be considered when approaching the study, understanding, and appreciation of art. Perhaps, if children were exposed to a variety of art styles depicting their world as found in their trade books and if these illustrations were used for art and aesthetic education, children could develop a more in-depth understanding of art styles; this familiarity due to exposure and easy access to art pieces (a gallery of sorts) which were created to illustrate the books found in a library or a bookstore.

Significance of the Study

In 1965 the National Society for the Study of Education devoted one of their year books to Art Education. The experts who contributed to this important publication discussed a multitude of aspects concerning the state of art education in America but one of their major conclusions was that "we live in the most artless culture in any period of time in history . . . perhaps art is the least understood, most difficult, and in most cases, the poorest taught subject of any in the elementary curriculum."[19]

They also expressed concern that art education, especially in the elementary school, appeared to be leveled at the project-centered, activity approach. They noted that although aesthetic appreciation was a generally accepted goal of many art education curriculums, at any level K-12, few teachers actually include it in their formal lessons. In making recommendations for future art education programs, Elliott Eisner suggested that curriculums incorporate two scopes of knowledge and understanding: the doing or making of art and the aesthetics or the analysis and judging of art.[20]

In his article, "A Primer for Aesthetic Education," Reid Hastie outlined basic factors needed for curriculum improvements in

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[19] Pauline Johnson, "Art for the Young Child," in Art Education ed. Reid W. Hastie, The Sixty-Fourth Yearbook of the National Society for the Study of Education, pt. 2 (Chicago: The University of Chicago Press, 1965), pp. 54-55.

[20] Elliott Eisner, "American Education and The Future of Art Education," in Art Education, ed. Reid W. Hastie, The Sixty-Fourth Yearbook of the National Society for the Study of Education, pt. 2 (Chicago: The University of Chicago Press, 1965), pp. 334-335.

the area of aesthetic education. His recommendations called for a single unified curriculum that combined art production and the appreciation of the arts so that students receive a comprehensive aesthetic experience and education. He stated that the goals of aesthetic education should not neglect looking at and reacting to art in favor of the emphasis of the art production process. Aesthetic education, according to Hastie, requires that teachers create a questioning, inquiry based, educational environment so that the two streams of knowledge (process/product and thought/reaction) are joined to meet a common goal: appreciation of the aesthetics in the person's environment, be they human made or nature made.[21]

Eliott Eisner stated that programs in aesthetic education and art appreciation should be brought into the realm of intelligent activities related to visual problem solving so that verbal language could be incorporated into lessons. In doing so, the students could respond to the aesthetic quality of the world around them. Eisner's justification for such a position was drawn from his analysis of those who studied the psychological functions of language: "If language is a tool that is useful for dealing with experience in general, perhaps it is useful in the arts."[22]

One of the language theorists cited by Eisner was Lev Vygotsky, a Russian psychologist. Vygotsky viewed cognitive language learning as

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[21]Reid W. Hastie, "A Primer for Aesthetic Education," Art Education 21 (January 1971): 14-20.

[22]Eisner, p. 322.

a combined effort; one process does not occur without the other. Vygotsky emphasized that there is no thought process that is not essentially verbal. Thus for him thought is born through words. Although Eisner offered no specific criterion for employing verbalization in the art education programs, it could be theorized that he drew a parallel between his suggested unified art education program and Vygotsky's idea of the combined effort in language and cognitive learning. Both men, in their own educational spheres, have called for two banks of knowledge to be drawn together so that comprehensive learning can take place.

Shirley Bolton offered suggestions for art curriculum revisions that would include strategies that provide for verbal interaction between students and teachers in the course of art appreciation and production of visuals. She noted that while the verbal factor was often neglected due to an emphasis on the art product creation, children needed to verbalize or give what she called a "Communicative Response" to the art or the visuals they viewed in order to make known what they understand and feel about the art presented. She stated that people have been assuming that visuals children create communicate what they comprehend but they fail to recognize that children's verbal responses to a work of art could also communicate this understanding. In summary, she noted:

> Art and learning, for the most part, are social and communicative devices. . . . It seems realistic to assume that the development in verbal interaction should receive critical consideration as a strategy toward the production of perceptual and cognitive formation which every learner needs.[23]

Ronald Silverman and Vincent Lanier described art programs for adolescents that incorporated verbal and manipulative sessions wo that the students could relate to their aesthetic judgments and artistic products to the world around them."[24]

Expression of self, understanding of self and the art world, and knowledge were some of the factors John Michael considered when drawing up his objectives for a comprehensive art education program. Some of the goals identified were:

1. To develop the pupil's sensitivity, awareness, and appreciation.
2. To integrate and vivify all learning experience.
3. To provide knowledge and information concerning the field of art.
4. To develop creative thinking, doing, and evaluating as a basic part of art activity.
5. To develop necessary skill and technique that the pupil may better express himself visually.

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[23] Shirley L. Bolton, "Oral Language Production as an Aid to Aesthetic Learning," Art Education 26 (December 1973): 14-15.

[24] Ronald Silverman and Vincent Lanier, "Art for Adolescents," in Art Education, ed. Reid W. Hastie, The Sixty-Fourth Yearbook of the National Society for the Study of Education, pt. 2 (Chicago: The University of Chicago Press, 1965), pp. 222-225.

6. To bring about meaningful art experiences for early adolescence.[25]

Shortly after the publication of Art Education, educators were discussing many of the same factors emphasized by Eisner and other yearbook contributors. By the 1970s, however, concern was not specifically aimed at art appreciation. Instead the focus was aimed toward effectively preparing children to deal with the visual stimuli they would encounter presently and in the future. Because the environment of the 1970s is so filled with varied visual stimuli, educators stress that students should become more aware of their visual competencies. They emphasize that students should learn how to intercept, interpret, and understand the visual stimuli within their environment that constantly bombards them. They should also be able to communicate their individual perceptions to others either in a visual or verbal form.

When developing programs aimed at increasing a child's visual awareness, discussions should be included as a viable means of comparing ideas and perceptions held by others.

> Because visuals offer pupils a fascinating way to share experience, and, at the same time provide a meaning centered, language-sharing technique, teachers have analyzed visual meaning. (Just how does a picture "mean" anything?) In doing so, teachers utilize many of the techniques of verbal language analysis.[26]

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[25] John Michael, "Art Experience During Early Adolescence," in Art Education, ed. Reid W. Hastie, The Sixty-Fourth Yearbook of the National Society for the Study of Education, pt. 2 (Chicago: The University of Chicago Press, 1965), pp. 107-110.

[26] Roger Fransecky and Roy Ferguson, "New Ways of Seeing: The Milford Visual Communication Project," Audiovisual Instruction 8 (April 1973): 46.

In less than a tactful manner, Ralph Nelson goes against the statements made by the contributors of the 1965 NSSE Yearbook by stating:

> I submit that visual competencies must be approached as something more vital to the student's development than mere "art appreciation." Visual communication goes beyond the walls of a museum.[27]

According to Bryant Fillion, children examine visuals in the form of paintings, sculpture, television, movies, cartoons, and environmental designs such as billboards and building architecture. The aspects of design, action, and perspective are studied to prepare children to become more competent visually, just as these factors would prepare a child to be more responsive to the aesthetic qualities in art.[28]

Due to the discussion about and planning for programs that prepare children to become more visually competent, the term visual literacy became used in recent curriculum designs. John Debes, among the first to conduct the original investigations concerning visual literacy, has outlined a tentative definition of visual literacy. At the First National Conference on Visual Literacy, Debes stated:

> Visual literacy refers to a group of vision-competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences. The development of these competencies is fundamental to normal

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[27]Ralph Nelson, "Toward Visual Literacy," Elementary English 52 (April 1975): 526.

[28]Bryant Fillion, "Visual Literacy," Clearing House 47 (January 1973): 308-311.

> human learning. When developed, they enable a visually literate person to discriminate and interpret the visual actions, objects, and symbols natural or man made, that he encounters in his environment. Through the creative use of these competencies, he is able to communicate to others. Through the appreciative use of these competencies, he is able to comprehend and enjoy the masterworks of visual communication.[29]

John Debes, Bryant Fillion, and Ralph Nelson have attempted to isolate specifics (still general considerations themselves) which would enable them to begin outlining instructional projects.[30] Programs could include the following:

1. The integration of the visual and verbal learning as a means of coping with and analyzing visual stimuli.
2. The study of perception related to meaning and action.
3. Practice in selecting and attending to visual stimuli within the environment.
4. The creation of meaningful non-print visual statements and practice in the arrangements of ideas visually in ways and means appropriate to the child's needs, abilities, and messages.

Visual literacy curriculums do, in their own way, lead to aesthetic appreciation of artistic or masterpieces of visual communication by preparing children to interpret, evaluate, and respond to what they have seen. These functions are not too dissimilar to the goals in art and aesthetic education. The main difference between

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[29] Walter Wittich and Charles F. Schuller, Instructional Technology: Its Nature and Use, 5th ed. (New York: Harper & Row Publishers, 1973), pp. 87-88.

[30] John L. Debes, "Some Foundations for Visual Literacy," Audiovisual Instruction 13 (November 1968): 961-964; Fillion, pp. 308-311; and Nelson, pp. 524-526.

visual literacy and some art education programs is the media employed in the project making. Instamatic or polaroid cameras and movie cameras are often the hardware called for in visual literacy programs while art classes often use materials such as paints, wood blocks, and sculpture materials.

If one could appreciate that both areas (art education and visual literacy) have a common bond, then the similarities they share could be developed to create a comprehensive educational program. What one learns about evaluating the designs in photographs, films, and communicating a judgment regarding these functions, one could transfer such skills to evaluating and discussing the masterpieces in visuals which are displayed on the walls in art galleries or appear as book illustrations.

Limitations

This study was limited to children's response to and study of three styles of art that were used in pictures that illustrated two fairy tales. Although the pictures in three Little Red Riding Hood versions and three Rumpelstiltskin versions were created by various artists, all versions were selected because they were illustrated in one of three styles of art: representational, expressionistic, and cartoon. The "back-of-the-room" books and books used in the treatment group sessions were also selected because they were illustrated in the three target styles of art.

This experimental study was designed to be completed in five weeks. Although the time duration was limited, the design of this study would allow future researchers to replicate the study covering a longer period of time.

All subjects in this study were fifth graders so information obtained from this study can only be generalized to a population of fifth graders. The design of this study contained a "do nothing" control group. This factor might be considered a limitation of the study because the control group might differ in more ways than the isolated treatment variables. This researcher designed the study to contain the "do nothing" control group on the advice of three staticians.

Definition of Terms

The following terms were defined by this researcher using information and terms gleaned from a variety of art education and children's literature sources.

Art education: A curriculum area dealing with (1) the fundamental nature of the art process (product creation), (2) the appreciation of the arts, (3) aesthetics, and (4) the historical study of the schools of art and the trends and issues in art--from the past to the present.

Art appreciation: A preference for a work of art is based upon the judged beauty of the object itself rather than the beauty of expression presented. One could like a work of art because it is green or appreciate it because it is representational art. One could dislike a work of art, or not appreciate it, because one does not prefer modern art, or does not like the distortion of the object being presented.

Aesthetics: An evaluation of a work of art is based upon the judged beauty or emotion of the expression presented in the depicted object. Aesthetic value of a work of art is its inherent beauty and emotion, not the object itself. One may not appreciate a work of modern art but they could evaluate the aesthetic quality of the visual presentation. Some characteristics of aesthetic preference are mood, perspective vs. flatness, color, movement, and puzzlement or the non-obvious meaning of the stimulus in question.

Often there is confusion when attempting to define *aesthetics* and *art appreciation* separately as many sources use the terms synonymously.

Style of art (school of art): This refers to the arrangement of line, color, and form characteristics of a specified visual presentation: representational style of art, surrealistic, impressionistic and cartoon styles of art are a few examples of art styles.

Representational style of art: This style is characterized by the form corresponding closely to the actual subject or object being depicted, detailed, and described. The portrayal of the subject or content of the illustration stays close to the appearance of the real object but a minimal amount of distortion is acceptable.

Impressionistic style of art: The light and color planes are broken down and a fleeting glance of an object is presented in this style of art. The dots and dashes of color and light seem to convey shadows, action, and a sense of immediacy when the art is viewed at a distance.

Expressionistic style of art: A symbolic treatment of the subject or object being presented is characteristic of this style. An abstract representation of reality is achieved by distorting or exaggerating such things as form, line, or color. This form of impressionistic art allows for the bare essential structural qualities of the object being portrayed to show through yet the presentation leans toward abstraction.

Cartoon style of art: Caracaturization, humor, and symbolic form are combined--often presented in line drawings--to depict action, subjects, and moods. This form of expressionistic art often portrays absurdities or incongruities when presenting an object or the content of the visual.

Surrealistic style of art: An abstract style of art where the real is blended into the impossible; incongruities are blended to simulate a dream world in order to present a super realism: a centaur. Fluidity, melting, and floating are sensed by the viewer along with an uncomfortable perception of the distortion. This is considered a protest art or an antirealism as it defies tradition and it mocks conventionalities.

Picture book: A "marriage" of text and illustration is characteristic of this type of book. The message or meaning presented depends upon both, if either were missing the message would be limited or lost.

Illustrated book: Pictures provide an extension of the text yet they are not necessary to convey the meaning of the text in this type of book. Most illustrated books are for children who have already learned to read or for those who depend less upon the pictures for information.

Fairy tale: A story that is romantic in nature, where good conquers evil and a certain amount of magic exists. The stories often center around royalty. Characters are flat (not fully developed) and have stereotypic behaviors.

Back-of-the-room books: Children's picture books illustrated in three styles of art (representational, expressionistic, and cartoon) will be placed in both the Experimental and Control classrooms for the children to read and examine on a voluntary basis during the study.

Verbal expression content score: The sum of possible responses a child makes to the following categories on the testing instrument for this study: stylistic features, object/subject features, comparison, media/technique, emotional response, overall opinion of the artist's work, characterization and other general responses.

Organization of the Study

Chapter I contains the statement of the problem, the statement of the hypotheses to be researched in the dissertation and the purpose of the study. The need for and significance of the study is also

stated. The scope of the study is presented as are the definitions of terms.

Chapter II is the review of pertinent literature and research.

Chapter III is the design of the study. It is a delineation of the classic experimental method and the specific procedures used in this study. It discusses the population and its selection as well as the instruments used in the study and the method of validating the instrument.

Chapter IV contains an analysis of the data and related topics.

Chapter V concludes the study. In it the summary, conclusions, and recommendations for future study are made.

CHAPTER II

REVIEW OF THE LITERATURE

In surveying the literature related to children's responses to and preferences for styles of art in the illustrations in children's trade picture books, this researcher found that there was a limited amount of information available. Related to illustrations in children's picture books were the pictures in text books and how children reacted to these. Other studies measuring how children responded to different forms and styles of art were included in the review of the literature: the great masters or gallery art, and art created for specific studies or artist's renditions. Because children often based their responses to and preferences for pictures on color, such studies were also included in this review. Studies measuring how children view pictures or how pictures retain the visual attention of children were also added to the literature survey about measuring responses toward child art.

Children's Responses to Illustrations in Children's Picture and Trade Books

In a study designed to determine children's preference for a book based on its size and thickness, the number of illustrations in it, its cover color and design, and the number of stories contained in the volume, Florence Bamberger selected five different editions of the same stories. Teachers read one of the stories aloud to groups of

ten children in first, second, and third grades (n - 462). Not all stories were read to all children. The stories were read to the suspense point and the children were asked if they would like to finish the story themselves. Five editions of one story were arranged by size on the blackboard shelf and the children stated their preference for the one book they wanted to read. Children's responses were measured for inspection (outside evaluation of the book) and examination (inside evaluation of the book). Small editions for all five stories for all groups of children were rejected as well as the textbook basal reader editions. Second and third graders agreed closely in preferences while the first graders varied widely from them. When the books were covered with tan paper, the size of the book preferred was 7 3/4 inches long, 6 inches wide, and 1 1/4 inches thick. Cover colors preferred were blue, red, and yellow, with brown, orange, and purple books being rejected, and saturated colors for the cover were more often preferred.[1]

The data within this study has important information regarding the appeal that the format of a book has for a child. One might question why Bamberger did not read all the stories to all the children in the study. While she attempted to select editions of the five stories that were as alike as possible, according to her report, she did not make use of them as a control factor. Thus it could be concluded that

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[1]Florence Bamberger, The Effects of the Physical Make-Up of a Book Upon Children's Selections (Baltimore: Johns Hopkins University Press, 1922).

Bamberger ran five different studies, each having their own findings, and these findings were generalized across the five studies.

As reported by Helen Martin, college students enrolled in a Senior Library Science Seminar on Reading Habits conducted two related studies to determine children's preferences for book illustrations. Book illustrations for both studies were selected by the college students on the basis that they thought the books and pictures would appeal to children and that the books were available in local libraries. As it was noted that the college students had a tendency to select books on the basis of literary quality rather than artistic merit, their advisor made some minor adjustments to the list of books to be used in the study. Basically, the selected pictures were either realistic or decorative in nature and they were produced in half tones, color halftones, electographs, lithographs, and woodcuts. In both studies, there were no uniform procedures for showing the pictures or books except that illustrations were present in the various books. In both studies, the library students worked with age groups of children; namely, preschool through third grade, fourth through sixth grade, and seventh through ninth grade. The children selected their favorite picture and said why they liked it. The first study was conducted in public libraries while the second was conducted in school classrooms. Findings of the first study indicated that for all children, picture content, familiarity with the book and subject matter, color, and humor were factors that greatly influenced preference for a picture. Some of the findings reported by age groups were: the primary through

third grade group liked animals, primary colors, and minute details. Pictures depicting animals in distress were disliked. Girls preferred softer color tones, and the size of the picture was found to be unimportant to this age group. Fourth through sixth graders preferred softer color tones, imaginary figures, and pictures with children their own age. Black and white pictures were only moderately liked, silhouettes were intensely disliked. There was a definite difference for preference between boys and girls. Realistic content and realistic portrayal of subject, sea and sealife, color and its use, and the balance or composition of a picture all were said to have been received positively by the seventh through ninth graders.[2]

After conducting the first study, the library students revised their list of books, some of the scoring procedures and then took their experiment to the public schools. Each group of children (K to ninth grade) were shown books having illustrations that accounted for content, familiarity, treatment, and process. Children, except the K to second grade who were interviewed individually, marked their own ballot slips noting their preference for a picture. Findings from this study were minimally reported as Martin combined them with the analysis of the first study. However, it was noted that intelligence and nationality had little to do with a child's preference for a picture. Four color halftones and lithographs were preferred while silhouettes were intensely disliked. Color, action, realism, and landscapes were

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[2]Helen Martin, Children's Preferences in Book Illustration, Series 34, no. 10 (Cleveland: Western Reserve University, 1931).

the factors preferred by all children in the study. Sex differences became apparent by the fourth grade and were at their highest by ninth grade with the boys preferring pictures of the "chivalric" age and girls liking "at-home" pictures. Animals were preferred by all children yet younger children liked domestic ones while older children preferred wild ones. Landscapes, imaginary figures, and picture composition were factors influencing picture selection for upper elementary and older children. In other findings Martin indicated that art training did not seem to influence a group's preference for a picture; even though twins were tested separately, they often voted the same; and children tended to read many of the books after the study was completed.

While these findings do appear to support much of the research of this time period, it appears to this researcher that there are some confounding variables acting during the two studies. The selection of pictures and the procedures for showing the pictures are two of the most apparent problems. While the intent was to have children see that the illustrations were an integral part of a child's book, some books used contained only a few illustrations while others were picture books. Thus the number of pictures could have influenced the child's preference. Decorations and full-page pictures accomplish different purposes and should not be equated; that is, the former illuminates while the latter extends the text. It should also be noted that a variety of styles of art were not used. The children were asked to respond to illustrations done in the representational style only and to the content of the illustrations. No mention was

made in the report as to whether the books were selected on the basis of literary merit or artistic quality or both. It appears that the children's preferences for an illustration might have been contaminated by their preference for a particular story or story character. Thus, instead of measuring children's preference for the pictures as a work of art, this study pertained to measuring story preference.

The procedures for showing and viewing the books were not described in detail but Martin stated that "each library student was left to solve the problem by herself" and the children were in informal groups. From a point of avoiding contaminating variables, it would appear that limitations such that one might question the reliability of the overall conclusions.

Urban nursery school children ($n = 36$), in individual interviews, looked at 16 sets of pictures of similar size and content and treatment in a study conducted by Elizabeth Onley and Hazel Cushing to measure children's preferences for pictures from children's trade picture books. The experimenters noted the amount of time each child looked at the individual pictures hypothesizing that the amount of time spent viewing indicated the child's interest in the pictures. Picture sets viewed the longest period of time were mechanical subjects involving people, mechanical subjects with people, and dramatic scenes with children. The least amount of time was spent viewing uncolored pictures of small animals, silhouettes, and uncolored pictures of animal activities. Colored pictures were preferred over black and white ones with silhouettes being the least liked. Factors seeming to have no

influence on interest level were details, composition complexity, and background.[3]

The researchers surveyed the types of picture books found in the homes of the children in their study and they noted that three-quarters of the children had books with animals, while one-fourth of the children had books with mechanical subjects. Very few children had access to books in their homes that had everyday objects and children in them. A survey of the nursery school books indicated that a wide variety of books were available. Noting that children did not like the animal pictures seen in the study and that the books at home had animals in them. Onley and Cushing recommended that adults reverse their book selection policies and they should be buying more books with mechanical subjects.

When investigating children's ability to examine pictures without adult assistance, William Miller conducted individual interviews with 100 third graders in Illinois. Each child was to respond to a series of six pictures taken from third grade basal readers. The children were asked to look at the pictures and verbalize what they saw, what they thought of when viewing them, and what was happening in them. Miller noted that these third graders saw few items or details in the pictures and if they did, the children saw the items in isolation rather than in relation to the overall pictures. Since the children

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[3]Elizabeth E. Onley and Hazel Cushing, "A Brief Report of the Responses of Pre-School Children to Commercially Available Pictorial Materials," Child Development 6 (March 1935): 52-55.

missed many of the important features of the pictures that would give them information concerning story plot or theme, Miller indicated that teacher intervention and direction is needed as children require assistance in looking to obtain meaning from the picture.[4]

While the Miller study was limited to picture content as being an aide in reading comprehension, his research did indicate that youngsters may need assistance when learning to look for particulars in a picture. The style of art in the pictures used in this study was not discussed as a factor which might have influenced the children's responses. Although the children were asked to say what they thought when looking at the pictures, such statements were not reported in Miller's findings, and examination of their comments might have added some insight as to why children responded as they did.

The Association for Arts in Childhood conducted an informal study aimed at recognizing qualities in book illustration that appeal to children. Teachers, librarians, and researchers showed some 1,400 children picture books and they found that the children varied in their preferences for illustrations, but the content of the pictures was the main center of interest. The study findings noted that younger children (age five through eight) preferred fairies, dwarfs, and other fanciful subjects, but they wanted the portrayal of them to be representational. All children preferred color in their pictures, but as children became older they also began to like black and white illustrations. Although

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[4]William Miller, "What Children See in Pictures," The Elementary School Journal 39 (December 1938): 280-288.

children disliked distorted art styles and cartoons, they preferred humorous pictures. The methods and procedures were crude and uncontrolled but the Association made no steadfast conclusions--they said their limited and tentative findings would indicate tendencies in picture preferences that would warrant further investigation.[5]

Noting that the more recent basal readers (1950) contained photographs, brilliant color or black and white lithographs rather than the traditional woodcuts or line drawings, John Read made a content analysis of pre-primer to sixth grade basals to determine how much children depend on pictures to help them with their reading. Read noted that there were more pictures and pictures in color in the basals for the pre-primer to fourth grade range with the second grade basals having a higher picture ratio than any other grade level. The majority of the pictures were realistic and of fine photographic quality and Read felt such pictures were helpful for the literal thinking of children. He indicated that fairy tales were often illustrated with "nightmarish" pictures that were so fearsome for children that the art work might possibly cause permanent damage to children.[6] Since Read did not discuss the relationship between picture and text and how children respond to this factor, it would seem to this researcher that his conclusions were only tentative at best.

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[5]"Children's Preferences in Book Illustration: A Study by the Association for Arts in Childhood," Publisher's Weekly 136 (December 30, 1939): 321.

[6]John Read, "Picture Indices for Basic Readers," The Elementary School Journal 50 (February 1950): 339-340.

Gertrude Whipple clipped pictures out of six reading books and mounted them in booklets. These were examined by children (n = 150) with a fourth grade reading ability. Illustrations had one to four colors and of the 464 pictures, 49 were full page. The children looked at two picture booklets at a time; they were to mark the pictures with the most interesting story and then mark three stories that they would like read to them. Whipple found that children preferred pictures that had a center of interest, action, and several colors. Booklets that contained pages with the larger area covered by the pictures and those containing a greater amount of pictures were preferred. Topics of human interest, fantasy, and adventure were liked by a majority of the subjects. Whipple did not mention the style of art presented in the pictures; the main focus of her study appeared to be directed toward the content of the pictures and their "narrative" interest value.[7]

After examining the reading books available for students in Puerto Rican schools, Ismal Bou and David Lopez found that the illustrations did not take into account the Puerto Rican environment. They also noted that the artistic merit of the pictures was lacking. They subsequently set out to find children's preferences for colors in reading book illustrations, textbook covers, the types/styles of illustrations and page placement of these pictures. Puerto Rican children in grades two, four, and six (n = 2,496), in individual

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[7]Gertrude Whipple, "An Appraisal of Interest Appeal of Illustrations," The Elementary School Journal 53 (January 1953): 262-269.

interview sessions, were to select from 71 color cards. They were to choose their favorite type of illustration (linear-schematic, black and white, and realistic) from three drawing samples. Ten picture placement cards were also shown to the children.

Bou and Lopez found that children preferred primary over secondary colors, red and blue combinations, and trichromatic combinations of orange, blue, and yellow. Most children preferred blue colors and dark tones of each color presented. Children liked the illustrations that contained the most realistic treatment of the subject matter. They desired to have pictures placed on the upper half of the page or to have full-page illustrations in the book. Bou and Lopez maintained that color preferences went hand-in-hand with cultural influences and these colors should be represented in the illustrations and book covers.[8] It was interesting to note that Bou and Lopez were very concerned over the content of the pictures in reading books yet they really neglected this issue. The three pictures children looked at were of an entrance door to a walled garden. It seems to this researcher more relevant if a few other subjects could have been used to see if they would have an effect on children's preference for the presentation of the pictures.

First, second, and third graders (n = 450) were the subjects in Luther B. Clegg's study measuring children's preferences for color

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[8]Ismael R. Bou and David D. Lopez, "Preferences in Colors and Illustrations of Elementary School Children of Puerto Rico," The Journal of Educational Psychology 44 (December 1953): 490-496.

value, style of art, and portrayal of subject matter. Children in classroom groups marked ballot slips noting their preference for one picture in twenty different picture sets. The 44 pictures used in the sets were obtained from various children's picture books and a few coloring books. Clegg found that children preferred illustrations with saturated colors, more than those with light color tints. They liked a fanciful portrayal of an animal over a realistic portrayal yet they preferred the realistic style of art over the stylistic style. Children also preferred pictures with imaginary animals more than pictures of real animals. Pictures with Caucasian subjects were chosen by many children yet the Black children had a tendency to divide their votes over pictures with Caucasians, Blacks, and multiracial populations. Clegg noted that children had a tendency to identify with subject of their own race. Grade placement made a greater difference in preferences than did socioeconomic background, race, school attended, or sex. He stated that third graders were more discriminating than any other age groups when making picture preferences related to color, subject, and style of art.[9]

Clegg had intended to only use picture books that had been recently published; also, he wanted all the subjects in the pictures to be animal oriented. He had difficulty finding the appropriate pictures and thus he used those in coloring books.

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[9]Luther Bryan Clegg, "An Analysis of Picture Illustration Preferences of Primary Grade Children" (Ph.D. dissertation, Texas Technological College, 1968).

Although John Stewig's study pertaining to trends in Caldecott Award books did not measure children's preferences for the illustrations, he attempted to ascertain whether the illustrations were becoming less representational and if there were any trends in the use of specific media in these picture books. He selected award winners and runners-up from five year spans during 1959-1966 and books from 1918--the year the award was created. He rated 22 books for the factors of proportion, color, modeling-form, details, and space. A realism quotient was arrived at by averaging the factor rating scores. Stewig noted that in the 1951-1966 books there was a lower reality quotient than in the books of the 1938-1951 time span. He found that there was not a trend to give Caldecott Medals to books considered for the award that were the most impressionistic or abstract. He stated that he found no definite trend in the media used, but he saw that many new media were being introduced. As there were new media forms being employed, Stewig felt that a specific study would have to be designed to explore this further. In conclusion, two of Stewig's recommendations were that others study children's responses to (1) illustrations in the American Library Association sponsored Caldecott Award winning books and (2) pictures in the books given the illustration award sponsored by the American Institute of Graphic Arts.[10]

In Charlotte Lam's study, illustrations done in realistic, muted-realistic, semi-abstract and cartoon styles of art were used

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[10] John Warren Stewig, "Trends in Caldecott Award Winners," Elementary English 45 (February 1968): 218-223.

in eight different series of second grade basal readers were rated by children. In each of four picture sets containing one subject matter per set, the illustrations were done in the four different styles of art. In a pilot study, 22 second graders, in individual interviews, were shown the pictures in a set and they were told to select their first, second, and third choices. After testing and retesting the children, Lam found that second graders seemed reliable in their preference choices. This group of second graders preferred realistic and muted-realistic illustrations. In the major portion of her study, 90 different second graders were tested using the same materials and procedures as those used in the pilot study. These children strongly rejected the abstract style of art and preferred the realistic pictures. However, Lam noted that the children from lower socioeconomic areas preferred cartoon style of art while those from the upper class chose the realistic presentations.[11]

John Warthman had fourth, fifth, and sixth grade children (n = 692) rate their preferences for pictures from Caldecott Award winning pictures books and the Caldecott Honor Books. Children viewed one picture from each of nine books selected in five-year spans and published between 1938 and 1969. After the children had rated each picture they looked at a second picture from the books and rated their first, second and third choices. Warthman found no preference differences between the first and second ballots; however, the Caldecott

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[11] Charlotte Lam, "Pupil Preference for Four Art Styles in Primary Reading Text Books" (Ph.D. dissertation, Rutgers, The State University, 1969).

committee of adults and the children only agreed twice. For two of the seven years the children preferred the award winner while for four out of five years the award winning books (which are selected solely by adults) had the lowest rank. Grade placement, sex, race, reading level, and school did not appear to influence children's picture preference. The children did not tend to select the Caldecott award winning pictures as their first choice and they did not share the agreement with the adults who selected the books to receive the awards. Warthman cautioned that child preference should be considered by adults when they are selecting award winning books on the basis of the art.[12]

In her study, Margaret Sloan attempted to measure whether children in second and fifth grades (n = 80) and teachers from these same grades (n = 80) shared preferences for narrative and informative pictures before and after hearing a narrative or informative story read aloud to them. Illustrations for the study were elected from children's trade books or they were created for the study. They were done as photographs as well as in realistic, stylistic, and cartoon styles of art. The children and teachers in groups were assigned to one of four groups: narrative pictures only, informative pictures only, story and narrative pictures, and story and informative pictures. In individual interviews, the subjects were asked to state their preference for the pictures (style of art), the "two picture only groups"

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[12] John Burns Warthman, "A Study of Picture Preferences of Caldecott Award Winners and Runners-Up by Fourth, Fifth, and Sixth Grade Children of Selected Schools" (Ph.D. dissertation, The University of Southern Mississippi, 1970).

were asked which picture made the best story, and the "two story and picture groups" were asked which pictures went best with the story.[13]

Photographs were the overall favorites of the students and teachers and, generally, the adults and the children had similar picture preferences. Photographs were selected when no story was read while realistic pictures were chosen when a story was read. Realistic pictures and photographs were chosen for informational texts while stylistic pictures were chosen for narrative texts. Second graders selected cartoons in the "picture only groups," while they rejected cartoons in the "story/picture groups." Male teachers selected realistic pictures and photographs while they neglected the interest in the story features. Sloan concluded that the content of a picture influences fifth graders and teachers more than second graders and that a story line influences a picture choice. Boys generally preferred photographs and realistic pictures while girls divided their preference votes among the four types of illustrations. Although there were differences based on grade and sex, Sloan found that the subjects generally agreed.

In a study directed by Paul Doebler, children's picture books submitted for the Children's Book Show sponsored by the American Institute of Graphic Arts were juried by nine children, ages six

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[13]Margaret Alice Sloan, "Picture Preferences of Elementary School Children and Teachers" (Ph.D. dissertation, The State University of New York at Buffalo, 1972).

to twelve, three children's book retailers and six designers of children's books. Designers indicated that their preference for 75 books was based on design and manufacturing principles. The retailers selected 66 books, mostly fantasy and animal books. This selection was not due to personal preference, but on the basis of what was successfully selling in their retail outlets. The children preferred 41 books, many of which were informational in nature. Only four books were selected by all three juries. Doebler noted that children agreed more with the design jurists than with the book retailers. He concluded that while beauty may be important in picture book illustrations, children and designers selected books with informational content (in the pictures and in the text) and good design and illustration principles over those that were beautiful.[14]

While this was certainly not a controlled study, Doebler pointed out that retailers are selling to adults and they may not be considering what children like. His limited population and lack of description regarding specific factors influencing the jurist's preference for illustrations serve to limit the generalizations of the findings to this group of people and a specific set of books.

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[14] Paul Doebler, "Kids Vs. Adults on Children's Books," Publisher's Weekly 206 (November 4, 1974): 22-24.

Children's Responses to Gallery Art

Children ages six through fourteen (n = 178) and university students (n = 83) in Rudolph Pinter's study were asked to rank six paintings in order of personal preference for their beauty. Each painting consisted of the same theme but differed in accuracy of perspective, color, and drawing. Pinter found that six year olds had little agreement for picture preference. They had little ability to judge beauty of a picture and were more influenced by color than any other factor. By age seven, children began to conform to adult standards of what was aesthetically beautiful. In fact, by age ten, the majority of the youngsters seemed to have completely conformed to the aesthetic standards of the environment as selected by adults. Pinter noted that aesthetic judgment, as compared to adult designations of beauty, became more uniform as the children became older. Pinter did not identify the content, theme, or style of art in the paintings. Other research studies read by this researcher indicated that factors such as these could influence a person's judgment when deciding what was beautiful.[15]

Florence Williams conducted three separate yet related studies with fifth through eighth graders to determine their preferences for pictures and their reasons for selecting one picture over another. In the first study, classes of students (n = 939) examined a portrait

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[15] Rudolph Pinter, "Aesthetic Appreciation of Pictures by Children," The Pedagogical Seminary 25 (June 1918): 216-218.

display at the Richmond, Indiana Art Gallery (water colors, oil colors, miniatures, tintypes, and deguerotypes). The second study took place at an exhibit of paintings created by Richmond area artists (water colors, pastels, and oil paintings). In the third study students (n = 1,092) viewed paintings made by Indiana artists (water colors, oil paintings, and woodblock prints). In all three studies the students were asked to vote for the one picture they liked the best from among all they had seen that day. Williams found that in all three studies children tended to like the same pictures and that they only selected a few of those presented. She noted that when children were given the opportunity, they did select "good" pictures. People, places, and incidents most familiar to the children, as well as those with large and easily seen foregrounds were in the pictures most often selected as favorites. Although some children selected pictures with children in them, this factor was not of prime importance in this study. Williams stated that the story appeal was not a significant factor since it did not seem to be "great in awakening appreciation."[16]

Some contamination could have taken place as many of the children personally knew some of the artists and had seen their work previously. A preference for a picture might have been based on familiarity with the artists and their works rather than an on-the-spot appraisal. Although media was minimally discussed in the report, Williams did not suggest this factor as one that might influence

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[16] Florence Williams, "An Investigation of Children's Preferences for Pictures," The Elementary School Journal 25 (October 1924): 119-126.

children's picture preference. Nor did she discuss the style of art presented in the various works. This information would have been helpful if one is to identify the significance and implications of the findings of this study.

In a study conducted by Roberta White and Buford Johnson, 15 children (ages 3.5 years to 5.5 years) individually looked at eleven modern paintings that were arranged on a wall in order of the most impressionistic to the most representational. Each child pointed to the one he/she liked best and then he/she was to point to any others that he/she liked. The majority of the children preferred the three examples that were deemed to be the most representational in style of art. When asked if they liked any other pictures in the study, the majority of the children said they liked the rest of the pictures. Only a few children indicated that they liked only a few others: dislike was not mentioned.[17]

Eunice Waymack and Gordon Hendrickson conducted an experimental study where children, without previous picture study training, responded in writing to a set of paintings, participated in picture study sessions and then responded to a second set of pictures. Half of the twelve pictures selected were from picture study lists while the other half were added by the examiners. All pictures were juried by teachers and a school art director. Fourth, fifth, and sixth graders (n = 219) were given four painting reproductions (four different paintings per grade)

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[17] Roberta White and Buford Johnson, "Children's Choices in Modern Art," Child Development 1 (December 1930): 347-349.

and asked to select one they would like to keep. They were also instructed to write down why they liked that picture. The children overwhelmingly selected those pictures which were least preferred by the adult jury and they preferred more than half of the pictures not selected from the picture study lists. Children preferred pictures on the basis of color, prettiness, scenery, people, and subjects. Technical elements such as light, perspective, mood, etc. were ignored. Waymack and Hendrickson found that the older subjects made more comments and these were more varied. The sixth graders, although not detailed in their comments, seemed more analytical than the other children.[18]

A few weeks after this part of the study, Ms. Waymack held art appreciation discussions concerning the four pictures seen previously. She guided the 15 to 25 minute sessions so that technical elements were mentioned by the children. Immediately after the discussions, four pictures seen by the other grades were placed on the chalkboard and the children were asked to indicate in writing which picture they liked best. Again, there was little correlation between adult and child preference. The responses made by the children were longer, more analytical and technical in nature. Color and people were still a preference but were appreciated on a more intellectual and technical level by the children. Waymack and Hendrickson concluded that children of this age level were capable of making analytical appraisals of

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[18] Eunice Waymack and Gordon Hendrickson, "Children's Reactions as a Bias for Teacher Picture Appreciation," The Elementary School Journal 33 (December 1932): 267-278.

paintings if given the opportunity to receive some training in picture viewing. They found that children reacted with less emotion even after short sessions of picture study.

Forty pictures were selected from 100 picture courses and 65 approved picture study lists in Jeanette Morrison's study aimed at measuring children's preferences for pictures. The pictures were mounted on three oak tag sheets which were viewed by children (n = 500) in grades one through eight. They then checked a ballot sheet indicating their first through fifth choices. Eighty-five percent of the children had had no art training from a certified art teacher while 15% were from a university lab school and were receiving "excellent" training from experienced instructors.

Although there were some differences in the order of picture preference among children at different grade levels, most children liked contents like religious themes, animals, nature and color, historical and allegorical, and pictures with children in them. Sex differences were found in the content of preferences indicated: boys preferred ships, historical, animals, and action pictures while girls liked contents like religious themes, pet and child, non-action, and pictures of children best. Landscapes, scenery, and pictures containing strong colors were preferred by both sexes. Twins who participated in this study had no duplication in their responses to pictures. There were several large discrepancies between the pictures adults indicated as children's preferences and those the children themselves expressed as preferences. Nine out of ten pictures most often shown to children

in picture study courses were least liked by the children. Animal pictures were often omitted from picture study lists as adults thought many of them lacked artistic quality. However, animal pictures that were used in this study were rated high by children. Adults felt that seascapes and boat pictures would have no interest for children yet the youngsters in this study indicated the reverse. Although there were some differences, adults and children tended to agree with regard to popularity of and interest in religious pictures. Morrison said that pictures in this study were liked by children because they were pretty, nice, or cute. Religious pictures were preferred because children had studied the people in Sunday School or they had read about them in the Bible. Other preferences were: "I like dogs, and this is a nice dog." Morrison said that color had a considerable influence on pictures selection but that this factor was "felt" by the children rather than stated by them. Morrison wondered about the reliability of the children's responses as some children thought they had seen some of the pictures used in this study when they were some place else but she concluded that familiarity was due to content, not exposure to a particular painting. She concluded that lists for courses in picture study often set up arbitrary divisions for ages, grades, and subjects. She felt that list makers needed to recognize interests of children and should become flexible enough to revise their lists.[19] Although Morrison did not specifically discuss styles of art or colors, a full

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[19] Jeanette Gertrude Morrison, Children's Preferences for Pictures (Chicago: The University of Chicago Press, 1935).

listing of paintings and the names of each artist were given, one could use such information to examine children's preferences and make some tentative conclusions. Morrison noted that the children had received different levels of art training but she did not report whether this factor influenced preferences for pictures. This researcher would have found such information interesting.

Children from a private experimental school, ages three to six (n = 138), having an average I.Q. of 120, were individually interviewed in a three-part study conducted by Gertrude Hildreth, that was to ascertain children's responses to colors, picture subjects and styles of art. In the first part of the study, each child was shown a card with ten colors on it and they were to name the colors and point to the one they preferred. In the three-to-four-year-age group, 66 percent could correctly name nine or more colors correctly and 92 percent of the five to six year olds could name nine or more correctly. Orange was the first color preferred while pink and red were the second and third choices. Reasons for liking a color were because it was pretty, it was the color of a child's clothing, or it was the color that had been recently used in an art project in school. In the second part of the study, children were individually shown 16 pictures in sets of four and asked to point to the one they liked best. This procedure was done four times with the favorite picture being held each time. The children then voted for their favorite picture among those they preferred. These pictures were selected from various places: prints of paintings to illustrations from books. Younger children often selected pictures

quickly and they seemed to be less certain in their choices. They were also more influenced by the position of the picture when a set of four pictures was placed in front of them. Although color was found to be less of an influence on picture preference, reasons for liking a painting included exposure to and familiarity with the subject of the picture. Children selected action and animal pictures with the girls tending to select more mother-child interaction pictures. In the third part of the study, children were shown four renditions of Bonnat's "Roman Girl at a Fountain" (color print, black and white print, line drawing, and black and white silhouette) and they pointed to the one they liked the best. Again, the children seemed to make their selections quickly. A large majority of the children preferred the color prints. The silhouette, the black and white print and the line drawing were the second, third, and fourth choices.

Hildreth made no absolute statements when reporting her findings. She did caution the reader that the children appeared to be making choices quickly and often at random. She indicated that attention should be paid to what children prefer as adults often select pictures and other visuals based on adult preference and these two preferences could be quite different.[20]

In four separate but related studies conducted at the Cleveland Museum of Art, Betty Lark-Horovitz attempted to measure children's preference for subjects in pictures, for portraits and for textiles.

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[20]Gertrude Hildreth, "Color and Picture Choices of Young Children," The Pedagogical Seminary Journal of Genetic Psychology 49 (December 1936): 427-435.

In all four studies children labeled as "Specials" were those who were enrolled in Saturday art classes at the museum and they showed an above average ability in drawing. Children labeled as "Average" were those from the Cleveland area schools not attending Saturday art classes. The "Special" children were given specific instructions to select pictures on the basis of personal preference and not to rate the art on its artistic merit. The "Average" children were not given these instructions. In all four studies, the procedures followed were alike: children viewed a specially selected museum display and responded in writing to a questionnaire covering the exhibit. Children under eleven had their responses recorded by an examiner.

In her first study, "Picture Preference of Picture Subjects in General," "Special" children ages eleven through sixteen ($n = 72$) and "Average" children ages six through sixteen ($n = 461$) rated their preferences for and reasons for preferring some of the twelve pictures on display. Overall findings indicated that most first and second choice ratings were interchangeable, interest for certain pictures rose at certain ages and disappeared at others, the sharp difference between picture preferences of boys and girls faded with increasing age, and still life and interiors held little interest for any of the children. The "Average" group preferred pictures on the basis of realistic representation, color, and subject, while the "Specials" selected pictures on the basis of design, color, and overall emotional and imaginary appearance of the work. Lark-Horovitz felt that the "Specials" had an eye for design and its effect on the total work,

while the "Average" group made non-aesthetic or crudely aesthetic responses. While the "Specials" tended to be analytical in their looking and evaluating, the "Average" group seemed to have no special purpose involved when viewing a work of art.[21]

In the second study, "Portrait Preference," the "Specials" ages twelve through fifteen (n = 44) and the "Average" group ages six through fifteen (n = 479) viewed and responded to portraits. Two portrait exhibits were developed to allow for interest ages of the subjects. Pictures one through twenty-one were the same in both exhibits: Exhibit A for children six through ten had 51 pictures and Exhibit B for subjects eleven through fifteen had 51 pictures. General findings noted that only one-half of the portraits were preferred by both the "Specials" and "Average" group, by age nine or ten, uncolored pictures were preferred to colored ones and this interest increased with age. Younger children selected pictures with younger children in them but this tendency of self-identification faded with increasing age. As in the previous study, choices for first and second preference were interchangeable for most children. Portait preference for the "Specials" did not differ much from the "Average" group except that the "Specials" were less concerned with subject matter of the portrait; overall arrangement, values of color, and light were of more concern to the "Specials." Boys from both groups preferred portraits with men and boys exclusively and they selected

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[21] Betty Lark-Horovitz, "On Art Appreciation of Children: I. Preference of Picture Subjects in General," The Journal of Educational Research 31 (October 1937): 118-137.

portraits of Indians, war heroes, masculine types and portraits reflecting imaginary action. Girls from both groups tended to select portraits containing women and children and feminine ideals, and their responses indicated they preferred realism and realistic representations more than boys. Overall, the subject matter and its portrayal seemed to dominate the preference for a portrait. As children become older, they had less of a tendency to select age-realted subjects. Although the differences between the two groups were not great, the "Specials" did have a tendency to respond to a portrait in a more analytical manner. Lark-Horovitz recommended that educators become aware of children's interests and they should develop art appreciation classes so that boys and girls could be segregated for art lessons as their interests vary so much.[22]

In Lark-Horovitz's third study measuring children's preferences for textiles, children ("Averages" n = 521 and "Specials" n = 43) preferred only 3 of the 39 textiles on display in the museum. Factors influencing preference were object and subject, color, arrangement of color, design, and technique of textile creation. Subjects preferred were animals, flowers, people, and objects. Children were least influenced by the usefullness of the textiles and the abstract aspects of the designs. The children preferred modernistic textiles with this liking being conscious in children eleven and up. The "Specials" gave the largest number of reasons for liking a textile. The interest focus

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[22]Betty Lark-Horovitz, "On Art Appreciation of Children: II. Portrait Preference Study," The Journal of Educational Research 31 (April 1938): 572-598.

of subject/object in a textile was noted across age groups yet its importance decreased with increasing age, while focus on color and color arrangement was constantly a preference factor. Interest in abstract and modern designs was a factor with children over twelve yet it never reached the height of subject preference. Preferences for the abstract art and modern patterns seemed non-existent for the younger children. Textiles filled with several bright colors and favorite colors of the children were most often selected with this trend being high until about age ten. Boys six through nine preferred blue, the girls of this age liked purple and all younger children were interested in red. The children over twelve were interested in subdued and delicate colors. The "Specials" tended to be more analytical in their responses to the textiles as they noted aesthetic qualities of technique, line, shape, and materials. Subjective emotion and familiarity with the subject of the textile seemed to have less of an influence on them. The "Average" group appeared to be greatly moved by their personal feelings for a textile design rather than being analytical in their evaluations.[23]

Her fourth study entitled "Comparative Study of White and Negro Children" consisted of three small phases, but in each the children viewed the same portrait, painting, and textile exhibits that had been used in her three earlier studies. In the first phase measuring preference for pictures in general, Caucasian children ("Specials" n = 104)

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[23]Betty Lark-Horovitz, "On Appreciation of Children: III. Textile Pattern Preference Study," The Journal of Educational Research 33 (September 1939): 8-35.

and Black children (n = 126) from the Cleveland schools noted that the subject of the pictures influenced their preference for a painting. The "Specials" had more distinct preferences with the Caucasian boys making a high level of color responses. Black children tended to scatter their preference choices. In viewing a portrait exhibit, Caucasian children ("Specials" n = 162) and Black children (n = 98) differed in their preferences. The Black males made choices similar to the white males in the 1938 Lark-Horovitz study; they liked portraits with young men and with young women while Black girls preferred portraits of young women. All Black students listed color as an important feature of portrait preferences. White males preferred only portraits of young men and White girls liked portraits of young women and of mothers with children. The "Specials" chose more uncolored portraits than the Black children and they made more responses related to the techniques the artists used. Black children (n = 168) and White children ("Specials" n = 220) viewed a textile display and they both appeared to prefer the same patterns with color, arrangement, and subject matter influencing their choices. Only the "Specials" mentioned the modern designs while only the Black children noted the simplicity and clarity of the designs. Overall, for both groups, there was a preference for representational art yet this tendency was only slightly greater than preferences for geometric patterns. Lark-Horovitz noted that across these three studies measuring the preferences of Black and White children, the Black children were more interested in art with emotional

associations and that White children often selected art with a certain amount of romanticism and hero worship in it.[24]

Although the information from the four Lark-Horovitz studies provide a vast amount of data, the populations were often of an uneven size, the ages of the subjects differed and it was never made clear by Lark-Horovitz whether the same children participated in several studies or whether each study consisted of different populations. While the procedures and picture selections appeared to be sound, the problems with defining the various populations might lessen the impact of the conclusions and inferences made by Lark-Horovitz.

William Lucio and Cyrus Mead conducted a study where fourth, fifth, and sixth graders (n = 436) selected their first, second, and third choices for 18 modern paintings. Children were also to write down their responses as to why they selected a painting for their first choice. Photographic-realistic pictures were selected the most and over the grades there was general agreement for first, second, and third choices. Boys preferred seascapes and girls tended to select pictures that were quiet and serene. Reasons for selecting a painting for first choice included: "pretty, best, simple, interesting, or beautiful." Children made excessive comments about color in relation to preferences. Portraits and still life paintings were least liked by the children. Some children made references to proportion, action,

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[24]Betty Lark-Horovitz, "On Art Appreciation of Children: III. Comparative Study of White and Negro Children," The Journal of Educational Research 33 (December 1939): 258-285.

scenery, and story element but such comments were often indirect and not explicitly stated.[25]

In designing a test that would measure children's preference for painting styles, Elias Katz selected 64 pairs of paintings that represented traditional and modern art. Children in grades second through sixth (n = 243) were shown color slides of painting pairs in their classrooms and they marked their preference for one of the pictures in the pair on an answer sheet. Katz found that the children had a tendency to prefer the traditional painting style over the modern style and this bias increased with age. His analysis indicated that 5 of the 64 pairs had a higher level of significance for measuring children's preference while 5 pairs of pictures were insignificant in doing this.[26]

Katz was designing a test to use for measuring preferences and as a result, his statistics appeared to lean more toward reporting the validity and reliability of test items rather than including other factors; he did not find out why children made the choices they did nor did he report which subject matter types within the traditional paintings children preferred. Katz omitted many of the masters of modern art because he could not locate color reproductions of their

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[25]William Lucio and Cyrus Mead, "An Investigation of Children's Preferences for Modern Pictures," The Elementary School Journal 40 (May 1939): 678-689.

[26]Elias Katz, "A Test for Preference for Traditional and Modern Paintings," The Journal of Educational Psychology 33 (1942): 668-677.

work. He also neglected many surrealists and abstractionists because they could not be matched by subject matter to the traditional paintings.

In Jessie Todd's study, fifth and sixth graders (n = 96) from one upper-middle socioeconomic area, having above-average intelligence, attending a university laboratory school, sorted modern and older (traditional) pictures by style of art, wrote what the differences between the styles were, selected five of the paintings and wrote why they liked their favorites. On the average, children correctly selected 9 of 13 as modern art and 10 out of 13 as older (traditional) art. In order of importance, children distinguished the two styles of art by color, realism, brush strokes, subject, and texture. With the 14 most preferred pictures there was an even division for liking modern and older art. Boys preferred more modern paintings than girls; girls selected landscapes more than boys, and girls preferred more pictures with girls and women in them than did boys. Grade differences showed that sixth graders had more correct responses and they overwhelmingly selected more landscapes. Children liked picture subjects of water, peace and quiet, distance, trees, and reflections on water.[27]

Since Todd's population is not representative of average children, the generalizations one might make about children's preferences for art styles must be limited. Although the children had no formal picture study, many had family members or relatives that were

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[27]Jessie Todd, "Preferences of Children for Modern and Older Paintings," The Elementary School Journal 44 (December 1943): 223-231.

active in the world of art and Todd cited this as a factor that could have influenced children's performance in this study.

In a study conducted by Grace Dietrich and C. W. Hunnicutt, six pairs of pictures were shown daily to classrooms of first and second graders (n = 40) for 34 school days. Some 171 pictures were shown in 408 pairings allowing for various pictures to be shown more than once. The children selected one picture in each pair that they would like to take home with them, and they marked their preference (+) or dislike (-) on slips of paper. Children preferred outdoor scenes (landscapes and seascapes) and people. The youngsters opted for pictures with bright colors, obvious foregrounds and those showing subjects of their own sex and age.[28]

The experimenters allowed for mood (happy-sad) and movement (action-repose) in the pictures yet they did not discuss their findings related to these factors. Other than choosing pictures on the basis of subject matter, the experimenters did not give a detailed description of their selection procedures nor did they list the titles of the pictures used. Color, style of art, media, or size of the pictures were also not accounted for in the description of the pictures, the presentations, or the findings. It would have been interesting to this researcher to see what other factors might have influenced children's selection of pictures and subject matter.

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[28]Grace L. Dietrich and C. W. Hunnicutt, "Art Content Preferred by Primary Grade Children," The Elementary School Journal 48 (June 1948): 55-559.

During the fifteen year span, Minnie Levenson, Director of the Division of Public Instruction for the Worchester, Massachusetts Museum, and her staff selected art work on display in the museum and they devised an art study program for public school children. Kindergarten through fifth grade children viewed art in picture study lessons in school while eighth graders visited the museum to see the original art work they had previously studied. Basing her findings on the observations she and her staff made in relation to some 50,000 sixth graders when they toured the museum and from the letters children wrote to personnel of the museum, Levenson noted that religion, ethnic background/nationality, and enthusiasm of the art instructor and classroom teacher for art, appeared to be factors influencing children's responses to art. Realistic art, subject or content of picture, bright colors, story telling or action packed pictures and those with an air of mystery were in the art work preferred by children. Although sculpture was often preferred by the sixth graders, they soundly rejected those that were incomplete or damaged such as headless statue.[29]

Postcard size color reproductions of 44 paintings from Renaissance realism to abstract expressionism and three examples of child art were shown in pairs to 60 first through sixth graders in a pilot study and 500 first through sixth graders in Stephen Bencetic's main study measuring children's preferences for painting styles. The paintings were selected from a group of 500 paintings that

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[29]Minnie Levenson, "What Pictures Do Children Like?" American Childhood 36 (January 1951): 2-6.

had been ranked according to style of art by three adult judges. In both the pilot and main studies, children, in individual interviews, placed the pictures they liked in one pile and those they rejected in another. In the pilot study, the six most preferred pictures had animal subjects while 5 percent of the lowest ranked pictures were abstract or non-objective. In the main study, girls preferred pictures with girls and flowers as subjects. Although girls tended to have more picture preferences than boys, overall findings indicated that the higher the grade level, a lower number of preferences were made. Bencetic felt this was because the older children were more discriminating than the younger ones. Older children preferred realistic paintings two to one over the abstract ones while first graders had a high level of interest in abstract art. Children across the study preferred landscapes, animals and portraits of children, and religious pictures. Bencetic noted that fourth, fifth, and sixth graders seemed to have the same likes and dislikes. All children rejected the art created by children.[30]

In an attempt to measure what people perceive and how they respond to what they perceived, Brent Wilson designed an instrument with four judgmental response mode categories, six descriptive response categories, and eighteen aspect-of-painting categories that were used to categorize children's verbal comments about art. Fifth, seventh, and eleventh graders (n = 243), second and third year high school art

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[30] Stephen Bencetic, "Picture Preferences of Elementary Children" (Ph.D. dissertation, Pennsylvania State University, 1959).

students (n = 108), advance English high school students (n = 14), and senior university art students (n = 20) viewed slide reproductions of 34 paintings, many of which were well known; they also responded to testing items. The twentieth-century art which was viewed included surrealism, pop, abstract expressionism; the collection of paintings tended to be more stylistic in nature and it provided a great technical variety. Wilson found age differences to be only influential factors for just 6 of the 28 items. There was an increase of anecdotal, analogy, qualitative, synthesizing and analyzing responses with increasing age. Symbolic responses were non-existent for fifth graders while they were important for eleventh graders. Wilson noted that when children respond to art they are often limited to what has been taught to them about perceiving art and responding to it. He concluded that his instrument could be an effective device for art instruction and it could be a measurement tool for art students.[31]

Ann W. Coffee designed a study to ascertain whether picture preferences change developmentally or whether ratings are changed by labeling the pictures. Kindergarteners, fourth graders, and college students (n = 120) in individual interviews, viewed color postcard-sized reproductions of 12 realistic and 12 non-objective paintings one at a time. In the first group, the subjects were asked to name and sort pictures noting their preferences. In the second group, the

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[31] Brent Guy Wilson, "The Development and Testing of an Instrument to Measure Aspective Perception of Paintings" (Ph.D. dissertation, Ohio State University, 1966).

subjects only gave their preference ratings and in the third group, the subjects were to give their preferences and reasons for selecting pictures. Ratings did not change over the three trials as all subjects preferred the realistic pictures more often yet the kindergarteners preferred the non-objective pictures more. Labeling did not change preference readings; the use of concrete labels decreased with age and the use of conceptual labels increased with age. Kindergarteners stated color and content as reasons for preferring paintings, while fourth graders often listed color and content as reasons; they began to use more subtle reasons and they mentioned the action in the pictures. College students made predominantly conceptual and concrete statements. Coffee concluded that preference for paintings and the ability to label them changed developmentally with age.[32]

Patricia Kay showed paired sets of painting slides containing elements of turbulance, perspective, color, movement, puzzlement, and antiquity to seventh graders (n = 179). After the students responded, noting their preferences, Kay used Kruskal's Multidimensional Scale for detecting children's preference for painting styles. She found that there was no particular combination of style dimensions that would show predictive power relative to projecting popularity of painting styles for children when using such an instrument. Preference discriminations were made but not enough to rank their order. There was some degree of preference for pictures of a realistic nature but not

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[32] Ann W. Coffee, "A Developmental Study of Aesthetic Preferences for Realistic and Non-Objective Paintings" (Ph.D. dissertation, The University of Massachusetts, 1968).

enough to make any solid conclusions. Kay felt that there was a need to revise the scale she used. While her conclusions were tentative and Kay felt she could make no predictions based on her data, she noted that color had an influence on preference as did movement, while perspective and turbulance features had less of an influence.[33]

In Howard Gardner's study, first, third, sixth, and ninth graders (n = 80), in individual interview sessions, viewed 20 sets of painting arrays consisting of portraits, abstract art, and other varied subject matter. In each set, one card held two postcard-sized reproductions of paintings done by artsit A (Standard Array) and the second card held four paintings created by artists A, B, C, and D (Test Array). The children were told to point to the painting in the Test Array that had been painted by the same artist shown in the Standard Array. After two practice sets where the children were told whether they were right or wrong, the task continued with no verbal feedback by the experimenter. There were age differences in the level of performance with the ninth graders being most successful. Some of the sixth graders responded at a ninth grade level and the sixth grade girls did better than the boys. The younger children were quick in their responses and many misunderstood the instructions: they selected pictures they liked. Young children depended on subject matter and details for style detection. The older students offered explanations for their choices indicating that painting theme and emotions shown

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[33]Patricia M. Kay, "Multidimensional Scaling of Children's Preferences for Paintings" (Ph.D. dissertation, Rutgers, The State University, 1969).

influenced their choice. Older students took longer to make selections and often selected pictures after they had eliminated the pictures that appeared to them to be obviously wrong. Many of the older students recognized paintings and artists while the younger students did not. Gardner noted that this factor had an influence on children's responses. He also noted that between sixth and ninth grades, students began to recognize that artists painted in certain ways and styles; the girls were more observant than the boys.[34]

In another study conducted by Howard Gardner, students who had been identified in an earlier study (Gardner, 1971) as being those with minimal experience in style recognition and those with an understanding of the principles of art styles viewed art presented under four conditions: normal color reproduction, darkened color tones, black and white, and covered with a black screen. In classroom settings, the students aged 15 through 18, viewed slides of four sets of paintings and they marked an answer sheet indicating which paintings were done by the same artists. In each set of paintings two paintings by the target artist were displayed on the left of the viewing screen while four paintings done by the target artist and three other artists were on the right. The painting sets differed in artists, styles of art, subject matter, color, and texture. One-half of the paintings viewed had been used in Gardner's 1970 study. Gardner found that the performance of the students deteriorated when viewing pictures with no

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[34]Howard Gardner, "Children's Sensitivity to Painting Styles," Child Development 41 (September 1970): 813-821.

color and those with the screen covering them. The removal of color or the adding of screening obscured stylistic characteristics; as a result, the students had a tendency to rely on subject matter. The reduction of color brightness, however, did not appear to effect style sensitivity among these students. Gardner found that these adolescents reacted much the same as the youngsters did in his earlier studies.[35]

In a pilot study related to the one just discussed, students (n = 107), none of whom participated in the study just discussed, viewed slides of painting pairs where one painting was shown under normal conditions and the second was a manipulation of the first painting. Students identified the variables of color, texture, subject matter, and composition and discussed the ways artists employed these technical features. While the students found this method helpful in understanding art styles and they felt that style detection led to appreciation of art, they indicated that study was not an end in itself in appreciation of art.

Middle class second through fifth grade students (n = 48) individually viewed postcard-sized reproductions of 160 sets of paintings during a 13 week period in Howard Gardner's study measuring figural and stylistic sensitivity in children. In each set, two pictures were created by artist A and two were created by artist B. In the pre-test children sorted 20 sets of pictures into two piles on the basis of looking alike. From this group, Gardner selected children who

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[35]Howard Gardner, "The Contribution of Color and Texture to the Detection of Painting Style," Studies in Art Education 15 (Spring 1974): 57-61.

sorted by style features (SG n = 12) and those who sorted by figural aspects (FG n = 12). For seven weeks both groups of children were told to sort pictures in a special way yet they were not told what the special way was. They were told whether they had sorted the pictures correctly using the special way, however. The SG group increased the number of correct style responses while the FG group increased in the number of figural responses. The SG group showed a tendency to learn the correct responses more rapidly than the FG group learned the figural responses with the younger FG children making more correct figural responses in the FG groups. When this training was completed, the children were post-tested. After a three-week time lapse with no training, the FG children were shown how to sort by stylistic features and the SG children were shown how to sort by figural aspects. When told there was an alternative way to sort pictures, the younger children seemed shocked and they reacted in disbelief as they sorted by story and subject. The youngsters then began to sort by color, position, size, subject, and realism. By the third week of sorting, the older subjects seemed consistent in looking for alternatives such as brush-strokes and the overall similarity of the paintings. Others looked for settings, themes, and textures of paintings. After each group was given three trials, they were post-tested. In this second post-test, the SG group decreased the number of correct stylistic responses while the FG group increased in the number of correct stylistic responses. Correct figural responses for the SG group increased while they decreased for the FG group. The FG group, noted Gardner, could

sort by stylistic features as well as the SG group, with the exception of the younger FG children. The younger children seemed inconsistent in their responses. The older children listened more attentively to directions and they became definitely sensitive to stylistic aspects of paintings. Gardner noted that pre-adolescents could learn to sort paintings by style in a consistent manner. He found that children who had a tendency to sort by stylistic features naturally improved dramatically in the amount of correct responses during the study. Gardner concluded that youngsters needed to disregard figural aspects of painting and should be taught how to develop an overall impression of the painting itself.[36]

In the initial part of their study, Howard and Judith Gardner had children ages six, eight, eleven, and twelve, view two reproductions of artist A and then they were to select other works of this artist from an array containing pictures by artists A, B, C, and D containing similar subject matter. Twenty such sets were created to contain diverse schools of art, subject matter, and artists. The younger children sorted by subject matter while the adolescents selected pictures on the basis of how the subject matter was presented in terms of composition and balance.

In the follow-up part of the study, subjects in first and sixth grades (n = 80) and college sophomores (n = 40) from a middle to upper middle class Boston area were individually shown eight sets

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[36] Howard Gardner, "The Development of Sensitivity to Figural and Stylistic Aspects of Paintings," The British Journal of Psychology 63 (November 1972): 605-615.

of pictures containing four postcard-size reproductions of paintings where two paintings were done by one artist and the other two by a second. The subjects were first told to sort the pictures on the basis of similarity. Several of the children tended to sort by subject matter. When the students were told to sort the pictures by artist, the younger children seemed insensitive to the new instructions. Subjects at or above the sixth grade level were able to take into account the new directions and they attempted to sort by artist. The Gardners concluded that while their older subjects could sort by artist, they did not have a natural tendency to do so.[37]

In an attempt to measure children's sensitivity to form and subject matter, the Gardners selected 20 sets of stimuli cards so that in each set of four pictures, two had obvious subject matter and two had a dominant figure (robin, horizon with birds, rose, floral arrangement on a table). Children ages five, seven, eleven, and nineteen (n = 100), volunteer subjects, were asked to sort the paintings into two piles on the basis of similarity. These researchers found that the younger children sorted by subject matter (robin and rose), pre-adolescents began to notice factors other than subject matter, and the majority of the adolescents sorted the pictures on the basis of formal aspects of painting style. The Gardners concluded that

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[37]Howard Gardner and Judith Gardner, "Developmental Trends in Sensitivity to Painting Style and Subject Matter," Studies in Art Education 12 (Fall 1970): 11-16.

children can and do comprehend other than subject matter in painting when sorting for similarity, especially as the subjects become older.[38]

Because Barry E. Moore hypothesized that children were trained in art to like what the experts and the adults did, his study was directed at finding how children, in individual interviews, responded verbally to selected pieces of art prior to any art training. In a pilot study children from the University of Illinois Saturday art classes in grades kindergarten/first (n = 20) and sixth/seventh (n - 16) responded orally to three reproductions of art. Moore categorized their responses as being objective (facts), associative (linking to personal past), subjective (a mood is aroused) and character expression (assigning human qualities). For the pilot study children, color was the most often mentioned factor; associative responses were made the with objective, subjective, and character-expression being second, third, and fourth types of comments. On the basis of the children's responses in the pilot study, Moore revised category definitions to encompass a wider range of verbal comments made by the children. The revised instrument was then used in the major part of his study. In the main study, first, fourth, seventh, tenth, and twelfth grade students without art training (n = 100), in individual interviews, responded verbally to sets of paintings. In each set, three styles of art were represented, namely representational (n = te), semi-abstract (n = 25), and non-representational (n = 22). There were no differences

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[38]Howard Gardner and Judith Gardner, "Developmental Trends in Sensitivity to Form and Subject Matter in Paintings," Studies in Art Education 15 (Winter 1973): 52-56.

in the responses made by girls and boys. However, there were differences in the types of statements made among the grade groups with the most notable changes in responses occurring between grades seven and ten and grades ten and twelve. The younger children made no subjective statements and although they made more objective remarks, this tendency decreased as grade placement increased. The younger children made more color statements, but again, this trend lessened with the age of the child. The older children made more subjective and character expression comments and as they became older they also tended to refer more to the whole painting in terms of style and theme. Seventh graders made more comments than any other grade group, boys made more statements than girls, and above the seventh grade all subjects tended to be less verbal. Children in the pilot group made more associative and objective responses while the students in the main study made more objective remarks. Moore attributed these findings and differences to the amount of art training received by the children in the pilot study. These findings may be seen as incomplete as the two groups of children were not the same as far as grade placement and the number of children interviewed.[39]

Five sets of six pictures the size of postcards were shown to children in fifth and sixth grades (n = 40) in Leni and Neil Salkind's study that attempted to measure children's aesthetic preference. The paintings selected were chosen for one of five subject matters and

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[39]Barry Edward Moore, "A Description of Children's Verbal Responses to Works of Art in Selected Grades One Through Twelve" (Ph.D. dissertation, The University of Urbana, Champaign, 1970).

for one of six art styles (from realistic to a complete removal of visual reality). The children were asked to state which picture in each set they liked. The Salkinds found that the majority of the children preferred pictures that were on the abstract end of the continuum. The experimenters hypothesized that this reaction was due to the abstract visuals found in the children's environment.[40]

Leo F. Twiggs study was aimed at measuring how three groups of disadvantaged eighth and ninth grade Black junior high school students (n = 167) reacted to three methods of art instruction. Students in the Criticism Group discussed the contents and meaning of paintings and they also shared their opinions of the art with each other. At first Twiggs found that this group was reluctant to speak up in class, ask questions, or to defend their opinions. However, by the end of the six weeks of having met for two 45-minute periods a week, the students became more verbal, more analytical, and more systematic in their approach to discussing art. The ninth graders became bored, however, by the end of the lesson. Twiggs figured that once the ninth graders had learned the process they did not want to keep doing it over and over. Students in the Traditional Group received lectures consisting of instructor description, analysis, interpretation, and history of the same paintings shown to the Criticism Group. Twiggs found this method to have little effect on the students and the students felt the method had little meaning for them. Students in the

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[40]Leni Salkind and Neil Salkind, "A Measure of Aesthetic Preference," Studies in Art Education 15 (Fall 1973): 21-27.

Control Group received no special attention. In the post-test Twiggs found that the Criticism Group responded more often, made longer comments, and were more systematic in evaluating paintings than any other group. For all groups, students had difficulty understanding many paintings because their personal background was so culturally different from what was portrayed in the paintings. The students responded more and were more interested in paintings containing Black subjects. Twiggs inferred that the Criticism Group was more successful because the students were allowed to use their own language and idioms when discussing the art and they probably would have been reluctant to do so if the assignment had been a written one.[41]

Children's Responses to Artist's Renditions

Bonnie Mellinger had a set of 18 pictures prepared to show in her study aimed at measuring children's preference for subject portrayal (realistic or conventionalized), picture color (black and white, two color, and three color). The content of the pictures (elephant, girl, and pine tree) was held constant, but it was depicted in various ways. First, third, and fifth graders (n = 795) from five school districts participated in the study. The pictures were shown two at a time in front of each of the classrooms and the children marked ballot sheets for the picture they liked best in each of 27 picture pairs. Although the majority of the children preferred the reaslistic style, the pine

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[41] Leo Franklin Twiggs, "The Effects of Teaching a Method of Art Criticism on the Aesthetic Responses of Culturally Disadvantaged Junior High School Students" (Ph.D. dissertation, The University of Georgia, 1970).

tree was the one subject that had a higher percentage of preference votes when done in a conventionalized style. Mellinger hypothesized this was because children often draw a pine tree in this manner. Although first graders preferred realistic pictures, they had the highest percentage of votes for any conventionalized pictures and fifth graders had the lowest percentage of votes for the conventionalized. Although all children preferred the three color pictures over the two color ones, they did not like the same subjects shown in the same number of colors. Black and white pictures were not generally preferred. Mellinger concluded that (1) children do have preferences for color and style, (2) age is a factor to consider for preference, and (3) the areas of preference should be further investigated in terms of color, detail, shading, and content. While Mellinger specifically selected her schools for the study (two private, one suburban-progressive and two public schools from blue collar areas), she did not suggest that her findings were in any way affected by environmental influences. It would have been interesting to this researcher to know whether or not the socioeconomic background of an individual influences his/her art preferences.[42]

When investigating what type of illustrative techniques children prefer, William Miller had 25 sets of seven pictures each created to control for subject matter (children and pets, children in action, children and toys, adults in action, and animals) and art

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[42]Bonnie Mellinger. Children's Interest in Pictures, No. 516 (New York: Bureau of Publications, Teachers College, Columbia University, 1932).

style (line drawing, full color, red as predominant color, blue as predominant color, wash drawing, and photograph). Children in grades one, two, and three (n = 100 per grade) were interviewed individually and asked to state their preference for one picture in each set. Miller found that 55 percent of the votes went for the full color reproductions while the red predominant and blue predominant and photographs rated as second choices; choice for red or blue pictures decreased with mental and chronological age. He noted that the other three styles received only an insignificant amount of votes. The photograph became more popular as the subjects' chronological and mental age increased and boys preferred photographs more than girls. Two months after the main study was conducted, Miller retested 50 randomly selected children from grades one and two. He found that this population was not consistent with their first preference choice. These subjects had a tendency to have an increased preference for full color reproductions and the photographs were selected more than the red predominant pictures--a reverse of the first study. Although the children were not consistent with their choices, the basic findings, according to Miller, were not altered to any degree as the children were still preferring the same types of illustration style.[43]

To control for subject matter, style, and color, the illustrations used in Mabel Rudisill's study were created to represent the types of illustrations usually found in children's books (uncolored

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[43]William Miller, "Picture Choices of Primary Grade Children," The Elementary School Journal 37 (December 1936): 273-282.

photograph, colored photograph, realistic colored drawing, outline drawing, unrealistically colored drawing). Five pairs of pictures representing three subjects and five styles were shown to children daily for six days. Children in kindergarten through sixth grade (n = approximately 1,050) noted their preference for pictures by circling numbers on a prepared ballot sheet. Talking about the pictures was allowed only after all voting was completed but not during the selection procedure. College students, college faculty, and town people (n = 725) were asked to vote for the pictures that they believed children ages six and seven would prefer. Rudisill found that children preferred pictures containing the most realistic treatment of the subject matter, even over the color presented. Adults, however, overemphasized children's preferences for color. When responding to the pictures, younger children had difficulty making and verbalizing their analysis. Older children (fourth through sixth graders) made comments such as "It looks funny, real, or it's not real." Rudisill only mentioned these verbal responses in passing. She had allowed the children to discuss their responses as a group so that children might have been influenced by one another. It would have been helpful to have a better control for the verbal responses, to have comments made by the adults, and to analyze these responses more carefully.[44]

John French had two sets of pictures designed to use when measuring children's preference for complexity of pictorial patterns.

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[44]Mabel Rudisill, "Children's Preferences for Color Versus Other Qualities in Illustrations," The Elementary School Journal 52 (April 1952): 444-451.

One set had complex designs and the other had simple designs that were similar to the art work of first graders. Subject matter in both sets were the same. French interviewed elementary teachers (n = 88), first graders (n = 142), and students in one elementary school kindergarten through sixth grade (n = 554). All subjects were asked to say which of the pictures in a complex-simple paired set they preferred. He found that a majority of the teachers preferred complex designs, first graders selected the simple ones, and children's preference for the picture patterns progressively changed from simple to complex and more like the adult choices as they became older. He concluded that children tended to be guided by the type of picture patterns they have drawn and seen in their own art work.[45]

Sixty nursery school children aged three through five were individually interviewed for Ruth Amsden's study that collected the children's responses to two sets of pictures created from two photographs of illustrations found in picture story books. During pre- and post-test sessions, children looked at twelve picture pairs and pointed to the one picture in each pair that they liked. Although the children seemed to be inconsistent in their picture choices between the pre- and post-test sessions, Amsden noted that children had a strong tendency to select the picture on the right and this increased with age; children liked light and dark shades of colors over saturated colors; they enjoyed pictures with three or four colors compared to those with one or two colors or those in black and white; and they preferred

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[45]John French, "Children's Preference for Pictures of Varied Complexity of Pictorial Pattern," The Elementary School Journal 53 (September 1952): 90-95.

black and white photographs over black and white line drawings. The preschoolers showed a strong liking for fanciful objects over modified realistic drawings and three-year olds preferred the modified realistic drawings while the five-year olds selected the realistic drawings. Amsden found that sex, socioeconomic background, and reading habits had no significant influences on children's preferences for pictures.[46]

While Amsden had a sound premise for her study, she did not seem to be measuring preference for certain variables. It would have been beneficial for this researcher if she had reported the specific colors children liked, the subject or content of the pictures, and what the children said, if they did verbally respond, about the pictures they were viewing.

Because John W. Stewig felt findings related to children's responses to illustrations present in children's picture books could not be generalized beyond the specific books, he had sets of illustrations made to control for color, shape, proportion, detail and space, all of which are usually found in illustrations in children's books. Groups of children in various grades (n = 1,078) were shown slides of sets of pictures and asked to record their preference for one illustration on a prepared answer sheet. Stewig found that older children preferred realistic color more than younger subjects and younger children liked pictures with fewer details and shallow space. He found that while boys preferred shallow space pictures, there were no other

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[46] Ruth Helen Amsden, "Children's Preferences in Picture Story Variables," The Journal of Educational Research 53 (April 1960): 309-312.

sex biases in liking a picture. Upper-class children chose detailed illustrations, middle-class subjects selected shallow space, but other than these factors, there were no other biases according to social class. White children preferred realistic color and flat shapes while Black students chose those with limited detail. No other racial biases were recorded.[47]

In Gerald Smerdon's study, 30 pairs of black and white slides of a castle, drawn in different styles of art from representational to expressionistic art, were shown to classrooms of British children (Infants, Juniors, Secondary, and School Leavers, n = 381), and they marked a ballot slip for the picture they preferred in each pair. The six pictures used in the study were among those juried by professional art teachers. In a practice session, children viewed five picture pair slides of a bird drawn in the same styles as the castle, then they moved on to the castle preference test. With the exception of the Infants, the children preferred pictures ranked most representational by the judges and rejected those ranked the most abstract. Infants preferred the drawings with few details, bold outlines, and simple representations. Smerdon's other findings indicated that the children's fourth picture was second choice for the judges and that sex and age did not appear to influence children's picture preference.[48]

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[47]John W. Stewig, "Children's Picture Preferences," Elementary English 51 (November-December 1974): 1012-1013.

[48]Gerald Smerdon, "Children's Preferences in Illustration," Children's Literature in Education 30 (Spring 1976): 17-31.

Children's Responses to Color and Other Response Factors

Color studies have been carried out for many years. As reported by Margaret Schallenberger, the first color experiments with children were conducted in Germany by Professor Preyer, in 1881. Preyer's studies were conducted to ascertain whether one child could distinguish and correctly name various colors. From that time forward, many researchers became involved in measuring children's ability to (1) select the named color from an array of colors, (2) name a given color, and (3) select the colors that appeal to them. In a review of the color research available in the late 1800s, Schallenberger harshly criticized the various investigators for conducting the experiments in a careless manner, for not having all the basic colors made available during testing, and for confusing color perception with color attractiveness, especially with children under four years of age.[49]

In a study conducted by W. H. Winch, color preferences of English children and adults were compared. Boys and girls, ages seven through fifteen (n = 2,214); adolescent males, ages fifteen through twenty (n = 21); adult males (n = 24); and women teachers (n = 41), were the subjects of the study. All subjects were shown color lists and they ordered their preferences for the six colors (red, blue, yellow, green, white, and black). For all children, blue was the first choice, red was second, and black was sixth. Adolescent boys, men, and women

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[49]Margaret Schallenberger, "Professor Baldwin's Method of Studying the Color Perceptions of Children," The American Journal of Psychology 8 (July 1897): 560-576.

agreed on black as their sixth choice. The young girls agreed with adolescent males more than any other group and with minor exceptions, the majority of all subjects preferred red as a second choice and black as sixth. Green was characterized by Winch as being possibly related to a person's high mental capabilities and those from good to high socioeconomic backgrounds as the children from wealthy areas preferred green as second while adults ranked it first through third. Winch felt that age, sex, socioeconomic area, and mental capabilities had an influence upon color preference. He suggested that children with high mental capabilities were rating colors much the same as adults with low mental abilities.[50]

In J. F. Dashiel's study, kindergarteners (n = 212) and college sophomores (n = 126), in individual interviews, selected their favorite color from six color cards and after that color was selected it was removed from sight. This procedure was followed until a rank preference was given to each color. The same method was used in displaying paired color combination cards. In the single color preference test, the preferences of the youngsters had low reliability as their rankings seemed indefinite. Tentatively stated, five-year olds liked, in order of preference, blue, red, yellow, violet, green, and orange. The college students liked, in order of preference, blue, red, green, violet, yellow, and orange. Clear-cut preferences and larger differences for preferences were more distinct for the college students

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[50]W. H. Winch, "Colour Preferences of School Children," British Journal of Psychology 3 (December 1909): 42-65.

compared to the youngsters. While there were a few variations in responses, the different sexes of both age groups tended to prefer the same colors. In the color combination test, the responses of the children indicated that there was little agreement for any one color combination and that the color combinations seemed to be valueless for them. Tentatively, red/green and red/blue were the top color combinations for the youngsters while the sophomores clearly preferred combinations of red/blue and yellow/violet with the former being the first choice of the men and the latter being the first choice of the women. Dashiel cautioned that his results could be deemed tentative as the kindergarteners seemed unorganized and without any aesthetic background. He noted that the other reason that their responses were so different was that the youngsters were very flexible and they had not begun to conform to society's pressure for convergent preferences as the college sophomores had done.[51]

Color preferences of full-blooded Indians (n = 559), Indians of mixed blood (n = 174) and Whites (n = 560) were measured in Thomas Garth's study conducted to ascertain whether color preferences were native or acquired. In classroom situations (fourth through tenth grade) each student was given an envelope contained seven color squares and they were to make a ballot sheet noting the order of color preferences. Full-blooded Indians preferred red, first; blue, second; violet, third; green, fourth; and yellow and white, sixth. Garth found it

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[51] J. F. Dashiel, "Children's Sense of Harmonies in Colors and Tones," The Journal of Experimental Psychology 2 (December 1917): 466-475.

difficult to draw comparisons between the full-blooded Indians and mixed-blood Indians as the latter had such a small population in his study. However, for the mixed-blood Indians and the Whites, red and blue were often preferred the most, with the Whites preferring yellow four times more than the full-blooded Indians and preferring green more than the Indians. Full-blooded Indians preferred red twice as much as Whites, and violet was selected more by the Indians. Between fourth and tenth grades the Whites seemed to lose a feeling of color appreciation while the full-blooded Indians did not appear to have such a regression in color preference. Garth noted that for all three groups there were definite color preferences, except for the colors white and yellow. The full-blooded Indians were more decided in color preferences; Whites were not as strong and the mixed-blood Indians appeared to be insecure about their color selections. While education did not appear to have an influence on color preference, Garth felt that environment did have an effect. In conclusion, Garth noted, "we may say that for them [full-blooded Indians] their preference tendencies, on the whole, are stubbornly native."[52]

This researcher feels that these conclusions should be evaluated within the time frame work in which this study was conducted. Should this 1921 study be replicated in the 1970s, the researcher's racial attitudes may be quite different and the stereotypic conclusion statements might be less in number.

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[52] Thomas Garth, "The Color Preferences of Five Hundred and Fifty-Nine Full-Blooded Indians," The Journal of Experimental Education 5 (December 1922): 392-418.

Full blooded Japanese children in first through tenth grades (n = 1,011) were individually shown seven color cards and they sorted them in order of their color preference in a study conducted by Thomas Garth, Hunihei Ikeda, and Roy Langton. Although girls in grades eight through ten were omitted from the study, the researchers noted that girls preferred red, boys liked blue. For all students, colors in order of preference were red, blue, violet, green, yellow, orange, and white. White was the last choice for grades one through six, yet it was first for seventh graders. Violet and green shared the same overall value with violet fluctuating with various grades. The researchers found that some children showed a sense of confusion when ranking colors and overall preference rankings were not far apart or distinct.[53]

In George Michael's study, second through ninth graders (n = 535) viewed a large circular color chart placed in front of their classrooms that had six pure colors on it and they listed, in order of preference, each color. First graders were individually interviewed and as their responses seemed to be inconsistent; their color preferences were not reported. The majority of the boys definitely preferred blue and red, and they soundly rejected yellow and green. Preferences for violet and orange were often contradictory as these colors were likely to be chosen for any position other than first choice. Using a population of fifth graders (n = 27) not in the first study, Michaels

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[53]Thomas Garth, Kunihei Ikeda, and Roy Langton, "The Color Preferences of Japanese Children," The Journal of Social Psychology 2 (1931): 397-401.

had the boys look at a list of color names and then write down the names in order of preference for the color. A week later the boys looked at the color chart and ranked colors according to preference. Michaels found no significant difference between the two procedures and he reported that this group did not respond significantly different from the children in the major study.[54]

Approximately 1,000 school children were exposed to seven color preference tests and three color discrimination tests in Mary Polson's study measuring children's reactions to color. In her stated conclusions, Polson noted that more than half of the children tested could not distinguish twelve variations in color hue. She found that the children appeared to have no preference for colors arranged by color scheme. Younger children could distinguish the basic colors; they showed a high level of spontaneity in making color reactions yet formal color theory was often confusing for them. The older school children had some discrimination of color hue after training, yet their reactions to color were less spontaneous than those of the younger children. Younger children preferred light values of colors while boys liked dark values. Overall, intense colors were preferred over grayed ones. Polson also found that boys were poorer in color discrimination than girls and that children from poor homes had more difficulty making color discriminations than did children from better homes.[55]

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[54]George Michaels, "Color Preference According to Age," The American Journal of Psychology 35 (January 1924): 79-87

[55]Mary Polson, "Color Reactions of School Children," The Journal of Home Economics 18 (June 1926): 299-302.

Polson did not report some important details about the procedures employed in her study, nor did she describe her sampling carefully. The ages of the children were never defined beyond being younger and older school children. With these limitations, it appears to this researcher that, as stated by Polson, these findings can only be considered as being tentative.

In a study measuring color preferences and associative word responses to color, Roy M. Dorcus devised two sets of color cards used in testing situations: Series I, six basic colors in differing saturation and brightness; Series II, the six colors from Series I in the same uniform color value. Fifteen cards with two colors per card were made for each series and these were shown to college men (n = 430) and women (n = 401); psychopathic men (n = 19) and women (n = 48); aged men (n = 15) and women (n = 25); and children aged eight through ten (boys, n = 150; girls, n = 147). Each person interviewed marked a ballot sheet for their preference in a pair, then the subjects were to state word associations for the colors. Dorcus found that color saturation had little influence on color preference order, yet red and yellow had a tendency to rate lower when unsaturated. Within the same groups (i.e., the college students), there was little change between color preference in the upper half of the order while the color preferences for those colors in the middle of the order were often different. Across groups the color preference orders were minimal in their differences. College students were more decided in making preference choices. After selecting colors from Series I and colors from Series II, an average

of 50 percent of the subjects reversed their first and second color preferences. When making word associations to colors, the subjects tended to make more associations for saturated colors with females making more comments, college students making more than other groups and that red, blue, and green drew more comments than any other colors. Dorcus noted that the word associations fell into eight distinct categories: natural objects, house furnishings, dress and apparel, descriptive words, repulsive words, edibles, miscellaneous objects, and words of emotional content. Females made more associations concerned with dress while the aged and the children seemed to lack imagination when making word associations; their responses often appeared to be stereotypic in nature. While the total population of males (n = 614) and females (n = 621) appeared to be close in size, Dorcus noted that certain tentative conclusions could be drawn from this data as the subgroups for each sex group were small in size or they were uneven.[56]

Children in grades three through eight (n = 521) marked ballots noting their preferences for colors, color combinations, and color arrangements in subtests in a study conducted by Alice Van Nice. Although there were some grade differences, the ratings for all grades were basically the same. Orange, red-violet, and purple were the first three color preferences while blue-green, violet, and yellow were seldom preferred. In color combination tests, preferences for

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[56] Roy M. Dorcus, "Color Preferences and Associations," The Pedagogical Seminary 33 (September 1926): 399-434.

yellow and violet together were the same across the grades. Complementary colors blue and orange were rated first while yellow and blue were second. Color triads ranked first were red/blue/green and red-orange/blue/green being second. Children generally preferred warm, bright colors and they rejected the grayed colors. Van Nice noted that near complementary colors red/green, red/orange, and blue/green were often preferred more than the true complementary colors.[57]

Before conducting his major study measuring elementary children's responses to color, Ambrose L. Corcoran ran a pilot study with nursery school children (n = 20). The children were to paint two pictures at two different easels where the paint jars were placed in different orders. In the first easel color order was red, yellow, blue, and black; 33 percent of the children selected black as the first color to use. In the second easel the color order was blue, black, red, and yellow; 44 percent of the children selected yellow first. When the children were retested later, the paint jars from the two trials were combined and twelve of the children painted in the sequence of the paint jars. While Corcoran did not prove that the use of color was influenced by order, he felt that left/right direction could have been an operating factor in his study. On the whole, the nursery school children seemed more concerned with the application of paint rather than selective discrimination of color.

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[57]Alice Van Nice, Children's Preferences for Color, Color Combinations, and Color Arrangements (Chicago: The University of Chicago Press, 1933).

In the major portion of his study, second through sixth grade children in group interviews and kindergarten through first grade children in individual interviews were tested on a Color Perception Inventory designed by Corcoran. On each of the six pages of the instrument, six of one kind of figure (house, table, boat, clown, dancer, pine) all in one row were shown in six different colors (red, orange, yellow, blue, green, and purple). The children (n = 584) answered color questions relating to preference, distance/perspective, and emotional characteristics. Color preferences for all children, in order of rank, were red, blue, yellow, green, orange, and purple. Corcoran noted that these were in a similar order to the "happy" colors of yellow, red, and blue. "Sad" colors were purple and black; "excited" colors were purple and orange, while blue and yellow were "calm" colors. Children in grades fourth and up increased their ability to discriminate emotional content of colors. Corcoran felt that selection of emotional qualities in color was dependent on learning and it was easier to do than noting "far away" or "close up" colors. Red and orange were "retreating" colors, purple and yellow were "retreating" colors, red and green were "expanding" colors, while yellow was a "contracting" color. Other findings were that red lost preference rank with increasing age; boys reacted more strongly to colors than did girls; and community environment did not seem to influence color choices.[58]

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[58] Ambrose L. Corcoran, "The Variability of Children's Responses to Color Stimuli" (Ed.D. dissertation, The Pennsylvania State College, 1953).

Children in first through twelfth grades (n = 1,000) marked ballots for a favorite color in paired combination color tests conducted in classrooms by Irvin Child, Jens Hansen, and Frederick Hornbeck. In the first test, 35 color pairs differed in hue. There was a high preference for the "cooler" hues for all children with more girls preferring the "cooler" hues. The age trends for hue preference indicated that the liking of "cool" hues increased with age; however, many of the first and second graders' preferences could not be tabulated as many had incomplete ballot slips. In the second test, eight paired combinations were shown where the saturation of color varied. The first through the fourth grade children preferred the saturated colors while between fourth and twelfth grades there was a decrease in the preference for the saturated colors. Fourth grade girls and boys agreed in color choices while there was a large degree of difference between girls and boys in the twelfth grade with the girls selecting the more saturated colors and often selecting red. In the third test, six paired combinations differed in color value. While girls of all ages tended to select colors with high value, there was a decrease in preference in these colors during high school. Generally boys seemed to be inconsistent when making color value preferences. In the fourth test, children were shown a two hue, two simple chroma color wheel. Children with increasing age tended to select colors on the basis of hue alone, yet this trend was less for the boys.[59]

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[59] Irvin L. Child, Jens A. Hansen, and Frederick W. Hornbeck, "Age and Sex Differences in Children's Color Preferences," Child Development 39 (March 1968): 237-247.

Children in grades four through sixth (n = 96), in individual interviews, viewed and responded to four maps in Jack Miller's study measuring children's responses to coloration of maps. Map one and two looked much like those found in geography text books with land elevation colored in yellow, green, and brown, with the water in blue. Map three land elevations were in non-conventional map colors of red, purple, pink, and brown with blue water. Map four had no land elevation marked as the land was pale yellow and the water was white. Miller found that children answered more questions about geography using map three as compared to maps one, two, and four. There was no significant difference in using map four compared to maps one and two. Miller attributed the children's success with map three to the innovative use of color as the geographical features were unmistakably contrasted in color. Miller felt the traditional softer hues did not help children sort out the needed information as easily as the brighter colors did.[60]

According to Guy Buswell, his study was the first of its kind where the eye movements of people looking at pictures were electronically photographed on moving film. He stated that the data he gathered furnished no indication, except through inferences drawn, regarding personal preferences for the pictures or the mental activities that occurred when looking at the pictures. However, the information he compiled did provide insight into the principal centers of interest in a picture measured by density plots of the eye fixation

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[60]Jack Miller, "Comparison of Conventional Subdued to Vivid Highly Contrasting Color Schemes for Elementary School Maps," The Journal of Geography 73 (March 1974): 41-45.

positions. Elementary students (n = 12), high school students (n = 44), art students from the Chicago Art Institute (n = 47), college students with some art training (n = 14), and other college students (n = 83) each viewed at least 21 of 50 photographic reproductions of various items ranging from museum pieces to dishes, architecture, furniture, and silhouettes. Buswell found that the eye moved with a series of short pauses over the major portion of the pictures and this survey-type looking occurred during the early part of viewing. The eye also moved with another series of fixations that were longer in duration and they covered a smaller area of the pictures. This examination looking at details generally happened at the latter part of picture viewing. Buswell found the longer a person viewed a picture, the duration of eye fixations increased; however, he felt the duration of fixations was due to the individual people and not due to the type of pictures in the study. Art students had shorter eye fixations (survey looking) than any other group. Sixth graders had eye fixation patterns similar to adults. Buswell concluded that data from his study provided objective evidence of how people look at centers of interest. He also hypothesized that the type of looking that people do when viewing a museum display was survey looking. Finally, Buswell cautioned that attention people paid to the centers of interest in a picture did not mean that the person approved of the artist's treatment of the subject matter.[61]

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[61]Guy Thomas Buswell, How People Look at Pictures (Chicago: The University of Chicago Press, 1935).

Fifteen third grade Caucasian males were the subjects in Grace Withers study measuring characteristics of pictures which attract and retain visual attention. In individual interviews, each child was placed before a rear projection screen and viewed, for six seconds each, 190 pairs of pictures. The pairs were made up of illustrations, one per book, taken from 20 easy picture books. Withers measured the amount of time the boys viewed the pictures, left to right eye fixations with a Russtrack Event Recorder. Clusters of pictures identified in the illustrations viewed for the longest were those that contained masculine, feminine, outdoor, and animal characteristics and had the colors red and blue in them. Other clusters not specifically viewed for any length of time included realistic and cartoon styles of art, mothering activities, threatening conditions, social aspects and strength. Withers felt that the relationships drawn in her study were weak due to the selection of the pictures. She also noted that the amount of time, 45 minutes per child, seemed too long for a testing situation. Withers stated that her results could not be generalized to a great extent as her population was rather limited and her results were not as conclusive as she desired. However, Withers did feel that she was successful in designing a method of determining characteristics which retain and attract children's visual attention.[62]

Four groups of subjects (first, third, and sixth graders, n = 90; non-art trained adults, n = 30; art trained adults, n = 30; and elementary

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[62]Grace Withers, "The Development of a Method of Determining Characteristics of Pictures Which Attract and Retain Visual Attention" (Ph.D. dissertation, The University of North Carolina, 1975).

teachers, n = 30) rated 45 pieces of art made by children in kindergarten through eighth grade in Roscoe Shields' study measuring preferences for child art. The child art, randomly selected from the Eighteenth National Nebraska Elementary All State Exhibit was rated on a five-point scale for those above first grade and a three-point scale for first graders and kindergarteners. Basically all raters placed the grade groups of child art in the same preference order with kindergarten art rated the lowest and seventh and eighth grade art ranked the highest. Shields felt this could possibly indicate a general tendency of aesthetic sensitivity. Sixth graders had lower preference scores for all child art as they rejected all kindergarten through sixth grade art and they were critical of anything not realistic. The art trained adults were in close agreement with the sixth graders in picture preference. First graders and teachers tended to agree on picture preference with the younger children appearing to like most everything and not rejecting much, and the teachers seemed very accepting of most art. The non-art trained adults had no difference in preference for kindergarten through fourth grade art, yet they differed significantly with the fifth through eighth grade art, preferring the latter more. As the age of the raters increased, preferences narrowed, and the older child art chosen was more complex and more representational. The art of the youngsters seemed more individual and less controlled by external rules of art training.[63]

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[63]Roscoe Lewis Shields, "A Study of Preferences of Children for Child Art as Related to the Preferences of Art Trained and Non-Art Trained Adults" (Ph.D. dissertation, Pennsylvania University, 1968).

Summary

In the review of the literature, this investigator noted that as early as the 1800s teachers, art educators, psychologists, and a host of others have been interested in finding out what sort of pictures children like. Children's responses to illustrations in text and trade picture books, gallery art, artist's renditions, color, and other related topics revealed that while children do have preferences for pictures, the research findings contradict each other as to specifically what appeals to children and what does not. Color, line, form, and subject matter in pictures have been noted as factors that could effect childrens' choices for one picture over another, but in many studies this information had been inferred. In most of the studies reviewed by this investigator, children indicated their preferences for pictures by pointing to them or by marking a ballot slip. Rarely were children given an opportunity to make a verbal or written response that would clarify their preferences for the researchers. In some studies children were specifically forbidden to make any comments, while in others, subjects could comment, but usually such responses were not included in any statistical analysis related to the factors under study.

Research findings indicated that children's preferences for pictures change as they become older, and by the time students are at or above the fifth grade level their preferences for styles of art were very similar to or were leaning toward the preferences of adults (from representationalism to some degree of abstraction). While it was noted

that young children would select abstract art, this tendency decreased with age and some educators noted that as the children became older they conformed to the preferences of adults. This process of conformity was often linked to the educational process and to family and societal influences, but some researchers suggested that the preferences for styles of art were probably due to a developmental rather than an environmental process. Other research reports indicated that children often preferred or responded primarily to the portrayal of the subject matter or content of an illustration, especially a realistic presentation, and color was often a secondary basis for selecting a picture. Again, it was thought to be a developmental process, as children at or above the fifth or sixth grade became more discriminating in their viewing and they began to note aspects of line, proportion and the mood in pictures; they began to discuss the properties of art that adults would. Again, this tendency was thought to be related to the educational process and family and societal influences.

Over the years very few studies have employed the art inherent in children's picture books as a source of research material. The studies on children's responses to book illustrations often seemed to be surface evaluations of children's preferences for pictures rather than attempting to ascertain what styles of art children like or dislike, what aspects of art appeal to children, and what styles of art children seem to understand. Many of the studies employing children's picture books reviewed seemed to limit their scope to color preferences or the usefulness of the illustrations themselves rather than measuring the children's responses to the total stylistic nature of the art.

Researchers have indicated that there is a need to further study children's preferences for styles of art, their acceptance of certain artistic styles and to examine children's understanding of artistic features such as line, movement, perspective, and the like. There is also the question of whether children should be matched to the art styles they like or whether they would be more accepting of different art if they had more encounters with the various styles of art.

CHAPTER III

DESIGN AND METHODOLOGY

This experimental study was designed to measure fifth graders' oral responses to three styles of art used to illustrate selected fairy tales. Two design features were incorporated in the experiment: randomization and control. Rationale for and clarity of responses to art styles used to illustrate children's picture books were measured by increased total verbal expression content scores and increased subtotals for that score in the subsections of style features, emotion, and the opinion of the artist's work.

The Design

The design for this experimental study was a Pre-Test/Post-Test/Control Group model. As outlined by Donald Campbell and Julian Stanley,[1] such a design has no fixed weaknesses in the control sources of Internal Validity. Graphically, Campbell and Stanley have noted the design as:

R O X O

R O O

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[1]Donald Campbell and Julian Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally College Publishing Co., 1963), pp. 8-24.

Groups of ten students each were randomly selected from six classrooms and each group was randomly assigned to either one of three treatment groups or one of the three control groups. The exposure time for the subjects of the treatment groups was held constant in the small group style study sessions. Those students assigned to the three treatment groups met with the investigator two hours a week for three weeks. Students in the designated control groups met with the investigator only at the pre- and post-test sessions. Each student in both the control and treatment groups met with this researcher for 20 minutes for the individual interviews that occurred during the pre- and post-test sessions.

To determine change in the students responses to the art styles used to illustrate fairy tales, students in the treatment groups were compared to students in the control groups. The design is summarized in the following table.

Table 1. Summary of the Basic Design of the Experiment

	Pre-Test	Style Study	Post-Test
Groups	20 Minutes Each	2 Hours Each	20 Minutes Each
Treatment A, C, E	X	X X X	X
Control B, D, F	X		X

The Population

The 59 fifth graders who participated in this study were selected from two elementary classrooms in each of three school districts located in a Western Michigan metropolitan area having a population of approximately 150,000 residents. Originally 60 children were selected and pre-tested; however, one student moved from the area. Making generalized geographic distinctions, District I (Schools A and B) represented a suburban area; District II (Schools C and D) a city area; and District III (Schools E and F) represented a county area. Superintendents or Curriculum Directors in each of the three districts selected the two elementary schools from their districts to be in the study and each of six building principals selected the one fifth-grade classroom in their building to participate in the study. This investigator randomly assigned one school from each district to be a control classroom and one school from each district to be a treatment classroom. Ten children from each of the six classrooms were then randomly selected by this investigator from enrollment lists provided by each classroom teacher. The treatment and control classrooms from each district were selected from different buildings to avoid interaction between the groups.

Classrooms in this study were those traditionally labeled as fifth grade, self-contained rooms. Although in some cases, the children changed rooms for reading or math, for all other subjects they remained in the same classroom for the entire day. Art classes in four of the six schools were taught by a certified art instructor. In these schools

children in one school had art classes held in their classroom while in three schools art classes met in rooms designed for art instruction. In two of the schools, classroom teachers taught art to the children while they were in their classrooms.

In District I (Schools A and B) children in both schools had been receiving art training in an art room from a certified art instructor for one 45-minute period a week since first grade. School A was a treatment group and School B was a control group. The School A area, as described by the building principal, was an average middle-class neighborhood with a lower-middle-class pocket. The area was balanced more toward a working-class population. The ten children, six boys and four girls, were all Caucasians. The School B area, as described by the building principal, contained a cross-section of the socioeconomic strata having a 10 percent population of upper- and upper-middle-class residents. This same area contained the largest Title One poverty pocket in the district. Of the ten children selected, five were boys and five were girls; all were Caucasians.

In District II (Schools C and D) children in both schools had been receiving art training from a certified art instructor for one 45-minute period per week since first grade. Students in School C met in their own classrooms for art instruction, while students in School D met in an art room. School C was a treatment group and School D was designated a control group. Described by the building principal, School C children were from a low socioeconomic Target area where the average family income ranged from $5,000 to $6,000. The fifth

graders selected from this school were engaged in a behavior modification program where they received token money for appropriate behaviors. This investigator did not carry this behavior modification program into the treatment group sessions. Of the ten children selected for the study only nine completed the treatment group sessions as one child moved from the area. Four of the children were boys, five were girls; five children were Black, three were Caucasians, and one child was Spanish American. As described by the building principal, School D contained a cross-section of the socioeconomic strata from upper-class to lower-class with the average socioeconomic status being middle- to upper-lower-class. Of the ten children selected, five were boys and five were girls; all children were Caucasians.

District III (Schools E and F) children, in both schools, had been receiving art instruction for one 45-minute period a week from a certified art instructor from first through third grades. Since that time, classroom teachers provided art instruction for different time periods during the year. School E was designated treatment group and School F was a control group. The School E area, as described by the building principal, consisted of a middle to lower socioeconomic population with the average status of the area being lower-middle to upper-lower class. Of the ten children selected, four were boys and six were girls; all were Caucasians. The School F area, as described by the building principal, consisted of a lower-middle-class population with 116 children out of 455 qualifying for the free lunch program. Of the ten children selected, five were boys and five were girls; nine were Caucasians and one was Black.

The following two tables summarize the information regarding the population randomly selected for this study. Table 2 outlines the approximate geographic locations of each school district within a larger metropolitan area, the treatment and control group assignments by schools, schools having art classes taught by certified art instructors, and the average socioeconomic status of each school as described by the six building principals. Table 3 summarizes the sample information by sex (the number of boys and girls for each school, for each building, and for the total sample) and race (the number of Caucasians, Blacks, and Spanish Americans for each district, for each school, and for the total sample).

Table 2. Group, Art Instruction, and Average Socioeconomic Status of Schools

District (Area) and School	Group	Art Instructor	Average Socioeconomic Status
District I (suburban)			
School A	treatment	X	middle-class
School B	control	X	middle to lower-middle-class
District II (city)			
School C	treatment	X	lower-class
School D	control	X	middle to lower-middle-class
District III (county)			
School E	treatment	--	lower-middle to upper-lower-class
School F	control	--	lower-middle-class

Table 3. Sample Information: Sex and Race

District and School	Boys	Girls	Caucasians	Blacks	Spanish Americans	Total
District I	11	9	20	0	0	n = 20
School A	6	4	10	0	0	
School B	5	5	10	0	0	
District II	9	10	13	5	1	n = 19
School C	4	5	3	5	1	
School D	5	5	10	0	0	
District III	9	11	19	1	0	n = 20
School E	4	6	10	0	0	
School F	5	5	9	1	0	
Total	29	30	52	6	1	n = 59

The Instrument

Development of the Instrument used in the experimental part of this study consisted of three phases. The categories included in the Instrument I constructed during Phase I, were based on information gleaned by this researcher as she read the professional literature and related research about responses to art and illustrations. Phase II consisted of the limited pilot study which was conducted to establish the feasibility of the instrument developed during Phase I. Phase III of developing the instrument consisted of determining the degree of inter-rater reliability of the instrument to be used in the experimental part of the study. The instruments developed during Phase I and Phase II are found in Appendix A. The instrument which was developed as a result of Phase III is found on pages 132-142 of this chapter.

Phase I of Developing the Instrument

The categories or division headings (style features, object/subject, compared ____ to ____, media/technique, emotions, opinion of the artist's work, characterization, and other reasons) were devised by this investigator to cover the various general art and style of art features. All subdivisions created a total verbal expression content score for each child interviewed. In each testing booklet there was one general question sheet and three specific question sheets: one for each style of art or picture pair viewed. Four preference/rejection question sheets were also included for each testing booklet to cover the child's preference, dislike, middle choice, and preference to buy a picture pair for all three styles of art or for all picture pairs viewed in the test. With one question difference, the pre-test and post-test instruments were identical. In the post-test booklet only, there was a question guide which pertained to aspects of the back-of-the-room books placed in all six classrooms in the study. This question guide accommodated the responses children gave to the number of books they had read and looked at, the styles of art they viewed, the artists represented in the collection of books, and their preference for the books placed in the classroom.

Within the instrument various key letters or initials were employed in the scoring:

(+) correct

(-) incorrect

(Y) yes

(N) no

IDK I don't know

NVR no verbal response

A representational style of art

B expressionistic style of art

C cartoon style of art

Phase II of Developing the Instrument

Prior to using the instrument with the fifth graders in the major portion of the study, a limited pilot study was conducted to (1) test the instrument, (2) estimate time factors, (3) clarify drawing instructions, and (4) clarify the investigator's monologue and other instructions. Art materials were tested and general directions were clarified during these sessions. Children received only the pre-test during these sessions and thus the limited pilot study could not be considered experimental in nature. The 20 children who participated in the limited pilot study were randomly selected from a team-taught classroom of 60 fifth graders. The limited pilot study was conducted in a school located in the central part of Michigan. This community consisted of people from a middle-class area and all the children in the limited pilot study were Caucasion. This group of children had received art instruction in their classroom from a trained art teacher for one hour a week for four years. Ten children in this group of 20 were randomly selected to participate in the small group style study sessions.

All 20 pre-test interviews from the limited pilot study were tape recorded. All the instruments/interviews were scored by this investigator and by another rater. The rater was a Ph.D. candidate in Reading and Children's Literature attending Michigan State University. She had completed course work in Illustrations in Children's Books, and she had taught Children's Literature at the undergraduate level. This rater also had experience as an elementary school teacher. After the instruments were scored by this investigator and the rater, significant changes were made to clarify factors, to increase the ease in scoring, and to cover a wider range of responses made by fifth graders.

Instrument Changes as a Result of the Pilot Study

The cover sheet. On the cover sheet (1) book information was categorized differently so the examiner could circle groupings rather than single letters and numbers for order of picture pair presentation; and (2) an "additional comment" box was added to permit the examiner to enter the child's testing behavior or other factors that might influence a child's performance during testing.

General question. The question originally stated *What can you tell me about these pictures?* often elicited remarks about the content of the pictures rather than comments about the art. Without being too leading, the question was reworded to: *What can you tell me about how these pictures were made?* This question now suggested that comments were to be directed at how the pictures were created.

Specific questions. Question 8 was reworded to sound more personal and to repeat the name of the style of art the child had given as an answer to question 7. The question, *Why did you give it that style name?* was changed to *If you were to explain to me what this style was, what would you tell me about the _____ style of art?*

Question 9 was reworded to sound more personal and the other items were used by the investigator to summarize the nature of the child's response. The question *How would you describe these pictures to someone who cannot see?* was changed to *How would you describe these pictures to me if I could not see?* Additional scoring information included: object, subject, color description, _____# color; style, technique, media.

Preference/rejection questions. Notation changes were made to include the letters that represented the styles of art in the picture pairs and "none" for the children who said they did not prefer any of the styles of art in the picture pairs.

Back-of-the-room books questions. The following changes were made in the back-of-the-room questions:

1. In questions 1, 3, and 7, phrases such as *back-of-the-room books* or *books in the back of your classroom* were changed to the phrase *the books I brought into your classroom.* The rewording was made because many classrooms have in-room libraries and often these books or classroom collections were in the back of a classroom. Children were confusing the books the experimenter brought in with those already there. Thus, the rewording.

2. Question 6 (on Instruments II and III, Question 8) *Why* was changed to *What was it about these books that you liked?* The rewording was made to clarify the question and to repeat the idea stated in question 5 on Instrument I (question 7 on Instruments II and III).

3. On Instrument II and III two questions were added to accommodate the children's response to the styles of art used in the illustrations in the back-of-the-room books and to the various artists who created the illustrations in these books: Question 5. *What are the names of the styles of art that were used in the pictures of these books?* and Question 6. *What are the names of the artists who illustrated or made the pictures in these books?*

General changes made for each instrument. The general changes made for each instrument are as follows:

1. The child's name was placed on every sheet in the instrument in case the sheets became separated.

2. The letters A, B, C, were placed on every question sheet to note which style of art was being discussed.

3. The numbers 1, 2, 3 were placed on every question to note what order each style of art was being discussed.

4. Instrument I contained three major categories: style features, media/technique, and characterization. Because the children in the pilot study answered with a wider range of comments that could be separately and distinctly categorized, five more subdivisions were created: object/subject, compared ____ to ____, emotions, overall opinion of the artist's work, and other reasons.

5. Classification additions on Instrument II necessitated moving some items from Instrument I to different subdivisions on Instrument II: Example, in Instrument I, style features (funny, scary) was changed and appears in Instrument II as Emotions (funny, scary).

6. Under each subdivision, additional factors were included to accommodate all those responses made by children. Changes included: presence, absence, or amount of an item, and "other" remarks for each feature or item in the subdivision.

7. Terms which were not used by children in the pilot study were omitted from the second instrument. The terms which were omitted from Instrument I were: Style (abstract, fantasy/pretend, unreal) and Media/Technique (collage).

8. The number of features or items under each subdivision was changed to include a wider range of items or possible responses and terms used by fifth graders: Example,

Instrument I

Style Features
____ color
___ true/real, distorted
____ name of specific color _____
____ line (bold/heavy, thin)
____ (too many, not enough, presence of)

Instrument II

Style Features
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true, real
____ distorted
____ specific _____
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence
____ smooth, wavy, jagged
____ other

Final changes in the instrument. Final changes (relatively minor) in the instrument were made to accommodate the scoring for some items in the style features subdivision because some of the raters said they had difficulty entering the number of responses a child made for the item as well as the subitems. The basic changes were made in the placement of the lines in front of the subitems. The rater could score the subitems and then place a total for the subitems under a subdivision: Example,

Instrument II

Style Features
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true, real
____ distorted
____ specific _____
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence
____ smooth, wavy, jagged
____ other

Instrument III

Style Features
____ color
____ colorful, presence, not colorful
____ lights and darks, shading
____ true, real
____ distorted
____ specific _____
____ other
____ line
____ bold, heavy, thick
____ thin, skinny
____ smooth, wavy, jagged
____ other

Phase III of Developing the Instrument:
Establishing Inter-Rater Reliability

Instrument II was scored by this investigator and four other raters using three pre-test taped interviews randomly selected by this investigator from the group of 20 tapes in the limited pilot study. Three of the four raters were Ph.D. candidates in the fields of Children's Literature, Reading and Language Arts, attending Michigan State University. Three raters completed course work in Illustrations in Children's Literature and taught courses in Children's Literature at the graduate and undergraduate level. One rater held a degree in Art History from the University of Michigan. All four raters had elementary classroom teaching experience. The rater who participated in the limited pilot study was not one of the raters who helped to establish the reliability of the revised instrument.

The Coefficient Alpha (α), a generalization of the Kuder-Richardson 20 formula, was used to compute the inter-rater reliability of the instrument to be used in the experimental part of this study. This particular formula was employed because the Total Verbal Expression Content scores for the three students could take on a range of values.

The Coefficient Alpha (α) Formula

$$\alpha = \frac{n}{n-1}\left[1 - \frac{\Sigma S_i^2}{S_x^2}\right]$$

n = independent ratings of a performance;

S_i^2 = variance of student score from a particular rater;

ΣS_i^2 = sum of rater variances; variances for all raters; and

S_x^2 = variance of the sums of the ratings for all raters.[2]

Five raters (this researcher and four others) used Instrument II to rate the single performances of three children tested in the limited pilot study interviews. These interviews were tape recorded and each rater listened to the same three tapes.

In Tables 4, 5, and 6, the three pilot study interviewed students were identified by letters A, B, and C, and the five raters were labeled R1 (this researcher), R2, R3, R4, and R5. The figures in the body of the tables were the Verbal Expression Content scores for the three interviewed students.

Verbal Expression Content scores--scores and tables. Total Verbal Expression Content points for each of the three students scored by Rater 1, this researcher, were 42 for student A; 33 for student B; and 30 for student C. Scored by Rater 2, student A received 39 points; student B received 38; and student C received 28. Total points scored by Rater 3 for student A were 42; 29 for student B; and 31 for student C. Scored by Rater 4, student A received 42 points; student B received 34; and student C received 30. Rater 5 tabulated 44 points for student A; 40 for student B; and 29 for student C.

Total Verbal Expression Content points calculated by all five raters for each student were: 209 for student A; 184 for student B; and 148 for student C.

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[2]William A. Mehrens and Irvin J. Lehmann, Measurement and Evaluation in Education and Psychology (New York: Holt, Rinehart and Winston, Inc., 1969), p. 113.

Total Verbal Expression Content points for the three students were scored 105 by Rater 1; 105 by Rater 2; 112 by Rater 3; 106 by Rater 4; and 113 by Rater 5. The total points for all three students scored by all five raters were 541.

Table 4 summarizes the scores for three students (A, B, and C) scored by five raters (R1--this researcher, R2, R3, R4, and R5). The figures in the body of the table were the Total Verbal Expression Content scores for the three interviewed students.

Table 4. Verbal Expression Content Scores and Totals

	Interviewed Students			
Raters	A	B	C	Totals
1	42	33	30	105
2	39	38	28	105
3	42	39	31	112
4	42	34	30	106
5	44	40	29	113
Totals	209	184	148	541

Verbal Expression Content scores: Squares and Totals. For the purpose of mathematical computations, the individual scores for the three students and the total rater scores were squared. Squared Total Verbal Expression Content points for student A were scored 1,764 by Rater 1; 1,521 by Rater 2; 1,764 by Rater 3; 1,764 by Rater 4; and 1,936 by Rater 5. Squared Total Verbal Expression Content points for

student B were scored 1,089 by Rater 1; 1,444 by Rater 2; 1,521 by Rater 3; 1,156 by Rater 4; and 1,600 by Rater 5. Squared Total Verbal Expression Content points for student C were scored 900 by Rater 1; 784 by Rater 2; 961 by Rater 3; 900 by Rater 4; and 841 by Rater 5.

Squared Total Verbal Expression Content scores calculated by all five raters for all three students were 43,681 points for student A; 33,856 for student B; and 21,904 for student C.

Squared Total verbal Expression Content points for all three students were scored 11,025 points by Rater 1; 11,025 by Rater 2; 12,544 by Rater 3; 11,236 by Rater 4; and 12,769 by Rater 5. Total squared points for all three students by all five raters were 58,599.

Table 5 summarizes the Squared Total Verbal Expression Content scores for three students (A, B, and C) rated by five raters (R1--this investigator, R2, R3, R4, and R5). The figures in the body of this table were the Squared Total Verbal Expression Content scores for the three interviewed students.

Table 5. Squared Total Verbal Expression Content Scores and Totals

	Interviewed Students			
Raters	A	B	C	Totals
1	1,764	1,089	900	11,025
2	1,521	1,444	784	11,025
3	1,764	1,521	961	12,544
4	1,764	1,156	900	11,236
5	1,936	1,600	841	12,769
Totals	43,681	33,856	21,904	58,599

Sums of Squared Total Verbal Expression Content scores and totals. Various totals to be used in the Coefficient Alpha (α) formula: (1) The total of the Squared Verbal Expression Content scores, tabulated by the five raters was 99,441; (2) The Squared Total Verbal Expression Content scores for all three students, or the total of the figures in the body of Table was 19,445; and (3) The total of the Total Verbal Expression Content Scores for the three students tabulated by five raters was 58,599. This information is summarized in Table 6.

Table 6. Sum of Squared Total Verbal Expression Content Scores and Tables

1. Five rater scores squared	99,441
2. Three student totals squared	19,945
3. Five rater totals squared	58,599

Variances. Using the Coefficient Alpha (α) Formula, the aforementioned scores were inserted into the formula and an inter-rater reliability coefficient of .976 was computed.

Total Scores:

$$\frac{99,441}{3} - \frac{541^2}{3^2} = \frac{9,441}{3} - \frac{292,681}{9} = 33,147 - 32,529.111$$

$$= 626.889.$$

Sum of Item:

$$\frac{19,945}{3} = \frac{58,599}{3^2} = \frac{19,945}{3} - \frac{58,599}{9} = 6,648.333 - 6,511$$

$$= 137.333.$$

The Reliability: The Coefficient Alpha (α) Formula.

$$\alpha = \frac{n}{n-1}\left[1 - \frac{\Sigma S_i^2}{S_x^2}\right] = \frac{5}{4}\left[1 - \frac{137.333}{626.889}\right]$$

$$= 1.25\left[1 - .219\right]$$

$$= 1.25 \times .781$$

$$= .976.$$

For this particular instrument, the inter-rater reliability at a .976 for the Total Verbal Expression Content scores was quite high since it very nearly approaches 1, and it indicated that the five raters shared agreement in the manner in which the student interviews were to have been scored.

Subsection Inter-Rater Reliability

Inter-rater reliability was also estimated for each subsection of the Total Verbal Expression Content score for each student. While the inter-rater reliability at a .976 for the total instrument was quite high, it should be noted that not all the raters agreed to such a high degree when inter-rater reliability was measured for each of the

subsections of the instrument. Using the Coefficient Alpha (α) Formula for estimating multiple ratings of the same performance, each subsection was rated where the three pilot study interviewed students were identified by the letters A, B, and C, and the five raters were labeled R1 (this investigator), R2, R3, R4, and R5. The figures in the body of Tables 7 through 14 were the total scores for the particular subsections of the instrument.

Style subsection of the instrument. An inter-rater reliability of .888 was reported for the style subsection of the instrument. Style points reported for student A were 14 points scored by Rater 1; 11 scored by Rater 2; 15 scored by Rater 3; 14 scored by Rater 4; and 13 scored by Rater 5. Total style scores for student A scored by all five raters were 67 points. Style points reported for student B were 12 points scored by Rater 1; 12 scored by Rater 2; 13 scored by Rater 3; 11 scored by Rater 4; and 11 scored by Rater 5. Total style points for student B scored by all five raters was 59. Style points for student C were 10 points scored by Rater 1; 11 scored by Rater 2; 10 scored by Rater 3; 10 scored by Rater 4; and 10 scored by Rater 5. Total style points for student C scored by all five raters was 52.

Total style points reported for all three students scored by Rater 1 were 36; 34 scored by Rater 2; 38 scored by Rater 3; 35 scored by Rater 4; and 35 scored by Rater 5. Thus the total style points for all three students scored by all five raters were 178.

The aforementioned information regarding style scores is summarized in Table 7.

Table 7. Style Subsection Verbal Expression Content Scores

	Interviewed Students			
Raters	A	B	C	Totals
1	14	12	10	36
2	11	12	11	34
3	15	13	10	38
4	14	11	10	35
5	13	11	11	35
Totals	67	59	52	178

α = .888.

Object/subject description subsection of the instrument. An inter-rater reliability of .954 was reported for the object/subject description subsection of the instrument. Object/subject points for student A were 2 points scored by Rater 1; 3 scored by Rater 2; 2 scored by Rater 3; 2 scored by Rater 4; and 2 scored by Rater 5. Total object/subject points reported for tudent A rated by five raters were 11. Object/subject points for student B were 7 scored by Rater 1; 12 scored by Rater 2; 10 scored by Rater 3; 7 scored by Rater 4; and 7 scored by Rater 5. Total object/subject points reported for student B rated by five raters were 43. Object/subject points for student C were 6 scored by Rater 1; 4 scored by Rater 2; 7 scored by Rater 3; 6 scored by Rater 4; and 4 scored by Rater 5. Total object/subject points reported for student C by five raters were 27.

The total object/subject description points for all three students scored by Rater 1 was 15; 19 scored by Rater 2; 19 scored by Rater 3; 15 scored by Rater 4; and 13 scored by Rater 5. Thus, the total of the points for all three students scored by five raters was 81.

The aforementioned information regarding object/subject description scores is summarized in Table 8.

Table 8. Object/Subject Description Verbal Expression Content Scores

	Interviewed Students			
Raters	A	B	C	Totals
1	2	7	6	15
2	3	12	4	19
3	2	10	7	19
4	2	7	6	15
5	2	7	4	13
Totals	11	43	27	81

α = .954.

Compare _____ to _____ subsection of the instrument. An inter-rater reliability of .790 was reported for the comparison (compare ____ to ____) subsection of the instrument. Comparison points for student A were 7 points scored by Rater 1; 7 scored by Rater 2; 7 scored by Rater 3; 7 scored by Rater 4; and 7 scored by Rater 5. Total comparison points reported for student A scored by all five raters were 35. For student B comparison points were 6 points scored by Rater 1; 5 scored

by Rater 2; 7 scored by Rater 3; 6 scored by Rater 4; and 5 scored by Rater 5. Total comparison points reported for student B scored by all five raters were 29. Comparison points for student C were 6 points scored by Rater 1; 4 scored by Rater 2; 7 scored by Rater 3; 6 scored by Rater 4; and 2 scored by Rater 5. Total comparison points reported for student C scored by all five raters were 25.

The total comparison points reported for all three students scored by Rater 1 were 19; 16 points scored by Rater 2; 21 scored by Rater 3; 19 scored by Rater 4; and 14 scored by Rater 5. Thus, the total comparison points reported for all three students scored by all five raters were 89.

The aforementioned information regarding comparison scores is summarized in Table 9.

Table 9. Comparison Verbal Expression Content Scores

	Interviewed Students			
Raters	A	B	C	Totals
1	7	6	6	19
2	7	5	4	16
3	7	7	7	21
4	7	6	6	19
5	7	5	2	14
Totals	35	29	25	89

α = .790.

Media/technique subsection of the instrument. An inter-rater reliability of .985 was reported for the media/technique subsection of the instrument. Media/technique points for student A were 6 points scored by Rater 1; 6 scored by Rater 2; 6 scored by Rater 3; 6 scored by Rater 4; and 11 scored by Rater 5. Total media/technique points for student A scored by all five raters were 35. Media/technique points reported for student B were 1 point scored by Rater 1; 2 scored by Rater 2; 1 scored by Rater 3; 1 scored by Rater 4; and 3 scored by Rater 5. Total media/technique points reported for student B scored by all five raters were 8. Media/technique points reported for student C were 0 points scored by Rater 1; 0 scored by Rater 2; 0 scored by Rater 3; 0 scored by Rater 4; and 1 scored by Rater 5. Total media/technique points reported for student C scored by all five raters were 1.

The total media/technique points reported for all three students scored by Rater 1 were 7; 8 points scored by Rater 2; 7 scored by Rater 3; 7 scored by Rater 4; and 7 scored by Rater 5. Thus, the total media/technique points reported for all three students scored by all five raters were 44.

The aforementioned information regarding media/technique scores is summarized in Table 10.

Table 10. Media/Technique Verbal Expression Content Scores

	Interviewed Students			
Raters	A	B	C	Totals
1	6	1	0	7
2	6	2	0	8
3	6	1	0	7
4	6	1	0	7
5	11	3	1	15
Totals	35	8	1	44

α = .985.

Emotion subsection of the instrument. An inter-rater reliability of .995 was reported for the emotion subsection of the instrument. Emotion points for student A were 6 scored by Rater 1; 6 scored by Rater 2; 6 scored by Rater 3; 6 scored by Rater 4; and 6 scored by Rater 5. Total emotion points reported for student A scored by all five raters were 39. Emotion points for student B were 1 point scored by Rater 1; 2 points scored by Rater 2; 1 scored by Rater 3; 1 scored by Rater 4; and 3 scored by Rater 5. Total emotion points reported for student B scored by all five raters were 8. For student C emotion points were 0 scored by Rater 1; 0 scored by Rater 2; 0 scored by Rater 3; 0 scored by Rater 4; and 0 scored by Rater 5. Total emotion points for student C scored by all five raters were 0.

The total emotion points reported for all three students scored by Rater 1 were 7; 8 points scored by Rater 2; 7 scored by Rater 3; 7 scored by Rater 4; and 9 scored by Rater 5. Thus, the total emotion points reported for all three students scored by all five raters were 38.

The aforementioned information regarding emotion scores is summarized in Table 11.

Table 11. Emotion Verbal Expression Content Scores

	Interviewed Students			
Raters	A	B	C	Totals
1	6	1	0	7
2	6	2	0	8
3	6	1	0	7
4	6	1	0	7
5	6	3	0	9
Totals	30	8	0	38

α = .995.

Opinion of the artist's work subsection of the instrument. An inter-rater reliability of .968 was reported for the opinion of the artist's work (opinion) subsection of the instrument. Opinion points for student A were 3 scored by Rater 1; 3 scored by Rater 2; 3 scored by Rater 3; 3 scored by Rater 4; and 5 scored by Rater 5. Total opinion points for student A scored by all five raters were 17.

Opinion points reported for student B were 5 scored by Rater 1; 5 scored by Rater 2; 6 scored by Rater 3; 5 scored by Rater 4; and 6 scored by Rater 5. Total opinion points for student B scored by all five raters were 27. Opinion points for student C were 3 scored by Rater 1; 3 scored by Rater 2; 3 scored by Rater 3; 3 scored by Rater 4; and 3 scored by Rater 5. Total opinion points for student C scored by all five raters were 15.

The total opinion points reported for all three students scored by Rater 1 were 11; 11 points scored by Rater 2; 12 scored by Rater 3; 11 scored by Rater 4; and 14 scored by Rater 5. Thus, the total opinion points reported for all three students scored by all five raters were 59.

The aforementioned information regarding opinion scores is summarized in Table 12.

Table 12. Opinion of the Artist's Work Verbal Expression Content Scores

	Interviewed Students			
Raters	A	B	C	Totals
1	3	5	3	11
2	3	5	3	11
3	3	6	3	12
4	3	5	3	11
5	5	6	3	14
Totals	17	27	15	59

α = .874.

Characterization subsection of the instrument. An inter-rater reliability of a .874 was reported for the characterization subsection of the instrument. Characterization points for student A were 1 scored by Rater 1; 1 scored by Rater 2; 1 scored by Rater 3; 1 scored by Rater 4; and 0 scored by Rater 5. Total characterization points for student A scored by all five raters were 4. Characterization points for student B were 0 scored by Rater 1; 0 scored by Rater 2; 0 scored by Rater 3; 1 scored by Rater 4; and 0 scored by Rater 5. Total characterization points for student B scored by all five raters were 1. Characterization points for student C were 1 scored by Rater 1; 1 scored by Rater 2; 1 scored by Rater 3; 1 scored by Rater 4; and 1 scored by Rater 5. Total characterization points for student C scored by all five raters were 5.

Total characterization points reported for all three students scored by Rater 1 were 2; 2 scored by Rater 2; 2 scored by Rater 3; 3 scored by Rater 4; and 1 scored by Rater 5. Thus the total characterization points reported for all three students scored by all five raters were 10.

The aforementioned information regarding characterization scores is summarized in Table 13.

Table 13. Characterization Verbal Expression Content Scores

Raters	Interviewed Students A	B	C	Totals
1	1	0	1	2
2	1	0	1	2
3	1	0	1	2
4	1	1	1	3
5	0	0	1	1
Totals	4	1	5	10

α = .874.

Other reasons subsection of the instrument. An inter-rater reliability of a .834 was reported for the other reasons subsection (reasons) of this instrument. Reasons points for student A were 0 scored by Rater 1; 0 scored by Rater 2; 0 scored by Rater 3; 0 scored by Rater 4; and 0 scored by Rater 5. Total reasons points for student A scored by all five raters were 0. Reasons points for student B were 0 scored by Rater 1; 0 scored by Rater 2; 0 scored by Rater 3; 1 scored by Rater 4; and 4 scored by Rater 5. Total reasons points for student B scored by all five raters were 5. Reasons points for student C were 2 scored by Rater 1; 1 scored by Rater 2; 1 scored by Rater 3; 2 scored by Rater 4; and 4 scored by Rater 5. Total reasons points for student C scored by all five raters were 10.

Total reasons points reported for all three students scored by Rater 1 were 2; 1 scored by Rater 2; 1 scored by Rater 3; 3 scored by Rater 4; and 8 scored by Rater 5. Thus, the total reasons points reported for all three students scored by all five raters were 15.

The aforementioned information regarding other reasons scores is summarized in Table 14.

Table 14. Other Reasons Verbal Expression Content Scores

	Interviewed Students			
Raters	A	B	C	Totals
1	0	0	2	2
2	0	0	1	1
3	0	0	1	1
4	0	1	2	3
5	0	4	4	8
Totals	0	5	10	15

α = .834.

Summary of inter-rater reliability. The Coefficient Alpha (α), a generalization of the Kuder-Richardson 20 formula, was used to compute the inter-rater reliability of the various subsections of the instrument to be used in the experimental part of this study. While the total instrument inter-rater reliability was reported as being .976, there was some variety in the inter-rater reliabilities for the different subsections of the instrument. The style subsection had an inter-rater

reliability for the five raters of .888, a .954 for the object/subject subsection; a .790 for the comparison subsection; a .985 for the media/technique subsection; a .995 for the emotions subsection; a .968 for the opinion of the artist's work subsection; a .874 for the characterization subsection; and a .834 for the other reasons subsection of the instrument.

The various inter-rater reliability scores for each subsection of the total verbal expression content scores were within reasonable intervals of reliability for this instrument as they were above a .75 and many nearly approached 1. With the comparison subsection inter-rater reliability of a .790, one could deem that the subsection scoring did not agree as much as did the scoring for the object/subject subsection with an inter-rater reliability of a .954. These levels, however, of inter-rater reliability indicated that this investigator (Rater 1) and four other raters basically shared agreement in the manner in which the student interviews were to have been scored. Table 15 summarizes the inter-rater reliability information.

Table 15. Inter-Rater Reliability for the Instrument and for Subsections of the Instrument

Verbal Expression Content Scores Subsections	Inter-Rater Reliability (α)
Style	.888
Object/subject	.954
Compare ___ to ___	.790
Media/technique	.985
Emotions	.995
Opinion of the artist's work	.968
Characterization	.974
Other reasons	.834
For the total instrument	.976

Instrument III: The Testing Booklet

The text of the revised Instrument III used during the pre-test and post-test in this study is seen as a shortened form. In actuality, each pre-test testing booklet contained three general question sets (one for each of the three styles of art viewed), three specific question sets (one for each of three styles of art viewed) and one preference/rejection question set. The post-test testing booklet contained three general question sets, three specific question sets, one preference/rejection set, and one back-of-the-room question set.

The photographs following the text portion of the instrument were those picture pairs children viewed when answering question sets about representational, expressionistic, and cartoon styles of art. Two sets of picture pairs were used in the instrument: illustrations for three versions of Little Red Riding Hood in the pre-test and

and illustrations for three versions of Rumpelstiltskin for the post-test. A total of three picture pairs of six pictures illustrated by three artists using one of three styles of art (representational, expressionistic, and cartoon styles) were shown to children in each of the pre- and post-tests.

Pre-test pictures (Illustrations 1 and 2), found on pages 143 and 145, from Little Red Riding Hood, were illustrated in the representational style of art by Elizabeth Orton Jones. Pre-test pictures (Illustrations 3 and 4), found on pages 147 and 149, from Little Red Cap, were illustrated in the expressionistic style of art by Susan Blair. Pre-test pictures (Illustrations 5 and 6), found on pages 151 and 153, were from Red Riding Hood and were illustrated in the cartoon style by Edward Gorey.

Post-test pictures (Illustrations 7 and 8), found on pages 155 and 157, from the story "Rumpelstiltskin" in The Golden Book of Grimm's Fairy Tales were illustrated in the representational style of art by Benvenuiti. Post-test pictures (Illustrations 9 and 10), found on pages 159 and 161, were from Duffy and the Devil and were illustrated in the expressionistic style of art by Margot Zemach. Post-test pictures (Illustrations 11 and 12), found on pages 163 and 165, from Rumpelstiltskin were illustrated in the cartoon style of art by Edward Gorey.

INTERVIEW BOOKLET III

PERSONAL INFORMATION

Name _____ Birthdate _____

Age _____

School _____ Teacher _____

Sex F M E/R _____

Interview Number _____/10

Treatment Control

BOOK INFORMATION

Book and Order

I	II	III
A-1	B-1	C-1
B-2	C-2	A-2
C-3	A-3	B-3

Picture Pair Order

I	II	III
I-1	II-1	III-1
II-2	III-2	I-2
III-3	I-3	II-3

Additional Comments

Pre-test Post-test

Date _____

GENERAL QUESTION

Name _____ School _____ Book A B C Order 1 2 3

What can you tell me about how these pictures were made?

STYLE FEATURES

____ action
____ presence, lots, none
____ other
____ cartoon, caricature
____ other
____ color
____ colorful, presence, not colorful
____ lights and darks, shading
____ true, real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line
____ bold, heavy, thick
____ thin, skinny
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective
____ lack of, presence
____ true, distorted
____ foreground, background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of object/subject
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ not well done, bad
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ would look good in my bedroom or other part of the house
____ my parents would let me have this
____ I can draw like this (or someone else can)
____ I like it
____ other

SPECIFIC QUESTIONS

Name _____ School _____ Book A B C Order 1 2 3

Have you ever seen any of these pictures? Y N IDK NVR

1. Has anyone told you the name of the person who made these pictures? Y N IDK NVR
2. Do you know the name of the artist who made these pictures? Y N IDK NVR
3. What is the name? _____ + - IDK NVR

STYLE

4. Has anyone told you the name of the style of art in these pictures? Y N IDK NVR
5. Child asks: What does style mean? Y N
6. What is the name of the style of art in these pictures? _____ + - IDK NVR
7. If there were a name for the style of art in these pictures, what would it be? _____ + - IDK NVR
8. If you were to explain to me what this style was, what would you tell me about the _____ style of art? IDK NVR

STYLE FEATURES

____ action
- ____ presence, lots, none
- ____ other

____ cartoon, caricature
- ____ other

____ color
- ____ colorful, presence, not colorful
- ____ lights and darks, shading
- ____ true, real
- ____ distorted
- ____ specific _____
- ____ other

____ distortion (faces, figures, objects)
- ____ other

____ line
- ____ bold, heavy, thick
- ____ thin, kinny
- ____ smooth, wavy, jagged
- ____ other

____ outline (presence, heavy, thin, color)
- ____ other

____ perspective
- ____ lack of, presence
- ____ true, distorted
- ____ foreground, background
- ____ closeup, far away
- ____ other

____ real/true depiction
- ____ other

____ not real in depiction
- ____ other

OBJECT/SUBJECT

____ description of object/subject
- ____ main character
- ____ clothing
- ____ face
- ____ body
- ____ scenery, furniture
- ____ other

COMPARED _____ TO _____

____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ not well done, bad
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ would look good in my bedroom (or other part of the house)
____ my parents would let me have this
____ I can draw like this (or someone else can)
____ I like it
____ other

SPECIFIC QUESTIONS--page 2

Name _____

9. How would you describe these pictures to me if I could not see? IDK NVR

(object, subject, color description)
(media, technique, style) #_____ color

_____
_____
_____
_____
_____
_____
_____
_____

10. Have you seen other books with pictures done in this way? Y N IDK NVR

11. What are the book titles or what are the stories about in these other books? IDK NVR

_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -

12. Have you seen other books with pictures made by this artist? Y N IDK NVR

13. What are the book titles or what are the stories about in these other books? IDK NVR

_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -

PREFERENCE/REJECTION QUESTIONS

Name _____

Book A B C Order 1 2 3

1. Of all the pictures you have seen today, which set do you like best?

A B C IDK NVR None

2. Why? IDK NVR

STYLE FEATURES

____ action
____ presence, lots, none
____ other
____ cartoon, caricature
____ other
____ color
____ colorful, presence, not colorful
____ lights and darks, shading
____ true, real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line
____ bold, heavy, thick
____ thin, skinny
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective
____ lack of, presence
____ true, distorted
____ foreground, background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of object/subject
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull, interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ not well done, bad
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ would look good in my bedroom (or other part of the house)
____ my parents would let me have this
____ I can draw like this (or someone else can)
____ I like it
____ other

PREFERENCE/REJECTION QUESTIONS--page 2

Name _____

3. Of all the pictures you have seen today, which set do you dislike?

A B C IDK NVR None

4. Why? IDK NVR

STYLE FEATURES

____ action
____ presence, lots, none
____ other
____ cartoon, caricature
____ other
____ color
____ colorful, presence, not colorful
____ lights and darks, shading
____ true, real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line
____ bold, heavy, thick
____ thin, skinny
____ smooth, wavy, jagged
____ other
____ outline
____ other
____ perspective
____ lack of, presence
____ true, distorted
____ foreground, background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of object/subject
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull, interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ not well done, bad
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ would look good in my bedroom (or other part of the house)
____ my parents would let me have this
____ I can draw like this (or someone else can)
____ I like it
____ other

Name _____

5. Are there any you like as much as another?

		Y	N	IDK	NVR
What are they?	A	B	C	IDK	NVR

6. Why? IDK NVR

STYLE FEATURES

____ action
- ____ presence, lots, none
- ____ other

____ cartoon, caricature
- ____ other

____ color
- ____ colorful, presence, not colorful
- ____ lights and darks, shading
- ____ true, real
- ____ distorted
- ____ specific _____
- ____ other

____ distortion (faces, figures, objects)
- ____ other

____ line
- ____ bold, heavy, thick
- ____ thin, skinny
- ____ smooth, wavy, jagged
- ____ other

____ outline
- ____ other

____ perspective
- ____ lack of, presence
- ____ true, distorted
- ____ foreground, background
- ____ closeup, far away
- ____ other

____ real/true depiction
- ____ other

____ not real in depiction
- ____ other

OBJECT/SUBJECT

____ description of object/subject
- ____ main character
- ____ clothing
- ____ face
- ____ body
- ____ scenery, furniture
- ____ other

COMPARED _____ TO _____

____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull, interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ not well done, bad
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ would look good in my bedroom (or other part of the house)
____ my parents would let me have this
____ I can draw like this (or someone else can)
____ I like it
____ other

Name _____

7. If you were given money to buy any of the sets of pictures you have seen today and you knew you would have to spend the money on one of these sets, which one would you buy?

   A B C IDK NVR None

8. Why? IDK NVR

STYLE FEATURES

____ action
  ____ presence, lots, none
  ____ other
____ cartoon, caricature
  ____ other
____ color
  ____ colorful, presence, not colorful
  ____ lights and darks, shading
  ____ true, real
  ____ distorted
  ____ specific _____
  ____ other
____ distortion (faces, figures, objects)
  ____ other
____ line
  ____ bold, heavy, thick
  ____ thin, skinny
  ____ smooth, wavy, jagged
  ____ other
____ outline
  ____ other
____ perspective
  ____ lack of, presence
  ____ true, distorted
  ____ foreground, background
  ____ closeup, far away
  ____ other
____ real/true depiction
  ____ other
____ not real in depiction
  ____ other

OBJECT/SUBJECT

____ description of object/subject
  ____ main character
  ____ clothing
  ____ face
  ____ body
  ____ scenery, furniture
  ____ other

COMPARED _____ TO _____

____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull, interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ not well done, bad
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ would look good in my bedroom (or other part of the house)
____ my parents would let me have this
____ I can draw like this (or someone else can)
____ I like it
____ other

QUESTIONS FOR BACK-OF-THE-ROOM BOOKS

Name _____

1. Did you read or look at any of the books I brought into your classroom? Y N IDK NVR

2. If "yes," how many did you look at or read? _____ IDK NVR

3. Do you remember any of the books you read or looked at that I brought into your classroom? Y N IDK NVR

4. If "yes," what are the titles or what are the stories about that you read or looked at? IDK NVR

_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -

5. What are the names of the styles of art that were used in the pictures of these books? IDK NVR

_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
----

6. What are the names of the artists who illustrated or made the pictures in these books? IDK NVR

_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -

7. Of the books you read or looked at that I brought into your classroom, which did you like the best? IDK NVR

_____ + -
_____ + -
_____ + -
+ _____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -

Name _____

8. What was it about these books that you liked? IDK NVR

STYLE FEATURES

____ action
____ presence, lots, none
____ other
____ cartoon, caricature
____ other
____ color
____ colorful, presence, not colorful
____ lights and darks, shading
____ true, real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line
____ bold, heavy, thick
____ thin, skinny
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective
____ lack of, presence
____ true, distorted
____ foreground, background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of object/subject
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____
____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy, sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ not well done, bad
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ would look good in my bedroom (or other part of the house)
____ my parents would let me have this
____ I can draw like this (or someone else can)
____ I like it
____ other

PLEASE NOTE:

Illustrations #1 through 12 not microfilmed at request of author. Available for consultation at Michigan State University Library.

UNIVERSITY MICROFILMS

Illustration 1. For the pre-test interviews: Little Red Riding Hood illustrated in the representational style of art by Elizabeth Orton Jones in Little Red Riding Hood by the Grimm Brothers (New York: Simon and Schuster; A Golden Book, 1948), n.p.

Illustration 2. For the pre-test interview: Little Red Riding Hood illustrated in the representational style of art by Elizabeth Orton Jones in Little Red Riding Hood by the Grimm Brothers (New York: Simon and Schuster; A Golden Book, 1948), n.p.

Illustration 3. For the pre-test interviews: Little Red Cap illustrated in the expressionistic style of art by Susan Blair in Little Red Cap by the Grimm Brothers, translated from German by Werner Lenz (New York: Holt, Rinehart, and Winston, Inc., 1964), n.p.

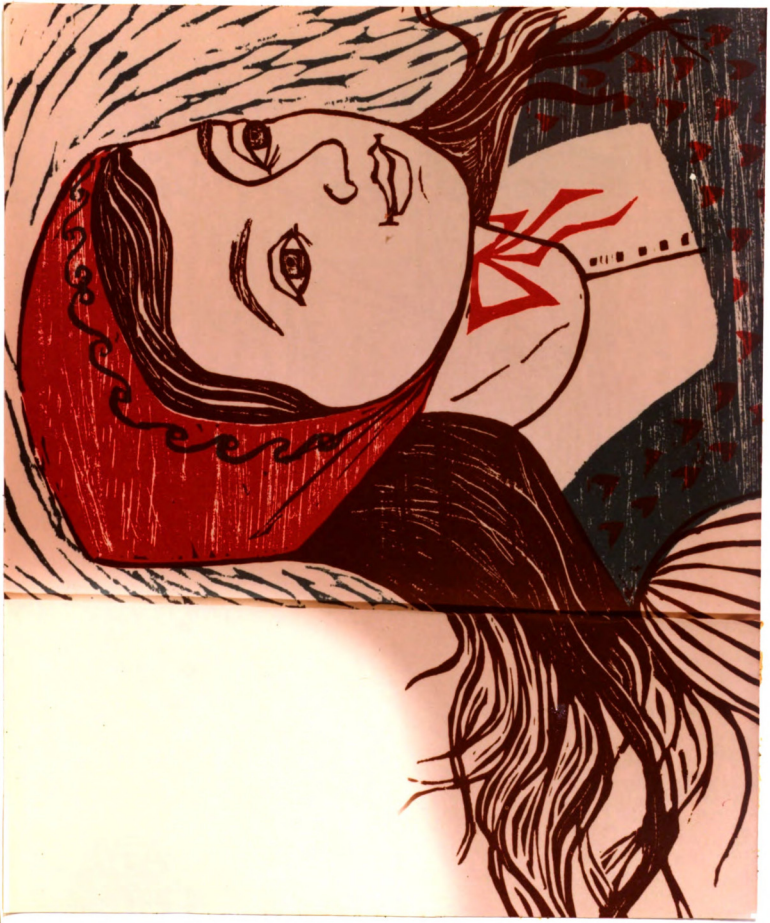

Illustration 4. For the pre-test interviews: Little Red Cap illustrated in the expressionistic style of art by Susan Blair in Little Red Cap by the Grimm Brothers, translated from German by Werner Lenz (New York: Holt, Rinehart, and Winston, Inc., 1964), n.p.

Illustration 5. For the pre-test interviews: Red Riding Hood illustrated in the cartoon style of art by Edward Gorey in Red Riding Hood by Beatrice Schenk de Regniers (New York: Atheneum Publishers, 1972), p. 6.

Illustration 6. For the pre-test interviews: Red Riding Hood illustrated in the cartoon style of art by Edward Gorey in Red Riding Hood by Beatrice Schenk de Regniers (New York: Atheneum Publishers, 1972), p. 8.

Illustration 7. For the post-test interviews: "Rumpelstiltskin," illustrated in the representational style of art by Benvenuiti in The Golden Book of Grimm's Fairy Tales retold by Jane Carruth (New York: Western Publishing Co., Inc.; Golden Press, 1977), p. 89.

Illustration 8. For the post-test interviews: "Rumpelstiltskin," illustrated in the representational style of art by Benvenuiti in The Golden Book of Grimm's Fairy Tales retold by Jane Carruth (New York: Western Publishing Co., Inc.; Golden Press, 1977), p. 88.

Illustration 9. For the post-test interviews: Duffy and the Devil illustrated in the expressionistic style of art by Margot Zemach in Duffy and the Devil by Harve Zemach (New York: Farrar, Straus and Giroux, 1973), n.p.

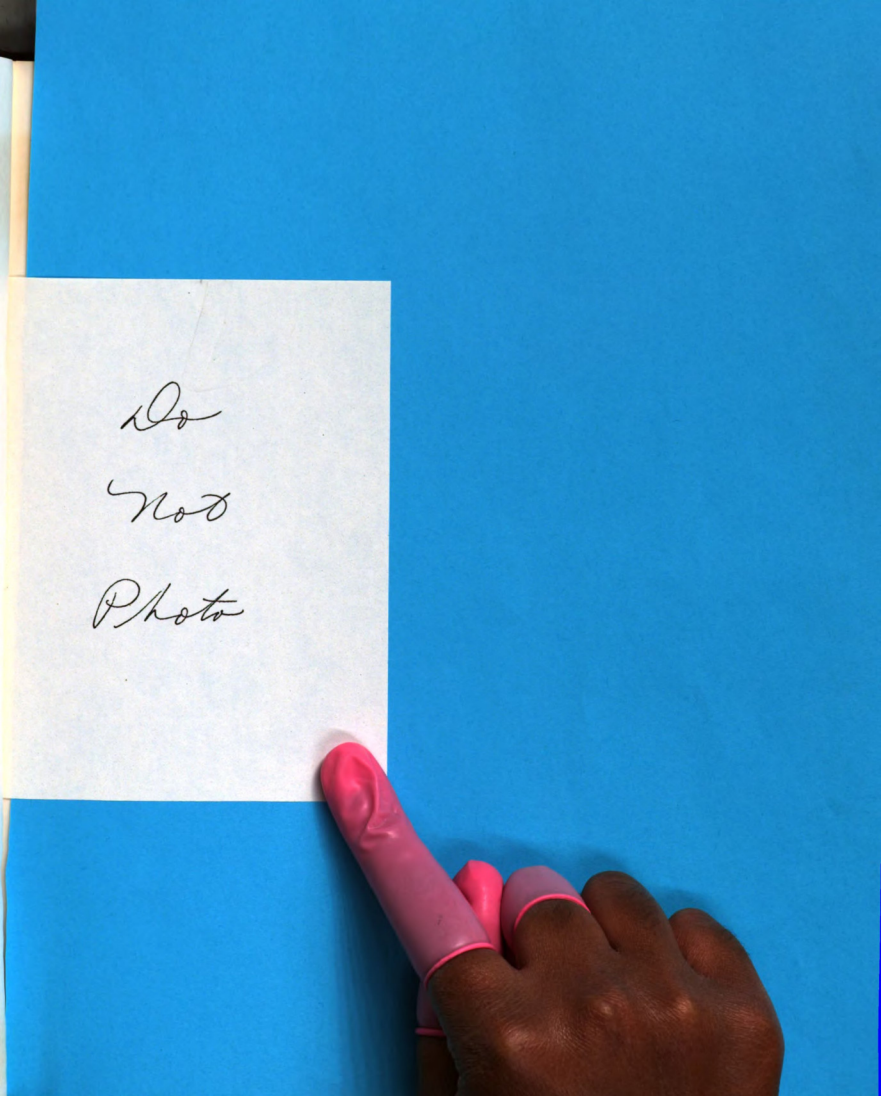
Do
Not
Photo

Illustration 10. For the post-test interviews: Duffy and the Devil illustrated in the expressionistic style of art by Margot Zemach in Duffy and the Devil by Harve Zemach (New York: Farrar, Straus and Giroux, 1973), n.p.

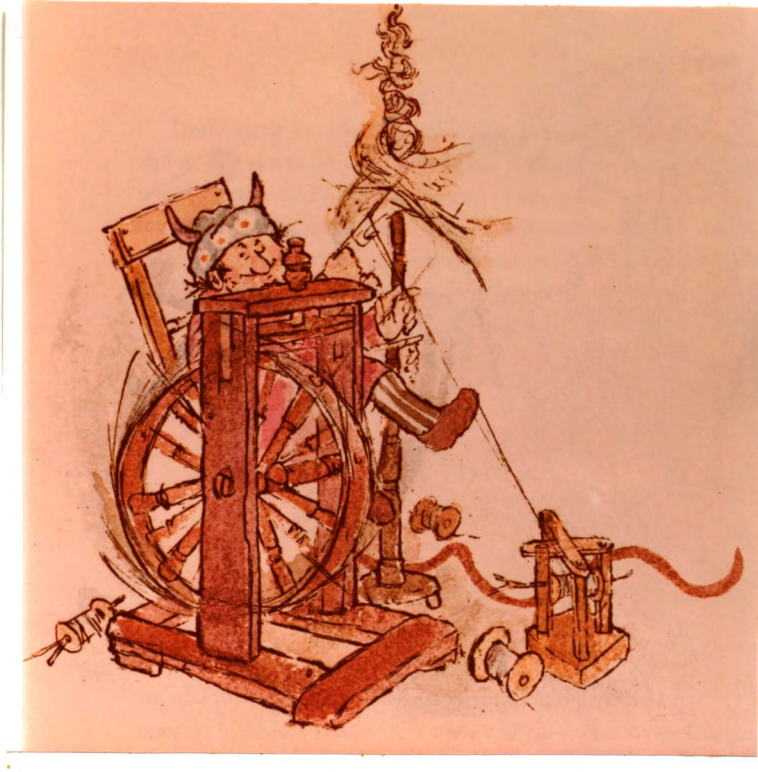

Illustration 11. For the post-test interviews: Rumpelstiltskin illustrated in the cartoon style of art by Edward Gorey in Rumpelstiltskin by Edith Tarcov (New York: Four Winds Press, 1973), p. 9.

Illustration 12. For the post-test interviews: Rumpelstiltskin illustrated in the cartoon style of art by Edward Gorey in Rumpelstiltskin by Edith Tarcov (New York: Four Winds Press, 1973), p. 37.

Pre-Test and Post-Test Sessions

Interview Procedures

Individual interview sessions conducted during the first and last weeks of the study were used to obtain pre- and post-test data. After the examiner read one fairy tale to each of six classrooms of fifth graders (Little Red Riding Hood for the pre-test and Rumpelstiltskin for the post-test) ten subjects, randomly selected from each of six classrooms, were interviewed by the investigator, one at a time in a room other than their classroom. Each interview took approximately 20 minutes.

During these pre- and post-test interview sessions, subjects in both the treatment and control groups were asked to (1) look at the selected illustrations from selected picture book versions of one of the two fairy tales read to them before the interview and (2) to respond orally to a set of questions regarding the styles of art used in the specific sets of illustrations. Each child was told he/she was to look at how each artist made the pictures which he/she examined.

In the post-test interviews the children in both the treatment and control groups were asked the same interview questions as in the pre-test, with the exception of one question set regarding the back-of-the-room books. In this question set, the children were to respond to the books placed in their classroom during the study, the number of the books they remembered looking at, their preferences and dislikes for these books, and their awareness of the styles of art in the illustrations and the artists illustrating these books.

In the post-test the children examined a set of pictures that were used to illustrate the story Rumpelstiltskin that had been read to entire classrooms of children prior to the post-test interviews.

During the pre- and post-test interviews, each child was shown two illustrations which represented one selected style of art and asked a set of general and specific questions about the illustrations and the styles of art in the pictures. After each child responded orally to the illustrations, the picture pair was removed and the procedure was repeated until a total of three picture pairs or six illustrations exemplary of three styles of art (representational, expressionistic, and cartoon styles) were viewed and discussed.

For the pre-test, children's picture books were selected on the basis of the story, Little Red Riding Hood, and on the style of art used by the artists in the illustrations. The pre-test pictures could be found in Little Red Riding Hood illustrated by Elizabeth Orton Jones in the representational style of art, in Little Red Cap illustrated in the expressionistic style of art by Susan Blair, and Red Riding Hood illustrated in the cartoon style of art by Edward Gorey.

Post-test books and illustrations were also selected on the basis of the story, Rumpelstiltskin, and for the styles of art used in the art work. The post-test illustrations could be found in Rumpelstiltskin illustrated by Benvenuiti in the representational style of art, Duffy and the Devil illustrated in the expressionistic style of art by Margot Zemach, and Rumpelstiltskin illustrated by Edward Gorey in the cartoon style of art.

For both the pre- and post-test interviews, the viewing of the art styles in the picture pairs was rotated to control for preference related to order of presentation. In the following table, three styles of art (A = representational, B = expressionistic, and C = cartoon) were shown to children (C1, C2, C3, ..., C10) one at a time in different orders (1, 2, 3). This information is summarized in Table 16.

Table 16. Order of Picture Pair Presentation for the Pre-Test and Post-Test Interviews

C1, C2, C3	A	B	C
C4, C5, C6	B	C	A
C7, C8, C9	C	A	B
C10	A		
	1	2	3

C1, C2, C3, ..., C10 = number of child interviewed;

1, 2, 3 = order of style presentation;

A = representational style of art;

B = expressionistic style of art; and

C = cartoon style of art.

After the general and specific questions were answered by the child, the experimenter placed all six pictures in front of the child so that the picture pairs for one style of art were placed one above another. The child was asked to state and explain his/her preference or rejection for a set of pictures. The order in which the picture

pairs were placed in front of the child was rotated to control for preference related to order (recency) of presentation and direction (left to right) preference. Thus, three styles of art (A = representational, B = expressionistic, and C = cartoon) were shown to each child (C1, C2, C3, ..., C10) in a different order during the preference/rejection discussions than during the general and specific question sets. The information is summarized in Table 17.

Table 17. Preference/Rejection Picture Pair Presentation for the Pre-Test and Post-Test Interviews

C1, C2, C3	C	A	B
C4, C5, C6	A	B	C
C7, C8, C9	B	C	A
C10	C		

C1, C2, C3, ..., C10 = number of child interviewed;

1, 2, 3 = order of style presentation;

A = representational style of art;

B = expressionistic style of art; and

C = cartoon style of art.

At the completion of the pre-test interviews, all children in both the treatment and control groups were told that the back-of-the-room library books were available for their perusal. The treatment group children were told that they (the children) were to be a part of the small group style study sessions.

During the post-test interviews, all children in both the treatment and control groups were asked if they could remember the number of and the titles of the back-of-the-room books they viewed in order to ascertain whether fifth graders would voluntarily look at picture books and remember what they had seen. More pertinent to this research, they were asked for preference/rejection statements regarding the books they mentioned. They were also asked if they knew the styles of art and the artists found in the books they looked at.

As a safeguard measure in data gathering, all interview sessions were tape recorded. The tapes provided a back-up measure in case notes taken by this investigator during the interviews proved incomplete. Children were told that the sessions were being recorded and they were told why.

During the pre- and post-test interviews, this researcher read all interview questions aloud to each child. Throughout the pre- and post-test interviews there was no need for any child to read or write.

Interview Statements and Questions

After the child entered the testing room and he/she was seated at a table so that he/she faced this examiner, he/she was told:

> *Today I am going to have you look at some pictures that you can find in library books. I read the story to you in class. The story is the same for all the pictures.* (Little Red Riding Hood was used in the pre-test and Rumpelstiltskin was used in the post-test). *You will be looking at how three different artists made a set of pictures for this story. These pictures are photographs of illustrations found in different library books. I will be tape recording everything you say because I want to be sure that I do not make any mistakes in writing down what you say. This tape will not be heard by any of your friends or by your teacher. The tape is to help me with what I am doing.*

General Question:

What can you tell me about how these pictures are made?

Specific Questions:

1. *Have you ever seen any of these pictures before?*

2. *Has anyone told you the name of the person who made these pictures?*

3. *Do you know the name of the artist who made these pictures?*

4. *Has anyone told you the name of the style of art in these pictures?*

5. *What is the name of the style of art in these pictures?*

6. *If there were a name for the style of art in these pictures, what would it be?*

7. *If you were to explain to me what this style was, what could you tell me about the _____ style of art?*

8. *How would you describe these pictures to me if I could not see?*

9. *Have you ever seen other books with pictures done in this way?*

10. (If "yes" to question 9) *What are the book titles or what are the stories about in these other books?*

11. *Have you ever seen other books with pictures made by this same artist before?*

12. (If "yes" to question 11) *What are the book titles or what are the stories about in these books?*

Preference/Rejection Questions:

1. *Of all the pictures you have seen today, which set of pictures do you like the best? Why?*

2. *Of all the pictures you have seen today, which set of pictures do you dislike the most? Why?*

3. *Are there any you like as much as another? Why?*

4. *If you were given money to buy any one set of pictures you have seen today and you knew you had to spend the money on just one of these sets of pictures, which set would you buy? Why?*

Back-of-the-Room Questions (For the Post-Test Only):

1. *Did you read or look at any of the books I brought into your classroom?*

2. (If "yes") *How many did you look at or read?*

3. *Do you remember any of the books you read or looked at that I brought into your classroom?*

4. (If "yes") *What are the titles or what are the stories about that you read or looked at?*

5. *What are the names of the styles of art that were used in the pictures of these books?*

6. *What are the names of the artists who illustrated or made the pictures in these books?*

7. *Of all the books you read or looked at that I brought into your classroom, which did you like the best?*

8. *What was it about these books that you liked?*

After the Pre-Test Interview (Treatment Group Only):

In a few days I will return and a group of us will get together and look at some more pictures in different library books. You will also have a chance to draw some pictures.

After the Pre-Test Interview (Treatment and Control Groups):

I will be placing some library books in the back of your classroom. They are for you and your classmates to look at and read during your free time so you will have an opportunity to examine a variety of books and illustrations.

Selection of Pre-Test and Post-Test Picture Books

The six illustrated children's trade books used in the pre-test and post-test interviews were selected to control for several variables: the story line (fairy tale), content/subject matter, style of art (representational, expressionistic, and cartoon styles), and the artists illustrating the pictures. Selection guidelines for the pre- and post-test illustrated children's trade books included:

1. The two stories must be traditional fairy tales.
2. One of three styles of art (A = representational, B = expressionistic, and C = cartoon) must be present in two of the illustrations.
3. The illustrations must contain the same scenes in the picture pairs for each story.
4. The two fairy tales may be illustrated by the same three artists or different artists using the same three styles of art.

Two different stories were selected for the interview sessions: Little Red Riding Hood for the pre-test and Rumpelstiltskin for the post-test. Although the different artists illustrated the various books, the styles of art used in the pictures remained the same in the pre- and post-test.

For the pre- and post-tests, two pictures were selected from each of the three picture books containing the same fairy tale,

illustrated by three different artists, each of whom used a different style of art, namely, representational, expressionistic, and cartoon styles of art. Thus a total of twelve illustrations were selected from six children's picture books. Scenes in each fairy tale were selected to control for subject matter and content. In Little Red Riding Hood, the first picture chosen from each of the three books contained only Little Red Riding Hood, making sure that her face was shown. The second picture depicted Little Red Riding Hood talking to the wolf. In Rumpelstiltskin, the first picture from each of three books showed the queen alone while the other illustration depicted Rumpelstiltskin alone. In one of the two Rumpelstiltskin pictures, a spinning wheel had to be shown.

Two different stories were selected for the interview sessions. Story I, Little Red Riding Hood was used for the pre-test, and Story II, Rumpelstiltskin was used for the post-test. Although the different artists illustrated the various books, the styles of art (A = representational, B = expressionistic, and C = cartoon styles) used in the pictures remained the same in the pre- and post-test books. The information is summarized in Table 18.

Table 18. Selection of Children's Picture Books for the Pre-Test and Post-Test

Pre-test books	I A	I B	I C
Post-test books	II A	II B	II C

Story I = Little Red Riding Hood;

A = representational art illustrated by Elizabeth Orton Jones;

B = expressionistic art illustrated by Susan Blair;

C = cartoon art illustrated by Edward Gorey;

Story II = Rumpelstiltskin;

A = representational art illustrated by Benvenuiti;

B = expressionistic art illustrated by Margot Zemach; and

C = cartoon art illustrated by Edward Gorey.

The twelve pictures shown to the children were 8 x 10 inch color photographic reproductions of actual children's book illustrations. The pictures used in this study were taken by a professional photographer who used a Japanese Mamiya RB 7 35 mm camera and Kodak Vericolor film. The pictures were printed on N-surface Kodak paper. The actual photographs used in this study are found on pages 142-166 in this chapter as part of the testing instrument.

The six books used in the pre- and post-test interviews were removed from the six school libraries to avoid recent student exposure and familiarity with them. No attempt was made by this researcher to determine if the children in either the treatment or control groups ever read or had any of these books read to them in the past.

Pre- and Post-Test Picture Books

Illustrations for the pre- and post-tests were obtained from the following books. These books were selected for the story, the content, the style of art used in the illustrations, and the artists creating the pictures.

Pre-test: Little Red Riding Hood

- Beatrice Schenk de Rengiers. Red Riding Hood. Illustrated by Edward Gorey. New York: Atheneum Publishers, 1972. (Cartoon style of art)
- Grimm Brothers. Little Red Cap. Translated from German by Werner Lanz. Illustrated by Susan Blair. New York: Holt, Rinehart, and Winston, Inc., 1964. (Expressionistic style of art)
- Grimm Brothers. Little Red Riding Hood. Retold by Elizabeth Orton Jones. Illustrated by Elizabeth Orton Jones. New York: Simon and Schuster; A Golden Book, 1948. (Representational style of art)

Post-test: Rumpelstiltskin

- Grimm Brothers. "Rumpelstiltskin." In The Golden Book of Grimm's Fairy Tales. Retold by Jane Carruth. Illustrated by Benvenuiti. New York: Western Publishing Co., Inc.; Golden Press, 1977, pp. 87-90. (Representational style of art)
- Edith Tarcov. Rumpelstiltskin. Illustrated by Edward Gorey. New York: Four Winds Press, 1973. (Cartoon style of art)
- Harve Zemach. Duffy and the Devil. Illustrated by Margot Zemach. New York: Farrar, Straus, and Giroux, Inc., 1973. (Expressionistic style of art)

Stories Read Prior to the Pre-Test and Post-Test Interviews

Two fairy tales were selected to read aloud to six classrooms of fifth graders prior to the individual interviews: Little Red Riding Hood for the pre-test and Rumpelstiltskin for the post-test. This researcher read the stories aloud to the children from typed pages so that no illustrations could be shown to them. Selection guidelines included:

1. The stories must be as close to the traditional rendition as possible.
2. The time to read the story aloud must not exceed ten minutes.

A copy of the text of the versions of Little Red Riding Hood and Rumpelstiltskin which were read to the children by this investigator are found in Appendices B and C. They were taken from the following sources: Little Red Riding Hood by the Brothers Grimm, retold and illustrated by Elizabeth Orton Jones, published in 1948 as a Golden Book by Simon and Schuster; and "Rumpelstiltskin," in Famous Fairy Tales illustrated by Les Gray and published in Racine as a Whitman Book by Western Publishing Company, pages 206-210.

Back-of-the-Room Books

A selection of fifteen children's trade books were placed in the back of all six of the classrooms in this study. Included in the collection of these fifteen picture books, five of the picture books were illustrated in each of the three styles of art; namely, representational, expressionistic, and cartoon styles. The books were placed in the classroom to ascertain whether fifth graders would:

1. voluntarily read and look at picture books;
2. remember the illustrations in the picture books;
3. have preference and dislikes for these books based on their appraisal of the illustrations and styles of art;
4. remember the styles of art in the illustrations and remember the artist's name who created the illustrations; and
5. associate the illustrations and the styles of art in these books with the pictures and styles of art studied during the small group style study sessions, and shown in the pre- and post-test interviews.

The selection guidelines for these back-of-the-room picture books included:

1. The books must be picture books.
2. The books may not be those in the pre- and post-tests.
3. The books may not contain the fairy tales used in the pre- and post-tests.
4. One of the three styles of art (A = representational, B = expressionistic, C = cartoon styles) must be present in the illustrations.
5. The artists who illustrated the stories used in the pre- and post-tests may not be those included in the back-of-the-room books.

6. The books may not be those which were included in the small group style study session collection; however, the back-of-the-room books may contain illustrations created by some of the same artists who illustrated the books used in the small group style study sessions.

Back-of-the-Room Picture Books

All of the children's picture books included in the back-of-the-room collection were chosen following the aforementioned guidelines. Many of these books selected were described and the art styles were identified by Dr. Patricia Cianciolo in Illustrations in Children's Books[3] and Picture Books for Children[4] while others were identified by this investigator. No attempt was made by this investigator to determine whether the fifth graders in this study had read, looked at, or had these books read to them prior to this study.

Representational Style of Art

- Muriel Feelings. Moja Means One. Illustrated by Tom Feelings. New York: The Dial Press, 1971.
- Russell Hoban. Bedtime for Frances. Illustrated by Garth Williams. New York: Harper and Row, Publishers, 1960.
- Robert McCloskey. One Morning in Maine. Illustrated by Robert McCloskey. New York: The Viking Press, 1952.
- John Schoenherr. The Barn. Illustrated by John Schoenherr. Boston: Little, Brown and Co.; An Atlantic Monthly Press Book, 1968.
- Lynd Ward. The Biggest Bear. Illustrated by Lynd Bear. Boston: Houghton Mifflin Co., 1952.

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[3]Patricia Jean Cianciolo, Illustrations in Children's Books, 2nd ed. (Dubuque: Wm. C. Brown Co., Publishers, 1976).

[4]Patricia Jean Cianciolo, Picture Books for Children (Chicago: American Library Association, 1973).

Expressionistic Style of Art

- Ludwig Bemelmans. Madeline. Illustrated by Ludwig Bemelmans. New York: The Viking Press, 1939.
- Margaret Hodges. The Wave. Illustrated by Blair Lent. Boston: Houghton Mifflin, Co., 1964.
- Miroslav Sasek. This Is Ireland. Illustrated by Miroslav Sasek. New York: Macmillan Co., 1964.
- Mary Hays Weik. The Jazz Man. Illustrated by Ann Grifalconi. New York: Atheneum, 1966.
- Taro Yashima. The Umbrella. Illustrated by Taro Yashima. New York: The Viking Press, 1958.

Cartoon Style of Art

- Theodore Seuss Geisel. And to Think That I Saw It On Mulberry Street. Illustrated by Theodore Seuss Geisel (Dr. Seuss). New York: Vangard Press, 1937.
- Steven Kellogg. Can I Keep Him? Illustrated by Steven Kellogg. New York: The Dial Press, 1971.
- James Marshall. George and Martha. Illustrated by James Marshall. Boston: Houghton Mifflin Co., 1972.
- Ellen Raskin. Spectacles. Illustrated by Ellen Raskin. New York: Atheneum Publishers, 1968.
- Maurice Sendak. Where the Wild Things Are. Illustrated by Maurice Sendak. New York: Harper and Row, Publishers, 1963.

Treatment Small Group Style Study Sessions

Procedures

Each treatment group consisted of ten children. Each group was asked to look at the pictures in ten library books which were selected by this researcher. After the children examined the illustrations in these picture books they were asked to indicate the ways the pictures

were alike. The examiner listed on the chalkboard the characteristics which the children identified during their discussion. At this point the examiner told the children that they were studying one school or style of art. She confirmed what the children said and when necessary added to the list of characteristics relative to the style of art under study. This procedure was used for each style of art that was studied.

The list of art style characteristics generated by the children and the list of characteristics related by the examiner were then compared by everyone in the group. After the lists of art style characteristics were compared, the examiner showed the children pictures in one book, provided the artist's name and the title of the book in which the illustrations appeared. After the illustrations in the picture book were shown, the children were asked to describe how the artist made the pictures. (If the children referred constantly to media or subject matter, they were asked to describe how everything looked in the pictures.) This procedure was continued until the children viewed and discussed the ten picture books. After the ten books were viewed and discussed, the children were asked to state and explain their preferences and dislikes for the pictures in the ten picture books under study during that particular session.

After the ten picture books had been discussed, the examiner read a fairy tale aloud from typed sheets, showing no illustrations, to the group of ten children. Each child then made two illustrations for the story: one in the style of art under study during that session and one drawing in his or her own favorite style of art. This same

procedure was used for all three small group sessions. The three treatment groups participated in these small group sessions and only one of the three styles of art was discussed during each session.

Style Characteristics for Three Styles of Art

This investigator discussed the various aspects of each of three styles of art at each of three style study sessions. Only one set of characteristics was related by the investigator at each of the style study sessions. Many of the style characteristics were selected by this investigator while the majority of the style characteristics chosen were those described by Dr. Patricia Cianciolo in Illustrations in Children's Books.[5]

The characteristics were reworded by this investigator to be understandable to fifth graders. At each session the following style characteristics were listed by this investigator.

Representational style of art. The representational style of art characteristics are as follows:

1. There are a lot of decorations in the pictures.
2. The pictures show people and things and animals in a real way.
3. Although most things look real, the artists do change things so they do not look like photographs.
4. The artist shows a lot of details and facts about the things and people shown.
5. The outlines are made to make the people and things look exact.

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[5]Patricia Cianciolo, "Styles of Art in Children's Books," in Illustrations in Children's Books, 2nd ed. (Dubuque: Wm. C. Brown Co., Publishers, 1976), pp. 28-57.

6. The lines used by the artist are smooth, round, curvy, and they let you see how real things and people look and move.

7. The colors and the shading used are those that give people and things life and movement. The colors used are the ones you would regularly find things and people colored.

Expressionistic style of art. The expressionistic style of art characteristics are as follows:

1. The pictures lean toward abstraction or they do not look 100 percent real.

2. These pictures look like something you can draw.

3. The artist gives you an ideal of how the people and things look and move but the artist wants to show you the feelings in the faces and in the picture.

4. Often the artist makes people and things really long or pointed or the artist distorts the real way people and things look.

5. The artist experiments with the colors and shading to show the emotions or feelings or action in the picture.

6. The quick lines and shading used in making the people and things gives you an idea of their form but the artist does not include a lot of lines or details or facts.

Cartoon style of art. The cartoon style of art characteristics are as follows:

1. The pictures were made to make you laugh or smile.

2. The artist often uses sketches or outlines to make the people or things.

3. The situations the people or things are in are often unusual or they don't happen in real life.

4. The artist exaggerates the situations, the colors, or the way people and things are made to make the pictures funny or odd. A person's face could have a nose that is too big or a blue elephant could be riding a bicycle.

Examiner's Monologue and Questions

The children and the examiner met in a room other than the classroom. The room had tables for the children to use when they were to draw pictures. Before this researcher distributed the ten picture books for the children to view she stated:

> *I want you to look at the pictures in all of these books and I would like you to be able to tell me how these pictures are alike or have something in common. I would like you to tell me how these pictures were made in much the same way.*

The examiner passed the ten library books out to the children and gave them approximately ten minutes to look at the books. Then she stated:

> *Now that you have had some time to look at the pictures, what have you found in the pictures that is the same? What can you tell me about how these pictures were made much the same? You tell me the ways these pictures are alike and I will write the list on the board.*

After the list was on the board, the examiner stated:

> *One thing that makes pictures or illustrations alike is what is called the style of art. The style or school of art used by the artists in making these pictures is called the* (name of style) *style of art. The characteristics are* (list of characteristics).[6]

> *Let us compare your list of things that make the pictures alike to the list of characteristics for the* (name of style) *style of art.*

The examiner reviewed the characteristics pointing out where the children were correct in noting the style features. Then she asked

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[6]See pages 182-183 for the list of characteristics.

the children to review the list of characteristics for the particular style of art under study. Then she stated:

> *I am going to show you each of these picture books one at a time and then I want you to tell me about how the artists made these pictures and how the artist used the* (name of style) *style of art.*

For all the books:

1. *What do you like about these pictures? Why?*
2. *What pictures do you like the best? Why?*
3. *Are there any pictures that you like equally as much? Why?*
4. *What do you dislike about these pictures? Why?*
5. *What pictures do you dislike? Why?*
6. *Are there any pictures that you dislike equally as much? Why?*

After the pictures were discussed and the questions were answered, the examiner stated:

> *I am going to read a fairy tale to you and later you will be asked to make some pictures that will show something from the story.*

Drawing Instructions

After the story was read, the examiner asked:

1. *I would like you to draw two pictures that show something you liked in the story.*
2. *The first picture will be made in the style of art we are studying today, the* (name of style) *style of art and the second picture will be in your favorite style of art.*
3. *You may use any of the drawing materials I have provided. There are also watercolors for you to use.*
4. *When you are drawing, be sure to fill up the entire page and try not to make your drawings in a corner.*

Drawing Materials

Seven different drawing media were made available for the children at each style study session (see Figure 13). Three boxes of each type of media were provided at each session so that lack of materials would not deter a child from choosing one over another due to availability. Cray-pas, felt markers, crayons, chalk pastels, charcoal sticks, water colors, and china and cellophane markers were selected by this researcher as the media used in the study. Due to their own characteristics, these seven kinds of media, possibly with the exception of the felt markers that could provide fine lines, required the child to draw larger and bolder lines and shapes than the use of ink pens or pencils. White drawing paper 12 x 18 inches was used.

After the children had each drawn two pictures, the examiner stated:

1. *What did you do to make these pictures?*
2. *How are these pictures like those you saw in the picture books we looked at today?*
3. *How are your two pictures alike? Why?*
4. *How are your two pictures different? Why?*

After the children's drawings were discussed, the examiner stated:

I will be returning another time and we will get together for another session similar to the one we had today.

1. Sanford's Sakura Cray-Pas Colors (No. XKP-16)

White-50	Pale Orange-7	Green-25
Grey-44	Pink-20	Yellow Green-27
Black-49	Purple-24	Yellow-5
Vandyke Brown-7	Cobalt Blue-36	Orange-3
Brown-12	Pale Blue-125	Red-61
Yellow Ochre-15		

2. Sanford's Fiddlesticks Water Color Pens (No. 3610)

Pink	Blue	Purple
Red	Pale Blue	Brown
Orange	Green	Black
Yellow		

3. Binney and Smith Crayola Crayons (No. 16)

White	Yellow	Blue-Violet
Carnation Pink	Yellow-Green	Violet (Purple)
Red	Green	Red Violet
Red-Orange	Blue-Green	Brown
Orange	Blue	Black
Yellow-Orange		

4. Weber Costello Alphacolor Pastels (No. 105-007 Asst.)

White	Orange	Light Blue
Yellow	Red	Blue
Yellow-Ochre	Yellow-Green	Brown
Pale-Orange	Green	Black

5. Weber Costello Alphacolor Char-Kole (No. 167-007)

12 sticks of compressed charcoal

6. American Crayon Company Prang Water Colors (No. 8)

Red	Green	Brown
Orange	Blue	Black
Yellow	Purple	

7. Blaisdell China and Cellophane Markers

Red-169T	Green-973T	Purple-172T
Crimson Red-165T	Brite Blue-167T	Brown-166T
Yellow-170T	Blue-168T	Black-973T

Figure 1. Drawing media available for children.

Selection of Fairy Tales for Child Drawings

Three fairy tales were selected to read aloud to the children when they were in the small group style study sessions. Selection guidelines for the children's trade books (fairy tales) for the child drawings included:

1. The stories must be traditional fairy tales.
2. The stories may not be those from the pre-test or post-test or in the back-of-the-room books, or in the style study session collection.
3. Well-known fairy tales were avoided due to familiarity and possible contamination or creation of pre-conceptions of illustrations.
4. The time to read the story aloud must not exceed ten minutes.

The stories were rotated in relation to the style of art in the child-made illustrations so that one story style or content would not influence a preference for one style of art. Therefore, Story I, The Frog King, or Iron Henry; Story II, Bearskin; and Story III, The Poor Miller's Boy and the Little Cat, were read to the children prior to their illustrating the stories in one of three styles of art (A = representational, B = expressionistic, and C = cartoon styles). The order (1, 2, and 3) in which the stories were read differed with the order of the style study sessions. This information is summarized in Table 19.

Table 19. Fairy Tale Presentation for Child-Drawings

Fairy Tale			
The Frog King, or Iron Henry	A	B	C
Bearskin	B	C	A
The Poor Miller's Boy and the Little Cat	C	A	B
	1	2	3

1, 2, 3 = order of style study sessions;

A = representational style of art;

B = expressionistic style of art; and

C = cartoon style of art.

Fairy tales for child drawings. Three fairy tales were selected to read aloud to the three treatment groups prior to the child-drawings. A copy of the text of the versions of the three fairy tales are found in Appendix D. They were taken from one source; namely, The Juniper Tree and Other Tales from Grimm, selected and edited by Lore Segal and Maurice Sendak, translated by Lore Segal and Randall Jarrell, illustrated by Maurice Sendak, and published in 1973 by Farrar, Straus, and Giroux. The Frog King or Iron Henry is found on pages 169-177; Bearskin, on pages 217-227; and The Poor Miller's Boy and the Little Cat, on pages 178-186. No attempt was made by this investigator to determine whether the children in the treatment groups had read or heard these stories prior to this study.

Selection of Small Group Style Study Picture Books

A total of 30 children's illustrated trade books used in the three small group style study sessions for the three treatment groups were selected to control for style of art and the artists illustrating the pictures. Selection guidelines for the children's illustrated trade books used in the small group style study sessions included:

1. The books must be picture books.
2. The books may not be the specific editions in the pre-test and post-test.
3. The books may not contain the particular fairy tales included in the pre-test or post-test.
4. One of the three styles of art (A = representational, B = expressionistic, and C = cartoon styles) must be present in the illustrations.
5. The artists who illustrated the books used in the pre-test and post-test may not have illustrated the children's books that were included in the style study sessions.
6. The books may not be those in the back-of-the-room collection; however, the small group style study session books may contain illustrations created by some of the same artists as in the back-of-the-room books.

A total of three sets of ten picture books were selected so that each set of ten books represented only one style of art. For each of the three study sessions of art styles with the small groups, the examiner brought in a selection of ten picture books which were illustrated in the same style of art studied in the particular small group session.

The style study sessions were rotated between the treatment groups to control for the contaminating element of preference for style

due to order or recency of presentation. Therefore, the three treatment groups (GA, GC, and GE) studied three styles of art (A = representational, B = expressionistic, and C = cartoon styles) in different orders (1, 2, and 3). This information is summarized in Table 20.

Table 20. Small Group Style Study Session Order

GA	A	B	C
GC	B	C	A
GE	C	A	B
	1	2	3

GA, GC, GE = three treatment groups;

1, 2, 3 = order of style study;

A = representational style of art;

B = expressionistic style of art; and

C = cartoon style of art.

Small group style study session picture books. All of the children's picture books included in the small group style study sessions were chosen following the aforementioned guidelines. Many of these books selected were described and the art styles were identified by Dr. Patricia Cianciolo in Illustrations in Children's Books[7]

[7]Patricia Jean Cianciolo, Illustrations in Children's Books, 2nd ed. (Dubuque: Wm. C. Brown Co., Publishers, 1976).

and Picture Books for Children,[8] while others were identified by this investigator. No attempt was made by this investigator to determine whether the children in the treatment groups had read these books or whether these books had been read to them prior to this study.

Representational Style of Art

- Barbara Brenner. If You Were an Ant. Illustrated by Fred Brenner. New York: Harper and Row, Publishers, 1973.
- Muriel Feelings. Jambo Means Hello. Illustrated by Tom Feelings. New York: Dial Press, 1974.
- Carol Fenner. Gorilla, Gorilla. Illustrated by Symeon Shimen. New York: Random House, 1973.
- John Goodall. Jacko. Illustrated by John Goodall. New York: Harcourt, Brace, Jovanovich, 1972.
- Holling C. Holling. Paddle-to-the Sea. Illustrated by Holling C. Holling. Boston: Houghton Mifflin Co., 1941.
- Edward Lear and Ogden Nash. The Scroobius Pip. Illustrated by Nancy Ekholm Burkert. New York: Harper and Row, Publishers, 1962.
- McCloskey, Robert. Make Way for Ducklings. Illustrated by Robert McCloskey. New York: Viking Press, 1941.
- May McNeer. The Canadian Story. Illustrated by Lynd Ward. New York: Farrar, Straus, and Giroux, 1953.
- Miska Miles. The Wharf Rat. Illustrated by John Schoenherr. Boston: Little, Brown and Co.; Atlantic Monthly Press, 1972.
- Lynd Ward. The Silver Pony: A Story of Pictures. Illustrated by Lynd Ward. Boston: Houghton Mifflin Co., 1973.

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[8]Patricia Jean Cianciolo, Picture Books for Children (Chicago: American Library Association, 1973).

Expressionistic Style of Art

- Hans Christiansen Andersen. The Little Match Girl. Illustrated by Blair Lent. Boston: Houghton Mifflin Co., 1968.
- Hosea Baskin, Tobias Baskin, and Lisa Baskin. Hosie's Alphabet. Illustrated by Leonard Baskin. New York: Viking Press, 1972.
- Ludwig Bemelmans. Madeline's Rescue. Illustrated by Ludwig Bemelmans. New York: Viking Press, 1953.
- Carol Carrick. Lost in the Storm. Illustrated by Donald Carrick. New York: Seabury Press, 1974.
- Charles Keeping. Joseph's Yard. Illustrated by Charles Keeping. New York: Franklin Watts, 1969.
- Jacob Lawrence. Harriet and the Promised Land. Illustrated by Jacob Lawrence. New York: Simon and Schuster, 1968.
- Miroslav Sasek. This Is Historic Britain. Illustrated by Miroslav Sasek. New York: Macmillan Co., 1974.
- William Sleator. The Angry Moon. Illustrated by Blair Lent. New York: Lothrop, Lee and Shepard Co., 1965.
- Alfred Lord Tennyson. The Charge of the Light Brigade. Illustrated by Alice and Martin Provensen. New York: Golden Press, 1964.
- Taro Yashima. Crow Boy. Illustrated by Taro Yashima. New York: The Viking Press, 1955.

Cartoon Style of Art

- Jose Aruego. Look What I Can Do. Illustrated by Jose Aruego. New York: Charles Scribner's Sons, 1971.
- Frank Asch. Alvira Everything. Illustrated by Frank Asch. New York: Harper and Row, Publishers, 1970.
- Raymond Briggs. Father Christmas. Illustrated by Raymond Briggs. New York: Coward, McCann and Geoghegan, 1973.
- Theodore Seuss Geisel. Bartholomew and the Oobleck. Illustrated by Theodore Seuss Geisel (Dr. Seuss). New York: Random House, 1949.

- Steven Kellogg. The Mystery Beast of Ostergeest. Illustrated by Steven Kellogg. New York: The Dial Press, 1971.
- Fernando Krahn. April Fools. Illustrated by Fernando Krahn. New York: E. P. Dutton and Co., 1974.
- Bill Peet. The Wump World. Illustrated by Bill Peet. Boston: Houghton Mifflin Co., 1970.
- Ellen Raskin. The World's Greatest Freak Show. Illustrated by Ellen Raskin. New York: Atheneum Publishers, 1971.
- Maurice Sendak and Matthew Margolis. Some Swell Pup. Illustrated by Maurice Sendak. New York: Farrar, Straus, and Giroux, 1976.
- Tomi Ungerer. The Beast and Monsieur Racine. Illustrated by Tomi Ungerer. New York: Farrar, Straus, and Giroux, 1971.

Summary

In this chapter the procedures were defined and described. This was an experimental study designed to measure fifth graders oral responses to selected illustrations in children's books before and after a guided study of three styles of art. The design of this study was the pre-test/post-test/control model. Ten children were randomly selected from each of six schools in three school districts in Western Michigan; 59 children participated in the entire study. Each of the groups of 10 children was randomly assigned to one of three control or one of three treatment groups.

Pre- and post-testing of the children, in individual interview sessions, occurred during the first and fifth week of the study. A fairy tale was read aloud to all six classrooms by this investigator prior to any data gathering; another fairy tale was read prior to the post-test.

The instrument used in the pre- and post-tests was created by this investigator in three phases, and it was designed to measure children's Verbal Expression Content Scores. Total instrument inter-rater reliability was .976 while the inter-rater reliability for the eight subsections of the instrument ranged from .790 to .995.

The instrument consisted of interview questions measuring children's oral responses to pictures created in representational, expressionistic, and cartoon styles of art. In both the pre- and post-tests, the children were asked general, specific, and preference question sets regarding the three styles of art. In the post-test, children also answered a question set regarding picture books that had been placed in the six classrooms. For both the pre- and post-tests, children viewed and discussed three picture pairs or six pictures from three editions of one fairy tale. All six picture pairs were illustrated in one of three styles of art; namely, representational, expressionistic, and cartoon styles. Thus pre-test picture pairs contained the same three styles of art as seen in the post-test picture pairs.

After pre-testing was completed, 15 picture books illustrated in representational, expressionistic, and cartoon styles of art was placed in all six classrooms. This investigator wanted to ascertain whether fifth graders would voluntarily look at picture books, react to the styles of art in the illustrations, remember the artists, and whether they preferred or disliked the pictures in the books they viewed.

After the pre-tests, this investigator met with each of the three treatment groups for one two-hour session held every week for three weeks. At these group meetings she brought in a collection of ten picture books all illustrated in one of the three styles of art for the children to discuss. In three weeks, the children viewed 30 picture books illustrated in representational, expressionistic, and cartoon styles of art. During each small group style study session, the children examined the books, listed the characteristics for the style under study and then this investigator verified the style characteristics. Upon a second examination of the pictures, the children noted how the artists employed the characteristics of the art style under study and they voiced their preferences and dislikes for the illustrations in the books. After the discussions the children listened to a fairy tale read to them by this investigator (a different story for each style of art) and then they drew two pictures to illustrate the story: one in the style of art under study and one in their favorite style of art. Later the children discussed how their drawings contained the characteristics of the style of art under study.

The post-test was administered to 59 children and the change in the amount of Verbal Expression Content scores between the pre-test and post-test for the treatment groups was compared to the amount of change in the scores for the control groups.

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CHAPTER IV

ANALYSIS OF EXPERIMENTAL RESULTS

In Chapter Four the analysis of the experimental results are reported. The hypothesis were statistically tested with either the two-tailed distribution or the chi squared distribution. The population of boys in the treatment group did not equal that of the control group because one boy moved away from the school in district. Since an equal population sample was necessary to compute the t-distribution, the data for one boy in the control group was randomly deleted when computing and reporting the statistics for differentiation. The scores for individual children in the treatment and control groups are found in Appendix E.

Throughout Chapter Four various symbol connotations were used consistantly and they warrant identification at this time. The symbols used in the various charts and tables were:

R = representational style of art

E = expressionistic style of art

C = cartoon style of art

T = treatment group

C = control group

F = female

M = male

The data was analyzed in three parts for each hypothesis tested. Part one consisted of the Total Verbal Expression Content scores, part two consisted of noting sex differences, and part three consisted of data related to differences in Verbal Expression Content scores for the three styles of art.

Hypothesis 1:

Group instruction covering the relevant characteristics of three styles of art will have a significant effect on fifth grade children's verbal expression when they discuss illustrations exemplifying these three styles of art.

Symbolically: $H_1 = T > C$

Alternate Hypothesis: Restated in the Null Form:

Group instruction covering the relevant characteristics of three styles of art will have no significant effect on fifth grade children's verbal expression when they discuss illustrations exemplifying these three styles of art.

Symbolically: $H_0 = T = C$

This hypothesis was tested by comparing the Total Verbal Expression Content Gain scores in the pre and post-tests of the treatment and control groups. For purposes of statistical computation, one boy was randomly deleted from the control group to equalize the total population of the control group and the treatment group. When the differences between the gain scores for the girls and the boys in the treatment group were compared, one girl was deleted for purposes of statistical computation so that the sample population showed fourteen girls and fourteen boys in the treatment group. The analysis of the

data was conducted in two parts: Total Verbal Expression Content scores for the whole instrument and Total Verbal Expression Content scores for different Styles of art.

Pre-test Total Verbal Expression Scores for the Treatment Group

A total of 690 Total Verbal Expression Content pre-test scores was reported for the treatment group with a mean of 23.793 being reported for the fourteen boys and fifteen girls. The boys received 342 points with a mean of 24.429 points and the girls received 348 points with a mean score of 23.2 being reported. The scores for the twenty-nine children ranged from a high of 43 points to a low of 10 points. One girl attained a score within the 45-41 point range, two boys scores within the 40-36 point range, two students (one girl, one boy) scored within the 35-31 point range, eight students (four girls, four boys) scored within the 30-26 point range, seven students (three girls, four boys) scored within the 25-21 point range, six students (four girls, two boys) scores within the 20-16 point range, three students (one girl, two boys) scored within the 15-11 point range, and one girl attained a score in the 10-6 point range.

Children in District I, School A, received a total of 208 points with a mean score of 20.8 being reported for the six boys and four girls. The boys received 131 points with the mean score being 21.833 and the girls received 77 points with a mean of 19.25 being reported. Scores for the children from School A ranged from a high of 29 to a low of 12. Two children (one girl, one boy) scored within

the 30-26 point range, one boy attained a score within the 25-21 point range, four children (two girls, two boys) scored within the 20-16 point range, and two children (one boy, one girl) scored within the 15-11 point range. Children in District II, School C, received a total of 195 Verbal Expression Content points with a mean score of 21.667 reported for the four boys and five girls. The boys received 88 points with a mean of 22 points reported and the girls received 107 points with a mean of 21.4 points reported. Scores for the children from School C ranged from a high of 30 points to a low of 10 points. Three children (two girls, one boy) scored within the 30-26 point range; one boy scored within the 25-21 point range; four students (two girls, two boys) scored within the 20-16 point range; and scores for two children (one girl, one boy) scored within the 15-11 point range. Children in District III, School E, received 287 total Verbal Expression Content scores with a mean of 28.7 being recorded for the four boys and five girls. Scores for the children from School E ranged from a high of 43 to a low of 16. One girl scored within the 45-41 point range; one boy attained a score within the 40-36 point range; two children (one girl, one boy) scored within the 35-31 point range; scores for three children (two girls, one boy) scored within the 25-21 point range; and one girl attained a score within the 20-16 point range. The above data are summarized in Figures 2 and 3 (pages 201 and 202).

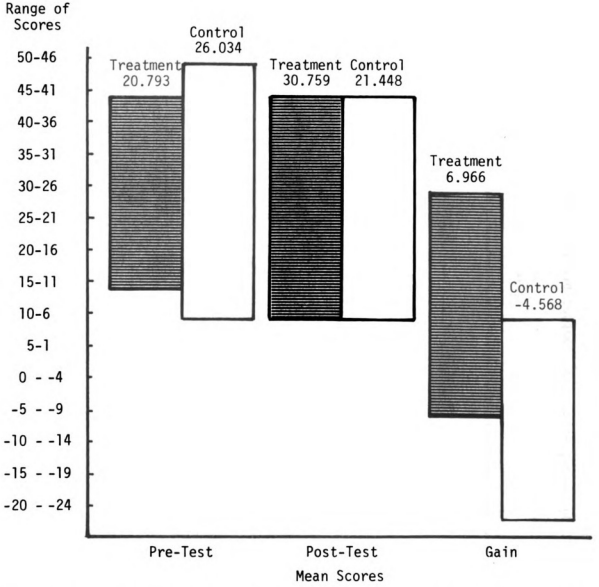

Figure 2. Range of total verbal expression content pre-test, post-test, and gain scores for the treatment and control groups.

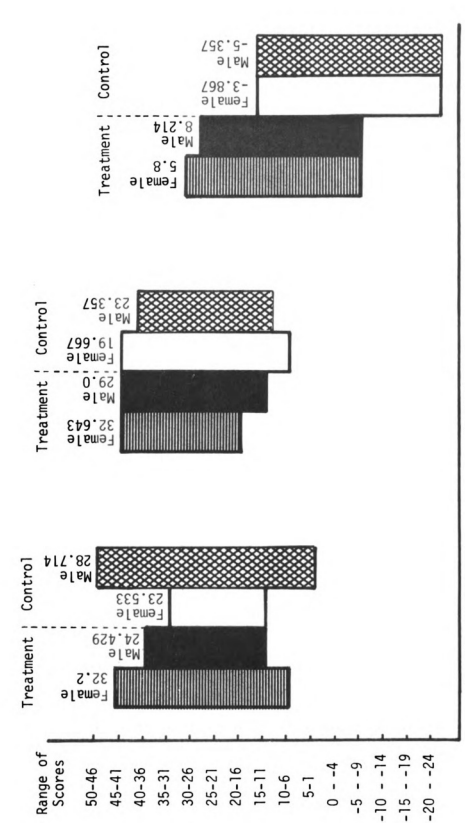

Figure 3. Range of total verbal expression content pre-test, post-test, and gain scores for treatment and control group girls and boys.

Pre-Test Total Verbal Expression Scores for the Control Group

A total of 755 Total Verbal Expression Content pre-test scores was reported for the control group with a mean score of 26.034 reported for the fifteen girls and fourteen boys. The girls received 353 points with a mean score of 23.533 and the boys received 402 points with a mean of 28.714 being reported. The scores for the twenty-nine children ranged from a high of 50 points to a low of 8 points. One boy attained a score within the 50-46 point range; four boys scored within the 40-36 point range; six students (five girls, one boy) scored within the 35-31 point range; four students (two girls, two boys) scored within the 30-25 point range; four boys scored within the 25-21 point range, seven children (six girls, one boy) scored within the 20-16 point range; two girls scored within the 15-11 point range; and one boy scored within the 10-6 point range.

Children in District I, School B, received a total of 215 points with a mean score of 21.5 being reported for the five girls and five boys. The girls received 104 points with a mean of 20.8 and the boys received 111 points with a mean of 22.2. Scores for children from School B ranged from a high of 43 points and a low of 8 points. One girl attained a score within the 43-49 point range; four students (one girl, three boys) scored within the 28-24 point range; three students (one girl, two boys) scored within the 18-14 point range; one girl attained a score within the 13-9 point range, and one boy attained a score within the 8-4 point range. Children of District II, School D, received a total of 189 Verbal Expression Content points with

a mean score of 18.9 being reported for the five girls and five boys. The girls received 92 points with a mean of 18.4 points reported and boys received 97 points with a mean of 19.7 points reported. Scores for the children from School D ranged from a high of 39 points to a low of 9 points. One boy attained a score within the 40-36 point range; one boy attained a score within the 35-31 point range; one girl attained a score within the 30-26 point range; two boys scored within the 25-21 point range; four girls scored within the 20-16 point range; and one boy attained a score within the 10-6 point range. Children in District III, School F, received a total of 218 points with an average of 24.222 being recorded for the four boys and five girls. Scores for the children from School F ranged from a high of 39 to a low of 8. One boy attained a score within the 43-39 range; three children (one girl, two boys) scored within the 33-29 point range; one girl attained a score within the 28-24 point range; one girl scored within the 23-19 point range; two children (one girl, one boy) scored within the 18-14 point range; and one girl attained a score within the 8-4 point range. The above data are summarized in Table 77 found in Appendix E.

Post-Test Total Verbal Expression Content Scores for the Treatment Group

A total of 892 Total Verbal Expression Content post-test scores was reported for the treatment group with a mean score of 30.759 being reported for the fourteen boys and fifteen girls. The boys received 457 points with a mean of 29 points being recorded which was 1.759 below the mean score reported for the control group. The girls

received 435 points with a mean score of 32.643 being reported which was 1.884 points above the mean score reported for the control group. The scores for the twenty-nine children ranged from a high of 45 to a low of 17. Scores for six children (three boys, three girls) were within the 45-41 point range; scores for four children (two boys, two girls) were within the 35-31 point range; scores for four children (two boys, two girls) were within the 30-26 point range; scores for five children (one boy, four girls) were within the 25-21 point range; scores for three children (one boy, two girls) were within the 20-16 point range; and one boy attained a score within the 15-11 point range.

Children in District I, School A, received a total of 339 Verbal Expression Content scores on the post-test with the mean of 33.9 being reported for the six boys and four girls. This score was 3.141 points above the mean score recorded for the control group. The boys received 185 points with a mean score of 38.5 being reported. This score was 7.741 points above the mean score reported for the control group and 4.6 points above the mean score reported for School A. The girls received 154 points with a mean score of 38.5. This score was 7.741 points above the mean score recorded for the treatment group and 4.6 points above the mean score reported for School A. School A scores ranged from a high of 41 to a low of 18. Scores for three students (one boy, two girls) were within the 45-41 point range; scores for three children (two boys, one girl) were within the 40-36 point range; one girl attained a score that was within the 35-31 point range; one boy attained a score within the 30-26 point range; one boy

attained a score that was within the 25-21 point range; and one boy attained a score that was within the 20-16 point range. Children in District II, School C, received a total of 238 Total Verbal Expression Content scores with the mean of 26.44 being recorded for the four boys and five girls. This score was 4.319 points below the mean of the treatment group. Scores for the children from School C ranged from a high of 32 to a low of 17. The boys received 185 points with a mean of 38.5 which was 7.741 points above the mean score recorded for the treatment group and 12.06 points above the mean score recorded for School C. The girls received 114 points with a mean of 22.8 which was 9.843 points below the mean score recorded for the treatment group and 3.64 points below the mean score recorded for School C. Three boys attained scores within the 35-31 point range; scores for two children (one boy, one girl) were within the 30-26 point range; three girls attained scores within the 25-21 point range; and one girl attained a score within the 20-16 point range. Children in District III, School E, received a total of 315 Total Verbal Expression Content scores with the mean score of 31.5 being reported for the four boys and six girls. This score was .741 points above the mean score recorded for the treatment group. Scores for the children from School E ranged from a high of 45 to a low of 20. The boys received 148 points with a mean of 37 which was 6.23 points above the mean score recorded for the treatment group and 5.5 points above the mean score recorded for School E. The girls received 167 points with a mean of 27.833 which was 2.926 points below the mean score recorded for the treatment

group and 3.667 points below the mean score recorded for School E. Scores for three children (two boys, one girl) were within the 45-41 point range, one girl attained a score within the 40-36 point range, two boys attained scores within the 35-31 point range, one girl attained a score within the 25-21 point range and two girls attained scores within the 20-16 point range. The above data are summarized in Figures 2 and 3 (pages 201 and 202).

Post-Test Total Verbal Expression Content Scores for the Control Group

A total of 622 Total Verbal Expression Content post-test scores was reported for the control group with a mean score of 21.448 being reported for the fourteen boys and fifteen girls. The boys received 327 points with a mean score of 23.357 which was 1.909 points above the mean score recorded for the control group. The girls received 295 points with a mean score of 19.667 which was 1.781 points below the mean score recorded for the control group. The scores for the twenty-nine children ranged from a high of 43 to a low of 8. One girl attained a score within the 45-41 point range, one boy attained a score within the 40-36 point range; two boys attained scores within the 35-31 point range, scores for three children (one girl, two boys) were in the 30-26 point range; scores for seven children (five girls, two boys) were within the 25-21 point range; scores for five children (one girl, four boys) were within the 20-16 point range; scores for six children (three girls, three boys) were within the 15-11 point range; and three girls attained scores within the 10-6 point range.

Children in District I, School B, received a total of 215 Total Verbal Expression Content scores on the post-test with a mean score of 21.5 being reported for the five boys and five girls. This score was .052 points above the mean score recorded for the control group. The boys received 111 points with a mean score of 22.2. This score was .752 points above the mean score recorded for the control group and .07 points above the mean score reported for School B. The girls received 104 points with a mean score of 20.8. This score was .648 points below the mean score reported for the control group and .7 points below the mean score reported for School B. The scores for School B ranged from a high of 42 and a low of 8. One girl attained a score within the 45-41 point range; two boys attained scores within the 30-26 point range; two children (one girl, one boy) had scores within the 25-21 point range; two children (one girl, one boy) had scores within the 20-16 point range; two children (one girl, one boy) had scores within the 15-11 point range; and one girl attained a score within the 10-6 point range. Children in District II, School D, received a total of 189 Total Verbal Expression Content scores on the post-test with a mean score of 18.9 being reported for the five girls and five boys. This score was 2.545 points below the mean score reported for the control group. The scores for School D ranged from a high of 25 to a low of 8. The boys received 97 points with a mean score of 18.9 being reported. This score was 2.048 points below the mean score reported for the control group and 2.1 points below the mean score

reported for School D. The girls received 92 points with a mean of 18.4. This score was 3.048 points below the mean score reported for the control group and 3.1 points below the mean score reported for School D. One boy attained a score within the 35-31 point range; four children (three girls, one boy) had scores within the 25-21 point range; one girl attained a score within the 20-16 point range; three children (one girl, two boys) had scores within the 15-11 point range; and one girl attained a score within the 10-6 point range. Children in District III, School F, received a total of 218 Verbal Expression Content scores on the post-test with a mean score of 24.222 being reported for the four boys and five girls. This score was 2.774 points above the mean score reported for the control group. The boys received 119 points with a mean of 29.75 being reported. This score was 8.302 points above the mean score reported for the control group and 5.528 points above the mean score reported for School F. The girls received 99 points with a mean score of 19.8 being reported. This score was 1.648 points below the mean score reported for the control group and 4.422 points below the mean score reported for School F. The scores for School F ranged from a high of 39 and a low of 8. One boy attained a score within the 40-36 point range; one boy attained a score within the 35-31 point range; two children (one girl, one boy) had scores within the 30-26 point range; one girl attained a score within the 25-21 point range; two children (one boy, one girl) had scores within the 20-16 point range; one girl attained a score within the 15-11 point

range, and one girl attained a score within the 10-6 point range. The above data are summarized in Figures 2 and 3 (pages 201 and 202).

Gain Scores for the Control Group

A total gain score for the Verbal Expression Content score for the control group between the pre and post-tests was a negative gain of -133 with a mean score of -4.568 reported for the fourteen boys and fifteen girls. The girls received an overall negative gain score of -58 with the mean score of -3.867 being reported. This score was .701 points above the mean score reported for the treatment group. The boys received an overall negative gain of -75 points with a mean of -5.357. This score was .789 below the mean score reported for the treatment group. The gain scores for the twenty-nine children ranged from a high of 8 points and a low of -22. Scores for five children (one girl, four boys) were within the 10-6 point range, scores for four children (two girls, two boys) were within the 5-1 point range, scores for nine children (six girls, three boys) were within the 0 to -4 range, scores for seven children (four girls, three boys) were within the -5 to -9 point range; one boy attained a score within the -10 to -14 point range; one boy attained a score within the -15 to -19 point range; and scores for two children (one girl, one boy) were within the -20 to -24 point range.

A negative gain score of -50 was reported for the children in District I, School B. This score for the five girls and five boys had a mean score of -5 which was .432 points below the mean score

reported for the control group. A negative gain score of -5 with a mean score of -1 was reported for the girls. This score was 3.568 above the mean score reported for the control group and 4 points above the mean score reported for School B. A negative gain score of -45 with a mean score of -9 was reported for the boys. This score was 4.432 points below the mean score for the control group and 4 points below the mean score reported for School B. The scores ranged from a high of 8 gain points to a low of -22 gain points. One girl attained a score within the 10-6 point range; five children (three girls, two boys) scored within the 0 to -4 point range, and scores for two children (one girl, one boy) were within the -5 to -9 point range. A negative gain score of -29 was reported for the children in District II, School D. This score for the five girls and five boys had a mean score of -3.222 which was 1.346 points above the mean score reported for the control group. A negative gain score of 14.8 with a mean score of -6 was reported for the boys. This score was .232 points below the mean score reported for the control group of 1.578 points below the mean score reported for School D. A negative gain score of -5 with a mean score of -1 was reported for the girls. This score was 3.568 points above the mean score reported for the control group and 2.222 points above the mean score reported for School D. Three boys attained scores within the 10-6 point range; three children (two girls, one boy) scored within the 5-1 point range; three children (two girls, one boy) scored within the 0 to -4 point range, and one girl attained a score within the -5 to -9 point range. A negative gain score of -54 was reported

for the children in District III, School F. This score for the four boys and five girls had a mean of -5.4 which was .832 points below the mean score reported for the control group. A negative gain score of -6 with a mean score of -1.5 was reported for the boys. This score was 3.068 points above the mean score reported for the control group and 3.9 points above the mean score reported for School F. A negative gain score of -48 with a mean score of -9.6 was reported for the girls. This score was 5.032 points below the mean score reported for the control group and 4.2 points below the mean score reported for School F. The gain scores ranged from a high of 7 points to a low of -20 points. One boy attained a score within the 10-6 point range; one boy attained a score within the 5-1 point range; one girl attained a score within the 0 to -4 point range, four children (two girls, two boys) scored within the -5 to -9 point range; one girl attained a score within the -10 to -14 point range, and one girl attained a score within the -20 to -24 point range. The above data are summarized in Figures 2 and 3 (pages 201 and 202).

Gain Scores for the Treatment Group

A total gain score for the Verbal Expression Content score for the treatment group between the pre- and post-tests was 202 points, with a mean gain score of 6.966 reported for the fourteen boys and fifteen girls. The girls received an overall gain score of 87 with the mean score of 5.8 being reported. This score was 1.166 points below the mean score reported for the entire treatment group. The boys received an overall gain score of 115 with a mean score of 8.214

reported. This score was 1.248 above the mean gain score for the entire treatment group. The gain scores for the twenty-nine children ranged from a high of 28 points and a low of -9. One girl attained a score within the 30-26 point range; scores for three children (one girl, two boys) were within the 2 -21 point range; scores for two children (one girl, one boy) were within the 20-16 point range; scores for three students (two girls, one boy) were within the 15-11 point range; scores for five children (one girl, four boys) fell within the 10-6 point range; scores for two boys and two girls were within the 5-1 point range; scores for seven children (four girls, three boys) were within the 0 to -4 point range; and scores for four children (three girls, one boy) were within the -5 to -9 point range.

Children in District I, School A, received a total of 131 gain points with a mean gain score reported at 13.1. This score was 6.134 points above the mean gain score reported for the treatment group. The girls received 77 gain points with a mean gain score of 19.25. This score was 13.45 points above the mean gain score reported for the treatment group and 6.15 points above the mean gain score reported for School A. The boys received 54 gain points with a mean gain score of 9 reported which is 3.966 points above the treatment group mean gain score and 4.1 points below the mean gain score reported for School A. The gain scores for children in School A ranged from a high of 28 to a low of a negative gain score of -8. One girl attained a score within the 30-26 point range; three children (one girl, two boys) had scores within the 25-21 point range; scores for two students (one boy, one

girl) were within the 15-11 point range; one girl attained a score within the 10-6 point range; one boy attained a score within the 5-1 point range; one boy attained a score within the 0 to -4 range; and one boy attained a score within the -5 to -9 point range. Children in District II, School C, received a total gain score of 28 points with a mean gain score of 2.8 reported. This score was 5.566 points below the mean gain score reported for the treatment group and 1.4 points below the mean gain score reported for School C. The boys received 36 gain points with a mean gain score of 9. This score was 2.01 points above the mean gain score reported for the treatment group and 6.2 points above the mean gain score reported for School C. The gain scores for the children from School C ranged from a high of 18 and a low of -7. One boy attained a score within the 20-16 point range; one girl attained a score within the 15-11 point range; the scores for two boys were within the 10-6 point range; the score for one girl was within the 5-1 point range; three children (two girls, one boy) had scores within the 0 to -4 point range; and one girl attained a score within the -5 to -9 point range. Children in District III, School E, received a total of 28 gain points with a mean gain score of 2.8 reported. This score was 4.166 below the mean gain score reported for the treatment group. The girls received 3 gain points with a mean gain score of .05. This score was 6.916 below the mean of the treatment group and 2.75 below the mean for School E. The boys received 25 gain points with a mean gain score of 6.25. This score was .716 points less than the mean gain score reported for the treatment group

and 3.45 points above the main gain score reported for School E. The gain scores for the children in School E ranged from a high of 18 to a low of -9. The score for one girl was within the 20-16 point range, two boys scored within the 10-6 point range; two children (one girl, one boy) scored within the 5-1 point range; three students (two girls, one boy) scored within the 0 to -4 point range; and two girls attained scores within the -5 to -9 point range. The above data are summarized in Figures 2 and 3 (pages 201 and 202).

Differences Between the Total Verbal Expression Content Scores for the Treatment and Control Groups

The two-tailed t-distribution was employed to measure the significant differences in the amount of Total Verbal Expression Content scores for the treatment and control groups. For the twenty-nine treatment group children, a mean gain score of 23.793 was reported with a standard deviation of 111.3916. A negative mean gain score of -4.568 with a standard deviation of 48.466 was reported for the twenty-nine children in the control group. The difference in the mean gain scores for the two groups was 11.552, the pooled variance for the two groups was 79.929, and the standard error was 1.174. A t-distribution score of 9.84 was reported as the difference between the treatment and control groups. A t-value of 2.66 was necessary for 56 degrees of freedom before the significant difference between the Total Verbal Expression Content scores for the children in the treatment and control groups could be concluded at the .01 level of significance. The t-value of 9.84 was significant at this level and these differences could have

occurred by chance only 1 percent of the time. The data indicated that the null hypothesis should be rejected as there was a significant effect on fifth graders' verbal expression when they discussed illustrations exemplifying three styles of art. The above data are summarized in Table 21 below.

Table 21. The t-distribution for the Total Verbal Expression Content Scores

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	23.793	111.392	$t\ \alpha\ .01\ [df = 56] \geq 2.66$
C	-4.568	48.466	
Standard Error = 1.174			$t = 9.84$
Pooled Variance = 79.929			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences Between the Total Verbal Expression Content Scores for the Boys and Girls of the Treatment Group

The two-tailed t-distribution was employed to measure the significant differences between the amount of Total Verbal Expression Content scores for the boys and girls in the treatment group. For purposes of statistical computation, one girl was randomly deleted so that the sample for this t-distribution consisted of fourteen girls and fourteen boys. For the girls a mean gain score of 4.429 was

reported with a standard deviation of 119.033. For the boys a mean gain score of 8.214 was reported with a standard deviation of 89.412. The difference in the mean gain scores for the boys and girls in the treatment group was 3.785, the pooled variance for the two groups was 104.222, and the standard error was 1.929. A t-distribution score of 1.962 was reported as the difference between the boys' and girls' Total Verbal Expression Content scores. A t-value of 1.315 was necessary for 26 degrees of freedom before the significant differences could be noted. The t-value was significant at this level and these differences could have occurred by chance only 1 percent of the time. The data indicated that girls and boys in the treatment group responded with different levels of Total Verbal Expression Content scores, with the boys receiving a higher number of gain scores. The above data are summarized in Table 22 below.

Table 22. The t-distribution for the Total Verbal Expression Content Scores for the Girls and Boys in the Treatment Group

Sex	Mean Gain Score	S.D.	Necessary to Reject H_0
Girls	4.429	119.033	$t\ \alpha\ .01\ [df = 26] \geq 1.315$
Boys	8.214	89.412	
Standard Error = 1.929			$t = 1.962$
Pooled Variance = 104.222			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Total Verbal Expression Content Scores for Representational Style of Art

A total of 129 Verbal Expression Content score points were attained by the treatment group when discussing the representational style of art in the pre-test. The reported mean score was 4.448. The boys received 55 points with a mean score of 3.929. This score was .519 points below the mean score for the pre-test. The girls received a score of 74 with a mean score of 4.933. This score was .485 points above the mean score for the pre-test. The range of scores was a high of 10 and a low of 1. A total of 184 Verbal Expression Content score points was attained by the treatment group when discussing the representational style of art in the post-test. The reported mean score was 6.345. The boys received 93 points with a mean score of 6.643 which was .298 above the mean for the post-test. The girls received 91 points with a mean score of 6.067. This score was .278 points below the mean for the post-test. The scores ranged from a high of 10 to a low of 2. A total of 53 gain points scored between the pre and post-test when discussing the representational style of art was attained for the treatment group. The mean gain score for the treatment group was reported at 1.828. The boys received 38 gain points with a mean of 2.714. This score was .886 points above the mean gain score for the treatment group. The girls received 16 gain points with a mean of 1.067. This score was .761 below the mean gain score for the treatment group. The gain scores ranged from a high of 10 to a low of -4. Scores for four children (one girl, three boys) were within the 10-6 point range; scores for fourteen children (four girls, ten boys)

were within the 5 to 1 point range, and scores for twelve children (nine girls, three boys) were within the 0 to -4 point range. Pre-test, post-test, and gain scores for individual children in the treatment group may be found in Appendix E. The above data are summarized in Figure 4.

A total of 146 Total Verbal Expression Content score points was attained by the children in the control group during the pre-test. The reported mean score was 5.034. The boys received 73 points with a mean score of 5.214. This score was 18 above the mean score for the pre-test. The girls received 73 points with a mean of 4.867. This score was 0.167 points below the mean score of the pre-test. The scores ranged for the pre-test from a high of 4 to a low of -7. A total of 110 Verbal Expression Content score points were attained by the children in the control group in the post-test. The reported mean score for the post-test was 3.793. The boys received 55 points with a mean score of 3.939. This score was 0.146 points above the mean score for the post-test. The girls received a score of 55 points with a mean score of 3.667. This score was 1.36 below the mean score for the post-test. The scores for the post-test ranged from a high of 9 points to a low of 0 points. A negative total of -36 gain points was reported for the control group. The mean negative gain score for the control group was reported at -1.241. The gain scores ranged from a high of 4 to -7. Scores for five children (two girls, three boys) were within the 10 to 6 point range; scores for twenty-one children (twelve girls, nine boys) were within the 0 to -4 range; and scores for three children (one girl, two boys) were within the -5 to -9 point range. Pre-test, post-test,

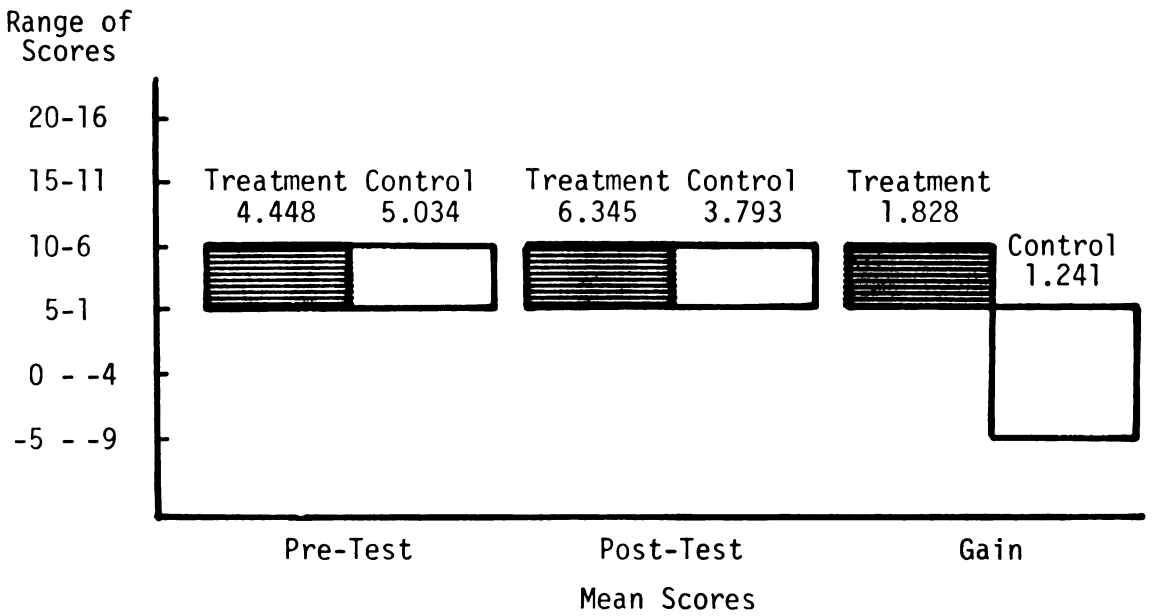

Figure 4. Range of total verbal expression content pre-test, post-test, and gain scores for treatment and control groups when discussing representational style of art.

and gain scores for individual children in the control group may be found in Appendix E. The above data are summarized in Figure 4.

Differences in Total Verbal Expression Content Scores for the Treatment and Control Groups When Discussing Representational Style of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the treatment and control groups when discussing the representational style of art. A mean gain score of 1.828 and a standard deviation of 9.148 was reported for the treatment group. A negative mean gain score of -1.241 with a standard deviation of 5.975 was reported for the control group. The difference between the means was 3.069, the pooled variance was 7.562, and the standard error was .361. The t-value, 8.501, was reported noting the differences between the two groups. A t-value of 2.66 with 56 degrees of freedom was needed before the differences could be concluded as being significant at the .01 level. The t-value of 8.501 was significant at this level indicating that there were differences in the Total Verbal Expression Content scores for the treatment and control group children and that such differences could have occurred only 1 percent of the time. The data indicated that children from the treatment group attained significantly more Total Verbal Expression score points when discussing the representational style of art than did the control group children. The above data are summarized in Table 23.

Table 23. Differences Between the Groups When Discussing Representational Style of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	1.828	9.148	$t\ \alpha\ .01\ [df = 56] \geq 2.66$
C	-1.241	5.975	
Standard Error = .361			$t = 8.501$
Pooled Variance = 7.562			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences Between Girls and Boys in the Treatment Group When Discussing Representational Style of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the girls and boys in the treatment group when discussing representational style of art. A mean gain score of 2.714 with a standard deviation of 10.989 was reported for the boys. A mean gain score of .643 with a standard deviation of 5.016 was reported for the girls. The difference between the mean scores was 2.071, the pooled variance was 7.995, and the standard error was .534. The t-value of 3.873 was reported noting the differences between the boys and girls. A t-value of 1.706 with 26 degrees of freedom was needed before the differences could be concluded at the .01 level of significance. The t-value of 3.873 was significant at this level indicating that there was a difference in the Total Verbal Expression Content scores attained by boys and girls when discussing

the representational style of art. The data indicated that the boys attained more Total Verbal Expression Content scores than did the girls and this difference could occur by chance only 1 percent of the time. The above data are summarized in Table 24 below.

Table 24. Differences Between Boys and Girls in the Treatment Group When Discussing Representational Style of Art

Sex	Mean Gain Score	S.D.	Necessary to Reject H_o
F	.643	5.016	$t\ \alpha\ .01\ [df = 26] \geq 1.706$
M	2.714	10.989	
Standard Error = .534			$t = 3.873$
Pooled Variance = 7.995			Reject H_o

df = degrees of freedom S.D. = Standard Deviation

Total Verbal Expression Content Scores for Expressionistic Style of Art

A total of 129 Verbal Expression Content score points were attained by the treatment group when discussing the expressionistic style of art in the pre-test. The reported mean score was 4.558. The boys received 69 points with a mean score of 4.929. This score was .481 above the mean score for the pre-test. The girls received 60 points with a mean score of 4.0 which was .448 below the mean score of the pre-test. The scores ranged from a high of 13 points to a low of 1 point. A total of 199 Verbal Expression Content score points was

attained by the treatment group in the post-test. The reported mean score was 6.862. The girls received a total of 106 points with a mean score of 7.067 which was .205 points above the mean score for the post-test. The boys received a total of 93 points with a mean score of 6.643 which was .039 below the mean score of the post-test. The scores ranged from a high of 13 points to a low of 3 points. A total of 70 gain points scored between the pre and post-test when discussing the expressionistic style of art was attained for the treatment group. The mean gain score for the treatment group was reported at 2.414. The boys received 24 gain points with a mean score of 1.714 which was .7 below the mean gain score for the group. The girls received 46 gain points with a mean score of 3.067. This score was .653 above the mean score for the group. The gain scores ranged from a high of 10 points to a low of -7 points. Scores for five children (two girls, three boys) were within the 10-6 point range; scores for sixteen children (ten girls, six boys) were within the 5-1 point range; scores for seven children (three girls, four boys) were within the 0 to -4 range; and one boy scored within the -5 to -9 point range. Pre-test, post-test, and gain scores for individual children in the treatment group may be found in Appendix E. The above data are summarized in Figure 5.

A total of 138 Verbal Expression Content score points were attained by the children in the control group during the pre-test. The reported mean score was 4.758. The boys received 81 points with a mean score of 5.786 which was 1.029 points above the mean score for the pre-test. The girls received 57 points with a mean score of 3.8 which

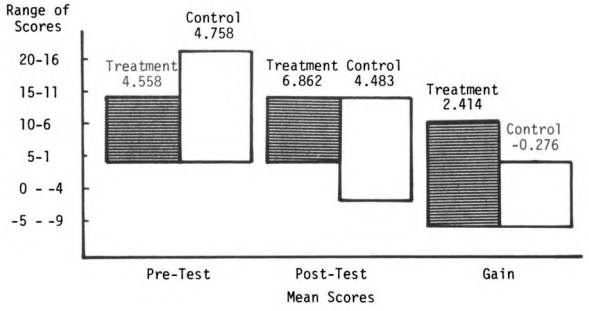

Figure 5. Range of total verbal expression content pre-test, post-test, and gain scores for treatment and control groups when discussing expressionistic style of art.

was .958 below the mean for the pre-test. The scores for the pre-test ranged from a high of 16 points to a low of 1 point. A total of 130 Verbal Expression Content score points was attained by the children in the control group on the post-test. The reported mean score for the post-test was 4.483. The boys received 63 points with a mean score of 4.5. This score was .017 points above the mean score for the post-test. The girls received 67 points with a mean score of 4.167. This score was .016 below the mean score for the post-test. The scores for the post-test ranged from a high of 11 points to a low of 0 points. A negative total of -8 gain points was reported for the control group. The mean negative gain score was reported at -.276. The gain scores for the control group ranged from a high of 5 points to a low of -9 points. Scores for eleven children (seven girls, four boys) were within the 5-1 point range, scores for seventeen children (eight girls, nine boys) were within the 0 to -4 point range, and one boy scored within the -5 to -9 point range. Pre-test, post-test, and gain scores for individual children in the control group may be found in Appendix E. The above data are summarized in Figure 5.

Difference Between the Groups when Discussing Expressionistic Style of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the treatment and control groups when discussing expressionistic style of art. A mean gain score of 2.414 and a standard deviation of 13.608 was reported for the treatment group. A negative mean gain score of -.276 with a standard deviation of 7.350 was reported for the control group. The difference

between the mean scores for both groups was 3.482, the pooled variance was 10.012, and the standard error was .850. The t-value of 4.098 was reported noting the differences between the two groups. A t-value of 2.66 with 56 degrees of freedom was needed before the differences could be concluded as being significant at the .01 level. The t-value of 4.098 was significant at this level and these differences could have occurred by chance only 1 percent of the time. The data indicated that the null hypothesis should be rejected as the children from the treatment group attained a higher amount of Total Verbal Expression Content scores when discussing the expressionistic style of art than did the control group. The above data are summarized in Table 25.

Table 25. Differences Between the Groups When Discussing the Expressionistic Style of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	3.207	9.099	$t \alpha .01 [df = 56] \geq 2.66$
C	-.276	7.350	
Standard Error = .850			$t = 4.098$
Pooled Variance = 10.012			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences Between Girls and Boys in the Treatment Group When Discussing Expressionistic Style of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the boys and girls in a treatment group when discussing expressionistic style of art. A mean gain score of 1.714 with a standard deviation of 16.989 was reported for the boys. A mean gain score of 2.929 with a standard deviation of 10.995 was reported by the girls. The difference between the means was 1.215, the pooled variance was 13.992, and the standard error was .707. The t-value of 1.719 was reported for noting the differences between the boys and girls. A t-value of 1.315 with 26 degrees of freedom was needed before the differences could be concluded at the .05 level of significance. The t-value of 1.719 was not significant at this level indicating that there was not a significant difference in the Total Verbal Expression Content scores attained by the boys and girls when discussing the expressionistic style of art. The above data are summarized in Table 26.

Total Verbal Expression Content Scores for Cartoon Style of Art

A total of 95 Verbal Expression Content score points were attained by the treatment group when discussing the cartoon style of art in the pre-test. The reported mean score was 3.275. The boys received 38 with a mean score of 2.714. The score was .561 below the mean score for the pre-test. The girls received 57 points with a mean score of 3.8. This score was .55 above the mean score for the pre-test.

Table 26. Differences Between Boys and Girls in the Treatment Group When Discussing Expressionistic Style of Art

Sex	Mean Gain Score	S.D.	Necessary to Reject H_0
F	2.295	10.995	$t\ \alpha\ .05\ [df = 26] \geq 1.315$
M	1.714	16.989	
Standard Error = .707			$t = 1.719$
Pooled Variance = 13.992			Do not reject H_0

df = degrees of freedom S.D. = Standard Deviation

The scores ranged from a high of 8 to a low of 0. A total of 188 Verbal Expression Content score points was attained by the treatment group in the post-test. The reported mean score was 6.483 points. The girls received a total of 84 points with a mean score of 5.6 which was .883 points below the mean score for the post-test. The boys received 104 points with a mean score of 7.429 which was .946 points above the mean score for the post-test. The scores ranged from a high of 13 points to a low of 2 points. A total of 93 gain points scored between the pre and post-test when discussing the cartoon style of art was attained for the treatment group. The mean gain score was reported at 3.207. The boys received 66 gain points with a mean score of 4.714 which was 1.507 points above the mean gain score for the group. The girls received 27 gain points with a mean score of 1.8 which was

1.407 points below the mean gain score for the group. The gain scores ranged from a high of 9 points to a low of -3 points. Scores for seven children (one girl, six boys) were within the 10 to 6 point range; scores for sixteen children (eight girls, eight boys) were within the 5 to 1 point range; and six girls attained scores within the 0 to -4 point range. Pre-test, post-test, and gain scores for individual children in the treatment group may be found in Appendix E. The above data are summarized in Figure 6.

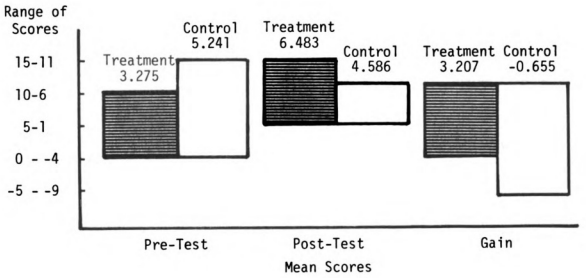

Figure 6. Range of total verbal expression content pre-test, post-test, and gain scores for treatment and control groups when discussing cartoon style of art.

A total of 152 Verbal Expression Content score points were attained by the children in the control group during the pre-test when discussing cartoon style of art. The reported mean score was 5.241. The boys received 79 points with a mean score of 5.643. This score was .402 above the mean score for the pre-test. The girls received 73 points with a mean score of 4.867. This score was .374 points below the mean score for the pre-test. The scores for the pre-test ranged from a high of 12 to a low of 0. A total of 133 Verbal Expression Content score points was attained by the children in the control group on the post-test. The reported mean score for the post-test was 4.586. The boys received 71 points with a mean score of 5.071. This score was .485 above the mean for the post-test. The girls received 62 points with a mean score of 4.133. This score was .453 points below the mean score for the post-test. The scores for the post-test ranged from a high of 10 to a low of 1. A negative total of -19 gain points were reported for the control group. The mean negative gain score was reported at -.655. A negative gain score of -8 with a mean score of -.571 was reported for the boys. This score was .084 points above the mean gain score for the group. A negative gain score of -11 with a mean score of -.733 was reported for the girls. This score was .079 points below the mean gain score for the group. The gain scores for the control group ranged from a high of 8 points to a low of -9 points. Pre-test, post-test, and gain scores for individual children in the control group may be found in Appendix E. The above data are summarized in Figure 6.

Difference Between the Groups When Discussing Cartoon Style of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the treatment and control groups when discussing cartoon style of art. A mean gain score of 3.207 with a standard deviation of 9.009 was reported for the treatment group. A negative mean gain score of -.655 with a standard deviation of 13.448 was reported for the control group. The difference between the mean scores for both groups was 3.862, the pooled variance was 11.274, and the standard error was .441. A t-value of 8.764 was reported noting the differences between the two groups. A t-value of 2.66 with 56 degrees of freedom was needed before the differences could be concluded as being significant at the .01 level. The t-value of 8.764 was significant at this level and these differences could have occurred by chance only 1 percent of the time. The data indicated that the null hypothesis should be rejected as the children from the treatment group scored significantly higher among Total Verbal Expression Content scores when discussing the cartoon style of art than did the control group. The above data are summarized in Table 27.

Table 27. Differences Between Groups When Discussing Cartoon Style of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	3.207	9.009	$t\ \alpha\ .01\ [df = 56] \geq 2.66$
C	-.655	13.448	
Standard Error = .441			$t = 8.764$
Pooled Variance = 11.274			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences Between Girls and Boys in the Treatment Group When Discussing Cartoon Style of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the boys and girls in the treatment group when discussing the cartoon style of art. A mean gain score of 4.714 with a standard deviation of 5.604 was reported for the boys. A mean gain score of 1.571 with a standard deviation of 8.418 was reported for the girls. The difference between the mean scores was 3.143, the pooled variance was 7.011, and the standard error was .5. The t-value of 6.286 was reported noting the differences between the boys and girls. A t-value of 1.706 with 26 degrees of freedom was needed before the differences could be concluded at the .01 level of significance. The t-value of 6.286 was significant at this level indicating that there was a difference in the Total Verbal Expression Content scores attained by boys and girls when discussing the cartoon style of

art, and thus the null hypothesis should be rejected. The data indicated that boys attained more Total Verbal Expression Content score points than did the girls and this difference could occur by chance only one percent of the time. The above data are summarized in Table 28.

Table 28. Difference Between Boys and Girls in the Treatment Group When Discussing Cartoon Style of Art

Sex	Mean Gain Score	S.D.	Necessary to Reject H_o
F	1.571	8.418	$t \alpha .01$ [df = 26] $\geq$ 1.706
M	4.714	5.604	
Standard Error = .5			t = 6.286
Pooled Variance = 7.011			Reject H_o

df = degrees of freedom S.D. = Standard Deviation

Total Verbal Expression Content Scores for Preference Responses

A total of 253 Verbal Expression Content score points was attained by the treatment group children when they were discussing their preferences (like, like-as-much, and buy) for style of art in the pre-test. The reported mean score was 8.72. The boys received 125 points with a mean score of 8.929 which was .209 points above the mean score for the pre-test. The girls received 128 points with a mean score of 8.533 which was .187 points below the mean score for the pre-test. The

scores ranged from a high of 17 points with a low of 3 points. A total of 238 Verbal Expression Content score points was attained by the treatment group in the post-test. The reported mean score was 8.207. The boys received 117 points with a mean score of 8.357. This score was .15 points above the mean for the post-test. The girls received 121 points with a mean score of 8.067. This score was .14 below the mean score for the post-test. The scores ranged from a high of 15 points to a low of 4 points. A negative total of -15 gain points was reported for the treatment group. The mean negative gain score was reported at .517. A negative gain score of -8 was received by the boys. The mean of this score was -.571 or .054 points below the mean gain score for the group. A negative gain score of -7 was received by the girls. The mean of this score was -.476 or .05 points above the mean gain score for the group. The gain scores ranged from a high of 11 to a low of -4 points. Scores for twelve children (five girls, seven boys) were within the 5 to 1 point range; scores for fourteen children (nine girls, five boys) were within the 0 to -4 point range; scores for two children (one girl, one boy) were within the -5 to -9 point range; and the score for one boy was within the -10 to -14 point range. Pre-test, post-test, and gain scores for individual children in the treatment group may be found in Appendix E. The above data are summarized in Figure 7.

A total of 235 Verbal Expression Content score points was attained by the control group children when they were discussing their preferences (like, like-as-much, and buy) for styles of art in the pre-test. The reported mean score was 8.103. The boys received 117 points

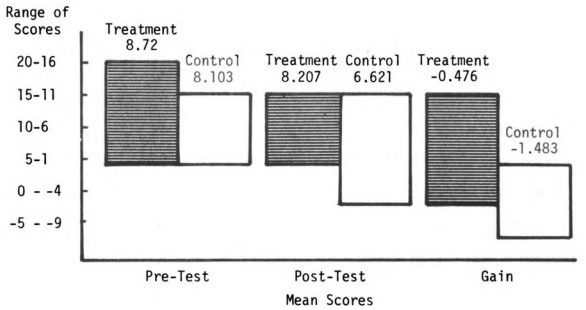

Figure 7. Range of total verbal expression content pre-test, post-test, and gain scores for treatment and control groups when discussing preferences for three styles of art.

with a mean score of 8.357. This score was .254 points above the mean score for the pre-test. The girls received 118 points with a mean score of 7.867. This score was .236 points below the mean score for the pre-test. The scores ranged from a high of 13 points to a low of 4 points. A total of 192 Total Verbal Expression Content score points were attained by the control group in the post-test. The reported mean score was 6.621. The boys received 103 points with a mean score of 7.357. This score was .736 points above the mean score for the post-test. The girls received 89 points with a mean score of 5.933. This score was .688 points below the mean score for the post-test. The scores ranged from a high of 14 points to a low of 0 points. A negative total of -43 gain points was reported for the control group. The mean negative gain score was reported at -1.483. A negative gain score of -14 was received by the boys. The mean of this score was -1 points or .483 points below the mean gain score for the group. A negative gain score of -29 was received by the girls. The mean of this score was -1.933 or .45 points above the mean gain score for the group. The scores ranged from a high of 5 points to a low of -7 points. Scores for six children (two girls, four boys) were within the 5-1 point range; scores for seventeen children (nine girls, eight boys) were within the 0 to -4 point range; and scores for six children (four girls, two boys) were within the -5 to -9 point range. Pre-test, post-test, and gain scores for individual children in the control group may be found in Appendix E. The above data are summarized in Figure 7.

Differences Between Groups when Discussing Preferences for Styles of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the treatment and control groups when discussing preferences (like, like-as-much, and buy) for three styles of art. A mean gain score of .517 with a standard deviation of 15.687 was reported for the treatment group. A negative mean gain score of -1.483 with a standard deviation of 9.330 was reported for the control group. The difference between the mean scores for both groups was .966, the pooled variance was .742, and the standard error was .133. A t-value of 7.263 was reported noting the differences between the two groups. A t-value of 2.66 with 56 degrees of freedom was needed before the differences could be concluded as being significant at the .01 level. The t-value of 7.263 was significant at this level and these differences could have occurred by chance only one percent of the time. The data indicated that the null hypothesis should be rejected as the children from the treatment group attained a significantly higher amount of Total Verbal Expression Content scores when discussing their preferences (like, like-as-much, and buy) for three styles of art than did the control group. The above data are summarized in Table 29.

Table 29. Differences Between Groups When Discussing Preferences for Three Styles of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	-.517	15.687	t α .01 [df = 56] $\geq$ 2.66
C	-1.483		
Standard Error = .133			t = 7.263
Pooled Variance = .742			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences Between Girls and Boys in the Treatment Group hen Discussing Preferences for Three Styles of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the girls and boys in the treatment group when discussing preferences (like, like-as-much, and buy) for three styles of art. A negative mean gain score of -.571 with a standard deviation of 13.956 was reported for the boys. A negative mean gain score of -.571 with a standard deviation of 13.956 was reported for the girls. The difference between the mean scores was 0, the pooled variance was 13.956, and the standard error was .706. The t-value of 0 was reported for the differences between the boys and girls when discussing their preferences for three styles of art. A t-value of 1.315 with 26 degrees of freedom was needed before the differences could be concluded at the .05 level of significance. The t-value of 0

was not significant at the .05 level indicating that there were no differences between the Total Verbal Expression Content scores attained by boys and girls when discussing preferences (like, like-as-much, and buy) for three styles of art. The above data are summarized in Table 30.

Table 30. Differences Between Boys and Girls in the Treatment Group When Discussing Preferences for Three Styles of Art

Group	Mean Gain Scores	S.D.	Necessary to Reject H_0
F	-.571	13.956	$t\ \alpha\ .05\ [df = 26] \geq 1.315$
M	-.571	13.956	
Standard Error = .706			$t = 0$
Pooled Variance = 13.956			Do not reject H_0

df = degrees of freedom S.D. = Standard Deviation

Total Verbal Expression Content Scores for Disliking Three Styles of Art

A total of 74 Verbal Expression Content score points was attained by the treatment group children when they were discussing their dislikes for three styles of art in the pre-test. The reported mean score was 2.551. The boys received 45 points with a mean score of 3.214 or .663 points above the mean score for the pre-test. The girls received 29 points with a mean score of 1.933 or .618 points below the mean score for the pre-test. The scores ranged from a high of 7 points to a low

of 0 points. A total of 84 Verbal Expression Content score points was attained by the treatment group in the post-test. The reported mean score was 2.90. The boys received 44 points with a mean score of 3.142. This score was .242 above the mean for the post-test. The girls received 40 points with a mean score of 2.667. This score was .233 points below the mean for the post-test. The scores ranged from a high of 5 points to a low of 0 points. A total of 10 Verbal Expression Content points scored between the pre-and post-tests when discussing dislikes for three styles of art was reported for the treatment group. The mean gain score for the treatment group was .345. A negative gain score of -1 with a negative mean gain score of -.071 was reported for the boys. This score was .416 points below the mean gain score for the group. The girls received 11 gain points with a mean of .733. This score was .388 points above the mean gain score for the group. The scores ranged from a high of 5 points to a low of -4 points. Scores for ten children (six girls, four boys) were within the 5-1 point range, and scores for nineteen children (nine girls, ten boys) were within the 0 to -4 point range. Pre-test, post-test, and gain scores for individual children in the treatment group may be found in Appendix E.

A total of 74 Verbal Expression Content score points was attained by the control group when discussing their dislike for three styles of art during the pre-test. The reported mean score was 2.552. The boys received 42 points with a mean score of 3. This score was .448 points above the average mean score for the pre-test. The girls received 32 points with a mean score of 2.133. This score was .419

points below the mean score for the pre-test. The scores for the pre-test ranged from a high of 6 points to a low of 0 points. A total of 123 Verbal Expression Content score points was reported for the control group when discussing their dislikes for three styles of art during the post-test. The reported mean score was 4.310. The boys received 64 points with a mean of 4.571. This score was .261 points above the mean score for the post-test. The girls received 59 points with a mean score of 3.933. This score was .377 points below the mean score of the post-test. The scores ranged from a high of 14 points to a low of 0 points. The control group scored a total of 49 gain points between the pre and post-tests when discussing dislikes for three styles of art. The mean gain score for the control group was reported at 1.690 points. The boys received 22 gain points with a mean score of 1.571. This score was .119 points below the mean gain score for the group. The girls received 27 gain points with a mean score of 1.8. This score was .11 points above the mean gain score for the control group. The scores ranged from a high of 11 to a low of -4. Scores for two children (one girl, one boy) were within the 15-11 point range; scores for two children (one girl, one boy) were within the 10-6 point range; scores for nine children (four girls, five boys) were within the 5-1 point range; and scores for sixteen children (nine girls, seven boys) were within the 0 to -4 point range. Pre-test, post-test, and gain scores for individual children in the control group may be found in Appendix E. The above data are summarized in Figure 8.

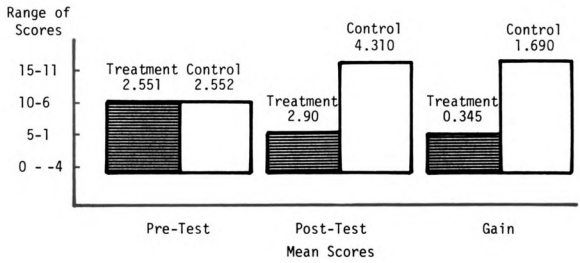

Figure 8. Range of total verbal expression content pre-test, post-test, and gain scores for treatment and control groups when discussing dislikes for three styles of art.

Differences Between Groups when Discussing Dislikes for Three Styles of Art

A two-tailed t-distribution was employed to determine the differences between the Total Verbal Expression Content scores for the treatment and control groups for discussing their dislikes for three styles of art. A mean gain score of .345 with a standard deviation of 2.948 was reported for the treatment group. A mean gain score of 1.690 with a standard deviation of 13.65 was reported for the control group. The difference between the mean scores for both groups was 1.345, the pooled variance was 8.299, and the standard error was .378. A t-value of 3.558 was reported noting the differences between the two groups. A t-value of 2.66 with 56 degrees of freedom was needed before the differences could be concluded as being significant at the .01 level. The t-value of 3.558 was significant at this level and these differences could have occurred by chance only one percent of the time. The data indicated that the null hypothesis should be rejected as the children from the control group attained a significantly higher amount of Total Verbal Expression Content scores when discussing their dislikes for three styles of art than did the treatment group. The above data are summarized in Table 31.

Table 31. Differences Between Groups When Discussing Dislikes for Three Styles of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	.345	2.948	$t \alpha .01$ [df = 56] ≥ 2.66
C	1.690	13.650	
Standard Error = .378			t = 3.558
Pooled Variance = 8.299			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences Between Girls and Boys in the Treatment Group When Discussing Dislikes for Three Styles of Art

A two-tailed t-distribution was employed to test the differences between the Total Verbal Expression Content scores for the girls and boys in the treatment group when discussing their dislikes for three styles of art. A negative mean gain score of -1 with a standard deviation of 2.841 was reported for the boys. A mean gain score of .429 with a standard deviation of 1.648 was reported for the girls. The difference between the mean scores was 5.0, the pooled variance was 2.245, and the standard error was .283. The t-value of 2.123 was reported noting the differences between the boys and girls when discussing their dislikes for three styles of art. A t-value of 1.706 with 26 degrees of freedom was needed before the differences could be concluded at the .01 level of significance. The t-value of 2.123 was significant at the .01 level and the differences could have occurred by chance only one percent of the

time. The data indicated that the girls attained more Total Verbal Expression Content score points than did the boys and thus the null hypothesis should be rejected. The above data are summarized in Table 32.

Table 32. Differences Between the Girls and Boys in the Treatment Group When Discussing Dislikes for Three Styles of Art

Sex	Mean Gain Scores	S.D.	Necessary to Reject H_o
F	.429	1.648	$t\ \alpha\ .01\ [df = 26] \geq 1.706$
M	-.071	2.841	
Standard Error = .283			$t = 2.123$
Pooled Variance = 2.245			Reject H_o

df = degrees of freedom S.D. = Standard Deviation

Hypothesis 2:

Group instruction covering the relevant characteristics of three styles of art will have a significant effect on the extent of stylistic terms used by fifth graders when discussing three styles of art.

Symbolically: $H_1 = T = C$

Alternate Hypothesis: Restated in the Null Form:

Group instruction covering the relevant characteristics of three styles of art will not have a significant effect on the extent of stylistic terms used by fifth graders when discussing three styles of art.

Symbolically: $H_0 = T = C$

This hypothesis was tested by comparing the Verbal Expression Content scores when responding to style during the discussions about three styles of art for the treatment and control groups. The two-tailed t-distribution was employed to measure the differences in the two groups. Overall Verbal Expression Content score points for use of stylistic terms were discussed as well as stylistic terms used for discussing representational, expressionistic, and cartoon styles of art. Stylistic terms used for discussing preferences and dislikes for three styles of art were also reported. Comments made by the children were included as part of the data report to indicate how the children responded to styles of art. Pre-test, post-test, and gain scores for individual children in the treatment and control groups may be found in Appendix F.

Differences in the Total Verbal Expression Content Scores for Stylistic Terms

A total of 191 Verbal Expression Content score points for use of stylistic terms was attained by the treatment group in the pre-test. While the mean score reported for the pre-test was 6.586, the scores ranged from a high of 21 points to a low of 1 point. A total of 389 points for use of stylistic terms was attained during the post-test. While the mean score reported for the post-test was 13.414 points, the scores ranged from a high of 32 to a low of 4 points. A total of 198 points used for stylistic terms were gained between the pre and post-tests by the treatment group. A mean gain score of 6.828 with a standard deviation of 44.576 was reported for the treatment group. The mean gain scores ranged from a high of 18 to a low of 3. Scores for three children were within the 20-16 point range, scores for five children were within the 15-11 point range, scores for eight children were within the 10-6 point range, scores for six children were within the 5-1 point range, and scores for seven children were within the 0 to -4 point range.

A total of 215 Verbal Expression Content score points for use of stylistic terms was attained by the control group in the pre-test. The mean score reported for the pre-test was 7.414 and the scores ranged from a high of 16 points to a low of 1 point. A total of 183 points for use of style was attained by the control group in the post-test. The mean score reported for the post-test was 6.310 and the scores ranged from a high of 19 points to a low of 0 points. A negative gain score of -32 points was reported for the control group. A negative mean gain

score of -1.103 with a standard deviation of 18.739 was reported for the control group. The mean gain scores ranged from a high of 8 points to a low of -12 points. One child attained a score within the 10-6 point range, eleven children scored within the 5-1 point range; twelve children scored within the 0 to -4 point range; three children scored within the -5 to -9 point range; and two children scored within the -10 to -14 point range.

A two-tailed t-distribution was employed to measure the differences in the Total Verbal Expression Content scores using stylistic terms for the treatment and control groups. The difference between the mean gain scores was 7.931, the pooled variance was 11.586, and the standard error was .455. The t-value noting the difference between the groups was 17.431. A t-value of 2.66 with 56 degrees of freedom was necessary before a significant difference between the Total Verbal Expression Content score points using stylistic terms in the treatment and control groups could be concluded at the .01 level of significance. The t-value of 17.431 was significant at the .01 level, and the difference could occur by chance only 1 percent of the time. The data indicate that the null hypothesis should be rejected in favor of the hypothesis that group instruction would have an effect on the extent of stylistic terms used to discuss three styles of art. The above data are summarized in Table 33.

Table 33. Differences in Total Verbal Expression Content Scores for Stylistic Terms

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	6.828	44.576	$t \alpha .01$ [df = 56] ≥ 2.66
C	-1.103	18.739	
Standard Error = .455			t = 17.431
Pooled Variance = 11.586			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Representational Style of Art

A total of 34 Verbal Expression Content score points for stylistic terms used to discuss representational style of art was attained by the treatment group in the pre-test. While the mean score reported for the pre-test was 1.172, the scores ranged from a high of 4 points to a low of 0 points. A total of 81 points for use of stylistic terms was attained in the post-test. While the mean score reported for the post-test was 2.793, the scores ranged from a high of 10 points to a low of 0 points. A total of 47 points used for stylistic terms was gained between the pre and post-tests by the treatment group. A mean gain score of 1.621 with a standard deviation of 24.887 was reported for the treatment group. The mean gain scores ranged from a high of 6 to a low of -2. Scores for two children were within the 10-6 point range,

scores for sixteen children were within the 5-1 point range, and scores for eleven children were within the 0 to -4 point range.

A total of 44 Verbal Expression Content score points for stylistic terms used to discuss representational style of art was attained by the control group in the pre-test. The mean score reported for the pre-test was 1.517, and the scores ranged from a high of 6 points to a low of 0 points. A total of 40 points for use of stylistic terms was attained in the post-test. The mean score reported for the post-test was 1.379, and the scores ranged from a high of 4 points to a low of 0 points. A negative gain score of -4 points was reported for the control group. A negative mean gain score of -.138 with a standard deviation of 3.266 was reported for the control group. The mean gain scores ranged from a high of 4 points to a low of -4 points. Scores for eleven children were within the 5-1 point range, and scores for eighteen children were within the 0 to -4 point range.

A two-tailed t-distribution was employed to measure the differences in the Total Verbal Expression Content Scores of stylistic terms used for discussing representational style of art for the treatment and control groups. The difference between the mean scores was 1.759, the pooled variance was 4.077, and the standard error was .268. A t-value noting the difference between the groups was 6.638. A t-value of 2.66 with 56 degrees of freedom was necessary before a significant difference between the Total Verbal Expression Content score points for stylistic terms used to discuss representational style of art in the treatment and control groups could be concluded at the .01 level of

significance. The t-value of 6.638 was significant at the .01 level, and the differences could have occurred only one percent of the time. The data indicate that the null hypothesis should be rejected in favor of the hypothesis that group instruction would have an effect on the extent of stylistic terms used to discuss representational style of art. The above data are summarized in the Table 34.

Table 34. Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Representational Style of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	1.621	4.887	$t\ \alpha\ .01\ [df = 56] \geq 2.66$
C	-.138	3.266	
Standard Error = .268			$t = 6.638$
Pooled Variance = 4.077			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Expressionistic Style of Art

A total of 48 Verbal Expression Content score points for stylistic terms used to discuss expressionistic style of art was attained by the treatment group in the pre-test. While the mean score reported for the pre-test was 1.665, the scores ranged from a high of 6 points to a low of 0 points. A total of 96 points for use of stylistic terms was attained in the post-test. While the mean score reported for the

post-test was 3.310, the scores ranged from a high of 9 points to a low of 0 points. A total of 48 points used for stylistic terms was gained between the pre and post-tests by the treatment group. A mean gain score of 1.655 with a standard deviation of 5.448 was reported for the treatment group. The mean gain scores ranged from a high of 8 to a low of -2. One child attained a score within the 10-6 point range, eighteen children attained scores within the 5-1 point range, and ten children attained scores within the 0 to -4 point range.

A total of 36 Verbal Expression Content score points for stylistic terms used to discuss expressionistic style of art was attained by the control group in the pre-test. The mean score reported for the group was 1.241, and the scores ranged from a high of 8 points to a low of 0 points. A total of 33 points for use of stylistic terms was attained in the post-test. The mean score reported for the post-test was 1.138, and the scores ranged from a high of 5 points to a low of 0 points. A negative gain score of -3 points was reported for the control group. A negative mean gain score of -.103 with a standard deviation of 3.525 was reported for the control group. The mean gain scores ranged from a high of 5 points to a low of -7 points. Scores for seven children were within the 5-1 point range; scores for twenty-one children were within the 0 to -4 point range; and the score of one child was within the -5 to -9 point range.

A two-tailed t-distribution was employed to measure the differences in the Total Verbal Expression Content scores for stylistic terms used when discussing expressionistic style of art for the treatment and control groups. The difference between the mean scores was 1.758, the

pooled variance was 4.487, and the standard error was .278. A t-value noting the difference between the groups was 6.32. A t-value of 2.66 with 56 degrees of freedom was necessary before a significant difference of stylistic terms used to discuss expressionistic style of art in the treatment and control groups could be concluded at the .01 level of significance. The t-value of 6.32 was significant at the .01 level and the difference could occur by chance only one percent of the time. The data indicate that the null hypothesis should be rejected in favor of the hypothesis that group instruction would have an effect on the extent of stylistic terms used to discuss expressionistic style of art. The above data are summarized in Table 35.

Table 35. Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Expressionistic Style of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	1.655	5.448	$t \alpha .01$ [df = 56] $\geq$ 2.66
C	-.103	3.525	
Standard Error = .278			t = 6.32
Pooled Variance = 4.487			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Cartoon Style of Art

A total of 34 Verbal Expression Content score points for stylistic terms used to discuss cartoon style of art was attained by the

treatment group in the pre-test. While the mean score reported for the pre-test was 1.172, the scores ranged from a high of 8 points to a low of 0 points. A total of 88 points for use of stylistic terms was attained in the post-test. While the mean score reported for the post-test was 3.034, the scores ranged from a high of 6 points to a low of 0 points. A total of 54 points used for stylistic terms was gained between the pre and post-tests by the treatment group. A mean gain score of 1.862 with a standard deviation of 4.195 was reported for the treatment group. The mean gain scores ranged from a high of 6 points to a low of -2 points. Scores for twenty-two children were within the 5-1 point range, and scores for seven children were within the 0 to -4 point range.

A total of 47 Verbal Expression Content score points for stylistic terms used to discuss cartoon style of art was attained by the control group in the pre-test. The mean score reported for the group was 1.621, and the scores ranged from a high of 7 points to a low of 0 points. A total of 28 points for use of stylistic terms was attained in the post-test. The mean score reported for the post-test was .966, and the scores ranged from a high of 4 points to a low of 0 points. A negative gain score of -19 points was reported for the control group. A negative mean gain score of -.655 with a standard deviation of 3.663 was reported for the control group. The mean gain scores ranged from a high of 2 points to a low of -7 points. Scores for five children were within the 5-1 point range; scores for twenty-three children were within the 0 to -4 point range; and the score for one child was within the -5 to -9 point range.

A two-tailed t-distribution was employed to measure the difference in the Total Verbal Expression Content scores for stylistic terms used when discussing cartoon style of art for the treatment and control groups. The difference between the mean scores was 2.517, the pooled variance was 3.929, and the standard error was .260. A t-value noting the difference between the groups was 9.681. A t-value of 2.66 with 56 degrees of freedom was necessary before a significant difference of stylistic terms used to discuss cartoon style of art could be concluded at the .01 level of significance. The t-value of 9.681 was significant at the .01 level and the difference could occur by chance only one percent of the time. The data indicate that the null hypothesis should be rejected in favor of the hypothesis that group instruction would have an effect on the extent of stylistic terms used to discuss cartoon style of art. The above data are summarized in Table 36.

Table 36. Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Cartoon Style of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	1.862	4.195	$t \alpha .01$ [df = 56] ≥ 2.66
C	-.655	3.663	
Standard Error = .260			t = 9.681
Pooled Variance = 3.929			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Style Preferences

A total of 49 Verbal Expression Content score points for stylistic terms used to discuss preferences (like, like-as-much, buy) for three styles of art was attained by the treatment group in the pre-test. While the mean score reported for the pre-test was 1.690, the scores ranged from a high of 5 points to a low of 0 points. A total of 77 points for use of stylistic terms was attained in the post-test. While the mean score reported for the post-test was 2.655, the scores ranged from a high of 6 points to a low of 0 points. A total of 28 points used for stylistic terms was gained between the pre and post-tests by the treatment group. A mean gain score of .966 with a standard deviation of 4.963 was reported for the treatment group. The mean gain scores ranged from a high of 5 points to a low of -3 points. Scores for seventeen children were within the 5-1 point range, and scores for twelve children were within the 0 to -4 point range.

A total of 65 Verbal Expression Content score points for stylistic terms used to discuss preferences (like, like-as-much, buy) for three styles of art was attained by the control group in the pre-test. The mean score reported for the group was 2.241, and the scores ranged from a high of 6 points to a low of 0 points. A total of 60 points for use of stylistic terms was attained in the post-test. The mean score reported for the post-test was 2.069, and the scores ranged from a high of 6 points to a low of 0 points. A negative gain score of -5 points was reported for the control group. A negative mean gain

score of -.172 with a standard deviation of 4.791 was reported for the control group. The mean gain scores ranged from a high of 5 points to a low of -5 points. Nine children attained scores within the 5-1 point range; eighteen children attained scores within the 0 to -4 point range; and two children attained scores within the -5 to -9 point range.

A two-tailed t-distribution was employed to measure the difference in the Total Verbal Expression Content scores for stylistic terms used when discussing preferences (like, like-as-much, buy) for three styles of art for the treatment and control groups. The difference between the mean gain scores was 1.138, the pooled variance was 4.866, and the standard error was .290. A t-value noting the difference between the groups was 3.924. A t-value of 2.66 with 56 degrees of freedom was necessary before a significant difference of stylistic terms used to discuss preferences for three styles of art could be concluded at the .01 level of significance. The t-value of 3.924 was significant at the .01 level, and the difference could occur by chance only one percent of the time. The data indicate that the null hypothesis should be rejected in favor of the hypothesis that group instruction would have an effect on the extent of stylistic terms used to discuss preferences for three styles of art. The above data are summarized in Table 37.

Table 37. Difference in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Preferences for Three Styles of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	.966	4.963	$t\ \alpha\ .01\ [df = 56] \geq 2.66$
C	-.172	4.791	
Standard Error = .290			$t = 3.924$
Pooled Variance = 4.877			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Style Dislikes

A total of 25 Verbal Expression Content score points for stylistic terms used to discuss dislikes for three styles of art was attained by the treatment group in the pre-test. While the mean score reported for the pre-test was .862, the scores ranged from a high of 5 points to a low of 0 points. A total of 53 points for use of stylistic terms was attained in the post-test. While the mean score reported was 1.828, the scores ranged from a high of 3 points to a low of 0 points. A total of 28 points used for stylistic terms was gained between the pre and post-tests by the treatment group. A mean gain score of .966 with a standard deviation of 1.963 was reported for the treatment group. The mean gain scores for the group ranged form a high of 5 points to a low of -2 points. Scores for sixteen children were

within the 5-1 point range, and scores for thirteen children were within the 0 to -4 point range.

A total of 23 Verbal Expression Content score points for stylistic terms used to discuss dislikes for three styles of art was attained by the control group in the pre-test. The mean score reported for the pre-test was .793, and the scores ranged from a high of 3 points to a low of 0 points. A total of 22 points for use of stylistic terms was attained in the post-test. The mean score reported for the post-test was .759, and the scores ranged from a high of 3 points to a low of 0 points. A negative gain score of -1 point was reported for the control group. A negative mean gain score of -.034 with a standard deviation of 1.249 was reported for the control group. The mean gain scores ranged from a high of 2 points to a low of -2 points. Eleven children attained scores within the 5-1 point range, and eighteen children attained scores within the 0 to -4 point range.

A two-tailed t-distribution was employed to measure the difference in the Total Verbal Expression Content scores for stylistic terms used when discussing dislikes for three styles of art for the treatment and control groups. The difference between the mean scores was 1 point, the pooled variance was 1.606, and the standard error was .166. A t-value noting the difference between the groups was 6.024. A t-value of 2.66 with 56 degrees of freedom was necessary before a significant difference of stylistic terms used to discuss dislikes for three styles of art could be concluded at the .01 level of significance. The t-value of 6.024 was significant at the .01 level, and the difference

could occur by chance only one percent of the time. The data indicate that the null hypothesis should be rejected in favor of the hypothesis that group instruction would have an effect on the extent of stylistic terms used to discuss preferences for three styles of art. The above data are summarized in Table 38.

Table 38. Differences in Verbal Expression Content Scores for Stylistic Terms Used to Discuss Dislikes for Three Styles of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	.966	1.963	$t\ \alpha\ .01\ [df = 56] \geq 2.66$
C	-.934	1.249	
Standard Error = .166			$t = 6.024$
Pooled Variance = 1.606			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Table 39 is a summary statement of the pre-test, post-test, and gain scores received by the children in the treatment and control groups. Pre-test, post-test, and gain scores for individual children in the treatment and control groups may be found in Appendix F.

Table 39. Summary of the Total Verbal Expression Content Scores for Stylistic Terms Used to Discuss Three Styles of Art

Category	Group	Mean Pre-test Scores	Mean Post-test Scores	Mean Gain Scores
Overall stylistic terms	T	6.586	13.414	6.828
	C	7.414	6.310	-1.103
Representational	T	1.172	2.793	1.621
	C	1.517	1.379	-.138
Expressionistic	T	1.665	3.310	1.665
	C	1.241	1.138	-.103
Cartoon	T	1.172	3.034	1.862
	C	1.621	.966	-.655
Preference	T	1.690	2.655	.966
	C	2.241	2.069	-.172
Dislike	T	.862	1.828	.966
	C	.793	.759	-.034

Children's Verbal Responses Using Stylistic Terms

The children's responses from the pre and post-test interviews were recorded by this researcher to determine the Verbal Expression Content scores. Perhaps these comments pertaining to the stylistic features for the three styles of art might add insight into how this researcher arrived at these scores.

Representational Style of Art

This researcher identified several characteristics for the representational style of art to be discussed with the children in the treatment group style study sessions. The following statements were those made by this researcher when discussing the style characteristics with the children. *The representational style of art shows people and things in a real way. There are a lot of decorations, details and facts about the people and things shown. The outlines make things look exact. The lines are smooth, round and curvy. They let you see how real things look and move. The colors and shading are used to give people and things life and movement. The colors are the ones you would regularly find things and people colored.* Some comments made by the children indicating their concepts related to the representational style of art or their level of sophistication when expressing their ideas about representational art are identified below.

When discussing the representational style of art in the pre-test illustrations of Little Red Riding Hood created by Elizabeth Orton Jones, one girl from the treatment group stated, *"The colors all blend together. This is deep in the forest and there are big trees, dirt, leaves and mushrooms."* In the post-test, this same girl, when discussing the representational style of art in the illustrations for Rumpelstiltskin created by Benvenuiti, noted, *"This is like a regular person because the face is normal and it stands out more. The bigger parts are in the front of the picture and the smaller things are in the back. This picture has a lot of color in it and all the parts are colored in."*

In the pre-test interview, one girl from the control group remarked that in Little Red Riding Hood, illustrated by Elizabeth Orton Jones, *"The shapes are sketched in and lines show hair, trees and the fur on the fox."* In the post-test, this same child, when discussing Rumpelstiltskin illustrated by Benvenuiti, said, *"Long and short lines make the hair, the hay, and the beard go all different ways."* This statement suggests there was no change in her level of ability to describe styles of art between the pre and post-test. When discussing the illustrations created by Benvenuiti in the post-test interview, one boy from the treatment group noted, *"The story is make-believe, but the faces are real, and some of the things could happen. There is good shading and outline and there is lots of colors."* Discussing the same pictures by Benvenuiti, a boy from the treatment group noted, *"These are real-looking [pictures] but there isn't much background. You can see the light and dark colors and the wrinkles in the clothes. The lines bend and they show the details."*

Expressionistic Style of Art

The following characteristics for the expressionistic style of art were identified by this researcher to discuss in the treatment group style study sessions. The following statements were those made by this researcher when discussing the style characteristics with the children. *Expressionistic style of art leans toward abstraction or they do not look one hundred percent real. These look like something you can draw. The artist gives you an idea of how things and people look and move. The feelings are shown in the faces. Things are often distorted by being*

really long or pointed. The artist experiments with colors and shadings to show emotions or feelings. The quick lines and shading gives you an idea of the form of things and people, but a lot of detail is not included. Some of the comments made by the children regarding expressionistic style of art are included below. When discussing the expressionistic illustrations for Duffy and the Devil ["Rumpelstiltskin"] one boy from the treatment group appeared to be confused when expressing his concept of style. He noted that the pictures were created in the "Wood" style of art and he explained that, *"The wheels usually spin water at a barn by a river and it goes around. The wheel in this picture goes around. Everything in this picture is made out of wood. The colors were slopped on and they aren't bright."* Another boy from the treatment group, commenting on the expressionistic illustrations created by Margot Zemach, said, *"All the spaces aren't filled in and you don't need all the details because the lines express the bending. There are no colors in these pictures and no background."* In contrast, a girl from the control group noted that the Margot Zemach illustrations for Duffy and the Devil showed *"the hair sketched, and there are spools of thread. The spinning wheel is sketched, and the dress is sketched."* Referring to the expressionistic illustrations for Little Red Cap created by Susan Blair, a boy from the treatment group noted in the pre-test that the pictures were *"drawn quickly and they aren't as real as the other pictures* [created by Elizabeth Orton Jones]. *These aren't real because the people are wide and funny. Also, there is no background in these pictures."*

Cartoon Style of Art

The following characteristics for the cartoon style of art were identified by this researcher to discuss in the treatment group style study sessions. The following statements were those made by this researcher when discussing the style characteristics with the children. *The cartoon style of art has pictures made to make you laugh or smile. The artist often uses sketches or outlines to make people or things. The situations people or things are in are often unusual or they don't happen in real life. The artist exaggerates the situations, the colors, or the way people and things are made to make the pictures funny or odd.* Some comments made by the children regarding the cartoon style of art are included below. When discussing the cartoon illustrations of Edward Gorey for Rumplestiltskin in the post-test, one boy from the treatment group noted, *"These are cartoons like Charlie Brown. They are funny because there is an odd expression on the face. The face has a flat and big nose. The different lines show the straight parts and the curves."* When discussing the cartoon illustrations of Edward Gorey for Red Riding Hood in the pre-test, one boy from the control group noted, *"These pictures are like cartoons. If the movement was real like on the Mickey Mouse Show they would be cartoon. You need a special projector to make cartoons move. These are funny because it's hard to draw a wolf with one foot."* The comments made by these two boys appear to reflect the effect media has on their interpretation or discussion of the cartoon style of art. In a somewhat negative manner, one girl from the treatment group described the cartoon illustrations of Edward Gorey for Rumpelstiltskin in the post-test as, *"They're gross. Things*

are sticking out, the nose is too big and the feet are funny. There are squiggly and straight lines and they show how things are sketched in." She determined that these illustrations had been done in the *"Weird"* style of art.

Preference Comments

Some comments made by the children indicating their preferences for styles of art are identified below. In reference to liking the illustrations in the representational style of art created by Benvenuiti for Rumpelstiltskin, one boy from the treatment group noted in the post-test that, " *These are the baddest pictures. They are better than the others because they are neater and they have lots of color."* When discussing the same Benvenuiti pictures in the post-test, a boy from the treatment group said he liked the pictures because *"These are really real and there are lots of colors. There is something really going on in the pictures and there are no smudge marks."* A girl from the control group stated in the pre-test that she liked the representational style of art created by Elizabeth Orton Jones because *"There are a lot of flowers in this picture. I like how they drew the wolf."* One boy in the treatment group, when discussing the cartoon illustrations of Edward Gorey for Red Riding Hood, noted, *"I like these pictures, but they aren't proper to hang on the wall so I guess I like these"* [representational style of art created by Elizabeth Orton Jones]. Another boy in the treatment group noted in the post-test that the representational style of art illustrations for Rumpelstiltskin created by Benvenuiti would *"look good in our house. My parents would let me buy them. The other pictures don't match a room in my house."* The

comments made by these two boys indicate that their preferences for styles of art are influenced by family wants and pressure.

Dislike for Styles of Art

Some comments made by the children indicating their dislikes for styles of art are identified below. Referring to the cartoon illustrations for Red Riding Hood created by Edward Gorey, one girl in the control group noted in the pre-test that these pictures in the *"Low Class"* style of art were those where *"The artist tries to do his best but he can't do much, but he really tries. These pictures are not too good. Pictures here are too little for a book. Pictures in books should be big. The artist just didn't do a good job."* In the post-test interview, a boy from the treatment group stated his dislike for the expressionistic style of art created by Margot Zemach for Duffy and the Devil by commenting, *"I hate the lady; she's ugly. The dwarf shouldn't have horns. He looks like a devil."* A girl from the treatment group rejected the same pictures created by Zemach because *"These aren't even real. They are not colorful and the colors are smeared. These pictures have no background."* When stating her dislike for the cartoon illustrations of Edward Gorey for Red Riding Hood seen in the pre-test, one girl from the control group noted, *"There is not that much color here. The trees are odd and funny and somebody pulled a bulldozer through and slanted the ground."* When discussing the same Edward Gorey pictures for Red Riding Hood, a boy from the control group noted, *"These pictures are brownish grey mostly. Little Red Riding Hood don't look that good because the dress is the same color as the scenery and the basket."*

The comments made by the children when stating their preferences and dislikes for three styles of art often had little to do with stylistic features. The children often appeared to prefer or reject a style of art based on factors such as peer or family influence or on comments of an opinion nature rather than based on stylistic terms.

Hypothesis 3:

Group instruction covering the relevant characteristics of three styles of art will have a significant effect on the extent of the emotional characteristics of art terms used by fifth graders when discussing three styles of art.

Symbolically: $H_1 = T > C$

Alternate Hypothesis: Restated in the Null Form:

Group instruction covering the relevant characteristics of three styles of art will have no significant effect on the extent of emotional characteristics of art terms used by fifth graders when discussing three styles of art.

Symbolically: $H_0 = T = C$

This hypothesis was tested by comparing the Total Verbal Expression Content Gain scores in the pre- and post-tests of the treatment and control groups. The analysis of the data was conducted in two parts: one, a statistical analysis employing the two-tailed t-distribution to measure the differences between the groups for use of emotional terms when discussing three styles of art; and two, a

report of the scores received by the groups when discussing specific styles of art in emotional terms. Children's verbal responses to three styles of art using emotional terms are included to give an indication of how this researcher arrived at their Verbal Expression Content score for use of emotional terms. Pre-test, post-test, and gain scores for individual children in the treatment and control groups are found in Appendix G.

Differences in Total Verbal Expression Content Scores in the Use of Emotional Terms

A total of 23 Verbal Expression Content score points for use of emotional terms was attained by the treatment group in the pre-test. The mean score reported for the pre-test was .793 points. A total of 35 points for use of emotional terms was attained in the post-test. A mean score reported for the post-test was 1.207. A total of 12 points was gained between the pre- and post-tests by the treatment group. The mean gain score was .414 points with a standard deviation of 6.037. The gain scores ranged from a high of 4 points to a low of -9 points. Thirteen children scored within the 5 to 1 point range; fifteen children scored within the 0 to -4 point range, and one child scored within the -5 to -9 point range.

A total of 12 Verbal Expression Content score points for use of emotional terms was attained by the control group in the pre-test. The mean score reported for the pre-test was .414. A total of 19 points for use of emotional terms was attained in the post-test. The mean score reported for the post-test was .655. A total of 7 points was

gained between the pre- and post-tests by the control group. A mean gain score of .241 with a standard deviation of 1.618 was reported for the control group. The gain scores ranged from a high of 4 points to a low of -2 points. Nine children scored within the 5 to 1 point range, and twenty children scored within the 0 to -4 point range.

A two-tailed t-distribution was employed to note the differences between groups in the use of emotional terms when discussing three styles of art. A mean gain score of .414 with a standard deviation of 6.037 was reported for the treatment group. A mean gain score of .241 with a standard deviation of 1.618 was reported for the control group. The difference between the mean gain scores was .173, the pooled variance was 3.828, and the standard error was .257. A t-value of .673 was reported noting the differences between the treatment and control groups for the use of emotional terms when discussing three styles of art. A t-value of 2.001 with with 56 degrees of freedom was needed before the differences could be concluded at the .05 level of significance. A t-value of .673 was not significant at this level indicating that the null hypothesis should not be rejected. The data indicated that there were no significant differences between the treatment and control groups in the post-test for use of emotional terms when discussing three styles of art. The above data are summarized in Table 40.

Because the number of Total Verbal Expression Content scores for the use of emotional terms was so minimal, statistical analysis of the various differences between the groups for using emotional terms

Table 40. Differences Between Groups in the Use of Emotional Terms When Discussing Three Styles of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	.414	6.037	$t\ \alpha\ .05\ [df = 56] \geq 2.001$
C	.241	1.618	
Standard Error = .257			$t = .673$
Pooled Variance = 3.828			Do not reject H_0

df = degrees of freedom S.D. = Standard Deviation

when discussing specific styles of art would be unproductive. Thus, the statistical analysis was abandoned. A descriptive report of the Verbal Expression Content scores for use of emotional terms when discussing specific styles of art will be furnished as an alternate means for reporting data.

When discussing representational style of art in the pre-test, the treatment group did not use any emotional terms. They attained 4 points for use of emotional terms in the post-test, and the gain score was 4 points. Children in the control group in the pre-test attained a score of 2 points for use of emotional terms when discussing representational style of art. In the post-test, they attained a score of 3 points for use of emotional terms. Thus, a total of 1 gain point between the pre- and post-tests was recorded for the control group.

Four points for use of emotional terms when discussing expressionistic style of art were attained by the treatment group in the pre-test. A score of 9 points for use of emotional terms was attained in the post-test. A gain score of 5 points was reported for the treatment group. Two points for use of emotional terms when discussing expressionistic style of art were attained by the control group in the pre-test. Five points for use of emotional terms were attained in the post-test with a gain score of 3 points being reported for the control group.

When discussing cartoon style of art during the pre-test, the treatment group attained a total of 2 points for use of emotional terms. Thirteen points for use of emotional terms were attained in the post-test. The treatment group received a total of 11 gain points between the pre-and post-tests. When discussing cartoon style of art during the pre-test, the control group attained a total of 0 points for use of emotional terms. A total of 5 points for use of emotional terms was attained by the control group in the post-test. The control group received a total of 5 gain points for use of emotional terms between the pre and post-tests.

Two points for use of emotional terms when discussing preferences (like, like-as-much, buy) for three styles of art were attained by the treatment group in the pre-test. They attained 6 points for use of emotional terms in the post-test. Thus, the treatment group attained a negative gain score of -7 points between the pre and post-tests. In the pre-test the control group attained 3 points for use of emotional

terms when discussing preferences for three styles of art. Five points for use of emotional terms were attained in the post-test. A total of 2 points was attained between the pre- and post-tests for the control group.

When discussing dislikes for three styles of art, 2 points for use of emotional terms were attained in the pre-test by the treatment group. One point for use of emotional terms was attained in the post-test. A negative gain score of -1 was reported for the treatment group for use of emotional terms. When discussing dislikes for three styles of art, 3 points for use of emotional terms were attained in the pre-test by the control group. The control group received no points for use of emotional terms in the pre-test, and thus a negative gain score of -3 points was reported for the control group. The above data are summarized in Table 41.

Children's Responses to Three Styles of Art When Using Evaluative Terms

Children's responses to the three styles of art noting an evaluation of the artist's work or treatment of the subject matter and media were varied, but they were less definitive for the most part in the pre-test. Many children said, *"The artist did a good job,"* or *"The person who made this picture made it nice."*

In the pre-test, one girl from the control group noted that the illustrations done in the representational style of art for Little Red Riding Hood created by Elizabeth Orton Jones would be good to own because *"if these pictures were bought for a little kid, it would be*

Table 41. Verbal Expression Content Scores for Use of Emotional Terms When Discussing Three Styles of Art

Category	Group	Post-Test Score	Pre-Test Score	Gain Score
Representational style of art	T	4	0	4
	C	3	2	1
Expressionistic style of art	T	9	4	5
	C	5	2	3
Cartoon style of art	T	13	2	11
	C	5	0	5
Preferences (like, like-as-much, buy)	T	6	13	-7
	C	5	3	2
Dislike	T	1	2	-1
	C	0	3	-3

easier for them to understand." In the post-test, one boy from the treatment group noted that the illustrations created in the representational style of art by Benvenuiti for Rumpelstiltskin would be good to own because, *"I would like to have these. I would buy the book to pass on to my own children. We do that in my family."* In much the same line, some children noted that they would like certain illustrations for the monetary value they hold. One girl from the control group noted that she would like to own the illustrations done in the representational style of art for Little Red Riding Hood by Elizabeth Orton Jones because *"These pictures have a lot of colors in them and I think they are worth the most money."*

Children's evaluative comments were linked to how well they thought the illustrations meshed with their literal interpretations of the story. When discussing the post-test pictures for Duffy and the Devil created in the expressionistic style of art by Margot Zemach, one girl from the treatment group noted, *"She's supposed to be a princess, but she looks like an older woman with old clothes and a big nose."* Discussing the same pictures by Zemach, another girl from the treatment group noted, *"These don't look real. She's in raggedy clothes and she should have been pretty because she was a king's bride."* The children were concerned with the image of the characters and their comments indicated that they were interpreting the story and the pictures in a very literal and unsophisticated manner.

Two children had different opinions for the expressionistic illustrations for Duffy and the Devil created by Margot Zemach. One girl in the control group noted that the Zemach pictures were made by *"a careless artist. These don't look so good. There are scribbles all over the place."* A girl from the treatment group noted that the Zemach pictures were *"made by a guy. It just looks like it because guys can do better."*

When discussing the post-test illustrations created for Rumpelstiltskin by Edward Gorey in the cartoon style of art, one boy from the treatment group noted, *"What is this? There's no color. The man is supposed to be a midget, but he's all wrong. The body, arms, and legs are too big. The people don't look right."* In contrast to the above evaluation of Gorey's work, a girl from the treatment group noted, *"These stand out more and the others don't stand out. Those*

[pictures for Duffy and the Devil in expressionistic style of art] *are all lines and these* [Gorey's illustrations] *are all colored in. I like these better."*

One explanation for the low number of evaluative terms used when discussing the three styles was that many children compared the work of the three artists in the post-test and as a result the comments were categorized under the "Compare ____ to ____" subsection of the instrument. An example of the comparative comments made are as follows: In the pre-test, a girl from the control group, when discussing the Little Red Riding Hood illustrations created in the representational style of art by Elizabeth Orton Jones, noted, *"These pictures are more interesting than the others. These pictures have more features than the others. The wolf here looks like a dog and the other wolves in the other pictures look like cartoons."* As these comments were all comparative in nature, none of them were placed under the subsection of the instrument labeled Opinion of the Artist's Work.

Hypothesis 4:

Group instruction covering the relevant characteristics of three styles of art will have a significant effect on the extent of evaluative terms used by fifth graders when discussing three styles of art.

Symbolically: $H_1 = T > C$

Alternate Hypothesis: Restated in the Null Form:

Group instruction covering the relevant characteristics of three styles of art will have no significant effect on the extent of evaluative terms used by fifth graders when discussing three styles of art.

Symbolically: $H_0 = T = C$

This hypothesis was tested by comparing the Total Verbal Expression Content gain scores in the pre- and post-tests of the treatment and control groups. The analysis of the data was conducted in two parts: one, a statistical analysis employing the two-tailed t-distribution to measure the differences between the groups for the use of evaluative terms when discussing three styles of art; and two, a report of the scores received by the groups when discussing specific styles of art in evaluative terms. Children's verbal responses to three styles of art using evaluative terms are included to give an indication of how this researcher arrived at their Verbal Expression Content score for use of evaluative terms. Pre-test, post-test, and gain scores for individual children in the treatment and control groups are found in Appendix H.

Differences in Total Verbal Expression Content Scores in the Use of Evaluative Terms

A total of 67 points for the Verbal Expression Content score for use of evaluative terms for three styles of art was attained by the treatment group in the pre-test. The mean score reported for the

pre-test was 2.310. A total of 54 points for use of evaluative terms for the three styles of art was attained in the post-test. A mean score reported for the post-test was 1.862. A negative gain score of -10 was reported for the treatment group between the pre and post-tests. The standard deviation for the negative mean gain score was 4.591. The gain scores ranged from 4 points to a low of -5 points. Ten children scored within the 5-0 point range, seventeen children scored within the 0 to -4 point range, and two children scored within the -5 to -9 point range.

A total of 83 points for the Total Verbal Expression Content score for use of evaluative terms was attained by the control group in the pre-test. The mean score reported for the pre-test was 2.862. A total of 57 points for use of evaluative terms was attained in the post-test. The mean score for the post-test was 1.966. A negative gain score of -26 was reported for the control group between the pre and post-tests. This score had a mean of -.897 and a standard deviation of 3.382. The gain scores ranged from a high of 3 points to a low of -5 points. Scores for five children were within the 5-1 point range, scores for twenty-three children were within the 0 to -4 point range, and the score for one child was within the -5 to -9 point range.

A two-tailed t-distribution was employed to note the differences between the groups in the use of evaluative terms when discussing three styles of art. A negative mean gain score of -.345 with a standard deviation of 4.591 was reported for the treatment group. A negative mean gain score of -.897 with a standard deviation of 3.382 was reported

for the control group. The difference between the mean gain scores was .552, the pooled variance was .276, and the standard error was .069. A t-value of 8 was reported noting the differences between the treatment and control groups for the use of evaluative terms when discussing three styles of art. A t-value of 2.66 with 56 degrees of freedom was necessary before the differences could be concluded at the .01 level of significance. A t-value of 8 was significant, and the differences between the groups could occur by chance only 1 percent of the time. While the data would appear sufficient to reject the null hypothesis, the t-value could be misleading as the differences between the groups were due to negative gain scores. Thus, group instruction did not appear to have a positive effect on fifth graders' use of evaluative terms when discussing three styles of art. Theoretically, the null hypothesis should be rejected. The above data are summarized in Table 42.

Table 42. Differences Between Groups in the Use of Evaluative Terms When Discussing Three Styles of Art

Group	Mean Gain Score	S.D.	Necessary to Reject H_0
T	-.345	4.591	$t\ \alpha\ .01\ [df = 56] \geq 2.66$
C	-.897	3.382	
Standard Error = .069			$t = 8$
Pooled Variance = .276			Reject H_0

df = degrees of freedom S.D. = Standard Deviation

Because the number of Total Verbal Expression Content scores for the use of evaluative terms was so minimal, statistical analysis of the various differences between the groups for using evaluative terms when discussing specific styles of art would be unproductive. Thus, the statistical analysis was abandoned. A descriptive report of the Verbal Expression Content scores for the use of evaluative terms when discussing specific styles of art will be furnished as an alternate means of reporting the data.

When discussing representational style of art in the pre-test, the treatment group attained 16 points for use of evaluative terms. Sixteen points for use of evaluative terms were attained in the post-test. A gain score of 0 was reported indicating that there was no change in the use of evaluative terms between the pre and post-tests for the treatment group. In the pre-test, the children in the control group attained 19 points for use of emotional terms when discussing representational style of art. In the post-test, the control group attained 12 points for use of evaluative terms. A negative gain score of -7 was reported for the control group.

Eight points for use of evaluative terms when discussing expressionistic style of art were attained by the treatment group in the pre-test. Sixteen points for use of evaluative terms were attained in the post-test with a gain score of 8 points being reported for the treatment group. Sixteen points for use of evaluative terms when discussing expressionistic style of art were attained by the control group in the pre-test. Ten points for use of evaluative terms were attained in

the post-test. A negative gain score of -6 was reported for the control group.

When discussing cartoon style of art, a total of 8 points for use of evaluative terms was attained by the treatment group in the pre-test. Seven points for use of evaluative terms were attained in the post-test. The treatment group received a negative gain score of -1 point for use of evaluative terms when discussing cartoon style of art. When discussing cartoon style of art, a total of 14 points for use of evaluative terms was attained by the control group in the pre-test. They attained 9 points for use of evaluative terms in the post-test. The control group received a negative gain score of -5 points for use of evaluative terms when discussing cartoon style of art.

When discussing cartoon style of art, a total of 8 points for use of evaluative terms was attained by the treatment group in the pre-test. Seven points for use of evaluative terms were attained in the post-test. The treatment group received a negative gain score of -1 point for use of evaluative terms when discussing cartoon style of art. When discussing cartoon style of art, a total of 14 points for use of evaluative terms was attained by the control group in the pre-test. They attained 9 points for use of evaluative terms in the post-test. The control group received a negative gain score of -5 points for use of evaluative terms when discussing cartoon style of art.

In the pre-test, the treatment group attained 28 points for use of evaluative terms when discussing preferences (like, like-as-much, buy) for three styles of art. In the post-test, they attained 9 points

for use of evaluative terms. A negative gain score of -19 points for use of evaluative terms was attained by the treatment group. In the pre-test, the control group attained 21 points for use of evaluative terms when discussing preferences for three styles of art. In the post-test, they attained 14 points for use of evaluative terms. A negative gain score of -7 points for use of evaluative terms was attained by the control group.

When discussing dislikes for three styles of art, 6 points for use of evaluative terms were attained in the pre-test by the treatment group. Twelve points for use of evaluative terms were attained by this group in the post-test. A gain score of 6 points for use of evaluative terms was reported for the treatment group. When discussing dislikes for three styles of art, 13 points for use of evaluative terms were attained in the pre-test by the control group. The control group received 7 points for use of evaluative terms in the post-test. A negative gain score of -6 was reported for the control group in use of evaluative terms between the pre- and post-tests. The above data are summarized in Table 43.

Children's Responses to Three Styles of Art Using Emotional Terms

When responding to the emotional features in the illustrations in the pre-test, children in both the treatment and control groups had a tendency not to explain why the pictures contained emotional features. *"He's happy,"* or *"She looks sad," "They are funny,"* were typical comments made by the children to note the emotion present in the pictures.

Table 43. Verbal Expression Content Scores for Use of Evaluative Terms When Discussing Three Styles of Art

Category	Group	Post-Test Score	Pre-Test Score	Gain Score
Representational style of art	T	16	16	0
	C	12	16	-7
Expressionistic style of art	T	16	8	8
	C	10	16	-6
Cartoon style of art	T	7	8	-1
	C	14	21	-7
Preferences (like, like-as-much, buy)	T	9	28	-19
	C	14	21	-7
Dislike	T	7	13	-6
	C	12	6	6

In the post-test, children in the treatment group began to be more insightful when making responses regarding the emotional features in the illustrations. While the comments were few in number, the children did begin to explain why they chose the emotion they were mentioning. A boy in the treatment group labeled the representational pictures of Rumpelstiltskin created by Benvenuiti as the *"Happy-People-style-of-art,"* and explained, *"They are both happy. They both found something they have invented."* Discussing the same post-test pictures by Benvenuiti, another boy from the treatment group noted, *"The expressions on their faces make them look happy."*

In response to the expressionistic style of art in the post-test illustrations of Duffy and the Devil created by Margot Zemach,

a boy from the treatment group noted, *"He's having a ball, but she's not very happy."* A girl from the treatment group noted that the cartoon illustrations for Rumpelstiltskin by Edward Gorey were *"funny because the faces are different. The faces have extra long noses on them."*

As the Verbal Expression Content comments for use of emotional terms were so few in number for both the treatment and control groups, a comprehensive analysis was difficult to make. However, it appeared that some children began to make comments that were more insightful and definitive when responding to the emotional features in an illustration.

Hypothesis 5:

A larger proportion of the children in both the treatment and control groups will reject expressionistic style of art than will reject representational and cartoon styles of art.

Symbolically: $H_1 = E > R$

$H_2 = E > C$

Alternate Hypothesis: Restated in the Null Form:

There will be no difference for children in both groups in the number of times expressionistic, representational, and cartoon styles of art are rejected.

$H_o = E = R = C$

This hypothesis was tested by comparing the rejection scores for three styles of art of the total population and for boys and girls. The pre-test scores were held constant and the post-test scores

were employed to measure the differences using the chi square (χ^2) distribution.

A total of 63 votes was recorded for the rejection score for the children in both groups: 29 for the treatment group and 34 for the control group. Representational style of art received 3 rejection votes: 2 from the treatment group and 1 from the control group. Expressionistic style of art was rejected 28 times: 14 times by the treatment group and 14 for the control group. A total of 21 rejection votes were made for cartoon style of art: 8 from the treatment group and 13 from the control group. Eleven votes were cast indicating no rejection votes were made for a style of art: 5 for the treatment group and 6 for the control group. The above data are summarized in Table 44.

Table 44. Total Rejection Scores for All Children

	R	E	C	N	Total
T	2	14	8	5	29
C	1	14	13	6	34
Total	3	28	21	11	63

Using the chi squared (χ^2) distribution, the total rejection score yielded a chi square (χ^2) of 39.305. A χ^2 of 11.345 was necessary for three degrees of freedom before significant difference between the

rejection scores could be concluded at the .01 level. The χ^2 value of 39.05 was significant at this level and the differences could only occur by chance 1 percent of the time. The data indicated that children in both the treatment and control groups reject different styles of art. The above data are summarized in Table 45.

Table 45. Chi Squared Distribution of Total Rejection Scores for All Children

χ^2	df	Necessary to Reject H_0	
39.305	3	χ^2 α .01 $\geq$ 11.345	Reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared distribution was employed to measure the differences between rejection scores for two styles of art. The χ^2 value noting the difference between rejection of expressionistic and representational styles of art was 22.133 and the χ^2 value noting the difference between rejection of expressionistic and cartoon styles of art was 14.773. A χ^2 of 6.635 was necessary for one degree of freedom before the significant difference between the rejection choices could be concluded at the .01 level of significance. The χ^2 values of 22.133 for rejection of expressionistic art style over representational style of art and 14.773 for rejection of expressionistic style over cartoon styles of art were significant at the .01 level. The data indicated that the null hypothesis should be rejected in favor of

the hypothesis that a greater proportion of children reject expressionistic style of art than do representational and cartoon styles of art. The above data are summarized in Table 46.

Table 46. Chi Squared Distribution for Rejection Scores for Expressionistic, Representational, and Cartoon Styles of Art for All Children

Rejection	df	χ^2	Necessary to Reject H_o	
Expressionistic over Representational	1	22.133	χ^2 α .01 $\geq$ 6.35	Reject H_o
Expressionistic over Cartoon	1	14.773		Reject H_o

χ^2 = chi squared df = degrees of freedom

A total of 63 votes was recorded for the rejection score for the 29 boys and 30 girls in both groups: 30 votes were cast by the girls and 33 by the boys. Representational style of art received 3 rejection votes: 1 by the girls and 2 by the boys. Expressionistic style of art was rejected 28 times: 8 times by the girls and 20 times by the boys. Twenty-one rejection votes were cast for cartoon style of art: 15 by the girls and 6 by the boys. Eleven votes were cast indicating that there were none of the children indicated rejection choices for one of three styles of art. Six choices were indicated by the girls and 5 by the boys. The above data are summarized in Table 47.

Table 47. Total Rejection Scores for Boys and Girls

	R	E	C	N	Total
Girls	1	8	15	6	30
Boys	2	20	6	5	33
Total	3	28	21	11	63

Using the chi squared (χ^2) distribution, the difference in the rejection for three styles of art scores for boys and girls yielded a chi square (χ^2) of 44.460. A χ^2 of 11.345 was necessary for three degrees of freedom before significant difference between the rejection score for boys and girls could be concluded at the .01 level. The χ^2 value of 44.460 was significant at this level and the differences could occur by chance only one percent of the time. The data indicated that boys and girls reject different styles of art. The above data are summarized in Table 48.

Table 48. Chi Squared Distribution of Total Rejection Scores for Boys and Girls

χ^2	df	Necessary to Reject H_0	
39.305	3	χ^2 α .01 $\geq$ 11.345	Reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared (χ^2) distribution was employed to measure the difference between boys and girls in rejection scores for two styles of art. The χ^2 value noting boys and girls, the difference between rejection of expressionistic and representational styles of art was 20.167. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant difference between the rejection scores of boys and girls could be concluded at the .01 level. The χ^2 value of 20.167 was significant at this level and the difference could occur by chance only one percent of the time. The data indicated that boys and girls do differ in their rejection of expressionistic and representational styles of art.

A χ^2 value of 5.444 was reported for the girls when noting the difference in rejection scores for representational and expressionistic styles of art and a χ^2 value of 14.723 was reported for the boys. A χ^2 value of 6.635 was necessary for one degree of freedom before a significant difference between rejection scores for representational and expressionistic styles of art for boys and girls could be concluded at the .01 level. The boys' χ^2 value of 14.723 was significant at this level while the girls' χ^2 value was not. A χ^2 value of 3.841 was necessary for one degree of freedom before significant difference could be concluded at the .05 level. The girls' χ^2 value of 5.444 was significant at this level with the difference occurring by chance only five percent of the time.

The data revealed that both boys and girls reject expressionistic style of art more than representational style of art with a larger proportion of the boys rejecting expressionistic style of art

more often than girls. Thus, for both the boys and girls the null hypothesis was rejected in favor of the hypothesis noting that expressionistic style of art would be rejected more than representational style of art. The above data are summarized in Table 49.

Table 49. Chi Squared Distribution of Rejection Scores for Expressionistic Over Representational Style of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_o	
Girls	5.444	1	χ^2 α .05 $\geq$ 3.841	Reject H_o
Boys	14.723	1	χ^2 α .01 $\geq$ 6.635	Reject H_o
Boys & Girls	20.167	3	χ^2 α .01 $\geq$ 11.345	Reject H_o

χ^2 = chi squared df = degrees of freedom

A chi squared (χ^2) distribution was employed to measure the difference between the rejection scores of boys and girls for expressionistic and cartoon styles of art. A total χ^2 value noting the difference was 16.13. A χ^2 value of 11.34 was necessary for three degrees of freedom before significant differences between the rejection scores could be concluded at the .01 level of significance. The χ^2 value of 16.13 was significant at the .01 level and the differences could have occurred by chance only one percent of the time. The data indicated that both girls and boys have different rejection choices for representational, expressionistic, and cartoon styles of art. A χ^2 value of 2.13 was reported for the girls and a χ^2 value of 14 was

reported for the boys. A χ^2 value of 6.635 was necessary for one degree of freedom before significant differences between the rejection scores for expressionistic and cartoon styles of art for boys could be concluded at the .01 level of significance. The boys' χ^2 value of 14 was significant at this level while the girls' was not. A χ^2 value of 3.841 was necessary for one degree of freedom before significant differences could be concluded at the .05 level of significance. The girls' χ^2 value of 2.13 was not significant at the .05 level. The data indicated that while expressionistic art was rejected more often than cartoon art, a larger proportion of boys rejected the expressionistic style of art, while a larger proportion of the girls rejected the cartoon style of art. The above data are summarized in Table 50.

Table 50. Chi Squared Distribution of Rejection Scores for Expressionistic Over Cartoon Styles of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_o	
Girls & Boys	3	16.13	χ^2 α .01 $\geq$ 11.345	Reject H_o
Girls	1	2.13	χ^2 α .05 $\geq$ 3.841	Do not reject H_o
Boys	1	14	χ^2 α .01 $\geq$ 6.635	Reject H_o

χ^2 = chi squared df = degrees of freedom

Hypothesis 6:

A larger proportion of children in both the treatment and control groups will prefer representational style of art than will prefer cartoon and expressionistic styles of art.

Symbolically: $H_1 = R > E$

$H_2 = R > C$

Alternate Hypothesis: Restated in the Null Form:

There will be no difference for the children in both groups in the number of times representational, expressionistic, and cartoon styles of art are preferred.

$$H_o = R = E = C$$

This hypothesis was tested by comparing the preference scores for three styles of art for the total population and for boys and girls. The pre-test scores were held constant and the post-test scores were employed to measure the differences using the chi squared (χ^2) distribution. These preferences were measured under three different ways: like the style of art, buy the style of art, and like a second style of art as well as a first choice. The data will be reported in three separate subdivisions.

Preference: Like

A total of 63 votes was recorded for the preference scores for the 59 children in the study, 31 for the treatment group and 32 for the control group. Representational style of art received 57 preference votes, 28 from the treatment group and 29 from the control group.

Expressionistic style of art received 4 preference votes, 2 from the treatment group and 2 from the control group. Cartoon style of art received 1 preference vote from the treatment group. One child in the control group indicated there was no preference for any of the three styles of art. The above data are summarized in Table 51.

Table 51. Total Preference Scores for All Children

	R	E	C	N	Total
T	28	2	1	0	31
C	29	2	0	1	32
Total	57	4	1	1	63

Using the chi squared (χ^2) distribution, the differences in the total preference choices for all children yielded a chi square (χ^2) of 123.283. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences between the preference scores for three styles of art could be concluded at the .01 level. The χ^2 value of 123.283 was significant at this level and the differences for preferring one style of art over another could have occurred by

chance only 1 percent of the time. The data indicated that the children in both the treatment and control groups had preferences for different styles of art. The above data are summarized in Table 52.

Table 52. Chi Squared Distribution of Total Preference Choices for All Children

χ^2	df	Necessary to Reject H_0	
123.283	3	χ^2 α .01 $\geq$ 11.234	Reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared distribution was employed to measure the differences between preference scores for two styles of art. The χ^2 value noting the differences between preferring representational and expressionistic styles of art was 49.333 and the χ^2 value for the differences between preferring representational and cartoon styles of art was 56.0. A χ^2 value of 6.635 was necessary for one degree of freedom before the significant differences between the preference scores could be concluded at the .01 level of significance. The χ^2 values of 49.333 for preferring representational over expressionistic style of art and 56.0 for preferring representational over cartoon styles were significant at the .01 level. The data indicated that the null hypothesis should be rejected in favor of the hypothesis that a greater proportion of the children prefer the representational style of art

than they do expressionistic and cartoon styles of art. The above data are summarized in Table 53.

Table 53. Chi Squared Distribution for Preference Differences for Representational Over Expressionistic and Cartoon Styles of Art for All Children

Preference	χ^2	df	Necessary to Reject H_0	
Representational over Expressionistic	49.333	1	χ^2 α .01 $\geq$ 6.35	Reject H_0
Representational over Cartoon	56.0	1		Reject H_0

χ^2 = chi squared df = degrees of freedom

A total of 63 choices for the preference score were made by the 29 boys and 30 girls in both groups: 30 choices for the girls and 33 choices for the boys. Representational style of art received 57 preference votes, 26 by the girls and 31 by the boys. Expressionistic style of art received 4 preference votes, 4 by the girls and none by the boys. One preference vote for cartoon style of art was cast by a boy and 1 vote for no preference for a style of art was made by a boy. The above data are summarized in Table 54. Using the chi squared (χ^2) distribution, the differences in the total preference scores for the three styles of art for the boys and girls yielded a chi square (χ^2) of 145.993. A χ^2 of 11.345 was necessary for three degrees of freedom before

Table 54. Total Preference Scores for Girls and Boys

	R	E	C	N	Total
Girls	26	4	0	0	30
Boys	31	0	1	1	33
Total	57	4	1	1	63

significant differences between the preference choices of boys and girls could be concluded at the .01 level. The χ^2 value of 145.993 was significant at the .01 level and the differences could have occurred by chance only 1 percent of the time. The data indicated that boys and girls reject different styles of art. The above data are summarized in Table 55.

Table 55. Chi Squared Distribution of the Total Preference Choices for Girls and Boys

χ^2	df	Necessary to Reject H_o	
145.993	3	χ^2 α .01 $\geq$ 11.345	Reject H_o

χ^2 = chi squared df = degrees of freedom

A chi squared (χ^2) distribution was employed to measure the difference between boys and girls in the preference scores for representational and expressionistic styles of art. The χ^2 value noting the differences in the preferences made by boys and girls was 47.133. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences between the preference scores of boys and girls could be concluded at the .01 level. The χ^2 value of 47.133 was significant at this level and the difference could have occurred by chance only 1 percent of the time. The data indicated that both boys and girls do have different preferences for representational and expressionistic styles of art. A χ^2 value of 31.0 was reported for the boys. A χ^2 of 6.635 was necessary for one degree of freedom before significant differences between the preference scores for representational and expressionistic styles of art for boys and girls could be concluded at the .01 level. The girls' χ^2 value of 31.0 and the boys' χ^2 value of 16.133 were both significant at the .01 level; the differences could have occurred by chance only 1 percent of the time. The data indicated that a larger proportion of the girls than boys prefer representational style of art over expressionistic style of art. The above data are summarized in Table 56.

A chi squared (χ^2) distribution was employed to measure the difference between the preference scores of boys over girls for representational and cartoon style of art. A χ^2 value noting the boys' and girls' preference differences was 56. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences

Table 56. Chi Squared Distribution of the Preference for Representational Over Expressionistic Style of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_0	
Girls & Boys	47.133	3	χ^2 α .01 $\geq$ 11.345	Reject H_0
Girls	31.0	1	χ^2 α .01 $\geq$ 6.635	Reject H_0
Boys	16.133	1		Reject H_0

χ^2 = chi squared df = degrees of freedom

between preference scores could be concluded at the .01 level. The χ^2 value of 56 was significant at this level and the differences could occur by chance only 1 percent of the time. The data indicated that both boys and girls do have different preferences for representational and cartoon styles of art.

A χ^2 value of 30 was reported for the girls and a χ^2 value of 26 was reported for the boys. A χ^2 of 6.35 was necessary for 1 degree of freedom before significant differences between the preference scores for representational and cartoon styles of art for boys and girls could be concluded at the .01 level. The χ^2 values of 26 for the boys and 30 for the girls were significant at this level and the differences could have occurred by chance only 1 percent of the time. The data indicated that a larger proportion of girls than boys preferred representational art over cartoon style of art. The above data are summarized in Table 57.

Table 57. Chi Squared Distribution of the Preferences for Representational Over Cartoon Style of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_o	
Boys & Girls	56	3	χ^2 α .01 ≥ 11.345	Reject H_o
Girls	30	1	χ^2 α .01 ≥ 6.635	Reject H_o
Boys	26	1		Reject H_o

χ^2 = chi squared df = degrees of freedom

Preference: Buy

A total of 59 votes was recorded for the 59 children in the study, 29 for the treatment group and 30 for the control group. Representational style of art received 54 votes for the Buy score: 25 for the treatment group and 29 for the control group. Expressionistic style of art received no votes for the Buy score from the children in both groups. Cartoon style of art received 4 votes for the Buy score by the treatment group. One child in the control group recorded no votes for the Buy score. The above data are summarized in Table 58.

Table 58. Total Buy Scores for All Children

	R	E	C	N	Total
T	25	0	4	0	29
C	29	0	0	1	30
Total	54	0	4	1	59

Using the chi squared (χ^2) distribution, the total Buy scores yielded a chi square (χ^2) of 152.483. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences between the Buy scores for three styles of art could be concluded at the .01 level. The χ^2 value of 152.483 was significant at this level and the differences for buying preferences for one style of art over another could have occurred by chance only 1 percent of the time. The data indicated that the children do have different buying preferences for one style of art over another. The above data are summarized in Table 59.

Table 59. Chi Squared Distribution of Total Buy Scores for All Children

χ^2	df	Necessary to Reject H_0	
152.483	3	χ^2 α .01 $\geq$ 11.345	Reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared distribution was employed to measure the differences between the Buy scores for representational and expressionistic styles of art. The χ^2 value noting the differing Buy scores for each of these two styles of art was 55 and the χ^2 value for the differences between buying representational and cartoon styles of art was 43.333. A χ^2 value of 6.635 was necessary for one degree of freedom before the significant differences between the Buy scores could be concluded at .01 level of significance. The χ^2 values of 55 for buying representational over expressionistic and 43.333 for buying representational over cartoon were significant at the .01 level. The data indicated the null hypothesis should be rejected in favor of the hypothesis that a greater proportion of the children prefer the representational style of art more than those who prefer expressionistic and cartoon styles of art. The above data are summarized in Table 60.

Table 60. The Chi Squared Distribution for Buy Scores for Representational, Expressionistic, and Cartoon Styles of Art

Preference	χ^2	df	Necessary to Reject H_0	
Representational over Expressionistic	55	1	χ^2 α .01 $\geq$ 6.35	Reject H_0
Representational over Cartoon	43.333	1		Reject H_0

χ^2 = chi squared

df = degrees of freedom

A total of 59 votes was recorded for the Buy score by the 29 boys and 30 girls in both of the groups: 30 votes for the girls and 29 votes for the boys. Representational style of art received a Buy score of 54 votes: 28 by the girls and 26 by the boys. Expressionistic style of art received no Buy votes by any of the children. Cartoon style of art received 1 Buy vote by a child in the control group. The above data are summarized in Table 61.

Table 61. Total Buy Scores for Boys and Girls

	R	E	C	N	Total
Girls	28	0	2	0	30
Boys	26	0	2	1	29
Total	54	0	4	1	59

Using the chi squared (χ^2) distribution, the difference in total Buy scores for the three styles of art for the boys and girls yielded a χ^2 value of 142.509. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences between the Buy scores of boys and girls could be concluded at the .01 level. The χ^2 value of 142.509 was significant at this level and the differences could have occurred by chance only 1 percent of the time. The data indicated that both boys and girls rejected different styles of art. The above data are summarized in Table 62.

Table 62. Chi Squared Distribution of the Total Buy Choices for Boys and Girls

χ^2	df	Necessary to Reject H_0	
142.509	3	χ^2 α .01 ≥ 11.345	Reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared (χ^2) distribution was employed to measure the difference between boys and girls in Buy scores for representational and expressionistic styles of art. The χ^2 value for noting the buying differences for boys and girls for these two styles was 54. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences between the Buy scores of boys and girls could be concluded at the .01 level. The χ^2 value of 54 was significant at this level and the difference could have occurred by chance only 1 percent of the time. The data indicated that both boys and girls had different buying preferences for representational and expressionistic styles of art. A χ^2 value of 28 was reported for the girls and a χ^2 value of 26 was reported for the boys. A χ^2 of 6.635 was necessary for one degree of freedom before significant differences between the Buy scores for representational and expressionistic styles of art for boys and girls could be concluded at the .01 level. The girls' χ^2 value of 28 and the boys' χ^2 value of 26 were both significant at the .01 level and the differences

could have occurred by chance only 1 percent of the time. The data indicated that for boys and girls, representational style of art received a larger proportion of the Buy votes than did the expressionistic style of art. The above information is summarized in Table 63.

Table 63. The Chi Squared Distribution of the Buy Scores for Representational Over Expressionistic Style of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_o	
Girls & Boys	54	3	χ^2 α .01 $\geq$ 11.345	Reject H_o
Girls	28	1	χ^2 α .01 $\geq$ 6.635	Reject H_o
Boys	26	1		Reject H_o

χ^2 = chi squared df = degrees of freedom

A chi squared (χ^2) distribution was employed to measure the difference between the Buy scores of boys and girls for representational and cartoon styles of art. A total χ^2 value noting the difference was 46.533. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences between Buy scores could be concluded at the .01 level of significance. The χ^2 value of 43.333 was significant at the .01 level and the differences could have occurred by chance only 1 percent of the time. The data indicated that both boys and girls have different Buy choices for representational and cartoon styles of art.

A χ^2 of 22.533 was reported for the girls and a χ^2 value of 24 was reported for the boys. A χ^2 of 6.35 was necessary for one degree of freedom before significant differences for Buy scores for representational and cartoon styles of art for boys and girls could be concluded at the .01 level of significance. The χ^2 values of 22.533 for the girls and 24 for the boys were significant at the .01 level. These differences could have occurred by chance only 1 percent of the time. The data indicated that for both boys and girls, representational style of art received a larger Buy score than did expressionistic or cartoon styles of art. The above data are summarized in Table 64.

Table 64. The Chi Squared Distribution of the Buy Scores for Representational Over Cartoon Styles of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_0	
Girls & Boys	43.333	3	χ^2 α .01 ≥ 11.345	Reject H_0
Girls	13.333	1	χ^2 α .01 ≥ 6.635	Reject H_0
Boys	30	1		Reject H_0

χ^2 = chi squared df = degrees of freedom

Preference: Like-As-Much

A total of 62 votes for the Like-As-Much scores was reported on the 59 children in the study: 30 votes for the treatment group and 32 votes for the control group. Representational style of art received

5 Like-As-Much votes: 5 from the treatment group and none from the control group. Expressionistic style of art received 8 Like-As-Much votes: 3 from the treatment group and 5 from the control group. Eleven Like-As-Much votes were cast for the cartoon style of art: 6 votes from the treatment group and 5 from the control group. Thirty-eight children indicated they had no Like-As-Much choices for a style of art with 16 "none" choices from the treatment group and 22 from the control group. The above data are summarized in Table 65.

Table 65. Total Like-As-Much Scores for All Children

	R	E	C	N	Total
T	5	3	6	16	30
C	0	5	5	22	32
Total	5	8	11	38	62

Using the chi squared (χ^2) distribution, the difference in total Like-As-Much scores for all children yielded a chi square (χ^2) value of 25.75. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences between the Like-As-Much scores for three styles of art could be concluded at the .01 level of significance. The χ^2 value of 25.75 was significant at this level

and the differences for Like-As-Much score or selecting a second style of art preference could have occurred by chance only 1 percent of the time. The data indicated that the children in both the treatment group and control group have Like-As-Much preferences for different styles of art and that the null hypothesis should be rejected in favor of the hypothesis indicating that there is a difference between girls and boys for Like-As-Much scores for three styles of art. The above data are summarized in Table 66.

Table 66. Chi Squared Distribution of Total Like-As-Much Scores for All Children

χ^2	df	Necessary to Reject H_0	
25.75	3	χ^2 α .01 $\geq$ 11.345	Reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared distribution was employed to measure the differences between the Like-As-Much scores for two styles of art. The χ^2 value noting the differences between liking representational or expressionistic styles of art as a second preference choice was 3.375. The χ^2 value noting the difference between liking representational or cartoon styles of art as a second preference choice was 3.125. The χ^2 value noting the differenece between liking representational style of art as a second preference choice and having no preference score was 39.129. A χ^2 value 6.635 was necessary for one

degree of freedom before the significant differences could be concluded at the .01 level of significance. The χ^2 values for Like-As-Much choices for representational over expressionistic styles of art at .25 and for representational over cartoon styles of art at 3.216 were not significant at the .01 level. However, the difference between representational style of art as a Like-As-Much choice and having no choice for a style of art, noted by a χ^2 value of 39.129, was significant at the .01 level and these differences could have occurred by chance only 1 percent of the time. A χ^2 value of 3.841 was necessary for one degree of freedom before the differences between the Like-As-Much scores for representational over expressionistic and for representational over cartoon could be concluded at the .05 level of significance. Neither of these two Like-As-Much scores were significant at this level. The data indicated the differences in the Like-As-Much scores were made when a larger proportion of children indicated they had no preferences for a style of art. As a result, the null hypothesis would not be rejected at the .05 level of significance indicating that there was no significant difference between the Like-As-Much choices for representational over expressionistic or representational over cartoon styles of art. The above data are summarized in Table 67.

A total of 62 choices was reported for the Like-As-Much score for the 29 boys and 30 girls in both groups: 31 votes for the girls and 31 votes for the boys. Representational style of art received 5 Like-As-Much choices: 3 votes by the girls and 2 votes by the boys. Expressionistic style of art received 8 Like-As-Much choices: 5 votes

Table 67. Chi Squared Distribution for Like-As-Much Scores for Representational Over Expressionistic and Cartoon Styles of Art and for No-Preference Scores for All Children

Preference	χ^2	df	Necessary to Reject H_o	
Representational over Expressionistic	3.375	1		Do not reject H_o
			χ^2 α .05 ≥ 3.841	
Representational over Cartoon	3.216	1		Do not reject H_o
Representational over No-preference	39.129	3	χ^2 α .01 ≥ 1	Reject H_o

χ^2 = chi squared df = degrees of freedom

by the girls and 3 votes by the boys. Cartoon style of art received 11 Like-As-Much choices: 5 votes by the boys and 6 votes by the girls. Thirty-eight children indicated they had no preference for a Like-As-Much choice: 18 votes by the girls and 20 votes by the boys. The above data are summarized in Table 68.

Table 68. Total Like-As-Much Scores for Boys and Girls

	R	E	C	N	Total
T	3	5	5	18	31
C	2	3	6	20	31
Total	5	8	11	38	62

Using the chi squared (χ^2) distribution, the difference in the total Like-As-Much scores for the girls and boys yielded a chi square (χ^2) value of 49.7. A χ^2 of 11.345 was necessary for three degrees of freedom before significant differences between the Like-As-Much choices of the girls and boys could be concluded at the .01 level of significance. The χ^2 value of 49.7 was significant at the .01 level and the differences could have occurred by chance only 1 percent of the time. The data indicated that both the girls and the boys have Like-As-Much preferences for different styles of art. The above data are summarized in Table 69.

Table 69. Chi Squared Distribution of the Like-As-Much Scores for Girls and Boys

χ^2	df	Necessary to Reject H_0	
49.7	3	χ^2 α .01 $\geq$ 11.345	Reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared (χ^2) distribution was employed to note the differences between girls and boys in the Like-As-Much scores for representational and expressionistic style of art. The χ^2 value noting the difference was 3.375. A χ^2 value of 7.815 was necessary for three degrees of freedom before significant differences between the Like-As-Much scores for boys and girls could be concluded at the .05 level of significance. The χ^2 value of 3.375 was not significant at this level

indicating that the null hypothesis should not be rejected when comparing the total Like-As-Much scores for representational and expressionistic styles of art for boys and girls. A χ^2 of 3.841 was necessary for one degree of freedom before significant differences between the Like-As-Much scores for representational and expressionistic art which were indicated by the boys and girls could be concluded at the .05 level of significance. The girls' χ^2 value of .25 and the boys' χ^2 value of 3.125 were not significant at the .05 level indicating that the null hypothesis should not be rejected when comparing the sex differences for Like-As-Much scores for representational and expressionistic styles of art. The above data are summarized in Table 70.

Table 70. Chi Squared Distribution of the Like-As-Much Scores for Representational and Expressionistic Styles of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_0	
Girls & Boys	.75	3	χ^2 α .05 $\geq$ 7.815	Do not reject H_0
Girls	.25	1	χ^2 α .05 $\geq$ 3.841	Do not reject H_0
Boys	3.125	1		Do not reject H_0

χ^2 = chi squared df = degrees of freedom

A chi squared (χ^2) distribution was employed to indicate the differences between the Like-As-Much scores of boys and girls for representational and cartoon styles of art. A total χ^2 value noting the difference was 3.216. A χ^2 value of 7.815 was necessary for three

degrees of freedom before significant differecnes between the Like-As-Much scores between girls and boys could be concluded at the .05 level of significance. The χ^2 value of 3.216 was not significant at the .05 level indicating that the null hypothesis should not be rejected when comparing the total Like-As-Much scores for representational style of art and for having no preference. A χ^2 value of 3.841 was necessary for one degree of freedom before significant differences between boys and girls could be concluded significant at the .05 level. The girls' χ^2 value of .091 and the boys' χ^2 value of .3125 were not significant at the .05 level although a larger proportion of the boys appear to have more no preferences than girls. The null hypothesis should not be rejected when comparing boys' and girls' differences in Like-As-Much scores for representational style of art and for having no preference. The above data are summarized in Table 71.

Table 71. Chi Squared Distribution of Like-As-Much Scores for Representational and Cartoon Styles of Art for Boys and Girls

	χ^2	df	Necessary to Reject H_0	
Girls & Boys	3.375	3	χ^2 α .05 $\geq$ 7.815	Do not reject H_0
Girls	.25	1	χ^2 α .05 $\geq$ 3.841	Do not reject H_0
Boys	3.125	1		Do not reject H_0

χ^2 = chi squared df = degrees of freedom

The chi squared distribution was employed to note the sex differences for Like-As-Much scores for representational style of art and having no preference for a style of art. The total χ^2 value for noting this difference was 39.129. A χ^2 value of 11.345 was necessary for three degrees of freedom before significant differences could be concluded at the .01 level of significance. The χ^2 value of 39.129 was significant at the .01 level and these differences could have occurred by chance only 1 percent of the time. The data indicated that a larger proportion of the boys and girls had a greater number of no preferences when compared to no preference scores for representational style of art. The null hypothesis should be rejected in favor of a hypothesis that would indicate that no preference is greater than a Like-As-Much score for the representational style of art.

A χ^2 value of 7.129 was reported for the girls and a χ^2 value of 32.02 was reported for the boys when noting sex differences for Like-As-Much scores for representational style of art and for having no preference. A χ^2 value of 6.635 was necessary at a .01 level of significance with one degree of freedom. Both the χ^2 values for boys and girls were significant at this level indicating that there were sex differences for Like-As-Much scores for representational style of art and having no preference. The data indicated that a larger proportion of the boys had no preferences. The null hypothesis should be rejected in favor of a hypothesis noting that no choices are greater than making Like-As-Much choices for representational style of art. The above data are summarized in Table 72.

Table 72. Chi Square Distribution of Like-As-Much Scores for Representational Style of Art and No Preference Scores for a Style of Art for Girls and Boys

	χ^2	df	Necessary to Reject H_0	
Girls & Boys	39.129	3	χ^2 α .01 $\geq$ 11.345	Reject H_0
Girls	7.129	1	χ^2 α .01 $\geq$ 6.635	Reject H_0
Boys	32.000	1		Reject H_0

χ^2 = chi squared df = degrees of freedom

Hypothesis 7:

A larger proportion of the children in both the treatment and control groups will be able to discuss the representational and cartoon styles of art in stylistic terms, but will not be able to discuss the expressionistic style of art in stylistic terms.

Symbolically: $H_1 = R > E$

$H_2 = C > E$

Alternate Hypothesis: Restated in the Null Form:

There will be no difference between the number of stylistic terms used by the children in both groups to discuss representational, expressionistic, and cartoon styles of art.

Symbolically: $H_0 = R = E = C$

This hypothesis was tested by comparing the Verbal Expression Content score points used for stylistic terms by children in both groups

when discussing representational, expressionistic, and cartoon styles of art. The pre-test scores were held constant and the post-test scores were employed to measure the differences in Verbal Expression Content score points for use of stylistic terms using the chi square (χ^2) distribution. These differences were measured three ways: stylistic terms used to describe representational as compared to cartoon styles of art, representational as compared to expressionistic style of art, and cartoon as compared to expressionistic style of art.

Differences in Stylistic Terms Used to Discuss Representational and Expressionistic Styles of Art

A total of 81 Verbal Expression Content score points was attained by the treatment group for use of style terms when describing representational style of art. When discussing representational style of art, the control group received 40 Verbal Expression Content score points for use of style terms. A total of 96 Verbal Expression Content score points was attained by the treatment group for use of style terms when describing expressionistic style of art, while the control group received 33 points.

Using the chi squared (χ^2) distribution, the differences in the Verbal Expression Content score points for use of stylistic terms for all children yielded a χ^2 value of 1.849. A χ^2 value of 3.841 was necessary for one degree of freedom before significant differences between the use of stylistic terms for representational and expressionistic style of art could be concluded at the .05 level. The χ^2

value of 1.849 was not significant at this level, indicating that the null hypothesis should not be rejected as there were no significant differences between the number of style terms used to describe representational and expressionistic styles of art.

Differences in Stylistic Terms Used to Discuss Representational and Cartoon Styles of Art

A total of 88 Verbal Expression Content score points for use of stylistic terms was attained by the treatment group when discussing cartoon style of art, while 28 Verbal Expression Content score points were received by the control group for use of stylistic terms when describing cartoon style of art. Using the chi squared (χ^2) distribution, the differences in the amount of Verbal Expression Content score points for use of stylistic terms for all children to describe representational and cartoon style of art yielded a χ^2 of 2.415. A χ^2 value of 3.841 was necessary for one degree of freedom before significant differences between the use of stylistic terms for representational and cartoon styles of art could be concluded at the .05 level. A χ^2 value of 2.415 was not significant at this level, indicating that the null hypothesis should not be rejected as there were no significant differences between the number of style terms used to describe representational and cartoon styles of art.

Differences in Stylistic Terms Used to Discuss Expressionistic and Cartoon Styles of Art

Using the chi squared (χ^2) distribution, the differences in Verbal Expression Content score points for use of stylistic terms for

all children yielded a χ^2 value of .758. A χ^2 value of 3.841 was necessary for one degree of freedom before significant differences between the use of stylistic terms for expressionistic and cartoon styles of art could be concluded at the .05 level. The χ^2 value of .758 was not significant at this level, indicating that the null hypothesis should not be rejected as there were no significant differences between the number of style terms used to describe expressionistic and cartoon styles of art.

Tables 73 and 74 summarize the aforementioned regarding the number of Verbal Expression Content score points for use of style terms by children in both groups when discussing representational, expressionistic, and cartoon styles of art.

Table 73. Verbal Expression Content Scores for Use of Style Terms by Children from Both Groups When Discussing Three Styles of Art

	Style		
Group	Representational	Expressionistic	Cartoon
Treatment	81	96	88
Control	40	33	28

Table 74. Differences in Verbal Expression Content Scores for Use of Style Terms by Children from Both Groups when Discussing Three Styles of Art

Styles	χ^2	df	Necessary to Reject H_0	
Representational over Expressionistic	1.849	1		Reject H_0
Representational over Cartoon	2.415	1	χ^2 α .05 $\geq$ 3.841	Reject H_0
Expressionistic over Cartoon	.758	1		Reject H_0

χ^2 = chi squared df = degrees of freedom

Hypothesis 8: Stated in the Null Form:

The treatment and control groups will not change their preference and rejection for styles of art between the pre- and post-test interviews.

Symbolically: H_0 = Pre = Post

Alternate Hypothesis:

The experimental and control groups will change their preference and rejection for styles of art between the pre- and post-test interviews.

Symbolically: H_1 = Pre $\neq$ Post

This hypothesis was tested by comparing the preference (like, like-as-much, buy) votes and rejection (dislike) votes attained in the pre-test by the treatment and control group children to the preference and rejection votes for three styles of art attained in the post-test.

The changes in preference or rejection for one style of art to any other were so low that they were not computable in statistical terms. Therefore, a descriptive report of the results follows.

Preference for Three Styles of Art

The preference votes for the three styles of art were made up of the total like votes, the like-as-much votes, and the buy votes. The adding together of the votes was employed to arrive at a single preference vote rather than to discuss small numbers for each of the subsections. When comparing just the post-test like and buy votes, for all of the twenty-nine children in the treatment group and twenty-nine of the thirty children in the control group, no difference was recorded.

A total of 57 preference votes for representational style of art was cast by the control group in the pre-test, while 53 preference votes were cast by the control group for the representational style of art in the post-test. None of the control group children changed their preference for representational style of art to expressionistic style of art in the post-test. One vote was changed to cartoon style of art, and 3 votes were changed from preferring representational style of art in the pre-test to having no preference for a style of art in the post-test. A total of 8 preference votes for expressionistic style of art was cast by the control group in the pre-test, while 2 votes were cast in the post-test. Two of the children in the control group changed their preference for expressionistic style of art to representational style of art in the post-test; 1 vote was changed to the cartoon style of art; and 3 votes were changed to having no preference for a style of

art in the post-test. A total of 7 preference votes for the cartoon style of art was cast by the control group in the pre-test, while 0 were cast by the control group in the post-test. Two children changed their preference to representational style of art; 2 votes were changed to expressionistic style of art; and 3 votes were changed to having no preference for a style of art in the post-test. A total of 19 votes indicating no preference for a style of art was cast by the control group in the pre-test, while 14 votes for no preference were cast in the post-test. None of the children changed their no preference votes to preferring representational style of art in the post-test; 2 votes were changed to expressionistic style of art; and 3 votes for no preference were changed to preferring cartoon style of art in the post-test.

Table 75 summarizes the pre-test preference votes cast by both the treatment and control groups. The change in preference votes for three styles of art from pre- to post-test is also summarized in Table 75.

Rejection Votes for Three Styles of Art

A total of 1 rejection vote was cast for the representational style of art in the pre-test by the treatment group, and 1 vote was cast for rejecting the representational style of art in the post-test, indicating there was no change in rejection choices for representational style of art. A total of 11 rejection votes for expressionistic style of art was cast in the pre-test by the treatment group, while 5 rejection votes for expressionistic style of art were case in the post-test.

Table 75. Change in Preference Votes for Three Styles of Art Between the Pre-Test and Post-Test for the Treatment and Control Groups

Pre-test Votes			Post-Test Votes							
			Style	R		E		C		N	
Group	T	C		T	C	T	C	T	C	T	C
Style											
R	54	57		47	53	0	0	3	1	3	3
E	5	8		1	2	2	2	1	1	1	3
C	14	7		5	2	4	2	2	0	3	3
N	31	19		0	0	7	2	8	3	16	14

Four pre-test votes rejecting expressionistic style of art were changed to rejecting cartoon style of art in the post-test, and 1 vote was changed to stating no rejection for a style of art. A total of 13 rejection votes was cast for cartoon style of art in the pre-test by the treatment group, while 3 votes were cast in the post-test. Eight pre-test votes rejecting cartoon style of art were changed to rejecting expressionistic style of art, and 1 vote was changed to indicating no rejection choice for a style of art. A total of 5 votes indicating no rejection choice for a style of art was cast by the treatment group in the pre-test, while 2 votes were cast in the post-test. Three no rejection votes cast in the pre-test were changed to rejecting the cartoon style of art.

A total of 1 rejection vote was cast for representational style of art in the pre-test by the control group, while 0 votes were cast in the post-test. The 1 vote rejecting representational style of art in the pre-test was changed to rejecting the cartoon style of art in the post-test. A total of 13 rejection votes for expressionistic style of art was cast by the control group in the pre-test, while 7 rejection votes were cast for expressionistic style of art in the post-test. Three votes for expressionistic style of art were changed to rejecting cartoon style of art in the post-test, and 3 votes were changed to no-rejection choice in the post-test. A total of 10 rejection votes was cast for cartoon style of art by the control group in the pre-test, while 7 were cast in the post-test. Three votes were changed to rejecting expressionistic style of art in the post-test. A total of 6 votes indicating there was no rejection choice was cast by the control group in the pre-test, while 7 votes indicating there was no rejection choice were cast in the post-test. One no-rejection pre-test vote was changed to rejecting expressionistic style of art, and 1 was changed to rejecting cartoon style of art in the post-test.

Table 76 summarizes the pre-test rejection votes for three styles of art cast by both the treatment and control groups. The change in rejection votes from pre- to post-tests are also summarized in Table 76.

The raw data indicate that there are some changes in the preference rejection for three styles of art cast by the children in both the treatment and control groups. When total preference votes were

Table 76. Change in Rejection Votes for Three Styles of Art Between the Pre-Test and Post-Test for the Treatment and Control Groups

Pre-test Votes			Post-Test Votes							
			Style	R		E		C		N	
Group	T	C		T	C	T	C	T	C	T	C
Style											
R	1	1		1	1	0	0	0	0	0	0
E	11	13		0	0	7	7	4	3	1	3
C	13	10		0	0	8	3	3	7	1	0
N	5	6		0	0	0	1	3	1	2	4

tallied, it appears that the children preferred representational style of art over all others to a large degree, and this preference did not change to any large extent between the pre- and post-tests. The range in preference votes between the pre- and post-tests for the treatment and control groups indicated that children were moving away from preferring expressionistic style of art in the post-test. This trend could be noted as being the same with the dispersion of preference votes for the cartoon style of art in the post-test. The no-preference choice votes cast by children in the treatment group indicated that half of the votes were changed to noting a preference for a style of art. The control group children did not change their no-preference votes to such a degree, however. When rejection votes were tallied, it appears that children in both the treatment and control groups disliked

expressionistic and cartoon style of art compared to their low rejection of representational style of art or to having no rejection choice for a style of art. The raw data indicate that the null hypothesis should be rejected as the children in both the treatment and control groups did change their preference and rejection votes for three styles of art between the pre- and post-test.

Hypothesis 9:

A larger proportion of the treatment group will remember looking at more of the "back-of-the-room" books than will the control group.

Symbolically: $H_1 = T > C$

Alternate Hypothesis: Restated in the Null Form:

There will be no difference in the number of the "back-of-the-room" books remembered by the treatment and control groups.

Symbolically: $H_0 = T = C$

This hypothesis was tested by comparing the number of "back-of-the-room" books recalled by the children in the treatment group to the number of these books recalled by the children in the control group. The number of children in both groups recalling the "back-of-the-room" books was very low and basically only children from District I, Schools A and B, listed the titles of the books placed in their classroom by this researcher. A statistical analysis was not employed for this hypothesis and, therefore, a descriptive report will follow.

Recollection of "Back-of-the-Room" Books

During the post-test interviews, six children from the treatment group recalled and named books that were placed in their classroom by this researcher. The six children (five from School A, one from School C) recalled looking at a total of fifteen books. A total of nine books were among the list recalled by the children. Three of the books were illustrated in the representational style of art, two were illustrated in the expressionistic style of art, and four were illustrated in the cartoon style of art. The three books illustrated in the representational style of art, each mentioned once, were The Barn illustrated by John Schoenherr, Bedtime for Frances illustrated by Russell Hoban, and The Biggest Bear illustrated by Lynd Ward. The two books illustrated in the expressionistic style of art were This Is Ireland illustrated by Miroslav Sasek and Madeline's Rescue illustrated by Ludwig Bemelmans. Each of the two books illustrated in the expressionistic style of art were mentioned once. The four books illustrated in the cartoon style of art were Where the Wild Things Are illustrated by Maurice Sendak (mentioned by 3 children), George and Martha illustrated by James Marshall (mentioned by 3 children), Spectacles illustrated by Ellen Raskin (mentioned by 2 children), and Can I Keep Him? illustrated by Steven Kellogg (mentioned by 1 child).

When asked if they could identify the style of art in the "back-of-the-room" books they named, three of the children in the

treatment group correctly identified the cartoon style of art used in three books: Where the Wild Things Are, George and Martha, and Spectacles. When asked which books were their favorites among those they recalled looking at, they named Where the Wild Things Are, George and Martha, and Spectacles. None of the children offered any names of illustrators that created the pictures in the books.

During the post-test interviews, nine children from the control group recalled and named books that were placed in their classroom by this researcher. The nine children (eight from School B and one from School F) recalled looking at a total of 17 books. A total of ten titles were among the list recalled by the children. One of the books which they remembered was illustrated in the representational style of art, three were illustrated in the expressionistic style of art, and five were illustrated in the cartoon style of art. The one book illustrated in the representational style of art and mentioned once was Bedtime for Frances illustrated by Russell Hoban. The three books illustrated in the expressionistic style of art were The Umbrella illustrated by Taro Yashima (mentioned once), The Jazz Man illustrated by Ann Grifalcone (mentioned by two children), and Madeline's Rescue (mentioned once). The five books illustrated in the cartoon style of art were Where the Wild Things Are (mentioned by three children), George and Martha (mentioned by three children), Spectacles (mentioned by five children), Can I Keep Him? (mentioned by two children), and And To Think That I Saw It on Mulberry Street illustrated by Theodore Seuss Geisel (mentioned by three children). When asked if they could

identify the style of art in the "back-of-the-room" books, one boy in the control group correctly identified the cartoon style of art in George and Martha and And To Think That I Saw It on Mulberry Street. This one person was also the only child to provide the names of the illustrator, and he correctly noted that And To Think That I Saw It on Mulberry Street was illustrated by Dr. Seuss. When asked to list their favorites among the books they remembered, Where the Wild Things Are, George and Martha, Spectacles, and And To Think That I Saw It on Mulberry Street were listed.

Children's Responses to the "Back-of-the-Room" Books

After the children had listed their favorite book among those they remembered looking at that were placed in their classroom by this researcher, the children stated what it was about the books they liked. When discussing Where the Wild Things Are, one boy from the treatment group noted, *"Those pictures have a good background. The pictures were good and well drawn. They had a lot of color. I thought it was a neat story."* A child from the treatment group commented that in the book Where the Wild Things Are, the things he liked were: *"I liked it when they made him a king. I also liked when he went sailing in a boat." The story was really good."* When discussing George and Martha, one child from the control group noted, *"I liked the pictures better than the story. The story was really funny."* However, in contrast, a child from the treatment group stated, *"The fat hippos are really funny. The pictures tell about the story in the book."* Another child from the

treatment group commented on George and Martha stating, *"The story was well written. The pictures had the expressions shown and the details shown. They were simple."* When discussing Spectacles, one child from the control group said, *"She can't see without her glasses and she saw different shapes. The story was really funny because she saw a rhino instead of her sister."* A child from the treatment group stated, *"The story and pictures are really funny. The pictures have a lot of color in them."* The one child from the treatment group that selected And To Think That I Saw It on Mulberry Street, commented that she liked the book because: *"That book was better than all the others. It had a lot of colors in the pictures."*

The children appeared to be basing their preference for a book due to the story line and not on the specific styles of art. After being asked to respond to the "back-of-the-room" books, one child from the treatment group noted, *"Oh, I wondered why you put those books in our room. I bet if I had paid attention to what was going on in our class with you, I could answer these questions."*

The data indicated that the primary hypothesis and the null hypothesis would have to be rejected because there was a difference in the number of "back-of-the-room" books remembered by the treatment and control group children. This difference, however, was in favor of the control group children, and this instance was not covered under either hypothesis. It is interesting to note that during the post-test interviews, the children from both groups appeared to prefer the illustrations created in the representational style of art, yet when

they recalled the "back-of-the-room books, they identified those illustrated in the cartoon style of art. While the number of books recalled by the treatment and control groups differed, the children appeared to be recalling the same titles regardless of group assignment and amount of style study received.[1]

Other Data

This investigator compiled information related to, but not directly covered by, any of the hypotheses. The other data collected provided this researcher with some additional information regarding children's responses to three styles of art. The other data collected that is reported here is divided into two sections. Part I deals with the children's responses to specific interview questions collected during the pre- and post-test interviews. Part II deals with children's responses to three styles of art when in treatment group style study sessions.

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[1]One factor which appeared to be operating during the study and seems to be directly related to the "back-of-the-room" question asked the children. Fifteen of the seventeen children that remembered looking at the books placed in their classroom were from the same district, namely District I. District I is the hometown of an author of children's books, and her book had been selected as the American Library Association's Caldecott Medal Award winning book two years prior to this study. The author visited these schools and many of the children in this study from District I had either met the author or they had heard her speak. The author had received wide press coverage at the time the book had won the award for the art work. It can be hypothesized that the children had become aware of the art in children's picture books as a result of being familiar with this one author's popularity and familiarity with the children from her home area.

Part I: Children's Responses to Specific Interview Questions

During the pre- and post-test interviews, the children in both groups were asked a series of questions for each style of art viewed. Specific questions asked are reported below along with a descriptive report of the general findings.

Specific Question:

Have you ever seen any of these pictures?

The majority of the children said they had not seen the pictures that were shown to them in the pre- and post-tests prior to the interviews. If they had seen the pictures, a number of the children said they had seen them on television or they had seen them in a book when they were younger.

Specific Question:

1. *Has anyone told you the name of the person who made these pictures?*
2. *Do you know the name of the artist who made these pictures?*
3. *What is the name?*

While the majority of the children would say "no" or "I don't know" to the question about being told the name of or knowing the name of the artist who made the pictures they were viewing, some children refused to respond verbally to these questions.

The majority of the children said they did not know the name of the artist who had created the illustrations they were viewing in the interviews. Some children would, however, say that they knew the name of the artist but they had forgotten it.

Specific Question:

4. *Has anyone told you the name of the style of art in these pictures?*

(Child asks):

5. *What does style mean?*

While the majority of the children would say "no" or "I don't know" to this question about being told the names for the styles of art in the pictures viewed in the interviews, some children refused to respond verbally to this question. In the pre-test, only three of the children involved in the study asked this researcher to define the term "style" for them. Once the researcher refused to tell them what the word meant the children did not ask the question again during the pre-test. During the post-test, six of the fifty-nine children asked this researcher to define the word "style" for them. Again, once they were not given a definition, they did not ask for one during the post-test. During the post-test, one control group child remarked, *"I didn't know that the last time you were here."* One control group child noted, *"My father told me when I was very little, but I can't remember everything he tells me."* Another control group child stated, *"A librarian told me once, but I don't remember."* Children in the treatment group responded much like the control group children did during the pre-test, but some of their responses changed during the post-test. One child from the treatment group said, *"It's that big word. We looked at those books when we drew in the library."* As that group had worked in another room during the two other style study sessions, this researcher felt that the child

was at least aware that the pictures she was looking at were illustrated in the same style of art. The child couldn't remember the style name, but she had remembered studying the style.

Specific Question:

6. *What is the name of the style of art in these pictures?*

When asked to name the style of art in the illustrations seen in the interview sessions, the children in the pre-test often provided style names that were more like the titles of pictures. A sampling of the style names for illustrations shown to the children in the pre- and post-test follows.

1. Little Red Riding Hood illustrated in the representational style of art by Elizabeth Orton Jones. Children in the treatment group referred to the style of art in these pictures as being *"Little Red Riding Hood style of art," "the wolf and the girl in the woods style of art," "the good style of art," "the colorful style of art," "the art of drawing style of art,"* and *"the real style of art."* Children in the control group labeled the style of art in the Jones' illustrations as being *"the Red Riding Hood style of art," "the forest style of art," "the make believe style of art," "the imagination style of art," "Red Riding Hood meets a wolf style of art," "the forest and fields style of art,"* and *"the sketched style of art."*

2. Little Red Cap illustrated in the expressionistic style of art by Susan Blair. Children in the treatment group referred to the style of art in these pictures as being *"the dark color style of art,"*

"the mean style of art," "the making of art style of art," "going to Grandmother's house style of art," "the India ink style of art," "the wolf and the girl style of art," and *"the big bad wolf style of art."* Children in the control group noted that the style of art in the illustrations by Susan Blair were *"Red Riding Hood and the Big Bad Wolf style of art," "the showing a wolf looking at Grandmother style of art," "the sloppy style of art," "in the woods style of art," "the sketched style of art,"* and *"the forming of a picture style of art."*

3. Red Riding Hood illustrated in the cartoon style of art by Edward Gorey. Children in the treatment group referred to the style of art in these pictures as being *"the Adventures of Little Red Riding Hood style of art," "the girl with a basket style of art," "the circle and line style of art," "the in-the-woods style of art,"* and *"the sketched style of art."* Children in the control group noted that the style of art in the illustrations by Gorey were *"the Little Red Riding Hood meets a fox style of art," "the low class style of art," "the pencil style of art," "the line style of art," "Red Riding Hood in the woods style of art,"* and *"the wolf and the girl style of art."*

4. Rumpelstiltskin illustrated in the representational style of art by Benvenuiti. In the post-test, children from the treatment group referred to the style of art in these pictures as being *"the half-sketched-in style of art," "the fancy style of art," "the expressionistic style of art," "the realistic looking style of art," "the painting style of art," "the good style of art," "the cartoon style of art," "the woman sitting on the hay style of art,"* and *"the half-real style of art."*

In the post-test, children from the control group referred to the illustrations created by Benvenuiti as being the *"Rumpelstiltskin and the Queen style of art," "the filled with stuff style of art," "the woman and the Dwarf make gold style of art," "the pencil drawing style of art," "the liveable style of art,"* and *"the workman style of art."*

5. Duffy and the Devil illustrated in the expressionistic style of art by Margot Zemach. In the post-test, children in the treatment group referred to the style of art in these pictures as being *"the cartoon style of art," "the sketching style of art," "the water color style of art," "the style of art with the big word,"* and *"the messy style of art."* In the post-test, the children in the control group referred to the style of art in the Zemach illustrations as being *"the classical style of art," "the imagination style of art," "nature style of art," "the woman meets a Dwarf style of art,"* and *"the little Dwarf style of art."*

6. Rumpelstiltskin illustrated in the cartoon style of art by Edward Gorey. In the post-test, children from the treatment group referred to the style of art in these pictures as being *"the Girl and the Dwarf style of art," "the sketched style of art," "the wierd style of art," "the cartoon style of art," "the drawing with a crayon style of art,"* and *"the funny style of art."* Eight children in the treatment group correctly identified this style of art as being the cartoon style of art. In the post-test, children in the control group referred to the style of art in Gorey's illustrations as being *"the Queen who could spin gold style of art," "the Dwarf made the woman Queen style of art," "the*

pretty style of art," "in a building style of art," "the practical style of art," and *"the brush style of art."*

While the number of correct style identifications in the post-test did occur with the treatment group, it cannot be said that the number of correct responses increased with any magnitude. Children in the treatment group had less difficulty identifying cartoon and representational styles of art in the post-test than they did with the expressionistic style of art. In the post-test, children in the treatment group began to provide style names they had heard in the style study sessions, but their identification of styles was not often correct. During the post-test, children in the treatment group also began to provide more style labels that were more media oriented. Children in the control group provided much of the same type of style labels and identifications in the post-test as they had in the pre-test.

For the most part, the children appeared eager to please--to provide an answer to the question requesting a name for the style of art. They would look at the pictures and quickly arrive at an answer. Those children who did not provide an answer had no verbal response--they just shook their heads. Often children in the control group during the post-test interview would state, *"I don't know the name of the style either,"* before the researcher had asked the question requesting them to provide a style name. It appeared that many of the children were not willing to risk being incorrect or if they were incorrect, they acted as if their answer were right. Another way the children got around providing an answer was to tell this investigator

that they knew the *right* answer because someone had told them, but they had forgotten it and maybe they could remember before the interview was over. The children were concerned with being *right*, and they did not appear to like being unsure of their answers.

Specific Question:

9. *How would you describe these pictures to me if I couldn't see?*

The children responded to this question in a number of ways that could be categorized approximately under headings of subject description, object, color, directions, story, style, technique/media. Some of the children's responses fell under only one of the categories while others fell into more than one. A sample of the children's responses for each specific category follows.

Subject description. When describing the characters or subjects in Rumpelstiltskin illustrated in the cartoon style of art by Edward Gorey, one child remarked, *"There is a guy lying down and he has no legs, two long yellow arms, a big nose, a hat with long curves, and he's happy. There's a lady with her hair up and she's wearing a necklace."*

Object. When describing or listing objects in Rumpelstiltskin illustrated in the representational style of art by Benvenuiti to someone who could not see, one child said, *"There is a guy threading wheat on the wheel. There is a pitchfork, a shovel, a rake, and they are by the big wheel. The girl is sitting and she is rolling up a ball of yarn. There is wheat behind her."*

Color: When describing or listing colors in Rumpelstiltskin illustrated in the expressionistic style of art by Margot Zemach to someone who could not see, one child remarked, *"The man has a red-pink nose, pink cheeks, dark brown hair. The old ugly lady has a pink scarf, a white face, brown hair that sticks out, and there is blue in her gown. She has pink shoes and little dotted pink spots on the bottom of it."*

Directions: When asked to describe the pictures viewed to someone who could not see, some children told the investigator how they would accomplish the task. *"First, I would read you the story. I would make you picture the story in your mind; then I would tell you all the details."* or *"I would answer your questions; then I would tell you about them. I would tell you the background of the story, too."*

Story: When asked to describe Rumpelstiltskin illustrated in the cartoon style of art by Edward Gorey to someone who could not see, a few children retold the story. One child remarked, *"Once there was a dwarf that could spin straw into gold, and there was a farmer's daughter. The king told the farmer his daughter had to spin straw into gold. She couldn't, so the dwarf came in."*

Style: When describing the style of art in Rumpelstiltskin illustrated in the cartoon style of art by Edward Gorey, one child commented, *"These funny pictures are cartoon. His suit is way too long and his face has an extra long nose. There isn't much background. You can see some shadows. There isn't much color in the background. She is holding straw in her hand."*

Technique/media: When describing the media or technique employed by the artist in Little Red Cap illustrated in the expressionistic style of art by Susan Blair, one child said, *"An oval circle big on one end is sketched. You go back and erase the straight lines for the red hood cap. You scratch to make the hair and eyebrows. The nose is sketched, too."*

Many of the children limited their remarks to listing the objects in the picture and describing what the characters were wearing. Few children in the treatment group noted anything about characteristics for the style in which the pictures were created. The presence or lack of color were mentioned frequently when the children were describing the pictures.

Specific Question:

10. Have you seen other books with pictures done this way?

In the pre- and post-tests, very few children said they had seen pictures done in the manner in which the specific pictures were illustrated.

Specific Question:

11. What are the book titles or what are the stories about in these other books?

Children's responses to this question were often difficult to classify. Many of the children said that Little Bo Peep, another book with Little Red Riding Hood or Rumpelstiltskin or The Three Bears were

all made in the same style of art as seen in the pre- and post-test illustrations. When children did provide book titles and they were asked why the pictures were alike, many of the children mentioned media as a way the pictures were alike. Charlotte's Web was mentioned a few times as being like the illustrations done by Edward Gorey. The children said the pictures were alike because they were drawn with ink. It was interesting to note that the children did not notice that illustrations created by Edward Gorey were shown in both the pre- and post-tests.

Specific Question:

12. *Have you seen other books with pictures made by this same artist?*

The majority of the children responded "no" or "I don't know" to this question. Several children stated, *"If I don't know the artist, and you already asked me that, how would I know this answer?* Other children would answer, *"I used to know, but I don't remember."*

Specific Question:

13. *What are the book titles or what are the stories about in these other books?*

As the children stated in Question 12 that they had not seen other pictures made by the same artist, the children were not asked to name books illustrated by the same artist.

Part II: Children's Response to Three Styles of Art in Treatment Group Style Study Sessions

This investigator brought in a collection of ten picture books illustrated in one style of art for each of three style study sessions. The children were given an opportunity to view the books and then they were asked to state how the pictures all had something in common. The following is a descriptive summary of the books the children discussed and a listing of the characteristics the children felt the various illustrations had in common.

Children from District I, School A, studied representational style of art first, expressionistic style of art second, and cartoon style of art third. In the first style study session the School A children decided that all the books viewed in the sessions had pictures that were alike because all the pictures had animals and people in them. The illustrations had been made with ink and oil points. The children decided that all the illustrations were drawn by an artist, and the artists usually showed people doing something. In the second style study session, children decided that the ten books illustrated in the expressionistic style of art had pictures alike because the pictures were all made in one style of art. As one boy so aptly put it, *"We did that last time, so it must be style of art we're doing this time."* The pictures had curvy lines, but not everything was outlined. The children said that the pictures did not look real and that there were few details and stuff in the pictures. Colors were found to be different and they were noted to be smeared. The children also noted that not

all the pictures were fully colored in. Books that were preferred by children from school that were illustrated in the expressionistic style of art were The Angry Moon illustrated by Blair Lent and Hosies Alphabet illustrated by Leonard Baskin. Books disliked by children in this group were Harriet and the Promised Land (*the people looked too funny* [odd]) illustrated by Jacob Lawrence; Madeline's Rescue *(nothing is finished in it)* illustrated by Ludwig Bemelmans; Hide and Seek Fog *(you can't tell what anything is)* illustrated by Roger Delvorson, and The Charge of the Light Brigade *(everything is too skinny and no one looks like that)* illustrated by Alice and Martin Provensen. Children in School A readily identified the third set of cartoon illustrations in the last style study session as being cartoon style of art. They said the pictures were alike because they were cartoon, they were not real and that they all used lines, outlines, and curvey parts. The children preferred The Mystery Beast of Ostergeest illustrated by Steven Kellogg as they found all the details interesting, Bartholomew and the Oobleck illustrated by Theodore Seuss Geisel (*I read that as a kid and now I remember the green rain*), Father Christmas (there is a scene of Santa Claus in the bathroom) illustrated by Raymond Briggs, and although the children disliked the pictures in Elvira Everything, they talked alot about it as there was a picture of a nude little girl. The children did not like the pictures in The Magic Stick by Kjell Ringi because *the pictures were dumb and no one would do those things and this book has no words*. The other book rejected by the children was Look What I Can Do illustrated by Jose Aruego because *the story was dumb and the oxen looked wierd.*

Children from District II, School C, studied expressionistic style of art first, cartoon style of art second, and representational style of art third. In the first style study session the children from School B decided that all the expressionistic style of art pictures in the books viewed in the session were alike because the illustrations had a lot of colors and the pictures were made in a lot of the same colors. The children noted that all the illustrations had either buildings, people, or animals in them. The children agreed that the *people looked funny* [odd] *and that they did not look right.* The illustrations were also alike because they had either been made with paints or with crayons. Children from School C preferred The Angry Moon because of the bright colors, and they rejected Joseph's Yard because the colors were too dark and they could not see Joseph's face clearly. The children preferred This Is Historic Britain illustrated by Miroslav Sasek because *"You can tell what everything is here."* Harriet and the Promised Land was soundly rejected by these children because *"No one who is black is that black and slavery is against the law."* It is interesting that six of the nine children in this group were black, and these children were very upset with the portrayal of blacks in this book. In the second style study session, the children decided the cartoon illustrations were alike because they did not have things that looked real in them, and that people or things either looked funny or dumb. While the children felt many of the things could happen in the books, they also felt that many of the events in the story could not happen. The children also agreed that the pictures were made by

an artist, and that the artist made no mistakes, and that the artist made the people laughing in the pictures. The children preferred the cartoon illustrations in Father Christmas illustrated by Raymond Briggs because *a lot of things were going on in the pictures,* Bartholomew and the Oobleck because they had seen it before, and The World's Greatest Freakshow illustrated by Ellen Raskin because the people had funny colored faces and because there was a two-headed person in the picture. The children rejected The Magic Stick because *it was dumb and because it had no words in it.* In the third style study session, the children decided that the representational illustrations in the ten books they examined were alike because they looked real and they showed action. They decided all the pictures had been made by the same artist, and that this artist did not make mistakes. The artist showed wrinkles in the clothes and used the right colors. Books preferred by the children were Jacko illustrated by John Goodall (the half pages intrigued the children), and Jambo Means Hello illustrated by Tom Feelings. The children found Jambo Means Hello to be interesting due to the elaborate hair styles on the black people and that the book showed African culture. The children soundly rejected The Silver Pony illustrated by Lynd Ward because *a horse doesn't have wings and there isn't anything in the background.* The children also rejected Gorilla, Gorilla illustrated by Symeon Shimin because there the pictures had no color.

Children in District III, School E, studied cartoon style of art first, representational style of art second, and expressionistic

style of art third. Children in School E readily identified the cartoon style of illustrations, and they correctly provided the style name. They decided all the illustrations were alike because *the people were cartoony and the pictures were funny, and you could laugh at them.* They also decided that the pictures were all made by an artist. Books preferred by the children were Father Christmas because it looked like a comic book, Bartholomew and the Oobleck because they had seen the book before, and The Beast and Monsieur Racine because of all the details in the illustrations. The children disliked The Magic Stick because *you can't tell what anything is* and Elvira Everything because there were no colors in the picture. In the second style study session the children decided the illustrations created in the representational style of art were alike because *"We're probably talking about art today."* The children found the *people look right and all the stuff was there.* The children said they would have liked the pictures to have more color in them. They preferred Gorilla, Gorilla because *you can see all the hair and the muscles.* They preferred Paddle-to-the-Sea because it was so colorful and they preferred Make Way for Ducklings illustrated by Robert McCloskey because *the ducks were cute.* In the third style study session the children in School E decided the illustrations in the expressionistic style were alike because *they were cartoony, colorful, and that straight lines were used for everything.* They said the pictures had imagination in them and that the *colors were scratched all over the place.* The children noted that the faces were strange and odd, and that the artists did not make noses on the faces, nor did they put toes on

the feet. The children preferred Hosie's Alphabet because of the text that accompanied the pictures. They preferred This is Historic Britain because everything looked real, and they preferred The Angry Moon because the book was so colorful. The children rejected Madeline because *it did not look finished and it was sloppy* and they rejected Hide and Seek Fog because *"you can't see anything and who would go to the beach on a foggy day like that."* The children also rejected The Charge of the Light Brigade because *the artist was trying to make it look like a lot of people when there really weren't that many. You can't tell whether the people are men or women.*

In all groups, the children seemed to understand that they were to look for characteristics for styles of art by the second style study session. They often rejected books on the basis of color, story line, and lack of background. Books preferred were often selected on the basis of familiarity, color, and realistic portrayal of the subject matter. In all three groups, the children made few preference and rejection choices and across the groups, the children appeared to prefer and reject much the same illustrations. The children appeared to show a lack of sophistication when verbalizing the reasons for preferring or rejecting a style of art or specific illustrations viewed in a particular style study session. The children also appeared to be easily swayed by the opinion of a few members of the group, and some children did not seem able to hold their opinion stand should someone disagree with them. Across the study, the children appeared to become more aware as to what was being attempted by this researcher in terms of having children list the characteristics for a specific style of art.

Summary

Nine hypotheses were developed to measure children's verbal responses to three styles of art used to illustrate children's books before and after a guided study of three styles of art used to illustrate fairy tales between the treatment and control groups.

The first hypothesis tested the difference in the Total Verbal Expression Content gain scores for the treatment and control groups between the pre- and post-tests. The analysis of the data was conducted in two parts: Total Verbal Expression Content scores for the whole instrument and Total Verbal Expression Content scores for the different styles of art. For each of the two parts, sex differences for children in the treatment group were also analyzed. Using a two-tailed t-distribution, significant differences between the groups in the Total Verbal Expression Content gain scores were noted with a t-value of 9.84 at the .01 level of significance. The null hypothesis was rejected as the treatment group scored higher in the post-test than did the control group. The analysis of the data noted that, in fact, the control group had a loss of Total Verbal Expression Content scores. When testing the differences in Total Verbal Expression Content gain scores for the boys and girls in the treatment group, a significant difference at a t-value of 1.962 at the .01 level was found as the boys responded with the higher number of Total Verbal Expression Content gain scores in the post-test than did the girls.

Significant differences with a t-value of 8.501 at the .01 level were noted between the treatment and control groups in the Total Verbal Expression Content Gain scores used when discussing representational style of art as the treatment group responded with the higher number of Total Verbal Expression gain scores than did the control group. Significant differences with a t-value of 3.873 at the .01 level were noted between boys and girls in the treatment group in the Total Verbal Expression Content Gain scores when discussing representational style of art as the boys responded with the higher number of Total Verbal Expression Gain scores than did the girls. Significant differences with a t-value of 4.098 at the .01 level were noted between the treatment and control groups when discussing expressionistic style of art as the treatment group responded with the higher number of Total Verbal Expression Gain scores than did the control group. There were no differences noted with a t-value of 1.719 at the .01 level of significance between the Total Verbal Expression Content Gain scores used to discuss expressionistic style of art for the girls and the boys. Significant differences with a t-value of 8.764 at the .01 level were noted between groups when discussing cartoon style of art, as the treatment group responded with the higher number of Total Verbal Expression Content Gain scores than did the control group. Boys in the treatment group attained a greater number of Total Verbal Expression Content Gain scores than did the girls in the treatment group, and this difference was noted to be significant at the .01 level with a t-value of 6.286. Significant differences at the .01 level with a t-value of 2.66 were

reported between the treatment and control groups in the number of Total Verbal Expression Content Gain scores used to describe preferences for styles of art as the treatment group attained the higher amount of Total Verbal Expression Content Gain scores. There were no differences noted with a t-value of 0 at the .05 level of significance between the girls and boys in the number of Verbal Expression Content Gain scores used to discuss preferences for styles of art. Significant differences with a t-value of 3.558 at the .01 level were noted between the treatment and control group in the number of Verbal Expression Content Gain scores used to discuss dislikes for three styles of art as the treatment group received the higher number of Total Verbal Expression Content Gain scores. There were differences noted with a t-value of 2.123 at the .01 level of significance between the girls and boys in the treatment group when discussing dislikes for styles of art as the girls received the higher number of Verbal Expression Content Gain scores.

Hypothesis 2 was tested with the two-tailed t-distribution to compare the Verbal Expression Content Gain scores for the treatment and control groups when responding to three styles of art using stylistic terms. Significant differences with a t-value of 17.431 at the .01 level were noted as the treatment group responded with the higher number of Total Verbal Expression Content Gain scores. The control group received a loss of Verbal Expression Content scores between the pre and post-tests. For each style of art and for preference and rejection, significant differences at the .01 level were noted as the

treatment group responded with the higher number of Verbal Expression Content scores, while the control group responded with a loss in points scored between the pre and post-tests.

Hypothesis 3 was tested using the two-tailed t-distribution to compare the Verbal Expression Content Gain scores for the treatment and control groups when responding to three styles of art using emotional characteristics. At the .05 level with a t-value of .673, there were no significant differences in the amount of emotional characteristics used when describing three styles of art for the treatment and control groups.

Hypothesis 4 was tested using a two-tailed t-distribution to compare the Total Verbal Expression Content Gain scores for use of evaluative terms used when discussing three styles of art for the treatment and control groups. At the .01 level with a t-value of 8, there were significant differences noted between the treatment and control groups when using evaluative terms. The results of this hypothesis tested could be misleading as both groups witnessed a loss of Total Verbal Expression Content score points between the pre and post-tests.

Hypothesis 5 was tested, using the chi squared (χ^2) distribution to measure whether children in both the treatment and control groups would reject the expressionistic style of art more than they would reject representational and cartoon styles of art. Significant differences were noted at the .01 level, as the children in both groups rejected expressionistic style of art over cartoon with a t-value of 14.773 and representational style of art with a t-value of 22.133. At the .01

level of significance, differences were found among boys and girls in the treatment group. The boys tended to reject expressionistic style of art more than girls and the girls tended to reject cartoon style of art more than boys.

Hypothesis 6 was tested, using the chi squared distribution, to measure whether children in both the treatment and control groups would prefer the representational style of art more than they would prefer either the cartoon or expressionistic styles of art. At the .01 level of significance, representational style of art was chosen more often as a like selection and as a buy selection than were cartoon with χ^2 value of 56.0 and expressionistic styles of art with a χ^2 value of 49.333. At the .05 level there were no significant differences for preferring a style of art in the like-as-much category as the larger proportion of the children had no preference for a style of art. While representational style of art was more often selected, girls preferred it more than boys and these differences were noted at the .01 level of significance.

Hypothesis 7, using the chi squared distribution, measured whether children would use more stylistic terms when describing representational and cartoon styles of art than when describing expressionistic style of art. At the .01 level, the differences in the amount of stylistic terms used to describe the three styles of art were found to not be significant.

Hypothesis 8 was designed to measure whether children in both groups would change their preference or rejection for a style of art

between the pre- and post-test interviews. While there were some changes made in the votes for preferred or rejected styles of art, the differences were minimal, and the data indicate that the children basically retained their preference between the pre- and post-tests.

Hypothesis 9 was designed to measure differences in the number of back-of-the-room books recalled by children in the treatment group and children in the control group. Only fifteen children out of fifty-nine children mentioned titles that were placed in the back of their classrooms. District I, Schools A and B, were basically the only groups of children who had mentioned the back-of-the-room books, and it was noted by this researcher that an author of an award-winning picture book lived in the area and the children had heard the author speak before.

CHAPTER V

SUMMARY, CONCLUSIONS, AND DISCUSSION

This experimental study was designed to measure fifth graders' verbal responses to selected illustrations in children's books before and after a guided study of three styles of art used to illustrate fairy tales. The purpose of this study was to note children's preferences or rejection for representational, expressionistic, and cartoon styles of art; to ascertain whether style study/picture study would influence children's usage of vocabulary terms characteristic of these three styles of art; to measure the stylistic, emotional, and evaluative terms children used when discussing the three target styles of art; and to ascertain whether fifth graders would become more aware of the art used to illustrate children's picture books. The significance of this experimental study was directly related to the premises founded in the fields of art education and visual literacy. The data gathered in this study was pertinent to the aforementioned educational processes as the procedures followed in the study allowed children to be able to view artistic visuals created for children, to describe the visuals verbally, to state orally and share their personal opinions and evaluations about the illustrations and the target styles of art under study, and to attempt to draw in the representational, expressionistic, and cartoon styles of art. Such procedures allowed for an expression of

individual preferences, a pooling of ideas, and a translation of ideas into an artistic visual. The data collected in this study provided this researcher with insight into how children respond to the three target styles of art before and after style study sessions and to ascertain whether the procedures followed would be beneficial means for teaching aesthetic education, art education, and visual literacy. The data collected also provided this researcher with information about what these fifth graders understood and felt about representationa, expressionistic, and cartoon styles of art used to illustrate children's books and how the children verbalized their understanding for the three styles of art. This study was not designed to change children's preference or rejection for three styles of art, nor was it an attempt to provide children with basic drawing lessons. The methods outlined were to provide educators with information regarding children's verbal responses to art and to shed some light on why children prefer or reject the target styles of art. The overall scope of the study was to include sessions where children could learn about three styles of art, to permit instances where children could evaluate three styles of art, and where they could be able to communicate their judgment regarding their evaluations to others.

Perusal of the related literature reporting research findings over the years has indicated that as children become older their preferences for art become similar to that of an adult. While younger children will accept the abstract art, somewhere at or above the fifth grade, children tend to prefer the representational style of art. Children's responses to art often were based on the portrayal of the

subject matter and whether it was real; however, at or above fifth grade, the children began to become more aware and start noting stylistic characteristics; they became more discriminating in their viewing. Researchers over the years did indicate that much of the information concerning children's preference for style of art or for art in general has been inconclusive or contradictory. It appeared to this investigator that some of the information concerning children's responses to art had been inferred because in many studies the children were never given an opportunity to provide an explanation for their choices, or in other studies if children did respond verbally their comments were only mentioned in passing when the researchers reported the findings from their studies.

Fifth graders who participated in this study conducted by this researcher were randomly selected from six elementary schools in three school districts in Western Michigan. Ten children were randomly selected from each of the six schools and the groups of ten children were randomly assigned to one of three treatment groups or to one of three control groups. While sixty children were originally selected for this study, only fifty-nine fifth graders completed it; one child moved out of the area before the study was concluded.

Children were pre-tested during the first week of the study, and they were post-tested during the last or the fifth week of the study. The testing instrument used in this study was designed by this investigator to measure children's Verbal Expression Content scores when responding verbally to representational, expressionistic, and cartoon styles of art in individual interview sessions. An instrument was

designed by the researcher to gather the data for this study. Total instrument inter-rater reliability was .976, while the inter-rater reliability for the eight sub-sections of the instrument ranged from .790 to .995. The instrument was designed to allow the children to respond to the three styles of art in a general manner and to have them comment on specific items related to the styles of art under study.

Pre and post-testing of the fifty-nine children, in individual interview sessions, occurred during the first and fifth week of the study. Prior to the interviews children, when in their classrooms, listened to a fairy tale read to them by this investigator; one fairy tale was read prior to the pre-test and another fairy tale was read prior to the post-test. In the individual interview sessions, children responded to general and specific questions regarding three picture pairs that were each illustrated in either representational, expressionistic, or cartoon styles of art. The picture pairs were obtained from three versions of the fairy tales read prior to the pre or post-tests.

After the pre-tests were concluded, this investigator placed fifteen picture books illustrated in the representational, expressionistic, or cartoon styles of art in the back of each of the six classrooms in the study. The purpose of such a collection was to ascertain whether fifth graders would voluntarily read picture books and whether they would remember the art work within the books.

Beginning in the second week of the study, this investigator met with each of the three treatment groups for one 2-hour style study session held every week for three weeks. During these 2-hour sessions the children discussed ten picture books all illustrated in one of the

three target styles of art. The children were given an opportunity to list the ways the pictures were alike; they were given information by this investigator as to what the style of art was in the books under study; they were given an opportunity to evaluate the art work of the various illustrators; and they were given an opportunity to draw in the style of art under study during each session. After the children had discussed and evaluated the picture books, this investigator read them a fairy tale and then the children drew two pictures: one in the style of art under study during a particular session and one in their favorite style of art. When the children had completed their drawings they discussed how their illustrations for a fairy tale contained the characteristics of the style of art under study and how their pictures were dissimilar to the style of art under study. During this three-week time period, this investigator had no contact with the children from the control group.

During the fifth week of the study, the fifty-nine fifth graders were post-tested using the same instrument that had been used in the pre-test. The only addition to the post-test instrument was a question set asking the children to respond to the fifteen books this investigator had placed in all the classrooms in the study. The change in the amount of the gain scores of the Verbal Expression Content scores between the pre-test and post-test for the treatment groups was compared to the amount of change in the Verbal Expression Content scores for the control groups.

The major findings that emerged from the study were as follows: 1. Group instruction related to relevant characteristics of three styles of art did influence children's response to art, and that children in

the treatment group attained a higher number of Total Verbal Expression Content Gain scores between the pre and post-test than did the control group. The control group witnessed a loss in Total Verbal Expression Content Gain scores between the pre and post-tests.

2. Boys in the treatment group attained a higher amount of Verbal Expression Content Gain scores between the pre and post-test than did girls in the treatment group.

3. When discussing expressionistic style of art, there were no significant differences in the Verbal Expression Content scores for the girls and boys in the treatment group. For representational and cartoon style of art, the boys of the treatment group attained a significantly higher number of Verbal Expression Content Gain scores than did the girls in the treatment group.

4. Differences between the treatment and control groups were found to be significant in relation to the number of stylistic terms used by the children to discuss the three styles of art. The treatment group attained a higher level of gain scores, while the control group witnessed a loss of Verbal Expression Content score points between the pre- and post-tests.

5. There were no significant differences between the treatment and control groups in relation to the number of emotional characteristics offered by children to describe the target styles of art. Not only were there no significant differences between the groups, but there were few emotional characteristics pertinent to the styles of art under study that were mentioned by children in either group.

6. Children in both groups soundly rejected expressionistic style of art when compared to representational art, and they rejected expressionistic art at a significant level more than they did cartoon style of art.

7. Boys in the treatment group tended to reject the expressionistic style of art more than girls, and girls in the treatment group tended to reject cartoon style of art more than boys.

8. Representational style of art was more often selected by the children as a preferred style of art when compared to expressionistic and cartoon styles of art.

9. Representational style of art was more often selected by girls than boys in the treatment group.

10. If given a second choice for a style of art preference, a significant number of children in both the treatment and control groups opted for a stance of no preference.

11. It was found that there were no significant differences between the groups when using stylistic terms to describe representational, expressionistic, or cartoon styles of art.

12. While children did change their preference and rejection votes for the three styles of art between the pre and post-tests, the amount of change was minimal. The majority of the children who preferred representational style of art in the pre-test retained that preference in the post-test. The change in preference votes occurred with the cartoon and expressionistic styles of art.

13. Only fifteen children out of fifty-nine children in the study mentioned recalling the books placed in the back of their classrooms.

The children had a tendency to recall a limited number of titles and the titles mentioned by the treatment group children were much the same as those mentioned by the control group children.

14. A contaminating factor that this researcher was not aware of until she was well into the study related to children's recollection of the books placed in their classroom. Living within School District I where thirteen children who participated in this study attended, was an author of a Caldecott award-winning picture book. These children were familiar with the author, they knew the books she had written, and they were familiar with the illustrations in her books. It could be hypothesized that the children became more aware of the art inherent in picture books, as a result of being familiar with a known author.

15. Children in the study did not appear to be familiar with the names of artists that illustrated children's picture books.

16. Fifth graders did not appear to be able to make a connection between the styles of art seen in the pre and post-test illustrations with the picture books placed in the back of their classrooms.

17. When providing style names for the pictures seen in the pre and post-test interviews, the children had a tendency to give the pictures titles *(the Little Red Riding Hood style of art)*, to make an opinion statement *(the good style of art or the low class style of art)*, or to refer to media or artistic technique *(the sketched style of art or the brush style of art or the water color style of art)*.

18. In the post-test, children in the treatment group began to offer labels for the style of art seen in the illustrations that were style names or that were media/technique names.

19. Representational and cartoon styles of art were easier for the children in the treatment group to correctly identify during the post-test than expressionistic style of art.

20. When attempting to describe the illustrations viewed in the pre and post-tests, children had a tendency to limit their descriptions to those of objects and subjects in the pictures rather than using stylistic or media/technique terms.

21. Children in both the treatment and control groups, during the pre and post-tests, appeared to be concerned with being correct and being able to provide an answer when asked to respond. When unsure of themselves or unsure of the answer, the children would either say *"I used to know, but I forgot,"* or they would not respond at all.

22. Children in the treatment group style study sessions were influenced by their peers, as they would change their opinion for an illustration if they appeared to have a minority opinion. The children in the treatment group also had a tendency to draw their pictures with much the same content as those children who began their drawings first.

23. The responses of the children in the treatment group may have increased in number, but they did not appear to have increased in the level of sophistication. Their responses to pictures were longer and they were somewhat more definitive, but the comments were not always indicative of the vocabulary that would be more technical in nature when describing styles of art.

Discussion

While there were differences between the treatment and control groups as measured by Total Verbal Expression Content Gain scores, it is difficult to ascertain why the control group attained a fewer number of Verbal Expression Content score points in the post-test than they attained in the pre-test. One could hypothesize that the control group children could not determine the purpose for repeating a task they completed four weeks earlier, and therefore they made fewer comments in order to have the interview sessions conducted during the post-test end as soon as possible. In the post-test, one boy became indignant and he remarked, *"I didn't know that the last time you were here, and I don't know that now."* The children could have also provided fewer comments because they were confronted with unfamiliar material for a second time within a four-week span, and if they had been threatened by the material in the pre-test, the post-test questions might have heightened their anxieties regarding the material being presented in the post-test.

While there are no reasons to believe that boys and girls are genetically different or that boys are better than girls when responding to styles of art, there were significant differences between the Total Verbal Expression Content Gain scores for the boys and the girls with the boys attaining a significantly higher number of gain points. The differences in the responses could be sociological in nature. The differences in responses might have been influenced by the types of experiences boys have that are different from girls, and this would be related to the way the different sexes were raised.

As previous research had verified they would, the fifth graders in both groups did prefer the representational style of art more often than cartoon or expressionistic styles of art. While the children had marked preferences for the representational style of art, they did not have higher Verbal Expression Content scores when discussing that style of art. This factor may be related to children's inability to explain their preference or rejection for a style of art or to their inability to communicate verbally.

The marked preference for representational style of art may have been created because the children were more familiar with the real portrayals of objects and people than they were with the abstract art. When confronted with expressionistic style of art, many children were dealing with an unknown, and they often rejected the illustrations done in that style because the pictures did not look real or because they looked sloppy. Children's responses to and preferences for representational style of art at times appeared to be under family influence. Children mentioned that illustrations created in the rep-representational style of art would match rooms in their homes, those would be the pictures their parents would let them have, the pictures were "proper," that they were expensive, or they would look good in a frame. Two children, one from the control group and one from the treatment group, noted that the representational style of art illustrations would be good to give to younger children because they would be nice to own and that younger children could understand them. Comments such as these reflect influences that are family and society

oriented, and while children may say they prefer one style of art, it may not necessarily be the one they would be allowed to have in their homes.

Children's responses related to cartoon style of art appeared, at times, to be related to television. Mickey Mouse and Charlie Brown were compared to the cartoon illustrations of Edward Gorey. However, one boy in the control group noted that the Edward Gorey pictures *could not be cartoons because they did not move; you needed a special projector for that.* It is interesting to note that while the children said they preferred the representational style of art, when asked to make a forced choice for preference or rejection in the pre- and post-tests, the children who remembered looking at picture books placed in the back of their classroom mentioned more books illustrated in the cartoon style of art. They said they preferred those books more than others illustrated in another style of art. One might determine that the children felt obligated to provide an answer that would thought-appease this investigator when confronted with a forced choice, and they did not feel obligated to arrive at a correct answer when asked if they could remember books placed in their classroom.

In the post-test, children in the treatment group had less difficulty in correctly identifying the representational and cartoon styles of art than they did expressionistic style of art. When mentioning style names in the post-test, children would refer to the representational style of art as *being real or things look right, or all the stuff is there*, while when they referred to the cartoon style

of art they would state, *"These are cartoon pictures."* While the treatment group moved away from giving the pictures titles, the style names provided for the illustrations in the post-test were more of a media/technique nature or opinion oriented. It can be noted that children in the treatment group did begin to mention style names such as cartoon or real more often in the post-test and two children used the term expressionistic when describing representational style of art. It appears that the children from the treatment group were becoming aware that titles of pictures were not the answers that were desired, but the style names they provided were far from sophisticated, and they still lacked the vocabulary of a technical nature that is often used to describe characteristics related to various styles of art. The children in the treatment group did begin to use more terms related to characteristics of art rather than listing objects in the illustrations, yet their responses showed a continued lack of awareness and sophistication for stylistic terms in the post-test that was noted in the pre-test.

When describing pictures for someone who could not see, the children often would tell the story related to the picture or list the objects in the illustration. Very few children mentioned the emotional features present, nor did they mention the action that was happening, or could have happened. This lack of mention could be because the children did not consider those features important, or they were more accustomed to surface descriptions and literal interpretations of the pictures.

Many of the children from both groups rejected the expressionistic illustrations created by Margot Zemach for Duffy and the Devil seen in the post-test because the woman in the picture did not look like a queen. The story of Rumpelstiltskin read to the children prior to the post-test did not describe how the miller's daughter looked, but the story did say she married a king. The children could not see *how a fat lady wearing raggedy clothes, who looked like a man, could possibly be a queen.* As one girl so aptly put it, *"She is supposed to be beautiful because she is a king's bride."* It is interesting to note that the Zemach illustrations were for a Cornish version of the story Rumpelstiltskin, and in this version the woman was never a queen, but a servant.

Conclusion

This experimental study was designed to measure fifth graders' verbal responses to selected illustrations in children's books before and after a guided study of three styles of art used to illustrate fairy tales. The following conclusions were arrived at:

1. This investigator was able to ascertain children's preferences or rejection for representational, expressionistic, or cartoon styles of art.

2. The verbal responses of the fifth graders who participated in this study indicated that these children significantly preferred representational art over expressionistic and cartoon styles of art, and they rejected expressionistic style of art over representational and cartoon styles of art.

3. The analysis of the children's verbal responses about the three target styles of art indicated that while children in the treatment group became more aware of stylistic aspects of these styles of art, they continued to respond to styles of art in a non-technical manner even after a guided study of three styles of art.

4. Even after a guided study of the three styles of art, the fifth graders in this study did not discuss the style of art use in a signficantly higher amount of stylistic and evaluative terms for the styles they said they preferred nor did they use former stylistic and evaluative terms when discussing styles of the art they disliked. There were no significant differences in the amount of stylistic or evaluative terms used by fifth graders when discussing any one of the three target styles of art. Overall, there was an increase in stylistic terms used to discuss the three styles of art, and there was a decrease in the amount of evaluative terms used to discuss the three styles of art under study.

5. If measured by children's recollection of picture books placed in the back of their classrooms, this study did not succeed in making fifth graders more aware of styles of art in the children's books they had read. If measured by the number of Total Verbal Expression Content gain scores between the pre- and post-tests, then this study did succeed in having the children become more aware of the styles of art in the visuals used to illustrate children's picture books.

Suggestions for Changes in the Study

Should this study be replicated by other researchers, certain changes might increase the positive gains in the children's learning about, evaluating, and verbalizing their responses to styles of art used to illustrate books.

1. The time span for this study should be lengthened so that children have more time to assimilate and use what they have learned. The exposure to the three target styles of art within a limited four-week period indicated that fifth graders do become more aware of characteristics pertinent to styles of art, but they do not appear to be able to verbalize adequately an understanding of or even a recognition of some of the major stylistic aspects. If given more time to conduct a more comprehensive study, the effects of the study may have been more significant.

2. The instrument subsection "Compared ____ to ____" should be deleted and the features that were included in it should be dispersed among other subsections of the instrument. Changes in this area would provide information pertaining to the children's evaluative comments as these often were made by the children when they compared one artist's work to another's, and often the evaluative comments were not scored as a separate entity. Recommended changes to be made include:

Instrument subsection:

Compared ____ to ____

1. ____ better, prettier, not as good as
2. ____ more/less colorful
3. ____ more/less real
4. ____ dull/interesting

The first and fourth features could be placed under the "Overall Opinion of the Artist's Work" subsection of the instrument. The second and third items could be placed under the "Style Features" subsection of the instrument.

3. The collection of picture books used in the treatment group style study sessions should be revised to include a few more titles which contained more colorful illustrations and which contained more up-to-date topics. Such small group style study session books should also include more multilevel/multi-interest picture books. Some of the fifth graders complained that the picture books were written for children much younger than themselves.

4. Some investigator control over the back-of-the-room books needs to be instituted. In this study, the books were placed in various locations in the different classrooms, and accessibility to the books may have been a contaminating factor which operated within this study.

5. In the Specific Question pre- and post-test interview form, an addition to the Style Questions 4 to 7 should be made to ask the children to select or point to a target style of art from an array of four styles of art. This arrangement would allow the researcher

to ascertain whether the chilren could recognize a specific style of art even though they could not provide a style label for it.

Suggestions for Further Research

1. There is a need for a study about children's verbal responses made in relation to almost any subject matter. There is a need for a study which would identify factors which determine children's ability or inability to explain their ideas verbally, to verbalize their opinions, and to voice their evaluations about almost any subject matter.

2. There is a need for a study about children's verbal responses to styles of art inherent in picture books. The study conducted by this researcher was limited to representational, expressionistic, and cartoon styles of art in picture books. Since children's picture books are illustrated in styles of art other than just these three styles, other studies are needed to identify children's responses to illustrations done in such styles as cubism, surrealism, collage, and impressionism.

3. Studies should be done to measure children's verbal responses to water colors, silk screens, wood cuts, line drawings, and the like.

4. It would be noteworthy to study what effect children's familiarity with a book artist or an author has on their awareness level for styles of art.

5. There is a need for studies measuring the relationship between the art education received by classroom teachers, art instructors, and librarians and the art curriculum and methods used to teach art in the schools.

6. There is a need for studies measuring the relationship between the coursework in children's literature and illustrations in children's books completed by classroom teachers and librarians and the type and method of picture study in children's books conducted in the schools.

7. There is a need for studies measuring the relationship between adults' (parents' and teachers') attitudes toward and preferences for various styles of art and the children's prefernces for and attitudes toward the same styles of art.

8. There is a need for studies which measure children's levels of conformity to adult models with regard to preferences for art styles used to illustrate books.

9. Studies should be conducted to develop a standardized instrument that could be used with children, kindergarten through sixth grade, to measure their understanding of art and aesthetic principles.

10. Longitudinal studies should be conducted to determine whether changes in children's understanding and preferences for styles of art are due to experiential or developmental factors.

11. A replication of this study conducted across grade level groupings could provide information used to ascertain how

children of different ages respond to the treatment variables and style study sessions described and employed in this study.

12. Verbal responses to art made by children in various curriculum/program settings (open classroom vs. traditional self-contained classrooms) should be studied to compare (a) the nature of verbal response (literal vs. abstract); (b) the number of stylistic, evaluative, and emotional responses; and (c) the number of total gain scores attained.

13. There is a need for a study measuring preferences and rejection for various styles of art of children and adults associated with various curriculum/program settings.

14. There is a need for a study which would compare children's verbal responses to art in picture books vs. their verbal responses to gallery art.

15. There is a need for a study which would measure the relationship between children's critical reading abilities and their aesthetic/evaluative verbal responses made about various styles of art.

16. There is a need for a study which would measure the relationship between children's ability to state their opinion and evaluation of styles of art in writing vs. stating their opinions and evaluations orally.

17. There is a need for a study which would measure the relationship between a teacher's preference for a style of art and a child's preference for a style of art.

18. There is a need for a study which would measure the relationship between a teacher's orally stated preferences and evaluations of styles of art and children's preferences and evaluations of styles of art.

19. There is a need for a study which would determine children's responses to the illustrations in books that contain their favorite stories with those used to illustrate picture books that contain stories they are not familiar with or dislike.

APPENDICES

APPENDIX A

INTERVIEW BOOKLETS I AND II

APPENDIX A

INTERVIEW BOOKLET I

PERSONAL INFORMATION

Child's Name_____ Birthdate_____

Age_____

School_____ Grade_____

Teacher _____

Sex M F Ethnic/Racial_____

Interview Number_____/10

Treatment Control 1 2 3

BOOK INFORMATION

Book A B C

Book Order 1 2 3

Picture Pair Order I II III

Pretest Posttest

Date_____

GENERAL QUESTION

What can you tell me about these pictures?

STYLE FEATURES

____ abstract
____ action
____ caricature
____ cartoon
____ color
    ____ true/real, distorted
    ____ name of specific color _____
____ distorted (faces, figures)
____ details (lack of, presence of, too many)
____ fantasy/pretend
____ funny (makes me laugh)
____ line (bold/heavy, thin)
    ____ (too many, not enough, presence of)
____ not real
____ perspective
    ____ lack of, presence of
    ____ true/distorted
____ real/true
____ scary
____ portrayal of subject of object
____ unreal
____ other

MEDIA/TECHNIQUE

____ application of paint
____ chalk, crayon, charcoal
____ collage
____ drawn
____ painted (oil, water)
____ pencil/pen
____ sketched
____ woodcut
____ other

CHARACTERIZATION

____ characters true to the story
____ characters not true to the story
____ characters pictured like I know them
____ characters not pictured like I know them
____ other

SPECIFIC QUESTIONS

Have you ever seen any of these pictures?	Y	N	IDK	NVR
1. Has anyone told you the name of the person who made these pictures?	Y	N	IDK	NVR
2. Do you know the name of the artist who made these pictures?	Y	N	IDK	NVR
3. What is the name?	+	-	IDK	NVR

_____

STYLE

4. Has anyone told you the name of the style of art in these pictures?	Y	N	IDK	NVR
5. Child asks: What does style mean?	Y	N		
6. What is the name of the style of art in these pictures?	+	-	IDK	NVR

_____

7. If there were a name for the style of art in these pictures, what would it be?	+	-	IDK	NVR

_____

8. Why did you give that style name?	IDK	NVR

STYLE FEATURES

____ abstract
____ action
____ caricature
____ cartoon
____ color
  ____ true/real, distorted
  ____ name of specific color _____
____ distorted (faces, figures)
____ details (lack of, presence of, too many)
____ fantasy/pretend
____ funny (makes me laugh)
____ line (bold/heavy, thin)
  ____ (too many, not enough, presence of)
____ not real

____ perspective
____ lack of, presence of
____ true/distorted
____ real/true
____ scary
____ portrayal of subject or object
____ unreal
____ other

MEDIA/TECHNIQUE

____ application of paint
____ chalk, crayon, charcoal
____ collage
____ drawn
____ painted (oil, water)
____ pencil/pen
____ sketched
____ woodcut
____ other

CHARACTERIZATION

____ characters true to the story
____ characters not true to the story
____ characters pictured like I know them
____ characters not pictured like I know them
____ other

9. How would you describe these pictures to someon who cannot see?

_____

_____

_____

10. Have you seen other books with pictures done in this way?	Y	N	IDK	NVR
11. What are the book titles or what are the stories about in these other books?			IDK	NVR
_____	+	-		
_____	+	-		
_____	+	-		
_____	+	-		
_____	+	-		

12. Have you seen other books with pictures made by this same artist? Y N IDK NVR

13. What are the book titles or what are the stories about in these other books? IDK NVR

_____ + -

_____ + -

_____ + -

_____ + -

_____ + -

QUESTIONS FOR THE PREFERENCE/REJECTION RESPONSES

1. Of all the pictures you have seen today, which set do you like best? 1 2 3 IDK NVR

2. Why? IDK NVR

STYLE FEATURES

____ abstract
____ action
____ caricature
____ cartoon
____ color
    ____ true/real, distorted
    ____ name of specific color _____
____ distorted (faces and figures)
____ details (lack of, presence of, too many)
____ fantasy/pretend
____ funny (makes me laugh)
____ line (bold/heavy, thin)
    ____ (too many, not enough, presence of)
____ not real
____ perspective
    ____ lack of, presence of
    ____ true/distorted
____ real/true
____ scary
____ portrayal of subject of object
____ unreal
____ other

MEDIA/TECHNIQUE

____ application of paint
____ chalk, crayon, charcoal
____ collage
____ drawn
____ painted (oil, water)
____ pencil/pen
____ sketched
____ woodcut
____ other

CHARACTERIZATION

____ characters true to the story
____ characters not true to the story
____ characters pictured like I know them
____ characters not pictured like I know them
____ other

3. Of all the pictures you have seen today, which set do you dislike? 1 2 3 IDK NVR

4. Why? IDK NVR

STYLE FEATURES

____ abstract
____ action
____ caricature
____ cartoon
____ color
    ____ true/real, distorted
    ____ name of specific color _____
____ distorted (faces, figures)
____ details (lack of, presence of, too many)
____ fantasy/pretend
____ funny (makes me laugh)
____ line (bold/heavy, thin)
    ____ (too many, not enough, presence of)
____ not real
____ perspective
    ____ lack of, presence of
    ____ true/distorted
____ real/true
____ scary
____ portrayal of subject or object
____ unreal
____ other

MEDIA/TECHNIQUE

____ application of paint
____ chalk, crayon, charcoal
____ collage
____ drawn
____ painted (oil, water)
____ pencil/pen
____ sketched
____ woodcut
____ other

CHARACTERIZATION

____ characters true to the story
____ characters not true to the story
____ characters pictured like I know them
____ characters not pictured like I know them
____ other

5. Are there any you like as much as another? What are they? 1 2 3 IDK NVR

6. Why? IDK NVR

STYLE FEATURES

____ abstract
____ action
____ caricature
____ cartoon
____ color
    ____ true/real, distorted
    ____ name of specific color _____
____ distorted (faces, figures)
____ details (lack of, presence of, too many)
____ fantasy/pretend
____ funny (makes me laugh)
____ line (bold/heavy, thin)
    ____ (too many, not enough, presence of)
____ not real
____ perspective
    ____ lack of, presence of
    ____ true/distorted
____ real/true
____ scary
____ portrayal of subject or object
____ unreal
____ other

MEDIA/TECHNIQUE

____ application of paint
____ chalk, crayon, charcoal
____ collage
____ drawn
____ painted (oil, water)
____ pencil/pen
____ sketched
____ woodcut
____ other

CHARACTERIZATION

____ characters true to the story
____ characters not true to the story
____ characters pictured like I know them
____ characters not pictured like I know them
____ other

7. If you were given money to buy any of the sets of pictures you have seen today and you knew you would have to spend the money on one of these sets, which one would you buy? 1 2 3 IDK NVR

8. Why? IDK NVR

STYLE FEATURES

____ abstract
____ action
____ caricature
____ cartoon
____ color
    ____ true/real, distorted
    ____ name of specific color _____
____ distorted (faces, figures)
____ details (lack of, presence of, too many)
____ funny (makes me laugh)
____ line (bold/heavy, thin)
    ____ (too many, not enough, presence of)
____ not real
____ perspective
    ____ lack of, presence of
    ____ true/distorted
____ real/true
____ scary
____ portrayal of subject or object
____ unreal
____ other

MEDIA/TECHNIQUE

____ application of paint
____ chalk, crayon, charcoal
____ collage
____ drawn
____ painted (oil, water)
____ pencil/pen
____ sketched
____ woodcut
____ other

CHARACTERIZATION

____ characters true to the story
____ characters not true to the story
____ characters pictured like I know them
____ characters not pictured like I know them
____ other

QUESTIONS FOR THE BACK-OF-THE-ROOM BOOKS

1. Did you read or look at any of the back-of-the-room books? Y N IDK NVR

2. If "yes," how many did you look at or read? _____ IDK NVR

3. Do you remember any of the books you read or looked at that were in the back of your classroom? Y N IDK NVR

4. If "yes," what are the titles or what are the stories about that you read or looked at? _____ IDK NVR

   _____ + -

   _____ + -

   _____ + -

   _____ + -

   _____ + -

5. Of the books you read or looked at that were in the back of the room, which did you like the best? _____ IDK NVR

   _____ + -

   _____ + -

   _____ + -

   _____ + -

   _____ + -

6. Why? IDK NVR

STYLE FEATURES

____ abstract
____ action
____ caricature
____ cartoon
____ color
  ____ true/real, distorted
  ____ name of specific color _____
____ distorted (faces, figures)

____ details (lack of, presence of, too many)
____ fantasy/pretend
____ funny (makes me laugh)
____ line (bold, heavy, thin)
    ____ (too many, not enough, presence of)
____ not real
____ perspective
    ____ lack of, presence of
    ____ true/distorted
____ real/true
____ scary

MEDIA TECHNIQUE

____ application of paint
____ chalk, crayon, charcoal
____ collage
____ drawn
____ painted (oil, water)
____ pencil/pen
____ sketched
____ woodcut
____ other

CHARACTERIZATION

____ characters true to the story
____ characters not true to the story
____ characters pictured like I know them
____ characters not pictured like I know them
____ other

INTERVIEW BOOKLET II

PERSONAL INFORMATION

Name _____ Birthdate _____

Age _____

School _____ Teacher _____

Sex F M E/R _____

Interview Number _____/10

Treatment Control

BOOK INFORMATION

Book and Order

I	II	III
A-1	B-1	C-1
B-2	C-2	A-2
C-3	A-3	B-3

Picture Pair Order

I	II	III
I-1	II-1	III-1
II-2	III-2	I-2
III-3	I-3	II-3

Additional Comments

Pre-test Post-test

Date _____

GENERAL QUESTION

Name _____ School _____ Book A B C Order 1 2 3

What can you tell me about how these pictures were made? IDK NVR

STYLE FEATURES

____ action (presence, lots, none)
____ other
____ cartoon, caricature
____ other
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true/real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective (lack of, presence)
____ true/distorted
____ foreground/background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of subject/object
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier/not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ painted (oil, water)
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty nice
____ boring
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ well done, good
____ took their time
____ hurried/fast
____ soppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ matches my bedroom (or other part of home)
____ my parents would let me have this
____ I can draw like that (or someone else can)
____ it looks expensive
___ other

SPECIFIC QUESTIONS

Name _____ Book A B C Order 1 2 3

Have you ever seen any of these pictures? Y N IDK NVR

1. Has anyone told you the name of the person who made these pictures? Y N IDK NVR
2. Do you know the name of the artist who made these pictures? Y N IDK NVR
3. What is the name? _____ + - IDK NVR

STYLE

4. Has anyone told you the name of the style of art in these pictures? Y N IDK NVR
5. Child asks: What does style mean? Y N
6. What is the name of the style of art in these pictures? _____ + - IDK NVR
7. If there were a name for the style of art in these pictures, what would it be? _____ + - IDK NVR
8. If you were to explain to me what this style was, what would you tell me about the _____ style of art? IDK NVR

STYLE FEATURES

____ action (presence, lots, none)
____ other
____ cartoon, caricature
____ other
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true/real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective (lack of, presence)
____ true/distorted
____ foreground/background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of subject/object
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier/not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ painted (oil, water)
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ boring
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ matches my bedroom (or other part of house)
____ my parents would let me have this
____ I can draw like that (or someone else can)
____ it looks expensive
____ other

SPECIFIC QUESTIONS--page 2

Name _____

9. How would you describe these pictures to me if I could not see? IDK NVR

(object, subject, color description)
(media, technique, style) #_____ color

_____
_____
_____
_____
_____
_____
_____
_____

10. Have you seen other books with pictures done in this way? Y N IDK NVR

11. What are the book titles or what are the stories about in these other books? IDK NVR

_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -

12. Have you seen other books with pictures made by this same artist Y N IDK NVR

13. What are the book titles or what are the stories about in these other books? IDK NVR

_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -
_____ + -

PREFERENCE/REJECTION QUESTIONS

Name _____

Book A B C Order 1 2 3

1. Of all the pictures you have seen today which set do you like best?

   A B C IDK NVR None

2. Why?

IDK NVR

STYLE FEATURES

____ action (presence, lots, none)
____ other
____ cartoon, caricature
____ other
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true/real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence)
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective
____ true/distorted
____ foreground/background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of subject/object
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier/not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ painted (oil, water)
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ boring
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ matches my bedroom (or other part of house)
____ my parents would let me have this
____ I can draw like that (or someone else can)
____ it looks expensive
____ other

Name _____ PREFERENCE/REJECTION QUESTIONS--page 2

3. Of all the pictures you have seen today, which set do you dislike?

A B C IDK NVR None

4. Why?

IDK NVR

STYLE FEATURES

____ action (presence, lots, none)
____ other
____ cartoon, caricature
____ other
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true/real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence)
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective (lack of, presence)
____ true/distorted
____ foreground/background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of subject/object
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARE _____ TO _____

____ better, prettier/not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ painted (oil, water)
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ boring
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ well done, good
____ took their time
____ hurried/fast
____ cloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ matches my bedroom (or other parts of the house)
____ my parents would let me have this
____ I can draw like that (or someone else can)
____ it looks expensive
____ other

Name _____ PREFERENCE/REJECTION QUESTIONS--page 3

5. Are there any you like as much as another? What are they?

A B C IDK NVR None

6. Why? IDK NVR

STYLE FEATURES

____.action (presence, lots, none)
____ other
____ cartoon, caricature
____ other
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true/real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective (lack of, presence)
____ true/distorted
____ foreground/background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of subject/object
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier/not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ painted (oil, water)
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ boring
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting,
____ complex
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ matches my bedroom (or other part of house)
____ my parents would let me have this
____ I can draw like that (or someone else can)
____ it looks expensive
____ other

Name _____ PREFERENCE/REJECTION QUESTIONS--page 4

7. If you were given money to buy any of the sets of pictures you have seen today and you knew you would have to spend the money on one of these sets, which one would you buy?

A B C IDK NVR None

8. Why? IDK NVR

STYLE FEATURES

____ action (presence, lots, none)
____ other
____ cartoon, caricature
____ other
____ color (colorful, not colorful, presence)
____ lights and darks, shading
____ true/real
____ distorted
____ specific _____
____ other
____ distortion (faces, figures, objects)
____ other
____ line (bold, heavy, thin)
____ too many, not enough, presence
____ smooth, wavy, jagged
____ other
____ outline (presence, heavy, thin, color)
____ other
____ perspective (lack of, presence)
____ true/distorted
____ foreground/background
____ closeup, far away
____ other
____ real/true depiction
____ other
____ not real in depiction
____ other

OBJECT/SUBJECT

____ description of subject/object
____ main character
____ clothing
____ face
____ body
____ scenery, furniture
____ other

COMPARED _____ TO _____

____ better, prettier/not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ painted (oil, water)
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ soft, gentle
____ moody, anxious
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ boring
____ dull, boring
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ matches my bedroom (or other part of house)
____ my parents would let me have this
____ I can draw like that (or someone else can)
____ it looks expensive
____ other

QUESTIONS FOR BACK-OF-THE-ROOM BOOKS

Name _____

1. Did you read or look at any of the books I brought into your classroom? Y N IDK NVR

2. If "yes," how many did you look at or read? _____ IDK NVR

3. Do you remember any of the books you read or looked at that I brought into your classroom? Y N IDK NVR

4. If "yes," what are the titles or what are the stories about that you read or looked at? Y N IDK NVR

_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-

5. Of the books you read or looked at that I brought into your classroom, which did you like the best? _____ IDK NVR

_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-
_____	+	-

Name _____ QUESTIONS FOR BACK-OF-THE-ROOM BOOKS--page 2

6. What was it about these books that you liked? IDK NVR

STYLE FEATURES

____ action (presence, lots, none)
  ____ other
____ cartoon, caricature
  ____ other
____ color (colorful, not colorful, presence)
  ____ lights and darks, shading
  ____ true/real
  ____ distorted
  ____ specific _____
  ____ other
____ distortion (faces, figures, objects)
  ____ other
____ line (bold, heavy, thin)
  ____ too many, not enough, presence
  ____ smooth, wavy, jagged
  ____ other
____ outline (presence, heavy, thin, color)
  ____ other
____ perspective (lack of, presence)
  ____ true/distorted
  ____ foreground, background
  ____ closeup, far away
  ____ other
____ real/true depiction
  ____ other
____ not real in depiction
  ____ other

OBJECT/SUBJECT

____ description of subject/object
  ____ main character
  ____ clothing
  ____ face
  ____ body
  ____ scenery, furniture
  ____ other

COMPARED _____ TO _____

____ better, prettier, not as good as
____ more/less colorful
____ more/less real
____ dull/interesting
____ different
____ interesting
____ other

MEDIA/TECHNIQUE

____ application of paint/pencil
____ chalk, crayon, charcoal
____ woodcut
____ drawn, sketched, scribbled
____ painted (oil, water)
____ pencil, pen, felt marker
____ other

EMOTIONS

____ feelings shown
____ happy/sad
____ moody, anxious
____ soft, gentle
____ scary
____ funny
____ other

ARTIST'S WORK

____ pretty, nice
____ boring, dull
____ not alive, not lively
____ plain, simple
____ interesting
____ complex
____ well done, good
____ took their time
____ hurried/fast
____ sloppy, careless
____ other

CHARACTERIZATION

____ true to the story
____ not true to the story
____ pictured like I know them
____ not pictured like I know them
____ other

OTHER REASONS

____ matches my bedroom (or other part of house)
____ my parents would let me have this
____ I can draw like that (or someone else can)
____ it looks expensive
____ other

APPENDIX B

PRE-TEST FAIRY TALE

APPENDIX B

PRE-TEST FAIRY TALE

Little Red Riding Hood[1]

Once upon a time there was a little girl who was dearly loved by all--most of all by her grandmother.

Wherever she went she always wore a little red cape with a hood her grandmother made for her. So people called her Little Red Riding Hood.

One morning her mother packed a basket and said, "Here are a piece of cake, a pat of butter, and a bottle of wine. Take them to your grandmother, Little Red Riding Hood. She is sick in bed and they will do her good. Keep right on the path. Don't play on the way. Don't talk to strangers. And when you see your grandmother, don't forget to say good day!"

Little Red Riding Hood promised. She took the basket, waved good-by to her mother, and started off along the path through the wood.

---

[1]Elizabeth Orton Jones, Little Red Riding Hood, Illustrated by Elizabeth Orton Jones (New York: Simon and Schuster, 1948).

She had not gone far before she met a wolf.

"Good morning, Little Red Riding Hood!" said the wolf politely. "Where are you going and what have you in your basket?"

"I'm going to see my grandmother," said Little Red Riding Hood. "I have a piece of cake, a pat of butter, and a bottle of wine for her."

"Well!" said the wolf. "And where does your grandmother live?"

"On the other side of the wood," said Little Red Riding Hood, pointing with her finger. "My grandmother is sick in bed."

"I'm sorry to hear that," said the wolf. "Why don't you pick some flowers for her?"

"I promised my mother I'd stay on the path," said Little Red Riding Hood.

"Then it's best to keep your promise," said the wily wolf. "But just look at all the flowers growing right beside the path!"

Little Red Riding Hood looked at the flowers.

"A pretty bunch of flowers would surely make your grandmother feel better. Don't you agree, Little Red Riding Hood?"

And away he went through the trees.

In no time at all Little Red Riding Hood was wandering about in the wood picking flowers here and there.

Meanwhile the wolf ran straight to Little Red Riding Hood's grandmother's house and knocked on her door.

"Who is there?" called Little Red Riding Hood's grandmother, from inside.

"It's Little Red Riding Hood," said the wolf, in a wee little voice. "I have a piece of cake, a pat of butter, and a bottle of wine for you!"

"Come in, my dear," called Little Red Riding Hood's grandmother. "Just pull the latchstring."

And without another word he sprang into Little Red Riding Hood's grandmother's room, and ate her up.

Then he put on her nightgown and cap, climbed into her bed, and pulled the covers up over his nose.

Soon Little Red Riding Hood came skipping along toward her grandmother's house.

"Good day, Grandmother!" she called.

She went in, and stepped close to her grandmother's bed.

"Oh, Grandmother!" she cried, for her grandmother looked very strange. "What big ears you have!"

"The better to hear you with, my dear," said the wolf, rolling his eyes.

"Oh Grandmother! What big eyes you have!" cried Little Red Riding Hood.

"The better to see you with, my dear," said the wolf, snapping his jaws.

"Oh Grandmother!" cried Little Red Riding Hood. "What big teeth you have!"

"The better to EAT you with!" said the wolf. And he sprang from the bed and ate Little Red Riding Hood up.

A passing woodsman stepped into the house to see how Little Red Riding Hood's Grandmother was feeling. And when he saw the wolf, he said, "Ah ha! I've found you at last, you wicked old rascal!" He lifted his ax, and with one blow, killed him. Then he cut the wolf open and out stepped Little Red Riding Hood and her Grandmother.

They thanked the woodsman for what he had done. Then all three sat down and ate the cake and the butter, and drank of the wine which Little Red Riding Hood had brought.

APPENDIX C

POST-TEST FAIRY TALE

APPENDIX C

POST-TEST FAIRY TALE

Rumpelstiltskin[1]

In a certain kingdom, there once lived a poor miller who had a very beautiful daughter. She was shrewd and clever, and the miller was so vain and proud of her that he told the king of the land that his daughter could spin gold from straw.

Now, this king was very fond of money, and when he heard the miller's boast, he ordered the girl to be brought before him. Then he led her to a room filled with straw, gave her a spinning wheel, and said, "All this must be spun into gold before morning, or you will forfeit your life." In vain the poor maiden declared that she could do no such thing, but the king would not listen. The door was locked behind her, and she was left to think what she would do.

She sat down and began to weep over her hard fate. Suddenly the door opened, and a droll little man hobbled in.

"Good day to you, my lass. Why are you weeping?" he asked her.

"Alas!" she answered. "I must spin this straw into gold, and I do not know how."

---

[1]"Rumpelstiltskin," in Famous Fairy Tales, Illustrated by Les Gray (Racine: A Whitman Book/Western Publishing Company, Inc., 1971), pp. 206-210.

"What will you give me," asked the little man, "to do it for you?"

"My necklace," replied the maiden.

The little man took her at her word and set himself down to the wheel. Round and round it went, merrily, merrily, and presently all the straw was spun into gold.

When the king came and saw the gold, he was greatly pleased, but his heart grew still more greedy, and he again shut the miller's daughter in a room, this time with a large pile of straw. She did not know what to do, so she sat down and began to weep again.

Presently the same little man opened the door and said, "What will you give me to do your task?"

"The ring on my finger," the maiden replied.

So her little friend took the ring and began to work at the wheel. By morning all the straw was spun into gold.

The king was delighted to see all this glittering treasure, but still he was not satisfied. He took the miller's daughter into a still larger room filled with straw and said, "If all this is spun into gold before morning, you shall be my queen."

As soon as the girl was alone, the dwarf came in.

"What will you give me to spin the straw into gold for you this third time?"

"I have nothing left to give you," the maiden said sadly.

"Then promise me," said the little man, "you will give me your first child when you are queen."

"That may never be," thought the miller's daughter. And, as she knew no other way to get her task done, she promised the little man what he asked. Immediately he began to spin.

When the king came in the next morning and found all the room filled with gold, he kept his promise and married the miller's daughter, and they lived together happily enough.

With the birth of her first child, the queen was filled with joy and forgot all about the little man and her promise. One day when he came to her chamber and reminded her of it. She was grieved at the thought of giving up her child and offered him all the treasures of her kingdom instead, but she pleaded in vain. The little man did not want treasure.

At last her tears softened him, and he said, "I will give you three days grace. If during that time you can tell me my name, you shall keep your child."

The queen lay awake all night, thinking of all the names that she had ever heard. In the morning, she dispatched messengers all over the land to inquire about new ones. The next day, when the little man came, she began with Throckmorton, Florizel, Peramund, and all the other unusual names she could remember. But to all of them he said, "That's not my name."

The second day she began with all the comical names she had heard of--Bandy-legs, Pegeon-toes, and the like--but to every one of them, the dwarf still said, "That's not my name."

The third day one of the messengers came back to report, "I heard of no other name. But yesterday, as I was climbing a high hill, among the trees of the forest where the fox and the hare bid each other good night, I saw a little hut, and before the hut burned a fire, and around the fire a funny little man danced on one leg and said,

"Today I brew, and then I'll bake
Tomorrow the queen's child I'll take;
The queen will never win this game,
For Rumpelstiltskin is my name."

When the queen heard this, she jumped for joy.

Soon her little visitor came and said, "Now, Lady, what is my name?"

"Is it John?" she asked.

"No!"

"Is it Tom?"

"No!"

"Can you name be Rumpelstiltskin?"

"The witches told you! The witches told you!" shrieked the little man, and, in a rage, he stamped his right foot so hard into the floor that he was forced to take hold of it with both hands to pull it out. Off he rushed, and he has never been seen again, from that day to this.

APPENDIX D

CHILD-ILLUSTRATED FAIRY TALES

APPENDIX D

CHILD-ILLUSTRATED FAIRY TALES

The Frog King, or Iron Henry[1]

In the old days, when wishing still helped, there lived a king and all his daughters were beautiful, but the youngest was so beautiful that even the sun, which has seen so much, marveled everytime it shone into her face. Near the king's castle lay a great, dark forest and in the forest, under an old linden tree, there stood a well. Now on the days when it was very hot the princess would go out into the forest and sit at the edge of the cool well and if time hung heavy on her hands she took a golden ball, threw it in the air, and caught it, and it was her favorite plaything.

It happened once that the princess's golden ball did not fall into her outstretched hand but slipped past, struck the ground, made straight for the water, and rolled in. The princess followed it with her eyes but the ball disappeared, and the well was deep, so deep that you couldn't see the bottom, and she began to cry and kept crying louder and could not stop. And as she sat wailing, someone called,

---

[1]Lore Segal and Maurice Sendak, "The Frog King, or Iron Henry," in The Juniper Tree and Other Tales from Grimm, trans. Lore Segal and Randall Jarrel, illustrated by Maurice Sendak (New York: Farrar, Straus and Giroux, 1973), pp. 169-177.

"What's the matter, Princess? The way you howl would melt the heart of a stone!" The princess looked around to see who it could be and saw a frog sticking his thick, ugly head out of the water. "Oh, it's you, you old puddle-splasher," said she. "I'm crying because my golden ball has fallen into the well." "Well, don't cry any more," answered the frog, "I can help you. What will you give me if I bring back your toy?" "Anything you want, dear frog," said she, "my dresses, my pearls and all my jewels, and the gold crown on my head as well." "I don't care anything about your dresses, your pearls and jewels, or your golden crown, but if you will promise to love me best and play with me, and let me be your dearest friend, and sit beside you at the table, eat off your golden plate, drink from your cup, and sleep in your bed with you, I will climb down and bring back your golden ball." "Yes, yes, I promise everything, only bring me my ball," said she thinking, The silly frog! What nonsense he does talk; he sits here in the water with his own kind and croaks, and can never be friends with real people.

When the frog had obtained her promise, he put his head in the water, sank down, and after a little while came paddling back up with the ball in his mouth and threw it on the grass. The princess was overjoyed to see her pretty toy, picked it up, and ran away. "Wait for me, wait for me," cried the frog. "Take me with you, I can't run so fast," but what was the good of his croaking after her as loud as he could? She would not hear him but hurried home and soon forgot the poor frog, who had to climb back into his well.

The next day, as she was sitting at the table with the king and all the court, and was eating from her golden plate, there came something crawling, splash, splash, up the marble stair. When it arrived at the top, it knocked and cried, "Princess, youngest princess, open the door." She ran to see who it was, but when she opened the door, there sat the frog. She quickly slammed the door, came back, and sat down, but she was in great fright. The king could see how her heart was beating, and said, "Why are you afraid, my child? Is there a giant at the door maybe, come to carry you away?" "Oh, no, she answered, "it's not a giant, only a nasty frog." "What does the frog want with you?" "Ah, dear Father, in the forest yesterday I was sitting by the well, playing, and my golden ball fell in the water. And because I was crying so hard, the frog went and fetched it up for me, and made me promise that he could be my best friend, but I never, never thought he'd get out of his water, and now he's here and wants to come inside with me." At that moment there was more knocking and a voice cried:

> Princess, youngest princess, open the door, don't you know what you said to me yesterday by the cool well-water? Princess, youngest princess, open the door.

Then the king said, "If you made a promise, you must keep it. Go, open the door for him." The princess went and opened the door and the frog hopped in, following her every footstep right up to her chair, and sat there and cried, "Lift me up where you are." She hesitated until finally the king commanded it. When the frog was on her chair, he wanted to be up on the table, and when he sat on the table he said,

"Now push your golden plate nearer, so we can eat together." She did, but one could tell she did not like it. The frog ate heartily, but as for her, every bite stuck in her throat. Finally, he said, "I have eaten till I am full, and now I'm tired. Carry me to your room and make up your silken bed so we can lie down and go to sleep." The princess began to cry. She was afraid of the cold frog, whom she could not bear to touch and who wanted to sleep in her nice clean bed. But the king got angry and said, "If someone helps you in your need, you must not look down on him afterwards." And so she took hold of the frog with two fingers, carried him upstairs, and set him in a corner, but when she was lying in bed he came crawling and said, "I'm tired too and want to sleep comfortable just like you. Lift me up, or I'll tell your father." Now this gets her really angry! She picked him up and she threw him against the wall as hard as she could: "Now will you be satisfied, you nasty frog!"

As he fell to the ground, however, he was no longer a frog but a prince with kind and beautiful eyes who, by her father's wishes, now became her friend and husband. And he told her how a wicked witch had put a spell on him and how nobody had been able to set him free from the well but she alone, and tomorrow they would go to his kingdom together. Then they went to sleep and next morning, when the sun woke them, a coach came driving up with eight white horses that had white ostrich feathers on their heads, all harnessed in golden chains, and in the back stood the young king's servant and it was his faithful Henry. Faithful Henry had been so grieved when his master was changed

into a frog that he had three iron bands laid around his heart to keep it from bursting with pain and sorrow. And the coach had come to fetch the young king home to his kingdom. Faithful Henry set them both inside and went and stood in the back and was overjoyed that his master had been freed. And when they had gone a little way, the prince heard a crackling behind him as if something had broken in two. He turned and cried:

> "Henry, the carriage breaks apart." "No, sire, it's not the carriage breaking, it's the iron band around my heart--my heart that lay so sorely aching while you were a frog, while you sat in the well."

Again, and once again, as they drove along, came the crackling sound, and each time the prince thought the coach was breaking apart but it was only another band bursting from around the heart of his faithful Henry because his master was free and happy.

Bearskin[2]

Once upon a time there was a young fellow who enlisted in the army, carried himself bravely, and was always out in front where it rained bullets. As long as there was a war on, everything went well, but when they made peace he was discharged and the captain said he could go where he pleased. His parents had died, and he had no place to call home, so he went to his brothers and asked them to take care of him until a new war started. But the brothers were hardhearted men and said, "What are we to do with you! You are no good to us. Go make your own way as best you can." The soldier had nothing except his gun, which he took on his shoulder, and so he went out into the world. He came to a great hearth on which there was nothing except a circle of trees. He sat down sadly and mused about his fate. I have no money, he thought, I have learned no trade except how to make war, and now they have made peace and don't need me any more. I can see that I must starve to death. All of a sudden he heard a great bustling and rushing, and when he looked around, there stood a stranger in a green coat, a fine-looking man but with a nasty horse's hoof. "I know what troubles you," the man said. "You shall have such an abundance of the world's goods that however hard you try, you'll never use it up, but first I have to make sure that you are not afraid.

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[2]Lore Segal and Maurice Sendak, "Bearskin," in The Juniper Tree and Other Tales from Grimm, trans. Lore Segal and Randall Jarrell, illustrated by Maurice Sendak (New York: Farrar, Straus and Giroux, 1973), pp. 217-227.

I don't want to waste my money." "A soldier and fear, they don't go together!" he answered. "Put me to the test." "Very well, then," said the man, "look behind you." The soldier turned around and saw a big bear trotting toward him and growling. "Oho," cried the soldier, "I'm going to tickle your nose for you so you won't feel like growling any more," took aim, and shot the bear in the muzzle so that it fell in a heap and never stirred again. "I can see," said the stranger, "you don't lack courage, but there is one other condition you must fulfill." "So long as it does not threaten my eternal soul," answered the soldier, who knew very well who it was standing before him, "I'm ready for anything." "Judge for yourself," answered Greencoat. "For the next seven years, you may neither wash yourself nor comb your beard or hair nor cut your nails nor pray the Our Father. And I will give you a jacket and an overcoat which you must wear all the time. If you die within the seven years you're mine, if you stay alive you are free and rich for the rest of your days." The soldier thought of his great need and how often he had faced death in the past, and was ready to dare it again, and so he agreed. The devil took off his green jacket and gave it to the soldier and said, "When you wear this coat and reach into your pocket, you will always find your hand full of money." Then he skinned the pelt off the bear and said, "This shall be your overcoat and your bed, and because you must sleep in it, nor may you lie down on any other bed. And because of this costume you shall be called Bearskin." With that the devil disappeared.

The soldier put the coat on, reached into the pocket and found the devil as good as his word. Then he hung the bearskin around his shoulders and went out into the world, was in good spirits, and left nothing undone that was good for him and bad for his money. In the first year things were still bearable. By the second year he began to look like a monster. His hair almost covered his face, his beard looked like a piece of coarse cloth, his fingers had grown claws, and his face was so dirty, if you had sowed cress on it, it would have sprouted. People ran away when they saw him, but he always gave money to the poor so they would pray for him not to die within the seven years. Because he paid well he always found a roof for his head wherever he went.

Now in the fourth year he came to an inn and the innkeeper refused to take him and would not even give him a place in the stable because he was afraid he might frighten the horses, but when Bearskin reached into his pocket and brought out a handful of ducats the innkeeper's heart softened. He let him have a room in the back, but he had to promise not to let anybody see him so as not to give the house a bad name.

In the evening Bearskin was sitting alone, wishing with all his heart that the seven years were past, when he heard loud wailing in the next room. He had a kind heart and opened the door and saw an old man crying with all his might, beating his hands together over his head. Bearskin came closer. The man jumped up and would have fled, but when he heard a human voice he let himself be calmed. Bearskin

urged him so kindly, he even got him to disclose the cause of his misery. His fortune had dwindled a little at a time until he and his daughters were starving and so poor was he that he could not even pay the innkeeper, who threatened to put him in jail. "If that's all that troubles you," said Bearskin, "I have plenty of money." He called the innkeeper, paid him off, and even put a purse of gold into the wretched man's pocket.

When the old man saw himself relieved of his worries he did not know how to show his gratitude. "Come with me," said he. "My daughters are marvels of beauty, choose one of them for your wife. When she hears what you have done for me, she will not refuse. You do look a little strange but she'll soon put you to rights." Bearskin liked the idea very well and went with him. When the oldest daughter caught sight of his face, it gave her such a fright she ran away screaming. The second one stayed and looked him over from head to foot but she said, "How can I take a husband who doesn't look human? I prefer the shaved bear who was on show here once, and pretended to be a man. At least he wore a fur coat like a hussar and had white gloves. If this one were merely ugly, I could get used to it." But the youngest said, "Dear Father, he must be a good man, who helped you in your need. If, in return, you promised him a bride, your word must be kept." It was a pity that Bearskin's face was covered with dirt and hair or one might have seen how his heart leaped for joy. He took a ring from his finger, broke it in two, gave her one-half and kept the other himself. In her half he wrote his name and in his half he wrote

her name and asked her to keep her piece safe. Then he took his leave and said, "I have to travel another three years. If I come back we will celebrate our wedding, but if I don't return, you are free, because that means I am dead. But pray God to keep me alive."

The poor bride dressed herself all in black, and whenever she thought about her bridegroom, tears came into her eyes. From her sisters she had nothing but mockery and gibes. "Take care," said the eldest, "when you give him your hand, he will slap it with his paw." "Look out," said the second, "bears love sweets, and if he likes you he will gobble you up." You must do everything he wants," the oldest started in again, "or he'll begin to growl," and the second one added, "But the wedding will be fun. Bears are good dancers." The bride said nothing and would not let them change her heart. But Bearskin roamed through the world from one place to another, did good deeds whenever he could, and gave generously to the poor so they would pray for him. Finally, when the last day of the seven years had dawned, he went back onto the hearth and sat down under the circle of trees. Soon there was a great rustling and rushing, and the devil stood before him and looked at him crossly, threw him his old jacket, and asked for his green one back. "Not so fast," answered Bearskin, "first you have to clean me up." Willy-nilly, the devil had to fetch water and wash Bearskin and comb his hair and cut his nails, and soon he looked like a brave warrior again and much handsomer than before.

When, happily, the devil had taken himself off, Bearskin felt gay at heart. He went into town, put on a splendid velvet coat, got

into a carriage drawn by four white horses, and drove to the house of his bride. Nobody knew him. The father took him for a high-ranking officers, brought him into the room where his daughters were sitting and made him sit between the two eldest; they poured him wine, helped him to the choicest morsels, and thought they had never seen such a handsome man. But the bride sat across from him in her black dress, did not raise her eyes, and never said a word. Finally when he asked the father to give him one of his daughters for a wife, the two eldest jumped up and ran into their room to put on their most splendid gowns because each imagined she was the chosen one. When the stranger was alone with his bride, he took out his half of the ring, dropped it into a beaker of wine, and handed it across the table to her. She accepted, and when she had drunk it and found the half ring at the bottom, her heart began to beat. She took out the other half, which she wore on a ribbon around her neck, held the two pieces together and they matched perfectly, and he said, "I am your promised bridegroom whom you saw as Bearskin, but by God's grace I have my human form form and am clean again." He came to her, embraced her, and gave her a kiss. At that moment the two sisters returned all dressed up, and when they saw that the handsome man belonged to thier youngest sister and heard that it was Bearskin, they ran out of the room full of rage and fury.

The Poor Miller's Boy and the Little Cat[3]

In a mill lived an old miller who had neither wife nor children, and three young fellows worked for him. One day when they had been with him for some years, he said, "I am getting old; I want to sit behind the oven and take my ease. Go out into the world, and whichever one brings home the best horse shall have the mill and in return he must take care of me until I die." Now the third young boy was only an apprentice. The two others took him for a simpleton and begrudged him the mill, though as it turned out in the end he didn't even want it. So the three of them set out, and as they were leaving the village, the two said to simple John, "You might just as well stay here, you'll never get a horse as long as you live." But John went along anyway and at nightfall they came to a cave and went in and lay down to sleep. The two smart ones waited till John had fallen asleep, then they got up and made off and left Johnny lying there and thought they had done something very clever; oh, but it won't do you a bit of good! When the sun came up, John woke and there he lay deep in a cave. He peered all around and cried, "Dear God! Where am I!" and he rose and scrambled out of the cave and went into the forest and thought, Here I am, alone and forsaken. How shall I ever get a horse! And as he was walking along deep in thought he met a little speckled cat that spoke kindly

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[3]Lore Segal and Maurice Sendak, "The Poor Miller's Boy and the Little Cat," in The Juniper Tree and Other Tales from Grimm, trans. Lore Segal and Randall Jarrell, Illustrated by Maurice Sendak (New York: Farrar, Straus and Giroux, 1973), pp. 178-186.

to him and said, "Where are you off to, John?" "Oh, it's nothing you can help me with." "I know very well what it is you want," said the little cat. "You want a pretty horse. Come with me and be my faithful servant for seven years and I will give you one more handsome than anything you've seen in your whole life." What a strange cat, thought John, but I might as well go along and see if she is telling the truth. And so she took him with her to her bewitched little palace where she had nothing but cats to wait on her. They leaped nimbly up and down the stairs, happy and full of fun. In the evening, when they sat down to supper, there were three who made music; one played the double bass, another the violin, and the third put the trumpet to her mouth and blew up her cheeks for all she was worth. When they had eaten, the table was removed and the cat said, "Come, John, dance with me." "No," said he, "I don't dance with pussycats. That's something I have never done." "Then take him up to bed," she said to the little cats. So then one lighted him to his bedroom, one took off his shoes, one his stockings, and finally one blew out his candle. The next morning they came back and helped him out of bed; one put on his stockings, one tied his garters, one fetched his shoes, one washed him, and one dried his face with her tail. "That feels nice and soft," said John. John himself had to wait on the cat. Every day he had to chop firewood and had a silver ax to do it with, and the wedges and the saw were all made of silver and the mallet was of copper. Well, and so he chopped and chopped and stayed in that house, had plenty of food and drink but never saw a soul except the speckled cat and her household. One day

she said, "Go and mow the meadow and dry the hay," and she gave him a silver scythe and a golden whetstone and told him to be sure to bring everything back, and so John went and did as he was told and when he was finished he brought the scythe, whetstone, and hay back home and said wasn't she going to give him his earnings. "No," said the cat, "first you must do one more thing. Here is silver lumber, and the carpenter's ax, the square, and everything you need all made of silver. Build me a little house with it." Well, and so John built the little house and when it was finished he said now he had done everything and still didn't have a horse. And yet the seven years had passed as if they were six months. The cat asked him if he wouldn't like to see her horses. "Yes," said John, so she opened the little house and as she is opening up the door there are these twelve horses standing there and oh, weren't they proud-looking, and didn't they shine and gleam like mirrors, it made his heart leap for joy. So then she gave him food and drink and said, "Go home. I won't give you your horse to take with you. In three days I will come and bring it after you." So then John got ready to leave and she showed him the way to the mill. But she hadn't even given him a new suit of clothes and he had to wear the old ragged smock he came in that had grown too short and tight for him in those seven years. Now when he got home, the two others were back as well, and though they had each brought a horse, the horse of one was blind and the other's horse was lame. They asked, "John, where's your horse?" "It's being sent after me in three days." They laughed and said, "Yes, John. Sure, John! Where would you get a horse? This is going to be

something!" John came inside but the miller said they couldn't have him sitting at the table, he was so torn and ragged one would be ashamed if somebody dropped in, so they gave him a little bit of food to take outside; and in the evening, when they lay down to sleep, the two others would not let him in the bed, and he had to crawl into the goose pen and lie down on a little hard straw. And in the morning he wakes up and the three days have already passed and here comes a carriage drawn by six horses; my, it was a pleasure to see how they gleamed, and there's this servant and he's brought yet a seventh horse, which is for the poor miller's apprentice. But out of the carriage there stepped this magnificent princess and she came into the mill and the princess was the little speckled cat that poor John had served for seven years. She asked the miller where's the boy, the miller's apprentice? So then the miller says, "We couldn't have him in the mill he's so ragged, he's lying outside in the goose pen." So then the princess said they should go get him at once. Well, so they went and got him out and he had to hold his little smock together to cover himself. And the servant unpacked magnificent clothes and washed him and dressed him, and when he was ready no king could have been more handsome. After that the lady asked to see the horses which the others had brought and one horse was blind and the other lame. So then she had the servant bring the seventh horse. When the miller saw it, he said that nothing like it had ever entered his yard. "Well, this is for the apprentice," said she. "Then he shall have the mill," said the miller, but the princess

said he could have the horse and he could keep his mill and takes her faithful John and puts him in the carriage and drives off with him. And they drive to the little house he built with the silver tools and it is a great palace and everything in it is silver and gold and she marries him and he is rich--so rich he had plenty of everything as long as he lived. And that is why nobody should say that a simple person can never amount to anything.

APPENDIX E

TABLES FOR HYPOTHESIS 1

Total Verbal Expression Content Pre-Test, Post Test, and Gain Scores for Individual Treatment and Control Group Children When Discussing Three Styles of Art

Table 77. Total Verbal Expression Content Scores for the Treatment Group Listing the Pre-Test, Post-Test and Gain Scores

Student/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex M/F
1A	24	32	-8	M
2A	26	29	-3	M
3A	37	12	25	M
4A	18	16	2	M
5A	39	24	15	M
6A	41	18	23	M
7A	34	20	14	F
8A	43	15	28	F
9A	37	26	11	F
10A	40	16	24	F
11C	31	13	18	M
12C	29	22	7	M
13C	32	30	2	M
14C	32	23	9	M
15C	26	26	0	F
16C	17	21	-4	F
17C	24	20	4	F
18C	23	30	-7	F
19C	24	10	14	F
20E	31	29	2	M
21E	32	22	10	M
22E	40	32	8	M
23E	45	40	5	M
24E	42	24	18	F
25E	20	22	-2	F
26E	26	28	-2	F
27E	20	16	4	F
28E	37	43	-6	F
29E	22	31	-9	F
Total	892	690	202	
Average	30.759	23.793	6.966	
N = 29 children		14 Boys	15 Girls	

Table 78. Total Verbal Expression Content Scores for the Control Group Listing the Pre-Test, Post-Test and Gain Scores

Student/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex M/F
1B	24	40	-16	M
2B	28	50	-22	M
3B	28	29	-1	M
4B	15	21	-6	M
5B	16	16	0	M
6B	11	11	0	F
7B	25	27	-2	F
8B	43	35	8	F
9B	8	17	-9	F
10B	17	19	-2	F
11D	13	21	-8	M
12D	18	21	-3	M
13D	24	32	-8	M
14D	31	38	-7	M
15D	11	9	2	M
16D	25	27	-2	F
17D	21	18	3	F
18D	8	14	-6	F
19D	23	20	3	F
20F	15	18	-3	F
21F	39	38	1	M
22F	18	26	-8	M
23F	30	23	7	M
24F	32	38	-6	M
25F	30	33	-3	F
26F	20	31	-11	F
27F	26	32	-6	F
28F	15	35	-20	F
29F	8	16	-8	F
Total	622	755	-133	
Average	21.448	26.034	-4.568	
N = 29 children		14 Boys	15 Girls	

Table 79. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Total Verbal Expression Content Scores Used When Discussing Representational Style of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	5	7	-2	M	1B	6	6	0	M
2A	4	8	-4	M	2B	4	10	-6	M
3A	9	1	8	M	3B	3	7	-4	M
4A	2	3	-1	M	4B	0	3	-3	M
5A	9	3	6	M	5B	3	2	1	M
6A	9	2	7	M	6B	1	2	-1	F
7A	9	4	5	F	7B	5	2	3	F
8A	6	2	4	F	8B	5	12	-7	F
9A	9	5	4	F	9B	1	3	-2	F
10A	8	2	6	F	10B	3	4	-1	F
11C	5	2	3	M	11D	8	9	-1	M
12C	4	2	2	M	12D	3	3	0	M
13C	9	5	4	M	13D	5	5	0	M
14C	9	5	4	M	14D	4	9	-5	M
15C	5	6	-1	F	15D	5	6	-1	F
16C	3	1	2	F	16D	3	5	-2	F
17C	4	4	0	F	17D	5	6	-1	F
18C	2	5	-3	F	18D	5	8	-3	F
19C	3	2	1	F	19D	2	4	-2	F
20E	6	3	3	M	20F	2	1	1	M
21E	7	4	3	M	21F	9	5	4	M
22E	6	3	3	M	22F	0	1	-1	M
23E	9	7	2	M	23F	4	5	-1	M
24E	9	6	3	F	24F	4	7	-3	M
25E	7	8	-1	F	25F	5	6	-1	F
26E	7	9	-2	F	26F	1	2	-1	F
27E	3	3	0	F	27F	8	5	3	F
28E	10	10	0	F	28F	1	2	-1	F
29E	6	7	-1	F	29F	5	6	-1	F
Total	184	129	53		Total	110	146	-36	
Mean	6.345	4.448	1.828		Mean	3.793	5.034	-1.241	

Table 80. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Total Verbal Expression Content Scores Used When Discussing Expressionistic Style of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	5	8	-3	M	1B	6	10	-4	M
2A	6	6	0	M	2B	7	16	-9	M
3A	9	3	6	M	3B	3	6	-3	M
4A	3	5	-2	M	4B	0	4	-4	M
5A	8	10	-2	M	5B	2	2	0	M
6A	9	1	8	M	6B	2	1	1	F
7A	7	3	4	F	7B	6	5	1	F
8A	13	3	10	F	8B	11	7	4	F
9A	11	7	4	F	9B	1	1	0	F
10A	6	1	5	F	10B	3	3	0	F
11C	7	2	5	M	11D	10	11	-1	M
12C	4	1	3	M	12D	3	5	-2	M
13C	7	5	2	M	13D	8	5	3	M
14C	7	5	2	M	14D	3	3	0	M
15C	7	5	2	F	15D	7	4	3	F
16C	4	6	-2	F	16D	7	2	5	F
17C	7	3	4	F	17D	4	5	-1	F
18C	4	7	-3	F	18D	5	5	0	F
19C	5	3	2	F	19D	4	4	0	F
20E	6	3	3	M	20F	2	3	-1	M
21E	7	4	3	M	21F	2	1	1	M
22E	6	13	-7	M	22F	2	1	1	M
23E	9	3	6	M	23F	5	6	-1	M
24E	9	3	6	F	24F	10	8	2	M
25E	7	3	4	F	25F	5	6	-1	F
26E	7	3	4	F	26F	1	3	-2	F
27E	3	3	0	F	27F	4	3	1	F
28E	10	5	5	F	28F	1	3	-2	F
29E	6	5	1	F	29F	6	5	1	F
Total	199	129	70		Total	130	138	-8	
Mean	6.862	4.448	2.414		Mean	4.483	4.758	-.276	

Table 81. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Total Verbal Expression Content Scores Used When Discussing Cartoon Style of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	5	4	1	M	1B	6	7	-1	M
2A	5	3	2	M	2B	7	12	-5	M
3A	9	2	7	M	3B	8	5	3	M
4A	3	2	1	M	4B	3	2	1	M
5A	11	4	7	M	5B	6	4	2	M
6A	10	5	5	M	6B	2	0	2	F
7A	6	3	3	F	7B	7	9	-2	F
8A	11	2	9	F	8B	11	11	0	F
9A	5	5	0	F	9B	1	1	0	F
10A	7	2	5	F	10B	2	2	0	F
11C	6	0	6	M	11D	10	2	8	M
12C	9	3	6	M	12D	2	11	-9	M
13C	7	5	2	M	13D	5	6	-1	M
14C	7	2	5	M	14D	9	2	7	M
15C	4	5	-1	F	15D	6	6	0	F
16C	4	4	0	F	16D	1	7	-6	F
17C	4	2	2	F	17D	6	8	-2	F
18C	8	6	2	F	18D	4	10	-6	F
19C	4	1	3	F	19D	2	2	0	F
20E	8	3	5	M	20F	1	4	-3	M
21E	4	0	4	M	21F	1	4	-3	M
22E	7	0	7	M	22F	6	7	-1	M
23E	13	5	8	M	23F	6	12	-6	M
24E	8	4	4	F	24F	1	1	0	M
25E	2	3	-1	F	25F	7	5	2	F
26E	4	4	0	F	26F	4	4	0	F
27E	3	2	1	F	27F	1	2	-1	F
28E	9	6	3	F	28F	7	4	3	F
29E	5	8	-3	F	29F	1	2	-1	F
Total	188	95	93		Total	133	152	-19	
Mean	6.483	3.275	3.207		Mean	4.586	5.241	-.655	

Table 82. Treatment and Control Group Pre-Test, Post-Test, and Gain Scores for Total Verbal Expression Content Scores Used When Discussing Preferences for Three Styles of Art (Like, Like-as-Much, Buy)

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	6	9	-3	M	1B	6	13	-7	M
2A	8	9	-1	M	2B	8	10	-2	M
3A	7	4	3	M	3B	10	9	1	M
4A	7	4	3	M	4B	8	8	0	M
5A	7	6	1	M	5B	3	6	-3	M
6A	10	7	3	M	6B	5	6	-1	F
7A	8	8	0	F	7B	4	7	-3	F
8A	9	5	4	F	8B	9	4	5	F
9A	9	6	3	F	9B	3	9	-6	F
10A	12	11	1	F	10B	6	7	-1	F
11C	10	6	4	M	11D	6	11	-5	M
12C	9	9	0	M	12D	7	5	2	M
13C	9	15	-6	M	13D	8	7	1	M
14C	6	8	-2	M	14D	14	11	3	M
15C	7	7	0	F	15D	9	11	-2	F
16C	4	8	-4	F	16D	7	12	-5	F
17C	8	10	-2	F	17D	14	10	4	F
18C	8	11	-3	F	18D	5	12	-7	F
19C	8	3	5	F	19D	0	6	-6	F
20E	5	17	-12	M	20F	8	8	0	M
21E	12	9	3	M	21F	6	7	-1	M
22E	15	13	2	M	22F	5	5	0	M
23E	6	9	-3	M	23F	6	8	-2	M
24E	11	8	3	F	24F	8	9	-1	M
25E	7	7	0	F	25F	6	7	-1	F
26E	12	12	0	F	26F	8	11	-3	F
27E	6	7	-1	F	27F	3	4	-1	F
28E	8	17	-9	F	28F	5	7	-2	F
29E	4	8	-4	F	29F	5	5	0	F
Total	238	253	-15		Total	192	235	-43	
Mean	8.207	8.72	-.517		Mean	6.621	8.103	-1.483	

Table 83. Treatment and Control Group Pre-Test, Post-Test, and Gain Scores for Total Verbal Expression Content Scores Used When Discussing Dislikes for Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	3	4	-1	M	1B	6	4	2	M
2A	3	3	0	M	2B	2	2	0	M
3A	3	2	1	M	3B	4	2	2	M
4A	3	2	1	M	4B	4	4	0	M
5A	4	1	3	M	5B	2	2	0	M
6A	3	3	0	M	6B	1	2	-1	F
7A	4	2	2	F	7B	3	4	-1	F
8A	4	3	1	F	8B	7	1	6	F
9A	3	3	0	F	9B	2	3	-1	F
10A	5	0	5	F	10B	3	3	0	F
11C	3	3	0	M	11D	6	5	1	M
12C	3	7	-4	M	12D	7	2	5	M
13C	0	0	0	M	13D	8	0	8	M
14C	3	3	0	M	14D	14	3	11	M
15C	3	3	0	F	15D	9	6	3	F
16C	2	2	0	F	16D	7	5	2	F
17C	1	1	0	F	17D	14	3	11	F
18C	1	1	0	F	18D	5	0	5	F
19C	4	1	3	F	19D	0	0	0	F
20E	3	3	0	M	20F	2	5	-3	M
21E	4	5	-1	M	21F	0	4	-4	M
22E	5	3	2	M	22F	3	1	2	M
23E	4	6	-2	M	23F	3	4	-1	M
24E	4	3	1	F	24F	3	4	-1	M
25E	1	1	0	F	25F	2	3	-1	F
26E	0	0	0	F	26F	4	0	4	F
27E	3	1	2	F	27F	2	2	0	F
28E	3	5	-2	F	28F	0	0	0	F
29E	2	3	-1	F	29F	0	0	0	F
Total	84	74	10		Total	123	74	49	
Mean	2.90	2.551	.345		Mean	4.310	2.552	1.690	

APPENDIX F

TABLES FOR HYPOTHESIS 2

Total Verbal Expression Content Pre-Test, Post-Test and Gain Scores for Individual Treatment and Control Group Children When Discussing Three Styles of Art in Stylistic Terms

Table 84. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Verbal Expression Content Scores Used for Stylistic Terms Used When Discussing Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	4	7	-3	M	1B	7	10	-3	M
2A	5	7	-2	M	2B	9	15	-6	M
3A	17	1	16	M	3B	13	9	4	M
4A	6	5	1	M	4B	3	3	0	M
5A	20	6	14	M	5B	6	5	1	M
6A	25	7	18	M	6B	2	4	-2	F
7A	18	4	14	F	7B	6	7	-1	F
8A	19	4	15	F	8B	5	13	-8	F
9A	15	10	5	F	9B	3	2	1	F
10A	21	3	18	F	10B	6	3	3	F
11C	7	2	5	M	11D	13	12	1	M
12C	12	2	10	M	12D	2	2	0	M
13C	16	6	10	M	13D	11	10	1	M
14C	14	7	7	M	14D	11	11	0	M
15C	11	5	6	F	15D	7	9	-2	F
16C	6	7	-1	F	16D	9	11	-2	F
17C	7	5	2	F	17D	19	11	8	F
18C	12	15	-3	F	18D	6	16	-10	F
19C	14	4	10	F	19D	0	3	-3	F
20E	13	5	8	M	20F	1	4	-3	M
21E	14	6	8	M	21F	6	4	2	M
22E	19	4	15	M	22F	3	1	2	M
23E	20	21	-1	M	23F	2	14	-12	M
24E	11	7	4	F	24F	7	12	-5	M
25E	5	5	0	F	25F	7	3	4	F
26E	8	8	0	F	26F	3	8	-5	F
27E	9	2	7	F	27F	2	2	0	F
28E	32	18	14	F	28F	6	6	0	F
29E	9	8	1	F	29F	8	5	3	F
Total	389	191	198		Total	183	215	-32	
Mean	13.414	6.379	6.828		Mean	6.310	7.414	-1.108	

Table 85. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Stylistic Terms Used to Discuss Representational Style of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	0	2	-2	M	1B	2	3	-1	M
2A	1	1	0	M	2B	4	3	1	M
3A	4	1	3	M	3B	2	2	0	M
4A	1	0	1	M	4B	0	0	0	M
5A	3	0	3	M	5B	2	1	1	M
6A	6	0	6	M	6B	0	1	-1	F
7A	4	1	3	F	7B	1	0	1	F
8A	1	1	0	F	8B	2	6	-4	F
9A	3	1	2	F	9B	0	1	-1	F
10A	5	0	5	F	10B	2	1	1	F
11C	0	1	-1	M	11D	4	0	4	M
12C	2	0	2	M	12D	1	0	1	M
13C	5	0	5	M	13D	2	1	1	M
14C	4	1	3	M	14D	2	3	-1	M
15C	1	1	0	F	15D	0	3	-3	F
16C	1	0	1	F	16D	2	3	-1	F
17C	2	0	2	F	17D	4	1	3	F
18C	1	3	-2	F	18D	2	4	-2	F
19C	3	1	2	F	19D	0	2	-2	F
20E	3	0	3	M	20F	0	0	0	M
21E	1	2	-1	M	21F	3	1	2	M
22E	3	1	2	M	22F	0	0	0	M
23E	6	4	2	M	23F	0	3	-3	M
24E	2	3	-1	F	24F	0	1	-1	M
25E	1	1	0	F	25F	2	0	2	F
26E	2	2	0	F	26F	0	0	0	F
27E	3	0	3	F	27F	1	0	1	F
28E	10	4	6	F	28F	0	2	-2	F
29E	3	3	0	F	29F	2	2	0	F
Total	81	34	47		Total	40	44	-4	
Mean	2.793	1.172	1.621		Mean	1.379	1.517	-.138	

Table 86. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Stylistic Terms Used When Discussing Expressionistic Style of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	2	3	-1	M	1B	1	1	0	M
2A	1	1	0	M	2B	1	8	-7	M
3A	3	0	3	M	3B	2	1	1	M
4A	1	3	-2	M	4B	0	0	0	M
5A	3	3	0	M	5B	0	1	-1	M
6A	4	0	4	M	6B	0	0	0	F
7A	6	1	5	F	7B	1	1	0	F
8A	9	1	8	F	8B	1	4	-3	F
9A	4	4	0	F	9B	0	0	0	F
10A	5	0	5	F	10B	2	0	2	F
11C	2	0	2	M	11D	4	5	-1	M
12C	3	0	3	M	12D	1	0	1	M
13C	5	2	3	M	13D	2	2	0	M
14C	5	3	2	M	14D	1	1	0	M
15C	4	2	2	F	15D	1	2	-1	F
16C	1	3	-2	F	16D	1	1	0	F
17C	2	0	2	F	17D	3	2	1	F
18C	2	4	-2	F	18D	2	2	0	F
19C	3	2	1	F	19D	0	0	0	F
20E	3	0	3	M	20F	0	0	0	M
21E	2	1	1	M	21F	0	0	0	M
22E	3	2	1	M	22F	1	1	0	M
23E	6	6	0	M	23F	1	0	1	M
24E	5	1	4	F	24F	5	0	5	M
25E	0	0	0	F	25F	1	1	0	F
26E	1	1	0	F	26F	0	2	-2	F
27E	2	1	1	F	27F	0	0	0	F
28E	7	3	4	F	28F	0	0	0	F
29E	2	1	1	F	29F	2	1	1	F
Total	96	48	48		Total	33	36	-3	
Mean	3.310	1.665	1.665		Mean	1.138	1.241	-.103	

Table 87. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Stylistic Terms Used When Discussing Preferences for Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	0	0	0	M	1B	4	5	-1	M
2A	0	3	-3	M	2B	2	0	2	M
3A	2	0	2	M	3B	3	3	0	M
4A	0	0	0	M	4B	1	1	0	M
5A	5	1	4	M	5B	2	2	0	M
6A	6	5	1	M	6B	1	2	-1	F
7A	3	1	2	F	7B	0	3	-3	F
8A	2	0	2	F	8B	1	0	1	F
9A	5	1	4	F	9B	2	1	1	F
10A	3	1	2	F	10B	1	1	0	F
11C	1	0	1	M	11D	0	2	-2	M
12C	2	1	1	M	12D	0	1	-1	M
13C	6	1	5	M	13D	5	5	0	M
14C	1	2	-1	M	14D	5	5	0	M
15C	3	0	3	F	15D	5	2	3	F
16C	0	2	-2	F	16D	3	2	1	F
17C	2	4	-2	F	17D	6	1	5	F
18C	3	5	-2	F	18D	1	6	-5	F
19C	1	0	1	F	19D	0	1	-1	F
20E	0	3	-3	M	20F	1	3	-2	M
21E	6	2	4	M	21F	2	2	0	M
22E	6	1	5	M	22F	0	0	0	M
23E	0	1	-1	M	23F	1	6	-5	M
24E	2	2	0	F	24F	2	2	0	M
25E	3	2	1	F	25F	3	1	2	F
26E	5	4	1	F	26F	2	5	-3	F
27E	1	0	1	F	27F	1	0	1	F
28E	6	4	2	F	28F	2	2	0	F
29E	3	3	0	F	29F	4	1	3	F
Total	77	49	28		Total	60	65	-5	
Mean	2.655	1.690	.966		Mean	2.069	2.241	-.172	

Table 88. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Stylistic Terms Used When Discussing Dislikes for Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	1	0	1	M	1B	0	0	0	M
2A	1	1	0	M	2B	1	0	1	M
3A	2	0	2	M	3B	2	1	1	M
4A	2	2	0	M	4B	2	2	0	M
5A	3	1	2	M	5B	0	1	-1	M
6A	3	1	2	M	6B	1	1	0	F
7A	3	1	2	F	7B	1	0	1	F
8A	4	1	3	F	8B	1	1	0	F
9A	1	3	-2	F	9B	1	0	1	F
10A	5	0	5	F	10B	1	1	0	F
11C	2	1	1	M	11D	1	3	-2	M
12C	1	0	1	M	12D	0	1	-1	M
13C	0	0	0	M	13D	1	0	1	M
14C	1	1	0	M	14D	0	1	-1	M
15C	2	1	1	F	15D	0	1	-1	F
16C	1	1	0	F	16D	3	2	1	F
17C	0	1	-1	F	17D	2	1	1	F
18C	1	1	0	F	18D	0	0	0	F
19C	3	1	2	F	19D	0	0	0	F
20E	2	1	1	M	20F	0	1	-1	M
21E	3	1	2	M	21F	0	0	0	M
22E	3	0	3	M	22F	2	0	2	M
23E	2	2	0	M	23F	0	2	-2	M
24E	0	0	0	F	24F	0	2	-2	M
25E	1	1	0	F	25F	0	1	-1	F
26E	0	0	0	F	26F	1	0	1	F
27E	2	0	2	F	27F	0	1	-1	F
28E	3	3	0	F	28F	2	0	2	F
29E	1	0	1	F	29F	0	0	0	F
Total	53	25	28		Total	22	23	-1	
Mean	1.828	.862	.966		Mean	.759	.793	-.034	

APPENDIX G

TABLES FOR HYPOTHESIS 3

Total Verbal Expression Content Pre-Test, Post-Test, and Gain Scores for Individual Treatment and Control Group Children When Discussing Three Styles of Art in Emotional Terms

Table 89. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Emotional Terms When Discussing Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	0	2	-2	M	1B	4	1	3	M
2A	2	0	2	M	2B	0	0	0	M
3A	0	0	0	M	3B	0	0	0	M
4A	0	0	0	M	4B	0	0	0	M
5A	2	1	1	M	5B	2	0	2	M
6A	3	0	3	F	6B	0	0	0	F
7A	1	0	1	F	7B	0	0	0	F
8A	3	0	3	F	8B	1	0	1	F
9A	1	0	1	F	9B	0	0	0	F
10A	0	0	0	F	10B	0	0	0	F
11C	4	0	4	M	11D	0	1	-1	M
12C	0	0	0	M	12D	0	0	0	M
13C	3	0	3	M	13D	0	1	-1	M
14C	0	0	0	M	14D	0	1	-1	M
15C	2	0	2	F	15D	2	0	2	F
16C	1	0	1	F	16D	2	1	1	F
17C	0	1	-1	F	17D	0	0	0	F
18C	2	0	2	F	18D	1	1	0	F
19C	0	0	0	F	19D	0	1	-1	F
20E	1	1	0	M	20F	4	0	4	M
21E	0	0	0	M	21F	1	0	1	M
22E	0	9	-9	M	22F	0	2	-2	M
23E	1	2	-1	M	23F	0	1	-1	M
24E	3	0	3	F	24F	0	1	-1	M
25E	0	0	0	F	25F	1	1	0	F
26E	5	2	3	F	26F	0	0	0	F
27E	0	0	0	F	27F	0	0	0	F
28E	1	4	-3	F	28F	1	0	1	F
29E	0	1	-1	F	29F	0	0	0	F
Total	35	23	12		Total	19	12	7	
Mean	1.207	.793	.414		Mean	.655	.414	.241	

Table 90. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Emotional Terms When Discussing Representational Style of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	0	0	0	M	1B	1	0	1	M
2A	0	0	0	M	2B	0	0	0	M
3A	0	0	0	M	3B	0	0	0	M
4A	0	0	0	M	4B	0	0	0	M
5A	1	0	1	M	5B	0	0	0	M
6A	0	0	0	M	6B	0	0	0	F
7A	0	0	0	F	7B	0	0	0	F
8A	0	0	0	F	8B	0	0	0	F
9A	0	0	0	F	9B	0	0	0	F
10A	0	0	0	F	10B	0	0	0	F
11C	2	0	2	M	11D	0	0	0	M
12C	0	0	0	M	12D	0	0	0	M
13C	0	0	0	M	13D	0	0	0	M
14C	0	0	0	M	14D	0	1	-1	M
15C	0	0	0	F	15D	0	0	0	M
16C	1	0	1	F	16D	0	0	0	F
17C	0	0	0	F	17D	0	0	0	F
18C	0	0	0	F	18D	0	0	0	F
19C	0	0	0	F	19D	0	0	0	F
20E	0	0	0	M	20F	0	0	0	M
21E	0	0	0	M	21F	1	0	1	M
22E	0	0	0	M	22F	0	0	0	M
23E	0	0	0	M	23F	0	0	0	M
24E	0	0	0	F	24F	0	0	0	M
25E	0	0	0	F	25F	1	1	0	F
26E	0	0	0	F	26F	0	0	0	F
27E	0	0	0	F	27F	0	0	0	F
28E	0	0	0	F	28F	0	0	0	F
29E	0	0	0	F	29F	0	0	0	F
Total	4	0	4		Total	3	2	1	
Mean	.138	0	.138		Mean	.103	.069	.345	

Table 91. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Emotional Terms When Discussing Expressionistic Style of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	0	0	0	M	1B	1	1	0	M
2A	1	0	1	M	2B	0	0	0	M
3A	0	0	0	M	3B	0	0	0	M
4A	0	0	0	M	4B	0	0	0	M
5A	1	0	1	M	5B	0	0	0	M
6A	1	0	1	M	6B	0	0	0	F
7A	0	0	0	F	7B	1	0	1	F
8A	0	0	0	F	8B	0	0	0	F
9A	0	0	0	F	9B	0	0	0	F
10A	0	0	0	F	10B	0	0	0	M
11C	1	0	1	M	11D	0	0	0	M
12C	0	0	0	M	12D	0	0	0	M
13C	2	0	2	M	13D	0	0	0	M
14C	0	0	0	M	14D	0	0	0	M
15C	0	0	0	F	15D	0	0	0	M
16C	0	0	0	F	16D	0	0	0	F
17C	0	0	0	F	17D	0	0	0	F
18C	0	0	0	F	18D	0	0	0	F
19C	0	0	0	F	19D	0	0	0	F
20E	1	0	1	M	20F	0	0	0	M
21E	0	0	0	M	21F	0	0	0	M
22E	0	3	-3	M	22F	0	0	0	M
23E	1	0	1	M	23F	0	1	-1	M
24E	1	0	1	F	24F	0	0	0	M
25E	0	0	0	F	25F	0	0	0	F
26E	0	0	0	F	26F	2	0	2	F
27E	0	0	0	F	27F	0	0	0	F
28E	0	1	-1	F	28F	1	0	1	F
29E	0	0	0	F	29F	0	0	0	F
Total	9	4	5		Total	5	2	3	
Mean	.310	.138	.172		Mean	.172	.069	.103	

Table 92. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Emotional Terms When Discussing Cartoon Style of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	0	0	0	M	1B	1	0	1	M
2A	0	0	0	M	2B	0	0	0	M
3A	0	0	0	M	3B	0	0	0	M
4A	0	0	0	M	4B	0	0	0	M
5A	1	1	0	M	5B	2	0	2	M
6A	1	0	1	M	6B	0	0	0	F
7A	0	0	0	F	7B	0	0	0	F
8A	3	0	3	F	8B	1	0	1	F
9A	0	0	0	F	9B	0	0	0	F
10A	0	0	0	F	10B	0	0	0	F
11C	0	0	0	M	11D	0	0	0	M
12C	0	0	0	M	12D	0	0	0	M
13C	0	0	0	M	13D	0	0	0	M
14C	0	0	0	M	14D	0	0	0	M
15C	1	0	1	F	15D	0	0	0	M
16C	0	0	0	F	16D	0	0	0	F
17C	0	1	-1	F	17D	0	0	0	F
18C	1	0	1	F	18D	1	0	1	F
19C	0	0	0	F	19D	0	0	0	F
20E	0	0	0	M	20F	0	0	0	M
21E	0	0	0	M	21F	0	0	0	M
22E	0	0	0	M	22F	0	0	0	M
23E	0	0	0	M	23F	0	0	0	M
24D	2	0	2	F	24F	0	0	0	M
25E	0	0	0	F	25F	0	0	0	M
26E	3	0	3	F	26F	0	0	0	F
27E	0	0	0	F	27F	0	0	0	F
28E	1	0	1	F	28F	0	0	0	F
29E	0	0	0	F	29F	0	0	0	F
Total	13	2	11		Total	5	0	5	
Mean	.448	.069	.379		Mean	.172	0	.172	

Table 93. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Emotional Terms When Discussing Preferences (Like, Like-as-Much, Buy) for Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	0	2	-2	M	1B	2	0	2	M
2A	1	0	1	M	2B	0	0	0	M
3A	0	0	0	M	3B	0	1	-1	M
4A	0	0	0	M	4B	0	1	-1	M
5A	0	0	0	M	5B	0	0	0	M
6A	0	0	0	M	6B	0	0	0	F
7A	0	0	0	F	7B	0	0	0	F
8A	0	0	0	F	8B	0	0	0	F
9A	1	0	1	F	9B	0	0	0	F
10A	0	0	0	F	10B	0	0	0	F
11C	1	0	1	M	11D	1	0	1	M
12C	0	0	0	M	12D	0	0	0	M
13C	1	0	1	M	13D	0	0	0	M
14C	0	0	0	M	14D	0	0	0	M
15C	0	0	0	F	15D	0	0	0	M
16C	0	0	0	F	16D	0	0	0	F
17C	0	0	0	F	17D	0	0	0	F
18C	0	0	0	F	18D	0	0	0	F
19C	0	0	0	F	19D	0	0	0	F
20E	0	1	-1	M	20F	0	0	0	M
21E	0	0	0	M	21F	0	0	0	M
22E	0	4	-4	M	22F	0	0	0	M
23E	0	2	-2	M	23F	0	0	0	M
24E	0	0	0	M	24F	0	0	0	M
25E	0	0	0	F	25F	2	0	2	F
26E	2	2	0	F	26F	0	0	0	F
27E	0	0	0	F	27F	0	0	0	F
28E	0	2	-2	F	28F	0	0	0	F
29E	0	0	0	F	29F	0	1	-1	F
Total	6	13	-7		Total	5	3	2	
Mean	.207	.448	-.241		Mean	.269	.103	.069	

Table 94. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Emotional Terms When Discussing Dislikes for Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	0	0	0	M	1B	0	0	0	M
2A	0	0	0	M	2B	0	0	0	M
3A	0	0	0	M	3B	0	0	0	M
4A	0	0	0	M	4B	0	0	0	M
5A	0	0	0	M	5B	0	0	0	M
6A	0	0	0	M	6B	0	0	0	F
7A	1	0	1	F	7B	0	0	0	F
8A	0	0	0	F	8B	0	0	0	F
9A	0	0	0	F	9B	0	0	0	F
10A	0	0	0	F	10B	0	0	0	F
11C	0	0	0	M	11D	0	0	0	M
12C	0	0	0	M	12D	0	0	0	M
13C	0	0	0	M	13D	0	1	-1	M
14C	0	0	0	M	14D	0	0	0	M
15C	0	0	0	F	15D	0	1	-1	M
16C	0	0	0	F	16D	0	0	0	F
17C	0	0	0	F	17D	0	0	0	F
18C	0	0	0	F	18D	0	0	0	F
19C	0	0	0	F	19D	0	0	0	F
20E	0	0	0	M	20F	0	0	0	M
21E	0	0	0	M	21F	0	0	0	M
22E	0	0	0	M	22F	0	0	0	M
23E	0	0	0	M	23F	0	0	0	M
24E	0	0	0	F	24F	0	0	0	M
25E	0	0	0	F	25F	0	0	0	F
26E	0	0	0	F	26F	0	1	-1	F
27E	0	0	0	F	27F	0	0	0	F
28E	0	1	-1	F	28F	0	0	0	F
29E	0	1	-1	F	29F	0	0	0	F
Total	1	2	-1		Total	0	3	-3	
Mean	.034	.069	-.034		Mean	0	.103	-.103	

APPENDIX H

TABLES FOR HYPOTHESIS 4

Total Verbal Expression Content Pre-Test, Post-Test, and Gain Scores for Individual Treatment and Control Group Children When Discussing Three Styles of Art in Evaluative Terms

Table 95. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Evaluative Terms When Discussing Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	4	2	2	M	1B	1	1	0	M
2A	0	4	-4	M	2B	0	3	-3	M
3A	2	0	2	M	3B	4	5	-1	M
4A	1	0	1	M	4B	2	3	-1	M
5A	2	1	1	M	5B	0	2	-2	M
6A	1	0	1	M	6B	0	0	0	F
7A	0	0	0	F	7B	2	2	0	F
8A	3	2	1	F	8B	7	5	2	F
9A	3	1	2	F	9B	0	2	-2	F
10A	0	0	0	F	10B	3	4	-1	F
11C	1	0	1	M	11D	1	2	-1	M
12C	0	5	-5	M	12D	0	2	-2	M
13C	1	1	0	M	13D	3	0	3	M
14C	3	4	-1	M	14D	6	6	0	M
15C	3	4	-1	F	15D	3	8	-5	M
16C	0	1	-1	F	16D	3	6	-3	F
17C	1	1	0	F	17D	0	3	-3	F
18C	2	7	-5	F	18D	0	0	0	F
19C	0	0	0	F	19D	1	2	-1	F
20E	1	1	0	M	20F	0	1	-1	M
21E	2	4	-2	M	21F	6	9	-3	M
22E	4	0	4	M	22F	2	1	1	M
23E	3	7	-4	M	23F	0	0	0	M
24E	3	2	1	F	24F	2	0	2	M
25E	6	6	0	F	25F	8	6	2	F
26E	0	0	0	F	26F	0	0	0	F
27E	2	2	0	F	27F	0	4	-4	F
28E	0	3	-3	F	28F	3	2	1	F
29E	9	9	0	F	29F	4	4	0	F
Total	57	67	-10		Total	57	83	-26	
Mean	1.862	2.310	-.345		Mean	1.966	2.862	-.897	

Table 96. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Evaluative Terms When Discussing Representational Style of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	1	0	1	M	1B	0	0	0	M
2A	0	0	0	M	2B	0	1	-1	M
3A	0	0	0	M	3B	1	3	-2	M
4A	0	0	0	M	4B	0	1	-1	M
5A	0	0	0	M	5B	0	1	-1	M
6A	0	0	0	M	6B	0	0	0	F
7A	0	0	0	F	7B	0	0	0	F
8A	1	0	1	F	8B	1	1	0	F
9A	0	0	0	F	9B	0	1	-1	F
10A	0	0	0	F	10B	0	0	0	F
11C	0	0	0	M	11D	0	0	0	M
12C	0	0	0	M	12D	0	0	0	M
13C	1	1	0	M	13D	0	0	0	M
14C	0	0	0	M	14D	2	1	1	M
15C	2	1	1	F	15D	1	3	-2	M
16C	0	0	0	F	16D	0	2	-2	F
17C	0	1	-1	F	17D	0	1	-1	F
18C	1	2	-1	F	18D	0	0	0	F
19C	0	0	0	F	19D	0	0	0	F
20E	0	0	0	M	20F	0	0	0	F
21E	2	1	1	M	21F	0	2	-2	M
22E	1	0	1	M	22F	0	1	-1	M
23E	0	1	-1	M	23F	0	0	0	M
24E	2	1	1	F	24F	0	0	0	M
25E	2	2	0	F	25F	5	1	4	F
26E	0	0	0	F	26F	0	0	0	F
27E	0	1	-1	F	27F	0	0	0	F
28E	0	3	-3	F	28F	1	0	1	F
29E	3	2	1	F	29F	1	0	1	F
Total	16	16	0		Total	12	19	-7	
Mean	.552	.552	0		Mean			-.241	

Table 97. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Evaluative Terms When Discussing Expressionistic Style of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	1	0	1	M	1B	1	0	1	M
2A	0	0	0	M	2B	0	0	0	M
3A	1	0	1	M	3B	0	0	0	M
4A	1	0	1	M	4B	0	1	-1	M
5A	1	0	1	M	5B	0	0	0	M
6A	1	0	1	M	6B	0	0	0	F
7A	0	0	0	F	7B	0	0	0	F
8A	1	0	1	F	8B	1	2	-1	F
9A	1	0	1	F	9B	0	0	0	F
10A	0	0	0	F	10B	0	0	0	F
11C	1	0	1	M	11D	0	0	0	M
12C	0	0	0	M	12D	0	0	0	M
13C	0	0	0	M	13D	0	0	0	M
14C	1	1	0	M	14D	1	3	-2	M
15C	1	0	1	F	15D	0	5	-5	M
16C	0	0	0	F	16D	1	1	0	F
17C	1	0	1	F	17D	0	1	-1	F
18C	0	1	-1	F	18D	0	0	0	F
19C	0	0	0	M	19D	0	0	0	F
20E	0	0	0	M	20F	0	0	0	F
21E	0	2	-2	M	21F	1	1	0	M
22E	1	0	1	M	22F	0	0	0	M
23E	0	1	-1	M	23F	0	0	0	M
24E	0	0	0	F	24F	1	0	1	M
25E	1	1	0	F	25F	1	1	0	F
26E	0	0	0	F	26F	0	0	0	F
27E	0	0	0	F	27F	0	0	0	F
28E	0	0	0	F	28F	0	0	0	F
29E	3	2	1	F	29F	3	1	2	F
Total	16	8	8		Total	10	16	-6	
Mean	.551	.276	.276		Mean	.344	.552	-.75	

Table 98. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Evaluative Terms When Discussing Cartoon Style of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	1	0	1	M	1B	0	0	0	M
2A	0	0	0	M	2B	0	0	0	M
3A	0	0	0	M	3B	0	0	0	M
4A	0	0	0	M	4B	1	1	0	M
5A	0	0	0	M	5B	0	1	-1	M
6A	0	0	0	M	6B	0	0	0	F
7A	0	0	0	F	7B	0	0	0	F
8A	0	0	0	F	8B	1	1	0	F
9A	0	0	0	F	9B	0	0	0	F
10A	1	0	1	F	10B	0	0	0	F
11C	0	0	0	M	11D	0	1	-1	M
12C	0	0	0	M	12D	0	2	-2	M
13C	0	0	0	M	13D	0	0	0	M
14C	1	0	1	M	14D	2	2	0	M
15C	0	2	-2	F	15D	1	0	1	M
16C	0	0	0	F	16D	1	2	-1	F
17C	0	0	0	F	17D	0	1	-1	F
18C	0	2	-2	F	18D	0	0	0	F
19C	0	0	0	F	19D	0	0	0	F
20E	0	0	0	M	20F	0	0	0	F
21E	0	0	0	M	21F	2	1	1	M
22E	0	0	0	M	22F	0	0	0	M
23E	1	1	0	M	23F	0	0	0	M
24E	0	0	0	F	24F	0	0	0	M
25E	0	0	0	F	25F	1	0	1	F
26E	0	0	0	F	26F	0	0	0	F
27E	0	0	0	F	27F	0	1	-1	F
28E	0	0	0	F	28F	0	0	0	F
29E	3	3	0	F	29F	0	1	-1	F
Total	7	8	-1		Total	9	14	-5	
Mean	.241	.276	-.344		Mean	.310	.483	-.172	

Table 99. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Evaluative Terms When Discussing Preferences (Like, Like-as-Much, Buy) for Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex	Child/ School	Post-Test Scores	Pre-Test Scores	Gain Scores	Sex
1A	0	2	-2	M	1B	0	1	-1	M
2A	0	3	-3	M	2B	0	2	-2	M
3A	1	0	1	M	3B	2	2	0	M
4A	0	0	0	M	4B	0	0	0	M
5A	0	1	-1	M	5B	0	0	0	M
6A	0	0	0	M	6B	0	0	0	F
7A	0	0	0	F	7B	1	1	0	F
8A	1	1	0	F	8B	2	0	2	F
9A	0	1	-1	F	9B	0	1	-1	F
10A	0	0	0	F	10B	1	1	0	F
11C	0	0	0	M	11D	0	0	0	M
12C	0	3	-3	M	12D	0	0	0	M
13C	0	0	0	M	13D	2	0	2	M
14C	0	3	-3	M	14D	1	0	1	M
15C	0	1	-1	F	15D	1	0	1	M
16C	0	1	-1	F	16D	1	1	0	F
17C	1	0	1	F	17D	0	0	0	F
18C	0	2	-2	F	18D	0	0	0	F
19C	0	0	0	F	19D	1	2	-1	F
20E	0	1	-1	M	20F	0	1	-1	F
21E	0	1	-1	M	21F	0	2	-2	M
22E	0	0	0	M	22F	1	0	1	M
23E	1	3	-2	M	23F	0	0	0	M
24E	0	1	-1	F	24F	0	0	0	M
25E	3	2	1	F	25F	1	1	0	F
26E	0	0	0	F	26F	0	0	0	F
27E	2	1	1	F	27F	0	3	-3	F
28E	0	0	0	F	28F	0	1	-1	F
29E	0	1	-1	F	29F	0	2	-2	F
Total	9	28	-19		Total	14	21	-7	
Mean	.310	1.647	-1.118		Mean	.483	.724	-.241	

Table 100. Treatment and Control Group Pre-Test, Post-Test and Gain Scores for Use of Evaluative Terms When Discussing Dislikes for Three Styles of Art

Treatment Group					Control Group				
Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex	Child/ School	Post- Test Scores	Pre- Test Scores	Gain Scores	Sex
1A	0	0	0	M	1B	0	0	0	M
2A	0	1	-1	M	2B	0	0	0	M
3A	0	0	0	M	3B	1	0	1	M
4A	0	0	0	M	4B	1	1	0	M
5A	0	0	0	M	5B	0	0	0	M
6A	0	0	0	M	6B	0	0	0	F
7A	0	0	0	F	7B	0	1	-1	F
8A	1	0	1	F	8B	2	1	1	F
9A	0	0	0	F	9B	0	0	0	F
10A	0	0	0	F	10B	1	0	1	F
11C	0	0	0	M	11D	1	1	0	M
12C	0	2	-2	M	12D	0	0	0	M
13C	0	0	0	M	13D	1	0	1	M
14C	1	0	1	M	14D	0	0	0	M
15C	0	0	0	F	15D	0	0	0	M
16C	0	0	0	F	16D	0	0	0	F
17C	0	0	0	F	17D	0	0	0	F
18C	0	0	0	F	18D	0	0	0	F
19C	0	0	0	F	19D	0	0	0	F
20E	1	1	0	M	20F	0	0	0	F
21E	0	1	-1	M	21F	3	1	2	M
22E	2	0	2	M	22F	1	0	1	M
23E	1	3	-2	M	23F	0	0	0	M
24E	1	1	0	F	24F	1	0	1	M
25E	0	2	-2	F	25F	0	0	0	F
26E	0	0	0	F	26F	0	0	0	F
27E	0	1	-1	F	27F	0	1	-1	F
28E	0	0	0	F	28F	0	0	0	F
29E	0	1	-1	F	29F	0	0	0	F
Total	7	13	-6		Total	12	6	6	
Mean	.241	.448	-.207		Mean	.414	.207	.207	

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