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PUPIL PREFERENCE FOR ART MEDIA USED IN ILLUSTRATIONS OF CALDECOTT AWARD WINNING BOOKS.

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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

PUPIL PREFERENCE FOR ART MEDIA USED IN ILLUSTRATIONS OF CALDECOTT AWARD WINNING BOOKS

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

By

WANDA DUFFY FLOWERS

Norman, Oklahoma

1978

PUPIL PREFERENCE FOR ART MEDIA USED IN

ILLUSTRATIONS OF CALDECOTT

AWARD WINNING BOOKS

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DISSERTATION COMMITTEE

DEDICATION

This research study is dedicated to my husband Sol, and children Roger, Dorothy, Mary, Steve and Janie for their confidence and encouragement during the entire program.

A special remembrance
to the fond memories
of my mother who did
not have the happiness
of seeing this dream
fulfilled.

ACKNOWLEDGMENTS

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PUPIL PREFERENCE FOR ART MEDIA USED IN ILLUSTRATIONS OF CALDECOTT AWARD WINNING BOOKS

CHAPTER I

INTRODUCTION AND PROBLEM

A child's book is essentially a work of visual art, something that speaks directly to the eye and through the eye. As a part of the young child's environment picture books can have a profound effect upon his whole pattern of development. General intelligence develops rapidly during the child's early years, and stories and illustrations can make a strong contribution to a child's early education. It is important for the parents and others who educate children to provide good picture books that delight children and help them expand their knowledge and to introduce them to the folk tales that are handed down from generation to generation.

Historically the first pictures that children saw were those painted on the walls of caves by Cavemen. These were not on vellum and paper. Der Ritter vom Tura was printed on

paper with woodcuts as early as 1493 in Switzerland; and Caxton, in England, printed several illustrated books for children and produced an illustrated Aesop in 1884.[1]

Bishop Comenius instituted the idea of teaching language through pictures and compiled the Orbis sensualium pictus, which is one of the very early picture books for children. It remained in print for more than a century. Comenius is quoted as saying, "Pictures are the most intelligible books that children can look upon."[2] The picture attracts the eyes, the child asks a question and is led to the reading of the text. The pictures in the one hundred and fifty chapters of this early book gave children their first general idea of the outside world.

MacCann and Richard described forms of children's books.[3] The Horn-book was a long piece of wood with a handle and was covered with transparent horn. It contained a large cross, alphabet, vowels and consonants, a prayer and many illustrations. This is considered to be the first lesson book for children in the English speaking world. The battledore was made of cardboard in three leaves which folded together and had easy reading lessons with little woodcuts to illustrate

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[1]Henry C. Pitz, Illustrating Children's Books (New York: Watson-Guptill Publications, 1963), pp. 12-20.

[2]Ibid., p. 21.

[3]Donnarae MacCann and Olga Richard, The Child's First Books (New York: The H. W. Wilson Company, 1973), p. 10.

them. Chapbooks were sold by peddlars called chapmen, in Britain, and told of heroes and heroines of legends and fairy tales and were illustrated with woodcuts. It was through these books that fairy tales, much frowned upon, managed to stay in circulation. The Puritans in America stressed sin and its punishment and for them fairy tales were not accepted for children because they considered them untrue and their morality often doubtful.[4]

Children's books were affected by the First World War and its aftermath. The war and the desire for relocation by a number of artists brought to America many fine artists with diversified racial backgrounds who had an effect on the illustrations of children's books. On the aesthetic side, we have had a great range and variety of racial and national inheritances, each bringing something new and different. Paul Hazard has been quoted as having stated:

> Children's books keep alive a sense of nationality; but they also keep alive a sense of humility. They describe their native lands lovingly, but they also describe faraway lands where unknown brothers live. They understand the essential quality of their own race; but each of them is a messenger that goes beyond mountains and rivers, beyond seas, to the very ends of the world in search of new friendships. Every country gives and every country receives.[5]

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[4]John Rowe Townsend, Written for Children (New York: Lathrop, Lee and Shepard Co., 1965), pp. 26-27.

[5]Bertha E. Mahony, Louise P. Latimer, and Beulah Folmsbee, Illustrators of Children's Books 1744-1945 (Boston: The Horn Book, Incorporated, 1975), pp. 288-89.

Ethnic and folk materials are well represented on the list of Caldecott Honor Books. These books lend themselves to the artistic effects and artistic referrals. They have setting, decor and costumes.[6]

Statement of the Problem

The problem of this study was to determine the preferences of first and second grade students in selected schools in southeastern Oklahoma for five art media identified as water color, woodcut, tempera, color-separation and graphics (with color), used in the illustrations of Caldecott Award Winning books.

The general hypothesis was:

> There are no statistically significant differences in the choices of books based on illustrations by students of selected schools in southeastern Oklahoma with respect to levels of intelligence, gender and socio-economic status.

Purpose for the Study

An investigation of the art media preferences of young children will help adults select books with the greatest amount of appeal for children. Picture books are now being published for children of all ages from nursery school through

---

[6]Lee Kingman, Newbery and Caldecott Medal Books 1966-1975 (Boston: The Horn Book, Incorporated, 1975), pp. 288-89.

Junior High School. Day-care center personnel, librarians, parents and others concerned with the selection of well illustrated books want the best they can obtain for their young readers and listeners. More than seventy publishers have juvenile departments publishing close to 3,000 books a year; more and more trade books supplement textbooks in schools; government aid has enabled schools to found libraries or enlarge existing ones and to buy quantities of books for young children.[7]

Most educators view the development of imaginative thinking as a major goal. Art work associated with fairy tales, myths and legends, as well as many modern stories, challenge the imagination. Library Schools and Colleges of Education study library listings for children's picture books. Books with illustrations children identify with the best will hold the interest of the children today and be remembered with affection, admiration and enthusiasm by them in the future.

An appreciation of great art does not mean that adult selections or adult standards should completely govern the choices of books and accompanying art work for children. Emotional and social maturity or immaturity of children has its own demands, and these demands must be recognized if children are to cultivate a love for book illustrations that

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[7]Marcia Brown, "One Wonders," in Illustrators of Children's Books: 1957-1966, ed. Lee Kingman, Joanna Foster and Ruth Giles Lontoft (Boston: The Horn Book, Inc., 1968), p. 2.

will bring them satisfaction throughout their entire lives.

Children are quick to recognize superficiality and insincerity in praise of books. Children themselves enjoy the search for such materials when they are really interested. It is a good experience for them to find material suited to their purpose and abilities.

Limitations of the Study

This investigation was confined to the five art media used in illustrations of Caldecott books. Other methods were not considered. This was a limitation of the study.

The study was limited to first and second grade pupils of six to nine years of age. All subjects were English Speaking Caucasian children because none of the schools involved had sufficient number of any minority group to be considered as an individual group.

The study was limited geographically. All students attended schools in the Ada School District in Oklahoma. This constituted the fourth and last limitation of the study.

Design of the Study

This descriptive study was designed to investigate the art media preferences of children for illustrations in picture books. Subjects for the study were first and second grade students of three elementary schools. It involved

reading the books to the children and a discussion of the art medium used in each book. Individual first, second and third choices were designated and all totals were tallied to see if any preferences occurred for a particular art medium category by various total groups and if any preferences occurred for a particular art medium by the refractionated groups. This was completed by the encompassing steps below.

Selection of Books

All thirty nine Caldecott Award Winning books were investigated, the media used in each identified and all books were placed into listed media groups. Five types of art media had three or more books on an identifying list. Fifteen books were randomly chosen from those representative of the five types of art media used in the study. Selected were three books representing each of the five categories of water color, woodcut, tempera, pre-separated and graphic (with color). Books to be used are identified in Appendix A and are listed below by titles with categories and illustrators.

Water Color:

Time of Wonder, illustrated by Robert McCloskey.
The Little House, illustrated by Virginia Lee Burton.
The Biggest Bear, illustrated by Lynd Ward.

Woodcut:

Once a Mouse, illustrated by Marcia Brown.
A Story A Story, illustrated by Gail E. Haley.
Drummer Hoff, illustrated by Ed Emberly.

Tempera:

Song of the Swallows, illustrated by Leo Politi.
Baboushka and the Three Kings, illustrated by Nicolas Sidjakov.
The Egg Tree, illustrated by Kathryn Milhous.

Pre-Separated:

Chanticleer and the Fox, illustrated by Barbara Cooney.
Frog Went A-Courtin', illustrated by Feodor Rojankovsky.
Many Moons, illustrated by Louis Slobodkin.

Graphic (with color):

The Funny Little Woman, illustrated by Blair Kent.
Madeline's Rescue, illustrated by Ludwig Bemelmans.
Nine Days to Christmas, illustrated by Marie Hall Ets.

The books were checked for appropriateness and the authority for their classification was secured from publications by Horn Book, Incorporated.* The specific identifications of the art media of the books used are listed and represent the authority for each selection.

Bertha Mahoney Miller and Elinor Whitney Field, Caldecott Medal Books 1938-1957 (Boston: The Horn Book, Inc., 1957).

The Little House - - - - - - - - - - - p. 87
Many Moons - - - - - - - - - - - - - p. 98
Song of the Swallows - - - - - - - - p. 200
The Egg Tree - - - - - - - - - - - - p. 212
The Biggest Bear - - - - - - - - - - p. 242
Madeline's Rescue- - - - - - - - - - p. 254
Frog Went A-Courtin' - - - - - - - - p. 284

*Horn Book, Incorporated, is a publishing company in Boston that is primarily a reviewing medium for children's titles (kindergarten through 8th grade). The reviews are grouped by picture books, age group and various subjects. It is considered to be among the best of the general reviewing media, and among the top five for its articles.

Lee Kingman, Newbery and Caldecott Medal Books 1956-1965 (Boston: The Horn Book, Inc., 1965).

Time of Wonder - - - - - - - - - - - - - p. 187
Chanticleer and the Fox- - - - - - - - - p. 198
Nine Days to Christmas - - - - - - - - - p. 208
Baboushka and the Three Kings- - - - - p. 217
Once A Mouse - - - - - - - - - - - - - - p. 225

Lee Kingman, Newbery and Caldecott Medal Books 1966-1975 (Boston: The Horn Book, Inc., 1975).

Drummer Hoff - - - - - - - - - - - - - - p. 159
A Story A Story- - - - - - - - - - - - - p. 165
The Funny Little Woman - - - - - - - - - p. 169

Selection of Subjects

Subjects represented both sexes, and three levels of intellectual ability and three socio-economic levels. All pupils were English Speaking Caucasian children enrolled in the first and second grades in three elementary schools in Ada, Oklahoma.

According to the Superintendent of Schools, one school was representative of the lower socio-economic level of the community, one was representative of the middle socio-economic level of the community and one was representative of the upper socio-economic level of the community. This socio-economic classification was based on the Federal Free Lunch Program and the percent of children receiving free lunches in each of the three schools. This program is based on head of the household income and number of family members.

First and second grades in these three schools are organized as self-contained classrooms under the direction

of regularly certified teachers. Pupils are distributed heterogeneously in the classrooms on each grade level. Permission slips requesting parent's signatures for their children to participate in the study were distributed to all students in these classrooms. Those students with parental approval were administered the Peabody Picture Vocabulary Test, and classified as to high, average or low I.Q. levels. This test provides a fast assessment of I.Q. Range. (See Appendix B.)

This test was administered in a room of the school building with a one-to-one relationship between the student and the examiner. It was felt that the examiner had good rapport with the students and that they were comfortable and at ease during the testing experience.

Students who scored 110 and above on the test were considered in the high I.Q. classification; those pupils who scored between 90 and 109 were considered in the average classification; and those students who scored 89 and below were placed in the low intelligence group. This classification is suggested in the Peabody Picture Vocabulary Test Manual and is ranked in chart form.

The distribution of subjects is tabulated below:

Socio-economic	I.Q.	Sex	Number	Total
Upper (School A)	High	Boys	5	
		Girls	5	
	Average	Boys	5	
		Girls	5	
	Low	Boys	5	
		Girls	5	
				30
Middle (School B)	High	Boys	5	
		Girls	5	
	Average	Boys	5	
		Girls	5	
	Low	Boys	5	
		Girls	5	
				30
Lower (School C)	High	Boys	5	
		Girls	5	
	Average	Boys	5	
		Girls	5	
	Low	Boys	5	
		Girls	5	
				30
	Total (Subjects Used)			90

Presentation of Books

Books representing the five categories were read to all the students in the classrooms, in designated reading sessions, by the investigator. The school released three one-hour sessions with each class and added time for selection

of individual choices. The students sat on the floor in a semi-circle around the reader as she held the book so that all of the students could see the pictures while the story was being read. These reading sessions were scheduled to acquaint the students with the story and accompanying illustrations. The Caldecott Committee has consistently affirmed that the story must be worthy of the illustrations.

Before each book was read, a presentation and discussion about the specific art medium used in a book was given by the research student. Oral directions were given at the beginning of each reading session. These directions were:

> As I read, each of you look at the pictures in these books and decide which ones you like the best, second best and third best. When you have seen and heard all the fifteen books, I will ask each of you to tell me your first, second and third choices.

All reading sessions took place during the spring semester of the school term and within a three week period. The subjects were encouraged to look at the books individually at the end of the reading sessions. The investigator visited the schools during the same three week period with copies of the book just completed. The subjects were allowed time for a review of the books, looking at them individually. At the end of the specified time the subjects made oral statements as to their first three preferences. These were made known in an individual conference with the investigator and peer influence was not felt. The investigator recorded their choices on the Recording Form. This form also contained the

student identification code for gender, socio-economic level, intelligence range and ordinal position in random sampling. All totals were taken from these forms. (See Appendix E.) This information provided the raw data for the study.

Treatment of the Data

The underlying purpose of this study involved the recording of children's preferences for art media used in picture books, more specifically with preferences for art media used in selected Caldecott Medal Winning books of children within the age span of the first and second grades. It showed what effect, if any, the factors of gender, intellectual ability and socio-economic environment reflect in expressed preferences. When each of the subjects at the three schools had been tested the individual results were tabulated and the results of the testing were recorded and reported in Appendix E.

The Chi Square with Yate's correction was used for testing the differences statistically, in relation to the general hypothesis and sub-hypotheses related to the preferences of pupils in the different intelligence, gender and socio-economic groups. Significance was determined by the appropriate degrees of freedom at the .05 level of confidence. This was considered adequate in indicating significant differences in all statistical tests of the study.

Definition of Terms

For the purpose of this study the following definitions were established:

ALA--American Library Association.

Caldecott Medal--A bronze medal awarded each year by the American Library Association to the artist of the most distinguished picture book for children published in the United States during the previous year.

Chiaroscural--A style of painting, drawing, etc. using only light and shade, in order to achieve the effect of a third dimension.

Easy Books--Those books for children that have very large pictures on every page and very few, if any, words.

Gesso--In fine arts, a Plaster of Paris used to prepare a surface for painting.

Graphic--A term used to denote pencil, pen and ink and charcoal to make black and white pictures.

Honor Books--Children's books that did not receive a Caldecott Medal but were second place winners.

Illustration--A picture, design, diagram, etc. used to decorate or explain something.

Media--The plural of medium and is any material used for expression in a drawing, sketch or portrait.

Newbery Medal--A medal awarded each year by the American Library Association to the writer of the best story book for children during the preceeding year.

Picture Book--A category of books in which the ratio of illustrations to the text is very high and the child will be able to deduce the entire plot line from the pictures alone.

Pre-Separated--Illustrations that are made separately four times, each one being printed with a separate color and then combined to make the picture.

Serigraphy--A print made by the silk screen process and printed by the artist himself.

Story Book--A book containing one or more stories or tales, with a smaller number of illustrations.

Strathmore Paper--A brand name for a good weight of drawing paper and a separate water color paper.

Style--The specific or characteristic manner of expression, execution, construction or design in any art.

Tempera--An identifying name for poster paints, but it more specifically refers to a medium which uses the yolks and whites of eggs, water and dry powder pigments.

Vellum--A fine kind of parchment prepared from calf skin, lamb skin or kid skin used as writing parchment for a manuscript.

Water Color--A pigment mixed with water instead of oil.

Woodcut--An engraving on wood, or a print or impression from such an engraving.

High I.Q.--The classification of subjects who scored 110 and above on the Peabody Picture Vocabulary Test (Form A).

Average I.Q.--The classification of those subjects who scored between 90 and 109 on the Peabody Picture Vocabulary Test (Form A).

Low I.Q.--The classification of those subjects who scored 89 or below on the Peabody Picture Vocabulary Test (Form A).

High Socio-Economic Status--Identification of the status of those children who attended the school that has 03% participation of the Federal Free Lunch Program, which is derived by the related income of the head of the household and the number of members in the family, as specified on the application form.

Middle Socio-Economic Status--Identification of those children who attended the school that has 45% participation of the Federal Free Lunch Program, which is derived by the related income of the head of the household and the number of members in the family, as specified on the application form.

Low Socio-Economic Status--Identification of the status of those children who attended the school that has 90% participation of the Federal Free Lunch Program, which is derived by the related income of the head of the household and the number of members in the family, as specified on the application form.

CHAPTER II

BACKGROUND INFORMATION

The picture book, with its brevity and visual emphasis, is almost by definition fitted to the young child's needs. It is a picture story in the purest sense, with more space given to illustrations than words. It offers an ideal opportunity to reach and delight children at the age level when it will count the most.

The body of good picture book literature has gradually accumulated over the past seventy years. Areas of research have tried to discover the types of illustrations that children viewing picture books seem to prefer. Recent studies pertaining to this typic may be grouped into categories. Background information for this study has been identified under these categories: (1) Subject Matter of Pictures, (2) Story Content and Illustrations, (3) Drawing Styles and Techniques, (4) Art Media and (5) Caldecott Background.

Since this investigation deals primarily with elementary school children, only the studies dealing with this age group have been included in this summary. No studies parallel to this investigation have been reported in related literature.

Subject Matter of Pictures

All people working with children's literature should be capable of critically evaluating pictures as well as texts. DeFlippo[8] criticized picture content and shares the findings of the Allen Nilson Study. This was a study of Caldecott Winners and runners-up for the past twenty years which represented eighty books in all. She found 386 females illustrated in comparison with 579 males. All of the books had at least one male character but females were omitted altogether from six books and in one fourth of the sample only token females were found.

Picture Books are identified with children ages 6-9. Carol Lauritzen,[9] chairman, and the Beta Upsilon Chapter of Pi Lambda Theta identified subject areas of picture book illustrations and conducted a study to discover interests of 811 respondents classified by age. Seven year old boys liked stories about animals, and girls preferred both exciting and funny books and animal stories as favorite categories. Eight year old boys preferred animals, science and history, but the girls gave all ten votes to animals. Nine year old boys favored first and foremost animal stories, then stories about

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[8]Kathy Byrne DeFlippo, "Little Girls and Picture Books: Problem and Solution," Reading Teacher 29 (April 1976): 671-73.

[9]Carol Lauritzen, Chairman, Beta Upsilon Chapter, Pi Lambda Theta, "Children's Reading Interests Classified by Age Level," Reading Teacher 27 (April 1974): 694-96.

transportation, science and sports, but girls preferred stories about animals followed by mysteries and stories about people.

Among the various learning skills that first graders bring with them to the classroom, the ability to interpret or "read a picture," has been suggested as an indicator of school readiness. The skills involved in learning to "read a picture" are learned through examining picture books and other sources, asking questions about them, and being stimulated to make judgments about the pictures. They show the ability to recognize objects and situations. Aliotti[10] reported the study of 120 first grade children from the lower East Side of New York City. The study utilized an objectively scored "true-false" picture interpretation test and pretested children from kindergarten through sixth grade. Culturally disadvantaged children scored below the expected average on the ability to "read pictures." Clearly the advantaged first grade children were superior to their disadvantaged peers on this test measure.

As an authority in the area of reading instruction, Betts[11] commented that interesting and interpretive illustrations are needed. It is his opinion that well-illustrated

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[10]Nicholas C. Aliotti, "Ability to Read a Picture in Disadvantaged First Grade Children," Reading Teacher 24 (May 1971): 3-6.

[11]Emmett Albert Betts, The Prevention and Correction of Reading Difficulties (Evanston, Illinois: Row Peterson and Co., 1936), p. 19.

books help to build concepts and motivate the slow learner.

Ronald C. Cramer[12] summarized recent opinion by saying:

> The whole world of literature can be opened up to children by reading to them. The enjoyment of books can be shared. Keep in mind the age and interest levels. Picture Books have many interesting stories and pictures. As children read or listen their facial expressions and bodily movements are clues to their enjoyment, frustration or excitement.

Story Content and Illustrations

Storytime offers a wonderful opportunity for children to think about and express their feelings about themselves. Where the Wild Things Are (Sendak) tells of being sent to bed without any supper; Peter's Chair (Keats) tells of rejection of a new baby or sibling; and Someday (Zalatow) offers readers a chance to daydream about wishes and laugh at failures. Robert H. LaFlamme[13] cited these as a few of the examples of the many, many books that show emotions of children. These books are in the Picture Book category.

Earlier children's books included death and pictures of death to encourage their devotion to God, and to teach them how to die. Stories and pictures of the emotion of death were studied by Carr[14] who generalized:

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[12]Ronald C. Cramer, "Reading to Children: Why and How," Reading Teacher 21 (February 1975): 460-63.

[13]Robert H. LaFlamme, "More Meaningful Storytime in Kindergarten," Elementary English 52 (April 1975): 369-72.

[14]Robin L. Carr, "Death as Presented in Children's Books," Elementary English 52 (April 1974): 449.

> That all living things are born and die is a universal truth which is often presented in children's books. In most cases, death is not the major theme which the author is trying to present in his writing; it is simply a vehicle to enable him to initiate a plot. Nevertheless, death is a theme which children are interested in and will take time to scrutinize whenever presented. Examples include stories such as Snow White, where the wicked queen gets her just rewards, or, in Three Billy Goats Gruff, in which the wicked Troll is killed.

Friendship is a theme of many Picture Books. Carolyn Sherman[15] studied the content of books with this theme, and suggested such books as I Have a Friend, The Two Friends, Who Will Be My Friend? and others such as Katie Goes to Camp and Best Friends for Frances. These books have positive and colorful pictures that build important concepts which start during childhood.

The behavior and story content of the picture book characters play a great, if not greater role, than their sex in influencing or determining children's enjoyment of the stories. Frasher[16] reported that Pippi Longstockings was read to 31 third grade children and the survey revealed that boys do read and enjoy stories in which females are predominate but the characters needed to be female fantasy characters.

The study of 100 picture story books, conducted by

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[15]Carolyn Sherman, "Friendship as Portrayed in Children's Books," Elementary English 52 (April 1974): 449.

[16]Ramona S. Frasher, "Boys, Girls and Pippi Longstockings," Reading Teacher 30 (May 1977): 860-63.

White[17] did not reveal any way in which picture story books could be classified as a closed group of plot actions. He did suggest certain grouping in regard to the logical plot and plot segments.

The plot must be interesting enough to keep the attention of the reader or listener. Frazer and Schatz,[18] in a study of second grade children, found that after these subjects had a picture book read to them they could gain relevance to individualized reading and develop concern for the arts in education.

The intensity of the plot was a necessity to maintain interest, in the study of 2500 kindergarten children in California. Data indicated that, first and foremost, children desired to look at the book and have the story retold by the teacher. Cappa[19] used a ten point interest inventory of his own creation to record these preferences.

Gifted children are still children, not adults, and the gifted child quite normally devotes part of his reading to books which are easy reading. These books may help him let up with more exacting reading, or give him a running start

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[17]Mary Lou White, "A Structural Description of Picture Books," Elementary English 52 (April 1975): 495-98.

[18]Alexander Frazier and Esther E. Schatz, "Teaching a Picture Book as Literature," Elementary English 43 (January 1966): 44-49.

[19]Dante Cappa, "Kindergarten Children's Spontaneous Responses to Storybooks Read by Teachers" (Doctoral dissertation, University of California, Berkeley, 1953).

in a new field of content which introduces concepts, special vocabulary and ways of thinking in the content. Leland B. Jacobs[20] felt that many adult books should be left for adulthood and the gifted child should be allowed "the quite normal pursuit of being less than one's best at some times." It also lets him be "in with the other children" and be able to talk with them about the books that they have read.

Agnes G. Gunderson[21] read fourteen books to the subjects in her study. She surmised that the influence of illustrations was strong but the story content was stronger. Story and picture content most favored were: humor, excitement, suspense, adventure and a good ending.

Three individuals interested in research in the Chicago area worked as a unit to discover the favorite book of elementary age children. In this study by Witty, Comer and McBean,[22] the favorite books selected were books about animals.

Drawing Styles and Techniques

Drawing styles suggest an interesting question. Should there be a special style of illustrations for children?

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[20]Leland B. Jacobs, "Books for the Gifted," The Reading Teacher 16 (May 1963): 429-30.

[21]Agnes G. Gunderson, "What Seven Year Olds Like in Books," Journal of Educational Research 27 (March 1957): 509-20.

[22]Paul Witty, Ann Comer, and Dilla McBean, "Children's Choices of Favorite Books: A Study Conducted in Ten Elementary Schools," The Journal of Educational Psychology 37 (May 1946): 266-78.

Margot Zemach, who illustrated the 1974 Caldecott Award Winning Book, stated:

> Children need detail, color and excellence--the best a person can do. I always think, when I'm drawing the view of a town or the inside of a hut: 'Would I have liked to live there?' One doesn't need meticulous authenticity of costume or architecture; to a certain extent, one can invent one's own style of dress and house shapes. But things have to be made real. The food has to be what you'd want to eat, the bed has to be what you'd want to get into right away. But, all in all, I'm not sure that one should consciously bear in mind that the drawings are meant for the gaze of children. I'd draw the same as I would for grown-ups.[23]

Knudsen[24] described the child's feeling for color by saying:

> The child will depend greatly on his emotional reaction to color. Primarily though, color is used with regard to subjective experiences. There are many different beliefs concerning the emotional content of colors. Probably the best solution would be that the color does have a powerful emotional implication for most people, but too rigidly defined pronouncements concerning the effects of color can never be made.

Charlotte Lam,[25] in her study of second grade children, discovered that second grade children are highly consistent in their rating of preferences for art styles used

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[23]Margot Zemach, "Caldecott Award Acceptance," Horn-book 50 (August 1974): 355-62.

[24]Estella Knudsen, Children's Art Education (Peoria, Illinois: Charles A. Bennett Co., 1957), p. 8.

[25]Charlotte Lam, "Pupil Preferences for Four Art Styles Used in Primary Reading Textbooks" (Doctoral dissertation, Oklahoma University, 1967).

in basal readers and preferred realistic art and muted-realistic art over and above people and animals in fantasy situations.

Realistic pictures were the preference of most of the subjects in a study by Rudisell.[26] They preferred a colored picture but would choose a realistic black and white picture over a less realistic colored one. She concluded that colored pictures made the material real and lifelike.

Another study concerned with the role of color in illustrations was conducted by Kinder.[27] He found that young children have a very considerable preference for colored pictures.

Techniques or processes that children may see in a book illustration may be learned first hand by them in school art classes and help them to visualize what they are seeing in a book. The processes used are weaving, dyeing, stitchery, modeling, carving, construction, glazing, painting, printing, arrangement or composition of parts into a pleasing pattern. The elements used are line, form, tone and texture. The principles which govern these elements are balance, repetition, transition and subordination. All of these can best be taught

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[26]Mabel Rudisell, "Children's Preferences for Color versus Other Qualities in Illustrations," Elementary School Journal 52 (April 1952): 444-51.

[27]James A. Kinder, Audio-Visual Materials and Techniques (New York: American Book Company, 1950), p. 109.

through practice and illustration. Callahan[28] identified and studied the importance of these processes for children.

In 1949, Ohlrogge[29] investigated children's preferences for illustrative techniques. She prepared booklets using illustrations of crayon drawings, design, fingerpainting, line drawing, sepia and water color. Subjects were second, fourth and sixth grade students. Collectively, the group preferred the crayon type illustration, and the second choices were water color and sepia.

A study by Wetstone and Friedlander[30] posed a negative enthusiasm for picture books. Their study was conducted with 247 children in kindergarten through third grade. The same stories were presented in exactly the same mode: live, TV or audio only. The questions were designed to probe the children's comprehension of the principal events of the preceeding story. The video medium was the most successful in commanding and sustaining children's attention enhancing their listening comprehension. The presence of the narrator did not offer this enhancing effect.

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[28]Opal Callahan, "Teaching Art in the Elementary Grades With a Short Historical Outline of the Growth of Art" (Master's thesis, Oklahoma University, 1938).

[29]Elizabeth S. Ohlrogge, "Children's Preferences in Book Illustrations" (Master's thesis, Indiana University, 1949).

[30]Harriet S. Wetstone and Bernard Z. Friedlander, "The Effect of Live, TV and Audio Story Narration of Primary Grade Children's Listening Comprehension," Journal of Educational Research 44 (September 1974): 32-35.

Art Media

There are various types of art media used to illustrate picture books. Each illustrator may choose the media he or she prefers to work with at a particular time. Books represent many lands, and creative communication requires a fluency of ideas, unusual patterns and the right picture for the right place. Creativity is a precious commodity, and the media brings it to the eyes of the viewer.

Medium may be defined as any means, agency or instrumentality of communication and art medium more specifically may be defined as any material used for expression in a drawing, sketch or portrait that is completed with any of a variety of materials and techniques which include: photographs, water color, woodcut, oils, tempera, gesso, preseparated and graphics that are strictly black and white or with color added.

The theory for its use in book illustrations may be described as an assignment challenging the artist to decide which elements of art will best suit his ideas and to fit the medium and technique to the spirit of the book. Each medium represents an accepted approach to illustrations as well as great art of the past. Five art media were identified in this study and several proponents of each are mentioned as well as honors they have received to add to the prestige of that particular technique.

In 1965, Fryatt wrote about the importance of pictures to children:

> Long ago the importance of pictures to children was established. Today the picture tube presents direct competition in many thousands of homes, with the picture book. We hope and expect, therefore, that the Caldecott Winners will reflect the best of contemporary art, as well as convey to children a warmth of color, action, clarity of thought and boldness of conviction that the young child especially needs.[31]

In order to appreciate each type of art media used in these illustrations an explanatory section is presented.

Water Color

Water color is one of the most popular forms of painting. It has some drawbacks for the artist. The paints dry so quickly that correction and alteration is difficult. Most water colors have soft pastel tones that do not lend themselves to rich deep coloring. As a result, most artists use water colors for dry, delicate, sketchy effects. The paints are most suitable when the artist wants to put a great deal of light into his picture.

Symeon Shimin, a New York artist has exhibited at the Whitney Museum of Art, The Art Institute of Chicago and the National Gallery of Art in Washington D.C. He has illustrated other books but The Paint Box Sea is especially adapted to water color.

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[31]Norma R. Fryatt, "Picture Books Today," in Newbery and Caldecott Medal Books 1956-1965, ed. Kingman (Boston: The Hornbook, Incorporated, 1965), p. 270.

Robert McCloskey attended the National Academy of Design in New York City. He was a Caldecott Medal Winner in 1942 and received his second Caldecott Medal in 1958. In 1964, Miami University awarded him an Honorary degree of Doctor of Literature. He has used water color extensively.

Each of the books illustrated by Nancy Echolm Burkert has won outstanding awards. These include a Notable Children's Book by the American Library Association and Best Book of the Year by School Library Journal. Another book won the ALA Notable Children's Award, as well as the Lewis Carroll Shelf Award and the Gold Medal of the Society of Illustrators. Her work is largely limited to water color.[32]

Tempera

Tempera is sometimes used as a general term for opaque water colors, particularly the inexpensive paints called poster paints. But the word tempera more specifically refers to a technique in which egg yolk is used as a binder. Tempera is a medium that uses the yolks and whites of eggs, water and dry powder pigments. Some kinds are made by mixing oily ingredients with glue like water solutions. Artists painting with tempera use panels coated with gesso. When tempera is correctly applied and built up in thin layers, it is neither transparent nor completely opaque.

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[32]David Larkin, The Art of Nancy Ekholm Burkett (New York: Harper and Row, Publishers, 1977), p. 6.

Kathryn Milhous uses mediums of all types but illustrated The Egg Tree with tempera and won the Caldecott Medal in 1951. Leo Politi won the medal in 1950 as did Nicholas Sidjakov in 1961. They both used tempera. Jo Polseno and Martha Alexander are also proponents of this medium.

Lynd Kendall Ward uses all mediums--including tempera. His works have earned him the 1942 Carteret Book Club Award for Best Book Illustrations, a Caldecott Medal, and he has had prints purchased for permanent collections of the Library of Congress and the Newark Museum, plus the Regina Medal in 1975.

Woodcut

Woodcut is a picture or design made from a block of wood. The block itself is also called a woodcut. Artists make most woodcuts from pine blocks, but different textures of wood may be used. The artist removes portions of the surface using chisels, gouges and knives. The artist must consider the force needed to cut it, and a knowledge that it has a tendency to splinter and ruin a design. The artist removes portions and the cutaway sections appear white in the final print and the uncut parts produce the desired images. The artist coats the uncut parts with ink and places a sheet of paper over the block. He rubs the paper with the palm of his hand or an object. The rubbing transfers the inked images onto the paper. To make colored woodcuts, the artist

generally uses colored ink and a number of separate blocks, one for each color. Each portion of block adds color to the picture but it is possible to add colors by over printing--one color over another.

Marcia Brown used woodcut for her Caldecott Winning book, Once A Mouse. She has received two Caldecott Medals, a Citation of Merit from the Society of Illustrators and was a United States Nominee for the Hans Christian Anderson Award in 1966.

Felix Hoffman used woodcut for the new editions of Grimm, Clement Hurd has illustrated over thirty five books, using woodcut on a number of them. John and Clare Ross were awarded the Louis Comfort Tiffany Grants for printmaking and were artists in residence with the United States International Artists in Romania and Yugoslavia.

Ed and Barbara Emberly have had the honor of the Caldecott Medal book, Drummer Hoff, being translated into Braille so that a blind mother can read it to a sighted child, and a film of the book was made in Czechoslovakia. This book was illustrated by woodcuts.

Color Separation

The artist using color separation begins with shades of black (the most important color, for it tells most of the story, and it is called the "key drawing"). Then one acetate sheet is placed over this, so that the artist can see

through the paper and visualize the black design. Then the red areas are painted. This drawing is attached to the key drawing by scotch tape and is folded back. The acetate sheet for the blue drawing is hinged on the right of this key drawing. The artist must present to the bookmaker not one drawing but four--one for each color of red, green, blue and yellow, so that when they are printed, one on top of another, the picture is put back together again. These overlays must fit exactly or a single error in the design will be noticed. But, if many areas are loosely put together one's eye accepts the looseness in its entirety.[33]

Barbara Cooney is considered to be a master at this craft. She is a member of the Art Students League of New York and has illustrated over 60 books. She was a Caldecott Winner in 1958.

Adrienne Adams has used color separation and has had two of her books as runners-up for the Caldecott Medal. She received the Alumnae Achievement Award from Stephens College in 1964.

Maurice Sendak received the Caldecott Medal in 1964, and has had Honor Books for six other years. The Caldecott Medal Book was illustrated by color separation. Another term for color separation is pre-separated.

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[33]Adrienne Adams, "Color Separation," in Illustrators of Children's Books 1957-1966, ed. Lee Kingman, Joanna Foster, and Ruth Giles Lontoft, pp. 28-35.

Graphic

Graphic is a term used to denote pencil, pen and ink, serigraphy and charcoal materials used in illustrations. One may compose on a piece of tracing paper and then transfer the design to a piece of Strathmore paper and work out with a pencil study. Then use a small brush. If colored inks are desired, they are then added and the underdrawings are erased.

Lois Lenski preferred pen and ink. She claimed "simple ink drawings can mean more to a child than a confusion of color."[34]

Imero Cobbato, a graduate from Venice's Royal Institute of Art, stated:

> I have not found yet a medium which surpasses the old pen and ink in capacity for detail, chiaroscural richness or affinity for photographic reproduction.[35]

Eleanor Frances Lattimore worked primarily in black and white using brush and ink. However others, such as Margot Zemach, have preferred to add color to the drawings.

Marie Hall Ets has written and illustrated seventeen books and has received a Caldecott Medal for a book with graphic illustrations several times. Two books have been

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[34]Joanna Foster, "Biographies," in Illustrators of Children's Books 1957-1966, ed. Lee Kingman, Joanna Foster, and Ruth Giles Lontoft, p. 139.

[35]Ibid., p. 115.

Honor Books at the New York Herald Tribune Spring Book Festival, and Play With Me was chosen for the Hans Christian Anderson Medal.

Caldecott Background

The Caldecott Medal is awarded by the Children's Services Division of the ALA to the artist of the most distinguished picture book for children published in the United States during the previous year. The award is given to the artist who must be a citizen or resident of the United States, whether or not he is the author of the text. If the book of the year is nominated for both the Newbery and Caldecott Awards, the committee decides under which heading it shall be voted upon, so that the title shall not be considered on both ballots.[36]

The Newbery-Caldecott Committee is now composed of twenty-three Division members and represents all kinds of libraries serving boys and girls. It is composed of the four officers of the Division, the Book Evaluation Committee's five members, eight members selected in the annual C.S.D. spring election, and six members appointed by the C.S.D. president. The vice-president of the Children's Services Division is the chairman of this committee.

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[36]American Library Association, Children's Services Division; Newbery Caldecott Awards Committee Bulletin, August, 1972.

In order to win either award, a book must receive twelve first choice votes (four points each) for a total of forty-eight points, with a twelve point lead over the next in line.

The calendar for selecting and presenting the awards is as follows:

November

Children's Services Division members receive nominating blanks for Medal Books.

December

Membership nominations are tabulated and sent to Newbery-Caldecott Committee.

January-February

Newbery-Caldecott Committee members meet at ALA Mid-winter conference to discuss nominated books.

Ballots to conclusion.

March

Medals presented to winning author and artist, in New York (on first Monday of month, if possible).

Public announcements.

(Medals remain in chairman's possession until next conference of ALA).

Annual summer conference of American Library Association Banquet in honor of award winners and public presentation of engraved medals. Their addresses of acceptance.[37]

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[37]Irene Smith, A History of the Newbery and Caldecott Medals (New York: The Viking Press, 1957), p. 75.

When the American Library Association convened in New York on June 24, 1937, the children's librarians accepted the offer of Frederic Melcher for a medal for illustrations of the children's books. Soon after, Frederic Melcher, the donor of the medal set down his reasons for making the new medal for Randolph Caldecott.

> First: we should not use the name of a living person. Secondly: in the history of the picture book, Caldecott has an important place. Thirdly: it supplies us with a name that has pleasant memories--memories connected with the joyousness of picture books as well as their beauty. Whatever direction new books may take, I think that joyous and happy approach is one we should be gently reminded of.[38]

Chambellan, well known for his work on the low-relief sculpture in Rockefeller Center, was chosen by Frederic Melcher to design the medal. Mr. Melcher stated:

> I gave the sculptor, Rene Chambellan, a collection of Caldecott's books, not specifying that the Caldecott designs should be used, but wishing him to understand the spirit of Caldecott and the reasons for his continuing value. Mr. Chambellan became so delighted with Caldecott's draftsmanship that he immediately said he could do nothing better than put a few typical scenes on the medal, and this he has done.[39]

The sculptor happily captured the spirit of John Gilpin taking his famous ride, for the face of the medal. The other side pictures the pie, containing four-and-twenty blackbirds, being set before the king. It was first struck in bronze and continues to be made of this metal.

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[38]Ibid., p. 65.

[39]Ibid.

Randolph Caldecott helped to bring in the new age of the picture book much to the delight of book lovers everywhere. Mr. Caldecott started his career by illustrating some books for Edmund Evans. These were printed in color. He is one of the first to make picture books. It was with these sixteen books that he became into being. During the following years he contributed many illustrations to the publishing industry. Historians have referred to his artistic ability and special suitability that made him a good illustrator for children.[40]

Summary

Literature has presented a good cross-section of the content of Picture Books in relation to pictures and stories. These studies revealed:

1. Illustrations in color are preferred by most children.
2. Pictures and stories about animals are first choice preferences by both boys and girls.
3. Children prefer realistic art over fantasy situations.
4. Many children's books have emotions entwined in the stories and illustrations.

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[40]MacCann, The Child's First Books, p. 14.

5. More Caldecott Winning Books have male characters than female characters.
6. Gifted children enjoy Picture Books and easy reading as well as "in depth" studies.
7. "Reading a picture" is considered an indicator of school readiness among first grade children.
8. Boys will read stories about girls if the female characters are fantasy characters.
9. Interesting and interpretive illustrations are needed to motivate the slow learner.

CHAPTER III

ANALYSIS AND INTERPRETATION OF DATA

This study was concerned primarily with determining the art media preferences of children in the first and second grade when given a choice for five art media used in illustrations of Caldecott Winning books. An integral component of the study was an investigation of the influences of intellectual ability, gender and socio-economic environment on these preferences.

The determinant of intellectual ability was the Peabody Picture Vocabulary Test. Socio-economic designations were formulated by the identification of factors relating to the Federal Free Lunch Program in the participating schools.

The basic data used to make statistical evaluation of the media preferences were oral responses of the participating students giving first, second and third preferences for art media. The interaction between the student and the investigator was on a one-to-one basis. First, second and third choices were recorded. Independent assessments were made of the first, the second and the third choices. The

general hypothesis was stated that there are no statistically significant differences in the choices of books based on art media by students of selected schools in southeastern Oklahoma with respect to levels of intelligence, gender and socio-economic status.

The art media categories are listed on the Tables by an identifying numerical symbol with 1=Water Color, 2=Woodcut, 3=Tempera, 4=Pre-Separated and 5=Graphic (with color). The Chi Square with Yate's Correction was used for testing the differences statistically. The level of significance was at the .05 level.

First Choice Preferences

An assessment was made of the first choice preferences of all media categories by the group representing intelligence to determine if any significance prevailed in the total group response.

TABLE 1

FIRST CHOICE PREFERENCES OF ALL MEDIA CATEGORIES BY COMBINED LEVELS OF INTELLIGENCE

	Art Media Categories					
	1	2	3	4	5	Total
O	16	30	8	9	27	90
E	18	18	18	18	18	90

$x^2=20.514$
df=8

This analysis verifies a positive significance at the .05 level. This relevancy pertains to the total group. The study now extends to the procedure of questioning whether strengths occur among any particular segment of the total Intelligence Group.

TABLE 2

COMPARISON OF FIRST CHOICE PREFERENCES OF STUDENTS BY INTELLIGENCE

	Art Media Categories					
	1	2	3	4	5	Total
High	5	11	1	2	11	30
Average	5	10	4	3	8	30
Low	6	9	3	4	8	30

$x^2=1.443$
df=8

The interpretation is that there were no statistically significant differences in first choice preferences of students of intelligence groups in relation to art media illustrations. Each group had its own preference that is not identical with the others but there was a consistency of the first three preferences and a variation of choices in the last two.

TABLE 3

RANKED FIRST CHOICE ART MEDIA CATEGORIES BY THE HIGH INTELLIGENCE GROUP

First:	Woodcut Graphic	Third:	Pre-Separated
Second:	Water Color	Fourth:	Tempera
		Fifth:	None

TABLE 4

RANKED FIRST CHOICE ART MEDIA CATEGORIES BY THE AVERAGE INTELLIGENCE GROUP

First:	Woodcut	Fourth:	Tempera
Second:	Graphic	Fifth:	Pre-Separated
Third:	Water Color		

TABLE 5

RANKED FIRST CHOICE ART MEDIA CATEGORIES BY THE LOW INTELLIGENCE GROUP

First:	Woodcut	Fourth:	Pre-Separated
Second:	Graphic	Fifth:	Tempera
Third:	Water Color		

Cells of the male and female responses were examined to see if any differences existed.

TABLE 6

COMPARISON OF FIRST CHOICE PREFERENCES OF CATEGORIES BY SEX

	Art Media Categories					
	1	2	3	4	5	Total
Male	11	16	3	3	12	45
Female	5	14	5	6	15	45

$x^2=1.914$
df=4

The inference drawn from these figures was that there was no statistically significant difference in art media preferences by gender.

TABLE 7

RANKED FIRST CHOICE ART MEDIA CATEGORIES
BY MALE STUDENTS

First:	Woodcut	Fourth:	Pre-Separated Tempera
Second:	Graphic		
Third:	Water Color	Fifth:	None

TABLE 8

RANKED FIRST CHOICE ART MEDIA CATEGORIES
BY FEMALE STUDENTS

First:	Graphic	Fourth:	Water Color Tempera
Second:	Woodcut		
Third:	Pre-Separated	Fifth:	None

Subjects of the study were divided into three levels of socio-economic circumstances and represented all ninety students that were participants in the study. The responses of the total group in regard to media preferences were tallied to determine if there was any significance in regard to art media categories.

TABLE 9

FIRST CHOICE PREFERENCES OF ALL MEDIA CATEGORIES
BY COMBINED SOCIO ECONOMIC LEVELS

	Art Media Categories					
	1	2	3	4	5	Total
O	16	30	8	9	27	90
E	18	18	18	18	18	90

$\chi^2=20.514$
df=8

These figures disclosed that there was a significance of preference at the .05 level to the total categories. A continuance of the study was processed to see if any strengths occurred among the socio-economic levels.

TABLE 10

COMPARISON OF FIRST CHOICE PREFERENCES OF STUDENTS BY SOCIO-ECONOMIC LEVELS

	Art Media Categories					
	1	2	3	4	5	Total
Upper	5	12	1	4	8	30
Middle	7	9	4	3	7	30
Lower	4	9	3	2	12	30

$X^2=2.586$
df=8

The value of Chi Square indicated that there was no statistically significant difference in first choice preferences of students of Socio-Economic levels in relation to art media illustrations, but they did show a general preference for woodcut and graphic categories.

TABLE 11

RANKED FIRST CHOICE ART MEDIA CATEGORIES BY THE UPPER SOCIO-ECONOMIC LEVEL

First:	Woodcut	Fourth:	Pre-Separated
Second:	Graphic	Fifth:	Tempera
Third:	Water Color		

TABLE 12

RANKED FIRST CHOICE ART MEDIA CATEGORIES BY THE MIDDLE SOCIO-ECONOMIC LEVEL

First:	Woodcut	Third:	Tempera
Second:	Water Color	Fourth:	Pre-Separated
	Graphic	Fifth:	None

TABLE 13

RANKED FIRST CHOICE ART MEDIA CATEGORIES BY THE LOWER SOCIO-ECONOMIC LEVEL

First:	Graphic	Fourth:	Water Color
Second:	Woodcut	Fifth:	Pre-Separated
Third:	Tempera		

Second Choice Preferences

Motivation by verbal directions for second choice preferences was utilized and the application of the same procedure of selection was used for this step in the total research pattern. Each student asserted that his second choice was as meaningful to him as the first choice, even though it received a lesser degree of prominence or importance. To secure a knowledge of any significance of the second choice preferences of all media categories by the intelligence group the following data was tested.

TABLE 14

SECOND CHOICE PREFERENCES OF ALL MEDIA CATEGORIES BY COMBINED LEVELS OF INTELLIGENCE

	Art Media Categories					
	1	2	3	4	5	Total
O	23	21	8	13	25	90
E	18	18	18	18	18	90

$X^2=9.954$
df=8

No statistical significance by categories was shown at the .05 level and then emphasis was placed on the differences of second choice preferences by students of the Intelligence Groups.

TABLE 15

COMPARISON OF SECOND CHOICE PREFERENCES OF STUDENTS BY INTELLIGENCE GROUPS

	Art Media Categories					
	1	2	3	4	5	Total
High	9	5	2	7	7	30
Medium	10	9	3	4	4	30
Low	4	7	3	2	14	30

$X^2=8.978$
df=8

No significant difference at the .05 level was found to exist among the subjects of the varying intelligence levels in the distribution of second choice responses of art media used in the illustrations under consideration.

TABLE 16

RANKED ART MEDIA CATEGORIES AS SECOND CHOICES BY THE HIGH INTELLIGENCE GROUP

First:	Water Color	Third:	Woodcut
Second:	Pre-Separated Graphic	Fourth:	Tempera
		Fifth:	None

TABLE 17

RANKED ART MEDIA CATEGORIES AS SECOND CHOICES BY THE AVERAGE INTELLIGENCE GROUP

First:	Water Color	Fourth:	Tempera
Second:	Woodcut	Fifth:	None
Third:	Pre-Separated Graphic		

TABLE 18

RANKED ART MEDIA CATEGORIES AS SECOND CHOICES BY THE LOW INTELLIGENCE GROUP

First:	Graphic	Fourth:	Tempera
Second:	Woodcut	Fifth:	Pre-Separated
Third:	Water Color		

Cells of the male and female second choice responses were examined to see if there were any differences in preferences.

TABLE 19

COMPARISON OF SECOND CHOICE PREFERENCES OF CATEGORIES BY SEX

	Art Media Categories					
	1	2	3	4	5	Total
Male	15	11	4	4	11	45
Female	8	10	4	9	14	45

$X^2=2.956$
df=4

By examining the value of Chi Square and the 9.488 value needed for the level of significance we found that there is no significant difference in the second choice selection by gender.

TABLE 20

RANKED ART MEDIA CATEGORIES AS SECOND CHOICE BY MALE STUDENTS

First:	Water Color	Third:	Tempera
Second:	Woodcut		Pre-Separated
	Graphic	Fourth:	None
		Fifth:	None

TABLE 21

RANKED ART MEDIA CATEGORIES AS SECOND CHOICE BY FEMALE STUDENTS

First:	Graphic	Fourth:	Water Color
Second:	Woodcut	Fifth:	Tempera
Third:	Pre-Separated		

These tables show that the first ranked choices by gender were not identical but the second choice of Woodcut was consistent.

An assessment of the category preferences of the socio-economic level was given to determine if there was a significant statistical difference in the choices by the ninety subjects in the socio-economic level.

TABLE 22

SECOND CHOICE PREFERENCES OF ALL MEDIA CATEGORIES BY COMBINED SOCIO-ECONOMIC LEVELS

	Art Media Categories					
	1	2	3	4	5	Total
O	23	21	8	13	25	90
E	18	18	18	18	18	90

$X^2=9.954$
df=8

There was no statistical significance in the second choice of media categories by the Socio-Economic level.

TABLE 23

COMPARISON OF SECOND CHOICE PREFERENCES BY STUDENTS OF SOCIO-ECONOMIC LEVELS

	Art Media Categories					
	1	2	3	4	5	Total
Upper	9	4	1	6	10	30
Middle	6	11	2	4	7	30
Lower	8	6	5	3	8	30

$X^2=5.460$
df=8

No significant differences were found to exist among the subjects of the varying socio-economic levels in the distribution of second choice responses of the preferences of art media used in illustrations.

TABLE 24

RANKED ART MEDIA CATEGORIES AS SECOND CHOICES BY STUDENTS OF THE UPPER SOCIO-ECONOMIC LEVEL

First:	Graphic	Fourth:	Woodcut
Second:	Water Color	Fifth:	Tempera
Third:	Pre-Separated		

TABLE 25

RANKED ART MEDIA CATEGORIES AS SECOND CHOICES BY STUDENTS OF THE MIDDLE SOCIO-ECONOMIC LEVEL

First:	Woodcut	Fourth:	Pre-Separated
Second:	Graphic	Fifth:	Tempera
Third:	Water Color		

TABLE 26

RANKED ART MEDIA CATEGORIES AS SECOND CHOICES BY STUDENTS OF THE LOWER SOCIO-ECONOMIC LEVEL

First:	Graphic	Third:	Pre-Separated
Second:	Water Color	Fourth:	None
	Woodcut	Fifth:	None
	Tempera		

Third Choice Preferences

To procure depth in the study third choice preferences were secured and tallied to register the art media preferences of the sample of the study. The Intelligence Group had these third choice preferences in relation to all categories.

TABLE 27

THIRD CHOICE PREFERENCES OF ALL MEDIA CATEGORIES BY COMBINED LEVELS OF INTELLIGENCE

	Art Media Categories					
	1	2	3	4	5	Total
O	18	28	11	12	21	90
E	18	18	18	18	18	90

$X^2=9.389$
df=8

The above figures of 9.389 of the needed 15.507 for significance at the .05 level indicated that there was no statistical significance in the third choice preference of a media category by the intelligence group as a whole but there was a stronger general choice for the woodcut medium. Further depth of study was pursued to see if significance occurred within the groups.

TABLE 28

COMPARISON OF THIRD CHOICE PREFERENCES OF STUDENTS BY INTELLIGENCE

	Art Media Categories					
	1	2	3	4	5	Total
High	9	9	4	3	5	30
Average	2	13	2	3	10	30
Low	7	6	5	6	6	30

$X^2=7.572$
df=8

The interpretation of these findings showed that no statistical significance occurred among these groups; however, one-third of the students preferred the woodcut medium as their third choice.

TABLE 29

RANKED THIRD CHOICE ART MEDIA CATEGORIES BY THE HIGH INTELLIGENCE GROUP

First:	Water Color Woodcut	Fourth:	Pre-Separated
		Fifth:	None
Second:	Graphic		
Third:	Tempera		

TABLE 30

RANKED THIRD CHOICE ART MEDIA CATEGORIES BY THE AVERAGE INTELLIGENCE GROUP

First:	Woodcut	Fourth:	Water Color Tempera
Second:	Graphic		
Third:	Pre-Separated	Fifth:	None

TABLE 31

RANKED THIRD CHOICE ART MEDIA CATEGORIES BY THE LOW INTELLIGENCE GROUP

First:	Water Color	Third:	Tempera
Second:	Graphic	Fourth:	None
	Woodcut	Fifth:	None
	Pre-Separated		

TABLE 32

COMPARISON OF THIRD CHOICE PREFERENCES OF CATEGORIES BY SEX

	Art Media Categories					
	1	2	3	4	5	Total
Male	9	19	5	6	6	45
Female	9	9	6	6	15	45

$X^2=5.94$
df=4

The woodcut medium and the graphic medium were the general media preferences although neither category reached the level of significance used in this study.

TABLE 33

RANKED THIRD CHOICE ART MEDIA CATEGORIES BY MALE STUDENTS

First:	Woodcut	Fourth:	Tempera
Second:	Water Color	Fifth:	None
Third:	Pre-Separated		
	Graphic		

TABLE 34

RANKED THIRD CHOICE ART MEDIA CATEGORIES
BY FEMALE STUDENTS

First:	Graphic	Third:	Tempera
Second:	Water Color		Pre-Separated
	Woodcut	Fourth:	None
		Fifth:	None

These preferences were varied and did not form a pattern of generalization of student choices by sex.

The socio-economic ambiance from which these third choice preferences were made reflected the following interests as far as a favorite category was determined.

TABLE 35

THIRD CHOICE PREFERENCES OF ALL MEDIA CATEGORIES BY COMBINED SOCIO-ECONOMIC LEVELS

	Art Media Categories					
	1	2	3	4	5	Total
O	18	28	11	12	21	90
E	18	18	18	18	18	90

$X^2=9.389$
df=8

The X^2 value of 9.389 of the needed 15.507 value for significance at the .05 level disclosed that there was no statistical significance of the third choice preference of an art media category but there was a general preference for the woodcut medium.

TABLE 36

COMPARISON OF THIRD CHOICE PREFERENCES OF STUDENTS BY SOCIO-ECONOMIC LEVELS

	Art Media Categories					
	1	2	3	4	5	Total
Upper	4	11	6	2	7	30
Middle	6	8	2	6	8	30
Lower	8	9	3	4	6	30

$X^2=3.464$
df=8

These figures showed that there was no statistical significance in the third choice preference by students of the socio-economic level but one-third of them had a general preference for the woodcut art medium and a second general preference for the graphic art medium.

TABLE 37

RANKED THIRD CHOICE ART MEDIA CATEGORIES BY THE UPPER SOCIO-ECONOMIC LEVEL

First:	Woodcut	Fourth:	Water Color
Second:	Graphic	Fifth:	Pre-Separated
Third:	Tempera		

TABLE 38

RANKED THIRD CHOICE ART MEDIA CATEGORIES BY THE MIDDLE SOCIO-ECONOMIC LEVEL

First:	Woodcut Graphic	Third:	Tempera
Second:	Water Color Pre-Separated	Fourth: Fifth:	None None

TABLE 39

RANKED THIRD CHOICE ART MEDIA CATEGORIES BY THE LOWER SOCIO-ECONOMIC LEVEL

First:	Woodcut	Fourth:	Pre-Separated
Second:	Water Color	Fifth:	Tempera
Third:	Graphic		

Discussion of Data

Final compilation of the data concerning the art media preferences showed that the Intelligence Group preferred the woodcut art medium as first and third preferences with the graphic with color technique as their second choice. Male and female students averred their first choice was the woodcut medium by one third of the total sample selecting this medium as first preference. The graphic with color technique held their interest for second place while woodcut regained their interest for the third choice preference. One-third of the sample of the Socio-Economic level preferred the

woodcut medium as their first choice, graphic with color garnered second place and the group returned to woodcut for their third preference.

The favorite medium of the tallied three choices was designated to be the woodcut style of artistic endeavor while the graphic with color art style was listed in second place. Water color held their interest for third place and pre-separated and tempera held fourth and fifth places respectively.

CHAPTER IV

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to investigate the art media preferences of first and second grade students when they were given a choice of five types of art media used in Caldecott Award Winning books. All pupils of the sample were English speaking Caucasian children. This sample was proportionally taken from three elementary schools in Ada, Oklahoma. One third of the students were from Hayes Elementary School, one third were from Willard Elementary School and one third were from Washington Elementary School. The sub-groups germane to the study were intelligence, gender and socio-economic levels of the ninety students involved in the study. The subjects represented a ratio of one third from each school in the high intelligence range, one third from the average intelligence range and one third of the lower intelligence range. One half of each sub group were boys and one half were girls. The pupils from one school represented the upper socio-economic level, the pupils from one school were from the middle

socio-economic level and the pupils from one school were from the lower socio-economic level. Thus the predictive variables of intelligence, gender and socio-economic environment were controlled.

All subjects were administered the Peabody Picture Vocabulary Test to secure a fast assessment of intelligence placement and were classified as being in the high, average or low group. The socio-economic ambience was based on the number of students on the Federal Free Lunch Program in each school and was verified by the Superintendent of Schools. The Federal Free Lunch Program uses the cognate information of income of the head of the household and the number of members in the family.

The fifteen books used in this research represented a stratified random sample of all Caldecott Award Winning books with three books utilizing each of the five types of art media. Each book was read to the children in classroom groups, and the art media used in each was discussed. At the completion of the reading sessions, entailing all fifteen books, the students reexamined the books and gave individual oral preferences which were indicated on a checksheet by the investigator. Each pupil was questioned independently in order to minimize extraneous factors that might be involved in pupil choice. All students were identified by number eliminating a name of the identifying checksheet. The recording was a one point numerical value for each of the

first, second and third choices of the students in the study. These were independent assessments. All choices were tallied by groups and the Chi Square test of Significance with the Yate's Correction Factor was applied to the data. This statistical process first treated the categories as a whole by groups or levels, then it determined the inter-relationships between designated groups. To test the data the level of significance was set at the .05 level.

Findings

The findings of this study are:

1. All subjects combined showed a first choice preference for the woodcut category, which was statistically significant.
2. There was no statistically significant difference among groups in the first choice preference when compared by intelligence level.
3. There was no statistically significant difference in the first choice preference by sex.
4. There was no statistically significant difference in the first choice preferences among the high, average and low socio-economic levels.

5. All subjects combined showed a second choice preference for the graphic (with color) category, which was not statistically significant.
6. There was no statistically significant difference among groups in the second choice preference when compared by intelligence level.
7. There was no statistically significant difference in the second choice preference by sex.
8. There was no statistically significant difference in the second choice preferences among the upper, middle and lower socio-economic levels.
9. All subjects combined showed a third choice preference for the woodcut category, which was not statistically significant.
10. There was no statistically significant difference among groups in the third choice preference when compared by intelligence level.
11. There was no statistically significant difference in the third choice preference by sex.
12. There was no statistically significant difference in the third choice preferences among the upper, middle and lower socio-economic levels.

Conclusions

The results of this investigation showed that while the fractionated groups did not show any statistically significant differences in the preferences of art media used in illustrations, the first and second grade students did show a positive and predominant interest in the Woodcut art medium. Many children of all intelligence and socio-economic backgrounds seem to prefer it. Moreover, the study indicated a great interest in Graphic (with color) and Water Color art styles. This interest should be included in the general knowledge of those persons providing illustrated reading materials for children. Sufficient evidence was revealed that warranted a closer look at the number of books selected for children that use the Tempera medium in the illustrations if one is to keep the interest of the children and make the book meaningful to them.

Recommendations

From the findings of this study the following recommendations were made for further research:

1. Parallel studies should be conducted with different age groups.
2. Parallel studies should be made in other geographic areas.

3. Additional research should be conducted with different populations. Racial differences need to be researched.
4. Similar studies should be conducted using illustrations other than Caldecott Award Winning books.
5. Identify change in art media preferences through periodic studies.
6. Similar studies should be made of children from urban and rural areas.
7. The findings of this study should be used by librarians in selecting and purchasing books for children of this age.

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APPENDICES

APPENDIX A

CALDECOTT BOOKS USED IN THE STUDY

CALDECOTT BOOKS USED IN THE STUDY

Listed by titles:

Baboushka and the Three Kings, written by Ruth Ribbins, illustrated by Nicholas Sidjakov. (Berkeley, California: Parnassus Press, 1960).

The Biggest Bear, written and illustrated by Lynd Ward. (Boston: Houghton Mifflin Co., 1952).

Chanticleer and the Fox, adapted and illustrated by Barbara Cooney. (New York: Thomas Y. Crowell Company, 1958).

Drummer Hoff, written by Barbara Emberley, illustrated by Ed Emberley. (Englewood Cliffs, N. J., Prentice-Hall, Inc., 1967).

The Egg Tree, written and illustrated by Kathryn Milhous. (New York: Charles Scribner's Sons, 1950).

Frog Went A-Courtin', written by John Langstaff, illustrated by Feodor Rojankovsky. (New York: Harcourt, Brace and World, Inc., 1955).

The Funny Little Woman, written by Arlene Mosel, illustrated by Blair Lent. (New York: E. P. Dutton and Company, Inc., 1972).

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A Story A Story, retold and illustrated by Gail E. Haley. (New York: Antheneum, 1970).

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APPENDIX B

EVALUATION OF PEABODY PICTURE VOCABULARY TEST

EVALUATION OF THE PEABODY PICTURE VOCABULARY TEST

Content validity was built into the test when a complete search was made of Webster's New Collegiate Dictionary (G&C Merriam, 1953) for all the words whose meaning could be depicted by a picture. The restriction was the omission of words which could not be illustrated. Since a good cross section was obtained of words in common use today in the United States, and since care was taken to keep the final selection of response and decoy items unbiased, the final product is assumed to meet adequate standards for a picture vocabulary test. Evidence to support the concept of construct validity may be found in the following statements. For the Revised Stanford-Binet Test of Intelligence, (see Terman, L. M. and Merrill, Maude A. Measuring Intelligence. Boston: Houghton Mifflin, 1937, p. 302) Terman and Merrill have stated: "We have found the vocabulary test to be the most valuable single test in the scale." For the Wechsler Intelligence Scale for Children Manual (New York: Psychological Corporation, 1949, p. 10) Wechsler found the vocabulary sub-test scores to correlate more highly with Full Scale I.Q. scores than any other sub-test.

Item validity was established by selecting individual words where the per cent of subjects passing increased from one age group to the next. Only items demonstrating linear, steep growth curves were retained. The effectiveness of the item selection was clearly demonstrated when mean raw scores for the standardization population were calculated and plotted against age.

Congruent validity shows that PPVT scores correlated with the Binet mental age scores over the range 0.60 to 0.87 with a median of 0.71. The PPVT I.Q. scores correlated with the WISC-F over the range 0.30 to 0.84 with a median of 0.61.*

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*Lloyd M. Dunn, Peabody Picture Vocabulary Test Manual (Circle Pines, Minnesota: American Guidance Service, Inc., Publisher's Building, 1965), pp. 32-33.

APPENDIX C

PERMISSION SIGNATURE FOR THE SURVEY

April 12, 1978

ATTENTION:
Dissertation Committee
Elementary School Principals
First and Second Grade Teachers

Mrs. Wanda Flowers, a Graduate Student at the University of Oklahoma, has my permission to pursue the study related to the "Preference of Art Media Used in Illustrations of Caldecott Award Winning Books."

Mack D. Skelton
(Supt. of Schools

APPENDIX D

RECORDING FORM FOR

STUDENT PREFERENCES

RECORDING FORM

Analysis of Student Numbers

Sex:---Column 1
Male (1) Female (2)

Socio-Economic Levels:---Column 2
High (3) Middle (2) Low (1)

I.Q. Range:---Column 3
High (3) Average (2) Low (1)

Sequence of Random Samplings:---Column 4
(1) (2) (3) (4) (5)

Student Number_____

STUDENT CHOICES OF MEDIA

1._____

2._____

3._____

APPENDIX E

RAW DATA TABLES

TABLE 40

TOTAL RAW DATA PREFERENCE RESPONSES OF SUBJECTS IN THE HIGH INTELLIGENCE GROUP

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1331	--3	1--	---	---	-2-
1332	-2-	--3	---	---	1--
1333	---	1--	---	---	-23
1334	---	--3	---	-2-	1--
1335	---	1--	--3	-2-	---
2331	-23	---	---	---	1--
2332	---	1--	--3	-2-	---
2333	1--	---	--3	---	-2-
2334	-2-	---	---	---	1-3
2335	--3	---	---	1--	-2-
1231	12-	--3	---	---	---
1232	1--	-2-	--3	---	---
1233	--3	-2-	---	---	1--
1234	123	---	---	---	---
1235	---	-2-	---	---	1-3
2231	--3	---	---	-2-	1--
2232	---	--3	---	-2-	1--
2233	---	1--	-2-	---	--3
2234	1-3	-2-	---	---	---
2235	-2-	1--	---	--3	---

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1131	---	1-3	-2-	---	---
1132	---	1-3	---	---	-2-
1133	-23	1--	---	---	---
1134	-2-	--3	---	---	1--
1135	-2-	---	---	--3	1--
2131	--3	---	---	12-	---
2132	---	12-	---	---	--3
2133	---	1--	---	--3	-2-
2134	---	--3	---	---	12-
2135	---	--3	1--	-2-	---
		Total			
First Choice	5--	11--	1--	2--	11--
Second Choice	-9-	-5-	-2-	-7-	-7-
Third Choice	--9	--9	--4	--3	--5

TABLE 41

TOTAL RAW DATA PREFERENCE RESPONSES OF SUBJECTS IN THE AVERAGE INTELLIGENCE GROUP

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1321	12-	--3	---	---	---
1322	---	1-3	-2-	---	---
1323	---	--3	---	---	12-
1324	---	12-	---	---	--3
1325	12-	--3	---	---	---
2321	---	--3	---	12-	---
2322	---	1--	---	---	-23
2323	---	--3	1--	-2-	---
2324	1--	-2-	---	---	--3
2325	-2-	---	---	--3	1--
2221	---	12-	---	---	--3
2222	-2-	--3	---	---	1--
2223	---	12-	---	---	--3
2224	---	---	1--	-2-	--3
2225	---	-23	1--	---	---
1221	---	123	---	---	---
1222	--3	---	---	1--	-2-
1223	-2-	1--	---	---	--3
1224	---	--3	---	-2-	1--
1225	-2-	1-3	---	---	---

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1121	-2-	1--	---	---	--3
1122	---	--3	-2-	1--	---
1123	12-	--3	---	---	---
1124	---	-2-	---	--3	1--
1125	---	-2-	1-3	---	---
2121	-2-	1--	---	---	--3
2122	1--	---	-2-	--3	---
2123	---	-2-	--3	---	1--
2124	-23	---	---	---	1--
2125	---	---	---	---	123
	Total				
First Choice	5--	10--	4--	3--	8--
Second Choice	-10-	-9-	-3-	-4-	-4-
Third Choice	--2	--13	--2	--3	--10

TABLE 42

TOTAL RAW DATA PREFERENCE RESPONSES OF SUBJECTS IN THE LOW INTELLIGENCE GROUP

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1311	-2-	--3	---	---	1--
1312	---	1--	---	--3	-2-
1313	1--	-23	---	---	---
1314	---	--3	---	1--	-2-
1315	-2-	1--	--3	---	---
2311	-2-	---	--3	1--	---
2312	--3	1--	---	-2-	---
2313	---	---	--3	---	12-
2314	---	1--	---	---	-23
2315	---	12-	---	---	--3
1211	1--	---	---	--3	-2-
1212	1--	--3	-2-	---	---
1213	--3	12-	---	---	---
1214	---	---	1--	--3	-2-
1215	---	-2-	1--	--3	---
2211	---	-2-	--3	---	1--
2212	---	---	---	1--	-23
2213	---	---	---	1-3	-2-
2214	---	1--	---	--3	-2-
2215	1--	---	---	---	-23

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1111	12-	---	--3	---	---
1112	--3	---	---	-2-	1--
1113	1--	---	---	---	-23
1114	--3	---	---	---	12-
1115	--3	12-	---	---	---
2111	--3	---	1--	---	-2-
2112	---	---	---	---	123
2113	---	1-3	-2-	---	---
2114	---	-23	---	---	1--
2115	--3	---	-2-	---	1--
	Total				
First Choice	6--	9--	3--	4--	8--
Second Choice	-4-	-7-	-3-	-2-	-14-
Third Choice	--7	--6	--5	--6	--6

TABLE 43

TOTAL RAW DATA PREFERENCE RESPONSES
OF ALL MALE SUBJECTS

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1331	--3	1--	---	---	-2-
1332	-2-	--3	---	---	1--
1333	---	1--	---	---	-23
1334	---	--3	---	-2-	1--
1335	---	1--	--3	-2-	---
1321	12-	--3	---	---	---
1322	---	1-3	-2-	---	---
1323	---	--3	---	---	12-
1324	---	12-	---	---	--3
1325	12-	--3	---	---	---
1311	-2-	--3	---	---	1--
1312	---	1--	---	--3	-2-
1313	1--	-23	---	---	---
1314	---	--3	---	1--	-2-
1315	-2-	1--	--3	---	---
1231	12-	--3	---	---	---
1232	1--	-2-	--3	---	---
1233	--3	-2-	---	---	1--
1234	123	---	---	---	---
1235	---	-2-	---	---	1-3

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1221	---	123	---	---	---
1222	--3	---	---	1--	-2-
1223	-2-	1--	---	---	--3
1224	---	--3	---	-2-	1--
1225	-2-	1-3	---	---	---
1211	1--	---	---	--3	-2-
1212	1--	--3	-2-	---	---
1213	--3	12-	---	---	---
1214	---	---	1--	--3	-2-
1215	---	-2-	1--	--3	---
1131	---	1-3	-2-	---	---
1132	---	1-3	---	---	-2-
1133	-23	1--	---	---	---
1134	-2-	--3	---	---	1--
1135	-2-	---	---	--3	1--
1121	-2-	1--	---	---	--3
1122	---	--3	-2-	1--	---
1123	12-	--3	---	---	---
1124	---	-2-	---	--3	1--
1125	---	-2-	1-3	---	---
1111	12-	---	--3	---	---
1112	--3	---	---	-2-	1--

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1113	1--	---	---	---	-23
1114	--3	---	---	---	12-
1115	--3	12-	---	---	---
	Total				
First Choice	11--	16--	3--	3--	12--
Second Choice	-15-	-11-	-4-	-4-	-11-
Third Choice	--9	--19	--5	--6	--6

TABLE 44

TOTAL RAW DATA PREFERENCE RESPONSES
OF ALL FEMALE SUBJECTS

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
2331	-23	---	---	---	1--
2332	---	1--	--3	-2-	---
2333	1--	---	--3	---	-2-
2334	-2-	---	---	---	1-3
2335	--3	---	---	1--	-2-
2321	---	--3	---	12-	---
2322	---	1--	---	---	-23
2323	---	--3	1--	-2-	---
2324	1--	-2-	---	---	--3
2325	-2-	---	---	--3	1--
2311	-2-	---	--3	1--	---
2312	--3	1--	---	-2-	---
2313	---	---	--3	---	12-
2314	---	1--	---	---	-23
2315	---	12-	---	---	--3
2231	--3	---	---	-2-	1--
2232	---	--3	---	-2-	1--
2233	---	1--	-2-	---	--3
2234	1-3	-2-	---	---	---
2235	-2-	1--	---	--3	---

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
2221	---	12-	---	---	--3
2222	-2-	--3	---	---	1--
2223	---	12-	---	---	--3
2224	---	---	1--	-2-	--3
2225	---	-23	1--	---	---
2211	---	-2-	--3	---	1--
2212	---	---	---	1--	-23
2213	---	---	---	1-3	-2-
2214	---	1--	---	--3	-2-
2215	1--	---	---	---	-23
2131	--3	---	---	12-	---
2132	---	12-	---	---	--3
2133	---	1--	---	--3	-2-
2134	---	--3	---	---	12-
2135	---	--3	1--	-2-	---
2121	-2-	1--	---	---	--3
2122	1--	---	-2-	--3	---
2123	---	-2-	--3	---	1--
2124	-23	---	---	---	1--
2125	---	---	---	---	123
2111	--3	---	1--	---	-2-
2112	---	---	---	---	123

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
2113	---	1-3	-2-	---	---
2114	---	-23	---	---	1--
2115	--3	---	-2-	---	1--
	Total				
First Choice	5--	14--	5--	6--	15--
Second Choice	-8-	-10-	-4-	-9-	-14-
Third Choice	--9	--9	--6	--6	--15

TABLE 45

TOTAL RAW DATA PREFERENCE RESPONSES IN THE HIGH SOCIO-ECONOMIC LEVEL

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1331	--3	1--	---	---	-2-
1332	-2-	--3	---	---	1--
1333	---	1--	---	---	-23
1334	---	--3	---	-2-	1--
1335	---	1--	--3	-2-	---
2331	-23	---	---	---	1--
2332	---	1--	--3	-2-	---
2333	1--	---	--3	---	-2-
2334	-2-	---	---	---	1-3
2335	--3	---	---	1--	-2-
1321	12-	--3	---	---	---
1322	---	1-3	-2-	---	---
1323	---	--3	---	---	12-
1324	---	12-	---	---	--3
1325	12-	--3	---	---	---
2321	---	--3	---	12-	---
2322	---	1--	---	---	-23
2323	---	--3	1--	-2-	---
2324	1--	-2-	---	---	--3
2325	-2-	---	---	--3	1--

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1311	-2-	--3	---	---	1--
1312	---	1--	---	--3	-2-
1313	1--	-23	---	---	---
1314	---	--3	---	1--	-2-
1315	-2-	1--	--3	---	---
2311	-2-	---	--3	1--	---
2312	--3	1--	---	-2-	---
2313	---	---	--3	---	12-
2314	---	1--	---	---	-23
2315	---	12-	---	---	--3
	Total				
First Choice	5--	12--	1--	4--	8--
Second Choice	-9-	-4-	-1-	-6-	-10-
Third Choice	--4	--11	--6	--2	--7

TABLE 46

TOTAL RAW DATA PREFERENCE RESPONSES IN THE MIDDLE SOCIO-ECONOMIC LEVEL

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1231	12-	--3	---	---	---
1232	1--	-2-	--3	---	---
1233	--3	-2-	---	---	1--
1234	123	---	---	---	---
1235	---	-2-	---	---	1-3
2231	--3	---	---	-2-	1--
2232	---	--3	---	-2-	1--
2233	---	1--	-2-	---	--3
2234	1-3	-2-	---	---	---
2235	-2-	1--	---	--3	---
1221	---	123	---	---	---
1222	--3	---	---	1--	-2-
1223	-2-	1--	---	---	--3
1224	---	--3	---	-2-	1--
1225	-2-	1-3	---	---	---
2221	---	12-	---	---	--3
2222	-2-	--3	---	---	1--
2223	---	12-	---	---	--3
2224	---	---	1--	-2-	--3
2225	---	-23	1--	---	---

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1211	1--	---	---	--3	-2-
1212	1--	--3	-2-	---	---
1213	--3	12-	---	---	---
1214	---	---	1--	--3	-2-
1215	---	-2-	1--	--3	---
2211	---	-2-	--3	---	1--
2212	---	---	---	1--	-23
2213	---	---	---	1-3	-2-
2214	---	1--	---	--3	-2-
2215	1--	---	---	---	-23
	Total				
First Choice	7--	9--	4--	3--	7--
Second Choice	-6-	-11-	-2-	-4-	-7-
Third Choice	--6	--8	--2	--6	--8

TABLE 47

TOTAL RAW DATA PREFERENCE RESPONSES OF SUBJECTS IN THE LOW SOCIO-ECONOMIC LEVEL

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1131	---	1-3	-2-	---	---
1132	---	1-3	---	---	-2-
1133	-23	1--	---	---	---
1134	-2-	--3	---	---	1--
1135	-2-	---	---	--3	1--
2131	--3	---	---	12-	---
2132	---	12-	---	---	--3
2133	---	1--	---	--3	-2-
2134	---	--3	---	---	12-
2135	---	--3	1--	-2-	---
1121	-2-	1--	---	---	--3
1122	---	--3	-2-	1--	---
1123	12-	--3	---	---	---
1124	---	-2-	---	--3	1--
1125	---	-2-	1-3	---	---
2121	-2-	1--	---	---	--3
2122	1--	---	-2-	--3	---
2123	---	-2-	--3	---	1--
2124	-23	---	---	---	1--
2125	---	---	---	---	123

Student Number	Media				
	Water Color	Woodcut	Tempera	Pre Sep	Graphic
1111	12-	---	--3	---	---
1112	--3	---	---	-2-	1--
1113	1--	---	---	---	-23
1114	--3	---	---	---	12-
1115	--3	12-	---	---	---
2111	--3	---	1--	---	-2-
2112	---	---	---	---	123
2113	---	1-3	-2-	---	---
2114	---	-23	---	---	1--
2115	--3	---	-2-	---	1--
	Total				
First Choice	4--	9--	3--	2--	12--
Second Choice	-8-	-6-	-5-	-3-	-8-
Third Choice	--8	--9	--2	--4	--6