Drawing on Education Project Annotated Bibliography

Ann Tan and Walt Haney

March 2004

323 Campion Hall
Center for the Study of Testing, Evaluation, and Educational Policy
Lynch School of Education
Boston College
Chestnut Hill, MA 02467

DOE Lib.	**1**
Title:	Considering children's art: Why and how to value their work.
Author:	Engel, Brenda S.
Date:	1995
Source:	National Association for the Education of Young Children
Group:	Elementary
Topic:	Children's art
Misc.	US

The author talks about how the arts are not viewed as "critical to the job of preparing young people for the work place." This has been because the arts are based on perception and perception is not assumed to involve thought. It is also difficult to assess although competence in art can lead to broad opportunities after schooling. Over the past thirty years, there has been a paradigm shift in education and educators have been redefining subjects as a result of research and new social/political awareness. Children are being actively involved in "constructing meaning, thinking things out for themselves, reinventing the world in their own terms" and art draws on all these ways of learning. Assessment has also been changing to include "performance sampling," "exhibitions," "presentations," and "portfolios."

Historically, children's art began to be valued only since the early 20th century spurred on by the Child Study movement. In the 20th century there have been four large movements that have influences the way child art has been viewed:
- John Dewey and the progressive schools believed that art should be part of everyday life and experience.
- Freud and psychoanalysts saw art as a means of providing access to, and allowing expression of, repressed feelings
- The Avant Garde artists like Klee and Gauguin looked to children's art for inspiration
- Art and development. The recognition of the relationship of art to children's development, that art can contribute to children's learning.

Contemporary views of children's art recognize its therapeutic, cognitive as well as aesthetic value.
- On the basis of art as visual thinking, Arnheim justified in theoretical terms that vision is a form of thinking.
- With Carini and the Prospect School, art was a path to learning about the characteristics and interests of the individual child
- There are many other ways of viewing children's art including the approaches of Lindstrom, Kellogg (DOE lib. 166 & 167), Goodnow, Gardner, Olson and Ernst, and Gallas (DOE lib. 2)

Observation of children's art requires a lot of observing and talking in a non-judgmental, non-interpretive way. There are two main perspectives on observing children's art:

- Art as communication and self expression of the individual artist so the idiosyncratic aspects of the work are stressed
- Art as visual thinking that can be generalized to all children hence the stress on its commonalities

Using children's drawings, the author looks at the drawings from each perspective and its characteristics.

DOE Lib.   **2**
Title: Arts as education.
Date: 1995
Eds.   Goldberg, Merryl Ruth & Phillips, Ann
Source: Harvard Educational Review Reprint Series No. 24

Topic: Arts as education
Misc.   US

A collection of essays on the arts in education.
- Greene, Maxine. 'Texts and Margins' on the importance of arts education.
- Gallas, Karen. The central role of arts in a first grade classroom (See below).
- Steinbergh, Judith Wolinsky. Poetry in language development.
- Cockburn, Victor. Folk music and songwriting in the classroom.
- Beckwith, Barbara et al. Describes 'Tribal Rhythms,' an interdisciplinary arts program to help schools deal with many of the problems facing children today.
- Grallert, Margot. Using art to promote self-expression (see below)
- Hoffman, James. Describes how computers were used in a course teaching music harmony.
- Howard, V. A. Describes the TIPS (Talent + Instruction + Practice = Success) formula.

DOE Lib.   **2**
Title: Arts as epistemology: Enabling children to know what they know.
Author: Gallas, Karen
Date: 1995
Source: Harvard Educational Review Reprint Series No. 24
Eds.   Goldberg, Merryl Ruth & Phillips, Ann
Pp: 19 - 31

Group: First grade
Topic: Using the arts to understand, synthesize and apply learning
Misc.   US, few sample drawings

Article looked at how children used pictures they draw and poems they wrote to express what they had learned.

DOE Lib.	**2**
Title:	Working from the inside out: A practical approach to expression.
Author:	Grallert, Margot
Date:	1995
Source:	Harvard Educational Review Reprint Series No. 24
Eds.	Goldberg, Merryl Ruth & Phillips, Ann
Pp:	79 - 89
Group:	Elementary
Topic:	Using the art to promote self-expression
Misc.	US

Describes how art was used to promote the central tenet of the school that it is more important for teachers to give direction to students as individuals, and show them how to please themselves and to work towards their own personal goals.

DOE Lib.	**3**
Title:	"That's funny, you don't look like a teacher." Interrogating images and identity in popular culture.
Author:	Weber, Sandra & Mitchell, Claudia
Date:	1995
Pub.	The Falmer Press: London, Washington D.C.
Pp:	206 - 214
Group:	Teachers
Topic:	Images of the teacher
Misc.	International, some sample drawings included, articles DOE lib. 96, 234

The authors look at the various images of teachers and their persistence over time. Images of teachers proliferate through the media and texts, and children often already have an image of a teacher even before they begin formal schooling.
- *Chapter 1* looks at the different sources of these images, including drawings of teachers by children and teachers themselves.
- *Chapter 2* considers the power of teacher stereotypes.
- *Chapter 3* looks at the role of teacher in relation to gender based on drawings.

- In *chapter 4*, the importance of teacher dress is examined.
- *Chapter 5* sets the context with its consideration of the images of school from texts and the media.
- *Chapter 6* uses the film "Kindergarten Cop" to discuss the juxtaposition of an overtly masculine Arnold Schwarzenegger in a "normally" female milieu - the kindergarten.
- It balances this with a discussion of Barbie in her reincarnation as a teacher in *Chapter 7*.
- In *chapter 8*, the perspective of a teacher is presented as she looks at her changed response to the film "To Sir, With Love," first as student just out o high school and then as a teacher.

DOE Lib.	**4**
Title:	Child art therapy: Understanding and helping children grow through art.
Author:	Rubin, Judith Aron
Date:	1978
Pub.	Van Nostrand Reinhold Company: New York
Group:	General
Topic:	Children's art as therapy: how children communicate their ideas through art and how therapists use children's art to understand children's needs
Misc.	US, sample art and case studies included

In using art as therapy for disturbed children, a balance has to be found which provides the child with a framework within to work and the freedom to express. Factors in setting conditions for creative growth include the materials, time, space provided for the child to create. Other factors include affective elements such as interest and respect for the child and his work.

The author believes that there is generally a predictable sequence of events for what children will do with art materials. These sequential stages often overlap and include "manipulating, forming, naming, representing, containing, experimenting, consolidating, naturalizing, and personalizing and aestheticizing." It must be remembered that development in children's art is not linear but cyclical and therapists need to recognize progression as well as regression in their art.

Generally, the author found it useful to allow children free choice as their choice of the medium, the way it is chosen and used, the way the child structures the time for his project can all be diagnostic indices to the child's personality and feelings. It is important to observe not only how the child works but also what he says.

The therapeutic process most generally includes a series of steps: testing, trusting, risking, communicating, facing, understanding, accepting, coping, and separating. Handicapped children, generally require more activity and greater involvement of the worker to "fill in" gaps where they are deficient. 'Props' like tape recorders, musical instruments, candles, etc. can facilitate the process.

As young children are realistically dependent on the adults who care for them, it is important to work with the families of children. Naturally, the format for dealing with families is different

from that of dealing with the individual child. The author found a format consisting of a sequence of tasks: individual scribbles, family portraits, joint mural and free products, to be the most effective. Within each family, it may be helpful to work with smaller units, for example, the child-mother/father dyad.

It is possible to use art therapy with groups, and there are various ways to group them, for example, single mothers-child group. In the early years of group therapy, emphasis was on the product of the individual created while in a group. With the growth of group psychotherapy and understanding and utilization of group process as a tool for change, joint projects have been increasingly looked at. In both individual and group therapy, art has led to other forms of expression such as poetry, movement, music and drama.

Art need not be used only to help the handicapped and disturbed, "normal" children can benefit because "art education, that is the education of feeling, is the only kind of art education that can help people become more human."

The author believes that art can be used as therapy for everyone as all humans have an "inner desire to create forms in some way." For children especially, the creative process is a learning experience. The child can, "in art, develop autonomy and independence, taking responsibility for both process and product. He can learn to choose, to make, to act, to revise decisions, to appraise and evaluate, and to learn from past experiences. . . . He can manipulate media which do not talk back, enabling him to experience a kind of power and mastery at no risk. He can master tools and processes, and feel competent. . . . He can learn to accept his creative/productive self, leading to a deep feeling of self-worth. He can discover, develop, and define his uniqueness, creating in and through his art as sense of himself as special. He can experience the pleasure of an aesthetically fine product, the joy of sharing it with a loved one, the pride in the affirmation of another."

DOE Lib.	**5**
Title:	Personality projection in the drawing of the human figure (A method of personality investigation).
Author:	Machover, Karen
Date:	1980 (11th ed.)
Pub.	Charles C. Thomas: Springfield, IL.
Topic:	A method of personality analysis based on the interpretation of drawings of the human figure.
Misc.	US, a few sample drawings and case studies included

Personality does not develop in a vacuum, but through the movement, feeling, and thinking of a specific body. It is safe to assume that all creative activity bears the stamp of conflict and needs of the individual creating it. Drawing a person s a creative activity, and as the body or 'self' is the most intimate point of reference for an activity, the drawing of a person provides a natural vehicle for the expression of one's body needs and conflict.

The book looks at the various features of the human figure and how they might be interpreted with reference to the artist.

DOE Lib.   **6**
Title: Breaking the silence: Art therapy with children from violent homes.
Author: Malchiodi, Cathy A.
Date: 1997 (2nd ed.)
Pub.   Brunner/Mazel Publishers, Florence:KY

Group: Children
Topic: Art therapy with children from violent homes
Misc.   US, child victims of violence and abuse, for Malchiodi's more general art therapy work DOE lib. 171.

The author discusses commonalities in the art of children from violent homes. She also looks at art intervention strategies and their implementation within crisis-oriented work with the children. She identifies program strategies for implementation of art interventions within shelter programs for children from violent homes.

DOE Lib.   **7**
Title: Daredevil Research: Re-creating analytic practice
Date: 1997
Source   Daredevil Research: Re-creating analytic practice
Eds.   Jipson, Janice A. & Paley, Nicholas
Pub.   Peter Lang: N.Y

Topic: Less/more than conventional research
Misc.   US

The editors introduce the volume with descriptions of less than orthodox choices for research and research methods. Includes:
- *Chapter 1.* Anijar, Karen. Truth, pedagogy and value from the view of 'Trekkers.'
- *Chapter 2.* Casey, Deb. Thoughts of an academic/mother.
- *Chapter 3.* Halford, Joan Montgomery. "Sounds" from a high school student.
- *Chapter 4.* Holm, Gunilla. Photographs, poetry and prose by and of teenage mothers.
- *Chapter 5.* Blumenfeld-Jones, Donald & Barone, Thomas. The connections between the arts and the educational research process using prose, conversation, musical score and soliloquy.
- *Chapter 6.* Jipson, Janice & Paley, Nicholas. Texts and pictures that invite comment.
- *Chapter 7.* Bailey, Chelsea. The experiences of a teacher of young children through very personal narrative.

- *Chapter 8*. Jipson, Janice & Wilson, Bruce. Visually broken thought.
- *Chapter 9*. Paley, Nicholas. Research as fragments of thought and information.
- *Chapter 10*. Jipson, Janice & Munro, Petra. Shared collaboration, in dialogue
- *Chapter 1*1. Jipson Janice & Paley, Nicholas. Research, in fragments.

DOE Lib.   **8**
Title: Art, Mind, and Brain: A cognitive approach to creativity.
Author: Gardner, Howard
Date: 1982
Pub.   Basic Books, Inc.: New York

Topic: Part 1: Different approaches to child development and art.
Part II: The field of children's artistic development from the author's
       perspective.
Part III: New forms of educational technology.
Part IV: Considers those individuals with brain damage
Part V: Creativity at its height

In the <u>Part I</u> of the book, Gardner describes the work, background, and theories of:
- *Chapter 1*. Piaget. That all knowledge derives from human actions upon the world. He identified four major stages of mental development: sensorimotor, intuitive/symbolic, concrete operational, formal operational ('Nurture')
- *Chapter 2*. Chomsky. Knowledge is largely inborn, ('Nature'). The different intellectual functions are separate and located in discrete parts of the brain.
- *Chapter 3*. Levi-Strauss. All humankind think in the same way and fashion comparable products (The commonality of mankind).
- *Chapter 4*. Cassirer. Man's construction of reality was based upon the availability of a collection of mental conceptions or symbolic forms (Relativism). Meaning is made through symbols.
- *Chapter 5*. Langer. Man has a need to symbolize, to invent meanings, and to invest meanings in one's world. She distinguished between two kinds of symbols: *discursive symbolism* involves the expression of ideas in words; *presentational symbolism* where ideas can be gleaned through pictures.
- *Chapter 6*. Goodman. It is more profitable to analyze art in terms of the artistic symbols that individuals create and perceive. He lists five symptoms/criteria for qualifying symbols as art or notations.
- *Chapter 7*. Gombrich. Many of answers to the historical puzzles of art lie in human psychology (for example, what makes one picture 'better' than another, the movement towards greater artistic realism and then withdrawal from it).

In <u>Part II</u>, Gardner surveys the field of children's artistic development from his perspective. In "*Exploring the mystery of artistic creativity*" (*Ch. 8*), he considers the U-shaped curve in artistic development (creativity/conformity/creativity). Debate has ranged around whether the creativity of the child is equal to the creativity of adolescents. Gardner believes that it is fundamentally different in that while is aware he is doing things differently, he is not cognizant of the conventions. While no one knows why artistic activity ceases, there are a few hints from principles of human growth: inborn talent, the environment, personality and character.

"*The child as artist*" (*Ch. 9*) looks at the similarities - and differences - between the artistry of children and adult masters. Gardner looks to two of Goodman's symptoms:
- Repleteness - whether the picture exhibits the range/potential of line
- Expressiveness - whether the picture conveys certain moods, feelings.

Another area is in the production of metaphor. From his research, preschoolers produced the highest number of metaphors, and this production wanes with time. As children understand metaphor, they utter fewer. As to who achieves artistic greatness in maturity, the author goes back to innate talent, environment, personality and character.

Children are expected to become more sensitive to the arts simply by exposure to them. In "*Children's conceptions of the arts*" (*Ch. 10*) Gardner & Winner posed general questions to children about the source, medium, production of art, music and poetry. In general, children thought art to be mechanistic (anyone can draw), and did not make critical judgments on its quality. By the age of ten, they begin to discern the properties of different art forms. However, by adolescence, relativism sets in and art is judged to be "a matter of taste."

In analyzing the art of two 3 1/2 year old children, the authors noticed that that one picture tried to tell the story with all the lines on the paper, while the other created a backdrop for a verbal narrative. The art of the two children is used a springboard to "*exploring differences in early artistic symbolization*" (*Ch. 11*). Appreciation and use of symbols may offer the key to the mystery of children's artistic development. Two approaches to the psychology of symbols have predominated:
- Cognitive approach (Piaget/Bruner). Symbolic activity is seen as an intellectual achievement.
- A child's ability to comprehend and produce symbols is taken for granted, and the emphasis is on the affect, the uses of the symbols.

The authors observed a group of children engaged in preschool activities and as they played with various symbolic media. While there was a tremendous variety of individual differences, there were some recurrent patterns:
- Verbalizers. Regardless of the task, some children were very verbal in their approach.
- Visualizers tended to plunge directly into drawing and building with few words. (In subsequent research, the verbalizers and visualizers were redescribed as "patterners" and "dramatists")
- Self-starters required the minimum of stimulus to begin.
- Completers had problems when confronted with a blank piece of paper but could finish tasks already begun.
- Person-centered featured people in their pictures and were attuned to other individuals.
- Object-centered children produced many objects in their pictures.

Certain differences correlated with gender (girls preferred to sing, boys were good with clay),

and themes were popular among some children who would feature these recurrently in their products. The use of "fixed themes" has traditionally been viewed as evidence of an unresolved area on conflict within the child or an inability to generate new ideas. This study suggests that fixed themes serve different purposes for different children: familiar territory from which to explore new variations, comfort from the rigors of experimentation. The diverse tasks provoked diverse performances, and the individual differences reflect the interaction of various factors within the child. Research into the development of artistic symbolization in children must take into account the child's native endowment and predilection, and a whole range of external/environmental/cultural factors.

In "*The golden age of drawing*" (*Ch. 12*) the author looks at drawings by his own children to resolve whether children between the ages of five and seven are "true" artists or simply drawing because they like to draw.

"*In search of the ur-song*" (*Ch. 13*) the author ponders whether there is a set of basic chants from which all diverse melodies are spawned, and if children innately know this chant. Gardner takes a closer look at the production of metaphors in "*The child is father to the metaphor*" (*Ch. 14*). His findings indicate that while young children do seem to produce the highest number of metaphors, there was no decrease in age. There was a decline in the incidence of spontaneous use. The difference among age groups in the use of metaphors derives less from metaphoric capacity than the type of metaphor used. In "*The birth of literary imagination*" (*Ch. 15*), Gardner explores whether children are creative geniuses or mimics, basically unaware of the meaning of their actions or words.

In "*Nadia's challenge*" (*Ch. 16*) Gardner takes a look at the case of Nadia, an autistic child whose drawings appeared to have skipped all the early, childish stages identified by psychologists. From Nadia, Gardner considers other child prodigies in "*The prodigies' progress*" (*Ch. 17*).

Part III deals with the various new forms of educational technology. In "*Unfolding or teaching: on the optimal training of artistic skills*"(*Ch. 18*), the author looks at the opposing views on developing artistic talent: to allow them to "unfold" or to "train" them to proficiency. An art exhibition of originals and fakes lets the author consider how learning can come by looking at the genuine and less genuine side-by-side in "*Illuminating comparisons*" (*Ch. 19*). In "*Toys with minds of their own*" (*Ch. 20*), he looks at how some of today's computer toys/games are so engaging - and educational. Television is the subject of the next three essays: "*Are television's effects due to television?*" (*Ch. 21*) (the effects of television); "*Cracking the codes of television*" (*Ch. 22*) (when children begin to distinguish between reality and television); and "*Television's effects on children: does it stimulate or stultify?(Ch. 23)*" In "*Dictated by necessity, or everyman his own Boswell*" (*Ch. 24*), he considers whether prosthetics devices like tape recorders and computers can improve the quality of writing or just enhance production.

Part IV. Greater insight into the workings on the brain - or not , are the subject of "*Brain damage: A window on the mind*" (*Ch. 25*), and "*What we know about the two halves of the brain*" (*Ch. 26*). Aphasia and dyslexia are tackled in "*The loss of language*"(*Ch. 27*), and " *The forgotten lesson of Monsieur C*" (*Ch. 28*). The processing of language ("*Missing the point: Language and the right hemisphere*" - *Ch. 29*) and artistic endeavors ("*Artistry after brain damage*"- *Ch. 30*),

and their left/right brain orientation are the topics of the next two essays in this section. It ends with "*The lives of Alexander Luria*" (*Ch. 31*) a gifted psychologist whose ideas were ridiculed.

In <u>Part V</u>, "*Creativity in the adult years*" (*Ch. 32*) looks appropriately at that and the schemas of a composer in "*The compositions of Mozart's mind*" (*Ch. 33*).

DOE Lib.	**9**
Title:	Measurement of intelligence by drawings.
Author:	Goodenough, F.L.
Date:	1975
Source	Classics in child development
Pub.	Arno Press: N.Y.
Group:	Kindergarten - grade 4
Topic:	To determine the extent to which the nature of drawings made by children in their early years is conditioned by their intellectual development.
Misc.	US, some sample drawings

Chapter I. Author presents an historical survey of the use of spontaneous drawings of young children to enlighten child development from Cooke in 1885 through its height of interest around 1917.

Chapter II. The experimental basis of the drawing test of intelligence is provided. The scale was derived according to the following respects:
- No arbitrary decisions made on the intellectual merit in a drawing
- Artistic standards have been completely disregarded
- Every effort made to eliminate the subjective elements in judgments
- A double criterion for judging mental development - chronological age and school grade - was the basis for determining validity of the test and establishing norms. Supplementary criteria was used when available
- A standard subject for drawing was chosen and adhered to. No further specifications were made on how the drawing was done. Subject was chosen based on the qualifications of: familiarity, little variability, simplicity in general outline, of universal appeal and interest. The human figure was chosen.

Chapter III. Discussion of the results with regard to validity and reliability, and other influencing factors such as artistic talent, special training and gender.

Chapter IV discusses the psychological interpretations of the drawings.

Chapter V. The summary and conclusions of the experiment and construction of the scale for measurement.

Chapter VI looks at the test procedure and the directions for scoring.

Chapter VII provides specimen drawings with scoring indicated.

DOE Lib.	**10**
Title:	Strategies of representation in young children: Analysis of spatial skills and drawing processes.
Author:	Freeman, Norman H.
Date:	1980
Pub.	Academic Press Inc.: N.Y.
Group:	Children
Topic:	Spatial skills with discrete objects and the construction of line drawings with discrete lines in children's drawings.
Misc.	Europe

Children's drawings can look funny to adults. The approach of this book is to view drawing as a problem solving exercise for children. Therefore two questions need to be asked:
• What are the task-demands of the drawing?
• What operational performance-characteristics are necessary for the task?
Hence, according to the author, the analysis of spatial skills.

In looking at the way in which children's drawings are organized, there are some general and specific hallmarks and planning problems. Research on children's drawings have established five stable general characteristics:
• Mixed views in a single scene. Different perspectives in one picture.
• Stereotypy. Objects tend to look formulaic.
• Schematization. Layout of objects and persons are fairly neat and spaced out.
• Synthetic capability. Inability to put parts together into a whole.
• Intellectual realism. The child draws what he knows rather than what he sees.

There are also two very specific hallmarks of children's drawings:
• Variant forms - the tadpole figure
• Transparency representations

Planning problems refer to whether and when the child plans/thinks about where certain features belong, for example, a face in profile having two eyes.

Drawing is therefore problematic for young children, the author attempts to deduce something about the plans to guide their attempts by looking at ideas on mental imagery and then at how the strategies are developed. The author then looks at children's problems with relative position and relative orientation in imposed tasks and free drawing, including drawings of the human figure.

DOE Lib.	**11**
Title:	The innocent eye: Children's art and the modern artist
Author:	Fineberg, Jonathan
Date:	1997
Pub.	Princeton University Press

Group:	General
Topic:	Children's art and the art of modern masters,
Misc.	Pictures by children and artists, for article on same DOE lib. 148

Artists have been interested in children's art. The Romantics of the 18th century held children's art to be "a model of the pure expression of the spiritual," while others depicted scribblings. Interest in child art took off at the end of the 19th century: it was connected to tribal art, considered another aspect of primitivism. Much of this interest was anthropological, psychological or pedagogical. By the 20th century, many artists had begun to collect child art and to be inspired by them. This book looks at the work of child art and their connection to the works of Larianov, Kandinsky, Munter, Klee, Picasso, Miro, Dubuffet, and the COBRA group.

DOE Lib.	**12**
Title:	Drawing/Writing and the new literacy: Where verbal meets visual.
Author:	Sheridan, Susan Rich
Date:	1997

Group:	General
Topic:	Drawing/Writing strategy to promote drawing, writing and thinking skills.
Misc.	Some sample drawings and writing, dissertation on how drawing helps writing in 2nd graders DOE lib. 49

The premise of the book is that "training in drawing prepares the mind for committed reading and writing. The rationale for connecting drawing with writing is the intimate connections between the left and right hemispheres of the brain." The book details the Drawing/Writing program, and is divided into four parts:

- Part 1. An essay in four parts provides the rationale for this drawing based literacy program, described as a "wholebrain" approach.
- Part 2 guides the reader through the five steps of the Drawing/Writing process.
- Part 3 provides information from neurobiology so readers can appreciate the cross-modal strategies and understand the part learners play in the learning process. Includes 13 specific tips to better teaching and learning.
- Part 4 describes curricular guidelines and strategies, including sample English and Fine Arts programs at the middle, high school and college levels, appropriate for the wholebrain approach.

DOE Lib.   **13**, 142
Title: How students see their writing: A visual representation of literacy.
Author: Black, Kathleen
Date: 1991
Source: Journal of Reading 35, 3
Pp: 206 - 214

Group: College
Topic: Illustrating the writing process
Misc.   US, drawings and references included

Brief description of the elements of the process approach to writing (refs. included). The author believes that sufficient time has passed for the process of writing to have been taught to and internalized by high school students. Article notes results of study that asked first year college students to draw pictures illustrating their procedures for writing a paper.

Results indicate that the process of writing has not been assimilated by students. Results also suggest students' "broader view of literacy" ie. the importance of individual personalities, the need for food and other activities as part of the process. Notes also the emotional impact of writing on students

DOE Lib.   **14**
Title: **   Making picture stories: children illustrating their narrative texts.
Author: Johnson, Paul
Date: 1998
Source: What's in the picture? Responding to illustrations in picture books
Ed: Evans, Janet
Pp: Ch. 10, 166 - 191
Pub.   Dublin: Paul Chapman Publishing Ltd.

Group: Elementary (9 years)
Topic: Illustrating a narrative
Misc.   UK, drawings included
**   Pp. 188-189 missing

Describes the "Toy Shop Project" - students were provided with six "story frames" (boxes with vague outline drawings) with short captions. Students were led into discussing and then filling in the story frames with detail. Emphasis on developing the illustration skills of students.

DOE Lib.   **15**

Title: Effective Teaching.
Author: Fries, Kim
Date: 1997, Fall

Group:
- Adult non-educators (interview)
- Adult non-educators, school-aged children (pictures)
- Adult non-educators, one adolescent

Topic: "Goodness of fit" between teacher and student
Misc.   US, drawings included, DOE lib. 82

Paper looks at what effective teaching "looks" like, ie. what makes a "good" teacher apart from the transfer of knowledge. Semi-structured interviews were undertaken with a group of adult non-educators on their educational experiences and teachers. A second group of adult non-educators and children was asked to draw a picture of a "good" teacher and a "bad" teacher in action. The third group of adult non-educators and a high school adolescent was asked to view the pictures and comment on them.

Paper posits that effective teaching is a function of the "goodness of fit" between teacher and students. That awareness of temperament or behavioral styles, and the emotional needs of the children contribute toward more effective teaching.

DOE Lib.   **16**
Title: The children's neighborhood drawings codebook.
Author: Lewis, Marva L.
Date: 1999

Group: 8 - 12 year olds
Topic: Coding system used to evaluate children's drawings of their neighborhoods
Misc.   US, African American, low SES, South, urban, drawings & coding sheets included

Describes the coding system used to evaluate children's drawings of
- Their neighborhood
- What goes on in their neighborhood

DOE Lib.   **17**
Title:
- Organizing images and scientific ideals (pp. 75 - 86)
- Mystery and multi-mythic organicism (pp. 161 - 171)

Author: Ferre, Frederick
Date: 1993

Source: Hellfire and lightning rods: Liberating science, technology, and religion
Pub. Maryknoll, NY: Orbis Rock

Topic:
- Religious World Models
- Multi-mythic organicism

Organizing images and scientific ideals

Defines Religious World Models (RWM) as metaphors for understanding/organizing the world. RWMs come from a variety of sources, including myth and science. Examples from tradition (Patriachalism) and science (Progressivism - forward linear growth of civilization) are used to show that the importance of RWMs is how they shape the values of society, awareness of ourselves, where we are and where we're going.

Mystery and multi-mythic organicism

The more we learn, the less we know. It is less about the mystery of the unknown as the mystery of the known. The author defines Multi-mythic organism as requiring three things:
- A sophisticated attitude toward our own belief systems, ie. the acceptance of mystery even in the known.
- A major change in attitude towards the environment as being greater than we can understand, as requiring long-term planning, and as an entity that does not require our total control
- The cultivation of distinctive attitudes towards fellow humans, ie. while we share many like characteristics, each is unique. Also includes the recognition that we should not control/manipulate others.

DOE Lib. 18
Title: Why Jane can't draw (or sing, or dance . . .)
Author: Ames, Katrine
Date: 1990, Fall/Winter
Source: Newsweek Special Issue: How to teach our kids
Pp: 40 - 41, 44, 49

Group General
Topic: Arts education in America
Misc. US

Although Arts education in America has improved, the author bemoans its consistent exclusion in schools. Features interviews with American artists on what they would like to see in Arts education.

DOE Lib.	**19**
Title:	A bag of possibles and other matters of the mind.
Author:	Fulghum, Robert
Date:	1990, Fall/Winter
Source:	Newsweek Special Issue: How to teach our kids
Pp:	88, 90, 92
Group:	General
Topic:	Arts education in America
Misc.	US, has good quotes.

Fulghum, a teacher of drawing and painting, and philosophy in high school, offers his perspective on education, which is to teach children how to learn for themselves. Uses the example of drawing to illustrate the idea that everyone can acquire skills.

DOE Lib.	**20**
Title:	First grade takes a test.
Author:	Cohen, Miriam
Date:	1980
Source:	Picture Yearling Book
Pub.	New York: Bantam Doubleday Dell
Group:	First grade
Topic:	Effects of testing
Misc.	US, children's fiction, illustrated book

A story for children about taking a test, and how doing well in it may matter less than other things like friendship.

DOE Lib.	**21**
Title:	Response to questions regarding Drawing on Education: Using drawings to study and change education.
Author:	Haney, Walter; Russell, Michael; Jackson, Lisa; Gulek, Cengiz & Fierros, Ed
Date:	1998, Feb.
Source:	Center for the Study of Testing, Evaluation, and Educational Policy (CSTEEP), Boston College
Group:	Middle school
Misc.	US, Research proposal to Spencer Foundation, Appendix includes "Drawing on Education: Using student drawings to promote middle school improvement (DOE lib. 25)," and the abstract for the dissertation "Using

drawings and interviews to promote reflection on student teaching."
- AERA presentation DOE. Lib. 24
- Overheads for AERA DOE lib. 248
- Proposal DOE lib. 77
- Ist year report DOE. 59
- 2nd year report DOE lib. 159
- Press packet DOE lib. 38
- Meeting materials DOE lib. 40
- Meeting agenda DOE lib. 65
- Exec. Summary DOE lib. 130

A short description of some developments since the grant proposal, with a reiteration of the basis of the study. The issues that will be dealt with concern the
- Analysis of drawings
  - The effectiveness of the prompts in eliciting certain types of drawings
  - The basis for the analysis/interpretation of the drawings
  - The benchmarks for assessing the reliability/stability of ratings for drawings
- Issues of validity
  - Content validity - comparing results of analytical ratings and holistic interpretations of drawings for correspondence
  - Criterion-related validity
    - comparing results of analyses of drawings with students surveys about typical classroom experiences
    - Independent ratings of schools and/or classrooms - comparing drawing results with the judgement of informed classroom observers with and across schools
    - Videotapes of classrooms - Comparing results of drawings with analyses of videotapes of classrooms
  - Construct validity
- Sample of teachers - that teachers are self-selected
- Consequential validity of drawings for school reform
  - How discussion of drawings will lead to change
- What will count as change?
  - Case studies
  - Cross-school comparisons
  - Mistakes and misinterpretations
  - Spin-off inquiries

DOE Lib.	**22**, 87
Title:	The Connected Mathematics Project: helping Minneapolis Middle School Students "Beat the odds." Year one evaluation report.
Author:	Bartel, Anne & Winking, Deborah
Group:	Middle school students

Topic: Results of the CMP in some middle schools in Minneapolis
Misc.   US, evaluation protocols included

Description and results of the CMP in middle school classrooms in 9 (5 full and 4 partial implementation) Minneapolis schools. Key questions in evaluation:
- How do students in CMP and non CMP perform on district and statewide assessments? (8th grade Minnesota Basic Standards Test, 7th grade CA Achievement Test Math Concepts Subtest, 7th grade math problem solving assessment, 8th grade Minneapolis Standards Based Multiple Choice Test, 7th grade Minneapolis Writing Assessment.
- How do CMP students feel about their Mathematics class - with multiple-choice questions, open-ended questions, and drawing prompts
- How do CMP teachers feel about teaching CMP Mathematics - - with unit reflection sheets, mentor observation logs, and standardized teacher surveys.

DOE Lib.   **23**
Title: Using multiple means of inquiry to gain insight into teaching and learning from the perspectives of students and teachers: A multi-trait multi-method approach.
Author: Gulek, Cengiz
Date: 1999, April
Source: Boston College

Group: Elementary School
Topic: Multi-trait multi-method approach to examine the ecology of the classroom.
Misc.   Paper presented at 1999 AERA, Montreal, Canada; guidelines and sample drawings included

Since the release of *A Nation at Risk* (1983) proposed education reforms include the desire for teachers to be more reflective practitioners of their craft. This paper explored the possibility of promoting reflection using Campbell and Fiske's (1959) Multi-Trait Multi-Method Approach to examine the educational ecology of the classroom. The study looked particularly at how surveys, drawings and videos are valid indicators of classroom teaching and learning experiences. The two classroom traits selected for study were the mode of instruction and the variety of learning materials in the class.

DOE Lib.   **24**
Title: Using student drawings of teaching to promote reflection and school improvement: Practical aspects
Author: Haney, Walt; Russell, Michael; Jackson, Lisa; Bebell, Damian; Coughlin, Mimi; Barrett, Jamie; Marshall, Kevin; Seldin, Amy; Teferra, Damtew;

	Malec, Nicole; Gulek, Cengiz; & Pacific Beach MiddleSchool, San Diego, CA.
Date:	1999, April
Source:	Boston College
Group:	Middle School
Topic:	Results of Student Reflection Forms
Misc.	Paper presented at AERA, drawings included, for other refs see DOE lib. 21

Presentation of results of using Student Reflection Forms (Likert-scale, open-ended questions and a drawing prompt) with middle school students in San Diego to document changes in classroom practices and students' attitudes as a result of Standards Based Reform.

DOE Lib.	**25**
Title:	Drawing on education: Using student drawings to promote middle school improvement
Author:	Haney, Walt; Russell, Mike; Gulek, Cengiz & Fierros, Ed.
Date:	1998, Jan/Feb, 6, 5
Source:	School in the middle (NASSP)
Pp.:	38 - 43
Group:	Middle school
Topic:	Using drawings
Misc.	US, examples included, presentation DOE lib. 24, other refs DOE lib. 21

Article describes the use of Student Reflection Surveys (having students draw pictures of their teachers at work in the classroom) so students can help judge the strengths and weaknesses of school reform efforts. A possible drawback to this is whether student drawings represent accurately their experiences or are their stereotypes/caricatures of teachers. The drawings do spark discussion among teachers. The authors recommend that drawings be part of multiple methods of research and evaluation

DOE Lib.	**26**
Title:	Student Reflection Technical Manual Draft - Reliability.
Author:	Haney, Walt & Gulek, Cengiz
Date:	1998, Feb. 2
Source:	Boston College
Pp:	10 - 15
Group:	Middle school
Topic:	Inter-Rater Reliability, Cohen's Kappa Coefficient of Agreement,
Misc.	• DOE lib. 60 for draft of manual

- DOE lib. 27 for article on Cohen's Kappa
- DOE lib. 25 for article on Student Reflection Forms
- DOE lib 23 for presentation

Describes the system of inter-rater reliability use in the Student Reflection Surveys of the DOE Project.

DOE Lib.   **27**
Title: Note on Cohen's Kappa.
Author: Kvalseth, Taraldo
Date: 1989, 65
Source: Psychological Reports
Pp: 223 - 226

Topic: Cohen's Kappa
Misc.   • DOE lib. 26 for use in Student reflection Forms

Describes Cohen's Kappa - the measure of overall agreement between two raters classifying items into a given set of categories.

DOE Lib.   **28**
Title: Torrance Tests of Creative Thinking
Source: (Tests in Print/Buros)
Pp: 1296 - 1297

Group: K through graduate school
Topic: Torrance tests of creative thinking
Misc.   • Includes test reviews

Describes the Torrance Tests of Creative Thinking. Includes information on the administration manual, reliability and validity figures, and the problems with the scoring system.

DOE Lib.   **29**
Title: Spencer Grant: Possible avenues of research
Author: Spencer Foundation
Date: 1998, Jan.

Topic: Issues raised by Spencer Foundation from proposal.
Misc.   For response and other refs., see DOE lib. 21
Letter and attachments from reviewers at the Spencer Foundation with their concerns about the
DOE proposal. The concerns can be classified broadly into the following:
- Analysis of drawings
- Issues of validity
- Sample of teachers
- Consequential validity of drawings for school reform

DOE Lib.   30
Title: Scatterplots in support to the Spencer Proposal Revision.

Topic: Issues raised by Spencer Foundation from proposal.
Misc.   For response and other refs. see DOE lib. 21

Scatterplots for the following questions:
- Describe the things you like best about your school (Science)
- Describe the things you like best about your school (Math)
- Teachers are interested in students

DOE Lib.   31
Title: Student Drawings at the Lanes Mill School.

Group: Elementary
Topic: DOE as implemented in Lanes Mills School,
Misc.   2 sample drawings included

Presentation of the DOE project as it was applied to the Lanes Mill Elementary School. General
results and findings.

DOE Lib.   32
Title: A shocking show of children at war.
Author: Wildman, David
Date: 1997, Sept. 21
Source: The Boston Sunday Globe

Topic: Exhibition of drawings by children in war
Misc.   Sierra Leone, West Africa. Drawings by children of Yugoslavia (DOE. Lib. 220) and Bosnia (DOE lib. 71).

Article on an exhibition entitled "The Children's War" of drawings by children caught in the war between Sierra Leone and Liberia.

DOE Lib.   **33**
Title: Pacific Beach Drawings
Author: O'Dwyer, Laura & Barrett, Jamie
Date: 1997

Topic: Process notes for coding DOE Project drawings
Misc.   US

Process notes from Laura O'Dwyer and Jamie Barrett on coding drawings from the Pacific Beach schools. Aim: check inter-rater reliability. Includes draft coding sheets, comments from BC Dept. of Fine Art faculty on the history of drawing, some information on ancient alphabets and ancient drawings, specifically cave paintings found in the Ardeche Region of France.

DOE Lib.   **34**
Title: Proposal for Critical Literature Review. Elementary Art: A Comparison between Japan and the U.S.
Author: Deguchi, Makiko
Date: 1998, Feb.

Group: Elementary
Topic: A comparison of elementary art education between the US and Japan.
Misc.   US, Japan,
- For paper ref DOE lib. 88
- Short bibliography included.

Brief introduction to the comparison of elementary art education between the US and Japan.

DOE Lib.   **35**
Title: Dissertation Abstracts on children's drawings.

Topic: Dissertation abstracts
Misc.   US

Lists the number of dissertations on/using children's drawings from 1861 tom 1997. Includes information on dissertation from Canadian institutions.

DOE Lib.   **36**
Title: Contacts

Topic: Contact names and addresses
Misc.   US

List of teachers/contacts who may be willing to work on the DOE project. Includes a letter of support from an artist.

DOE Lib.   **37**
Title: References for use of drawings.

Topic: References for use of drawings
Misc.   US

References for use of drawings, including some internal notes from DOE Project team and Carol Ziegler, and a dissertation abstract "A cross-national study of child art: Comparing for universal and culturally influenced characteristics."

DOE Lib.   **38**
Title: Drawing on Education Press Packet.
Author: Boston College

Topic: DOE Project
Misc.   US, for other refs see DOE lib. 21

Press packet materials:
- Letter of invitation to participate in the DOE project
- DOE brochure: Seeing classrooms through children's eyes
- Flyer from Beth Israel Deaconess Learning Center on an exhibition of art by children
- Press release

- Biography and statement of interests from 3 principal researchers (Walt Haney, Lisa Jackson & Mike Russell)
- List of past participants in DOE project
- "Drawing on Education: Student drawings to promote middle school improvement" article (DOE lib. 25)
- "Getting kids into the picture: Student drawings help teachers see themselves more clearly" from the Harvard Education Letter (DOE. Lib. 56)
- Sample drawings

DOE Lib.   **39**
Title: Ways teachers use drawings: Research ideas with drawings

Group: Elementary - College
Topic: Student teachers' perceptions of themselves, drawings of the "reading process"
Misc.   US

- Research Proposal "Beginning teachers developing perception of themselves as teachers: Using drawing to understand underlying images.
- Sample drawings on the reading process from grades 6, 9 and 12

DOE Lib.   **40**
Title: Drawing on Education Meeting agenda.
Date: 1999, May 26
Source: CSTEEP, Boston College

Topic: DOE
Misc.   US, for other refs DOE lib. 21

Materials include:
- Agenda
- Olson, Lynn (1995, April 26). School Portraits. Ed. Week, pp. 29 - 30 (DOE lib. 90)
- Tovey, Roberta (1996, Nov/Dec). Getting kids into the picture: Student drawings help teachers see themselves more clearly. The Harvard Education Letter, pp. 5 - 6. (DOE.lib. 56)
- Haney, W., Russell, M., Gulek, C., & Fierros, Ed. (1998, Jan/Feb). Drawing on education: Using student drawings to promote middle school improvement. (DOE lib. 25).
- Research proposal to Spencer Foundation
- Response to questions regarding DOE: Using drawings to study and change education and schooling (DOE lib. 21)
- Press release for DOE project (DOE lib. 38).
- Using student drawings of teaching to promote reflection and school improvement: Practical aspects (DOE lib. 24)

- Gulek, C. (1999, April). Using multiple means of inquiry to gain insight into classrooms: A multi-trait multi-method approach (DOE lib. 23)
- Russell, Mike & Haney, Walt (1999, April). Validity and reliability of information gleaned from students' drawings.
- Sample analytic coding guide and category descriptions
- Jackson, L.R., Malec, N.M., & Seldin, A.E., (1999, April). Using student drawings to explore gender differences in students' school experiences
- Rosinski, Jennifer (1998, Nov. 16). Drawing on education. Metrowest Daily News (DOE lib. 261).
- O'Dwyer, Laura. A brief history of American drawing education.
- Lifford, J., Byron, B., Eckblad, J., & Ziemian, C. Use of pictograms in promoting improvement in reading (Draft) (DOE lib. 55, 57).
- Fischman, G. & Pruyn, M. (1999, April). Drawing and talking: critical reflections on pre-service teachers' representations of teaching and gender (DOE lib. 52).
- Jorg, T., Korthagen, F., & Swennen, A. (1999, April). Concerns and images of student teachers and their development in pre-service teacher education (DOE lib. 66)

DOE Lib.   **41**
Title: Personal communication.
Author: Riley, Kathryn

Topic: DOE Project
Misc.   Includes articles

Letter from Kathryn Riley and articles written by her. Includes piece she wrote on DOE Project.

DOE Lib.   **42**
Title: Student drawings at Scott Middle School.
Author: Scott Middle School
Date: 1999, April

Group: Middle School
Topic: Students' drawings of what teachers do in class
Misc.   US

Poster session at 1999 AERA in Montreal, Canada. Includes description of DOE as implemented at Scott Middle School and samples of drawings.

DOE Lib.   **43**

Title: Drawings by 5-year old Black preschool children of l
Leon and Gadsden counties in Florida: A study of the relation between their verbal and visual conceptions.
Author: Britt, Arthur, R.
Date: 1974
Source: UMI Dissertation Services

Group: 5 year olds
Topic: Relationship between a child's verbal and visual conceptions of likes and dislikes in his home
Misc. Protocols and drawings included, Summary DOE lib. 250

The purpose of the study was to investigate relationship of the child's verbal and visual conceptions of likes and dislikes in his home, as reflected in interviews and drawings. The hypotheses posited no significant differences between the sexes of 5 year olds in two counties in Florida of their likes and dislikes. The results no significant differences. However, the children's verbal responses did not always match their drawings.

DOE Lib. **44**
Title: Art as a visual language in support of verbal language development in young children who are deaf or hard-of-hearing.
Author: Eubanks, Paula Kaye
Date: 1995
Source: UMI Dissertation Services

Group: Kindergarten & 2nd grade
Topic: How classroom teachers use art to encourage verbal development in young children who are deaf or hard of hearing
Misc. US

A qualitative study on how art is used to encourage verbal development in young children who are deaf and hard of hearing. Although the art in the study is used to encourage verbal development, some insights into the use of children's drawings to make meaning, express thoughts and feelings.

DOE Lib. **45**
Title: Color preferences and racial attitudes in young children
Author: Kohl, Rhiana B
Date: 1994
Source: UMI Dissertation Services

Group: Preschool
Topic: Color preferences and racial attitudes in young children
Misc. US

Study examined color preferences and racial attitudes in young children by looking at their color preferences in the abstract and by surveying their racial attitudes. The colors used represented not just "black" or "white" but a range of skin tones. Interesting for the color preferences of young children. Note on color preferences of young children in drawing.

DOE Lib. **46**
Title: Assessing the stages of group development using children's serial group drawings.
Author: Majcher, Jo-Ann Marie
Date: 1990
Source: UMI Dissertation Services

Group: Elementary School
Topic: Assessing the stages of group development using children's serial group drawings
Misc. Canada, some sample drawings.

Study explores the idea that stages of group development could be depicted in serial group drawings (ie. drawings of the process of structured group learning following standardized instructions) by children who had participated in structured learning groups. It posited the belief that trained raters could classify the stages of group development based on the drawings. Describes the ratings scales used. Useful for noting the difficulties in rating drawings and achieving usable scales for classification.

DOE Lib. **47**
Title: A cross-national study of child art: Comparing for universal and culturally influenced characteristics.
Author: Perez, Jeanine
Date: 1993
Source: UMI Dissertation Services

Group: 6 - 16 years
Topic: Universal and culturally influenced characteristics of children's artwork.
Misc. International

A study of children's artworks to determine universal characteristics and others culturally learned. Includes developmental stage checklist and a list of characteristics depicted in children's drawings. Useful for noting universal versus cultural symbols.

DOE Lib.   **48**
Title: A naturalistic study of written and non-verbal responses to and retellings of fairy tales by first grade chapter 1 reading students.
Author: Plauche, Linda Thompson
Date: 1994
Source: UMI Dissertation Services

Group: Elementary School
Topic: How children reconstruct stories

Fairy tales were read aloud to students and retold using a flannel board and figures and storybooks. Children's retelling of stories was observed and recorded, and included audio tapes, written responses and drawings.

DOE Lib.   **49**
Title: An analysis of the relationship between drawing and idea production in writing for second grade children across three aims of discourse.
Author: Skupa, Judith A
Date: 1985
Source: UMI Dissertation Services

Group: Second Grade
Topic: The relationship between drawing and writing for second grade children, For Drawing/Writing approach DOE lib 12

Study looked at how drawings affect children's writing. Of interest is how drawing helps children in organizing their thoughts for writing.

DOE Lib.   **50**
Title: Our peaceful classroom: Illustrations from Montessori schools around the world.
Author: Wolf, Aline D. (narrative)
Date: 1991

Pub.   Parent Child Press, Hollidaysburg: PA.

Group: Elementary/Primary
Topic: Children's drawings of their Montessori schools.

DOE Lib.   **51**
Title: Students' drawings as course evaluations: What they see in statistics.
Author: Ludlow, Larry
Date: 1999, April
Source: Lynch School Of Ed., Boston College

Group: College
Topic: Course evaluations with student drawings
Misc.   US, AERA Presentation, 2 samples included, cross-ref with DOE. Lib. 58

Course evaluations of a statistics class with student drawings.

DOE Lib.   **52**
Title: Drawing and talking: Critical reflections on pre-service teachers' representations of teaching and gender.
Author: Fischman, Gustavo & Pruyn, Marc
Date: 1999, April

Group: College
Topic: Education students' perspective of "real " and "ideal" teachers
Misc.   US & Argentina,

Paper reports on ongoing study of the perspectives of students in teacher education programs, of how they saw a "real" versus "ideal" teacher.

DOE Lib.   **53**
Title: Drawing scientists.
Author: Mathews, Brian
Date: 1996
Source: Gender and Education, 8 (2)
Pp: 231 - 243

Group: Secondary, college

Topic: How students view scientists
Misc.   UK, other Draw-a-Scientist refs. DOE lib. 162, 178

Paper looks at how students in secondary school and then at college view scientists through the use of drawings.

DOE Lib.   **54**
Title: Reading, reflecting, visualizing.
Author: Lifford, Jean
Date: 1998

Group: High School
Topic: Improving reading metacognition through drawings, and hence writing
Misc.   US, article DOE lib. 57

Use of drawings to persuade students into thinking about how they read and therefore what they were reading.

DOE Lib.   **55**
Title: Use of pictograms in promoting improvement in reading.
Author: Lifford, Jean; Byron, Barbara; Eckblad, Jean & Ziemian, Carol
Date: 1998

Group: Grades 6 - 12
Topic: Use of drawings to help assess students' reading strategies
Misc.   US, Draft, For article ref. DOE lib. 57

Students were asked to draw pictograms of what they do when they read as part of a program to improve reading skills.

DOE Lib.   **56**
Title: Getting kids into the picture: Student drawings help teachers see themselves more clearly
Author: Tovey, Roberta
Date: 1996, Nov/Dec
Source: The Harvard Education Letter

Pp: 5 - 6

Group: Middle school
Topic: Using students' drawings of teachers to evaluate reform, DOE
Misc. US

Describes the DOE project with comments from participating schools. Includes limitations of drawings.

DOE Lib. **57**
Title: Reading, responding, reflecting
Author: Lifford, Jean; Byron, Barbara; Eckblad, Jean & Ziemian, Carol
Date: 2000, March
Source: English Journal
Pp: 46 - 57

Group: Secondary (grades 6 - 12)
Topic: Use of drawings to help assess students' reading strategies
Misc. US, for draft Doe lib. 54

Students were asked to draw pictograms of what they do when they read as part of a program to improve reading skills. The pictograms helped students become more aware of how they read.

DOE Lib. **58**
Title: Exploring the psych in psychometrics.
Author: Ludlow, Larry
Date: 2000, Sept.
Source: Lynch School Of Ed., Boston College

Group: College
Topic: Course evaluations
Misc. US, Cross-ref with DOE lib. 51, 2 samples included

Course evaluations of a statistics class.

DOE Lib. **59**
Title: Drawing on education: Using drawings to study and change education and

schooling. First year report.

Author: Haney, Walter; Russell, Michael & Jackson, Lisa
Date: 1999, May
Source: CSTEEP, Boston College

Group: Middle school
Topic: DOE
Misc. US, for other refs. DOE lib. 21

First year report of the DOE project summarizes activities in the first year of the study including dissemination efforts. Brief description of planned second year activities. Attachments include:
- Press release on DOE (DOE Lib. 38).
- Rosinski, Jennifer (1998, Nov. 16). Drawing on education. Metrowest daily news (DOE lib. 261)
- List of collaborating schools
- Gulek, Cengiz (1999, May). Using multiple means of inquiry to gain insight into classrooms: A multi-trait multi-method approach (Dissertation abstract). AERA presentation DOE lib. 23.
- Russell, Michael (1999, May). Testing on computers: A follow-up study comparing performance on computer and on paper (Dissertation abstract).

DOE Lib. **60**
Title: Technical manual on student reflection survey (draft)
Author: Haney, Walter, & Gulek, Cengiz
Date: 1996, Dec.
Source: CSTEEP., Boston College

Group: Middle school
Topic: DOE technical manual
Misc. US, Section on reliability DOE lib. 26

Technical manual for DOE project detailing methodology, reliability, validity issues.

DOE Lib. **61**
Title: MCAS Test draws fire from local parents and students.
Author: King, Jackie Dee
Date: 2000, Summer, 4
Source: 4 Word: news and reviews in area 4
Pp: 6 - 7

Topic: MCAS
Misc. US, includes 2 drawings of children by children taking the MCAS, for more DOE lib. 200 - 202, response to WASL DOE lib. 199, taking the PSSA DOE lib. 75, taking a test DOE lib. 241, to EOG DOE lib. 160

Reactions to the MCAS from students and parents at the Maynard and Fletcher School in area 4.

DOE Lib.   **62**
Title: Form 4 Drawing Coding Frame

Topic: DOE coding frame
Misc.   US, Tech. Manual draft DOE lib. 60

DOE Lib.   **63**
Title: **   Measuring intelligence with the Goodenough-Harris drawing test.
Author: Scott, Linda Howard
Date: 1981, May
Source: Psychological Bulletin, 89, 3
Pp: 483 - 505

Topic: Goodenough-Harris drawingtest
Misc.   ** email with citation only, Goodenough book DOE lib. 9

DOE Lib.   **64**
Title: Concerns and images of student teachers and their development in pre-service teacher education.
Author: Jorg, Ton, Korthagen, Fred, & Swennen, Anja
Date: 1999

Group: Student teachers
Topic: Concerns of student teachers and their development in pre-service teacher education.
Misc.   The Netherlands, AERA Presentation, some drawing samples

Study tries to chart changes in the concerns of student teachers during pre-service teacher education through the "cards" (prioritizing cards with printed concerns), drawings and interviews.

DOE Lib.   **65**

Title: Drawing on education meeting agenda
Date: 1999, May 26
Source: CSTEEP, Boston College

Topic: Meeting agenda
Misc.   Meeting agenda only, for other refs. DOE lib. 21

DOE Lib.   **66**
Title: Possible resources for Draw on Ed available from the national Art
                          Education Association

Topic: Bibliography
Misc.   Citations for 6 books art education and child development in art

---

DOE Lib.   **67**
Title: Art is a way of knowing: A guide to self-knowledge and spiritual
                          fulfillment through creativity.
Author: Allen, Pat B.
Date: 1995
Pub.   Shambhala, Boston & London

Topic: Through art making to knowledge of the self.
Misc.   US, photographs of art included

A personal journal by an art therapist as she learns to make art to self-knowledge and fulfillment.

DOE Lib.   **68**
Title: A history of art education: Intellectual and social currents in teaching and
                          the visual arts.
Author: Elfland, Arthur, D.
Date: 1990
Pub.   Teachers College Press, Columbia: N.Y.

Topic: History of art education in the West

Elfland's history begins with a description of the social contexts for the arts. He looks at the Western origins of art education beginning with the Greeks, through the middle ages, the Renaissance, Industrial revolution to the present day. Includes descriptions of the kindergarten,

arts-and-craft, progressive education, bauhaus movements.

DOE Lib.	**69**
Title:	Young children and their drawings.
Author:	Di Leo, Joseph H.
Date:	1970
Pub.	Brunner/Mazel; New York: N.Y.
Group	13 months - 6 years
Topic:	Progression in children's drawings, drawings by normal children and those with "deviance" (handicapping problems)
Misc.	Us, sample drawings included, follow-up on interpreting children's drawings DOE lib. 169

The book is divided into two sections: the first looks at the drawings of normal children while the second part is devoted to drawings by children with emotional/physical handicaps.

Procedure. All drawings were made by children in individual sessions. The children were allowed to choose their own topics draw. Children older than three were asked to draw a man.

The author summarizes the various stages and sequences of children's artistic development according to their theorists. By looking at drawings by children over times, the author tries to discern the progression and characteristics of these drawings.

DOE Lib.	**70**
Title:	The child's creation of a pictorial world.
Author:	Golomb, Claire
Date:	1992
Pub.	University of California Press, Berkeley: CA.
Topic:	Childrens' drawings as a creative search for meaning
Misc.	US, sample drawings included, for essay on same topic by Golomb DOE. Lib. 211

Child art has fascinated for a number of years. Two major orientations have come to dominate the field:
- Cognitive deficit view that the art reveals the child's immature conceptions of the world.
- Projective significance which mirrors the child's emotional concerns.

Both positions are derived from psychology and bring ready-made conceptions to the study of

child art. Arnheim's new psychology of the arts provided the conceptual tools for analyzing child art as a symbolic domain with its own rules and developmental coherence. Here again there are two different approaches:
- As primitive deviations from reality
- As attempts to create "equivalences" in another medium.

Drawing is a uniquely human activity and "one of the major achievements of the human mind. This book builds on an earlier piece and attempts to articulate the principles that underlie the development of drawing as a predominantly cognitive problem-solving activity.
- Chapter 1 & 2 address the question of how representational drawings come about.
- Chapter 3 explores the laws that determine the orderly differentiation of forms and the evolution of early graphic models.
- Chapter 4 & 5 examines how the child solves the problems of two and three dimensional space, and how color and form can be used for the expression of effect.
- Chapter 6 examines the child's use of space.
- Chapter 7 considers the art development of gifted children.
- Chapter 8 considers the relationship between art, personality, and diagnostics
- Chapter 9 takes the perspective of the child on child art.
- Chapter 10 addresses the problem of universals in graphic development, and the role of social and cultural variables.

DOE Lib.	**71**
Title:	Floating homes: Drawings by Bosnian refugee children.
Author:	Goldstein, Rick
Date:	1996, Fall
Source	Double Take
Group	Children
Topic:	Children's drawings of war
Misc.	Bosnia, for photographs of the war from the same magazine DOE lib. 216, drawings children in Yugoslavia (DOE lib. 220) and Africa (DOE lib. 32)

Drawings of war by Bosnian child refugees.

DOE Lib.	**72**
Title:	Miscellaneous Drawings
Topic:	Drawings on reading
Misc.	

DOE Lib.   **73**
Title: Inter-rater reliability Coding Exercise
Date: 1998, Spring

Topic: Coding exercise for DOE
Misc.   Coding sheets from coding exercise

DOE Lib.   **74**
Title: Seven original Students' drawings
Date: 1998, Nov.
Source: Sack, Trudy

Topic: Children's drawings of teachers in class
Misc.   US

DOE Lib.   **75**
Title: Drawings/data collected by Bob David on middle schoolers taking the
                  PSSA test.
Date: 2000, Spring
Source: David, Bob

Group: Middle school
Topic: Children's drawings of themselves taking the PSSA test and data
Misc.   US, MCAS Doe lib. 61, 200, 201; WASL DOE lib. 199, taking tests DOE
                  lib. 241

DOE Lib.   **76**
Title: Investigating classroom ecology through student drawings: Are there gender
                  or grade differences?
Author: Fierros, Edward Garcia

Date: 1997, April

Group: Middle school
Topic: Students drawings of teachers, gender & grade differences in drawings
Misc. US, draft, sample drawings included, other articles gender-related DOE lib. 163 , 164, 165, 81

Study analyses children's drawings of teachers to see if there are differences between pictures by girls or boys, and if there are differences between the grade levels. Gender differences may reflect different classroom experiences. Grade level differences may aid towards determining appropriate age level assessment techniques.

DOE Lib. **77**
Title: Reflecting educational practice: Using student drawings to illuminate the educational ecology of schools and to promote teacher reflection.
Author: Haney, Walt; Russell, Mike & Sack, Trudy
Date: 1996, April
Source: CSTEEP, Boston College

Group: Middle school
Topic: Using students' drawings to illuminate school reform and aid teacher reflection.
Misc. US, research proposal to Spencer Foundation, other refs. DOE lib. 21

Proposal to the Spencer Foundation for support on research into the use of children's drawings to assess the reform in schools and to promote teacher reflection. Includes:
• Plan of work
• Budget
• Resumes & biographical sketches
• Description of CSTEEP
• Letters of support
• Description of UDAC
• Description of Co-NECT
• Olson, Lynn (1995, April 26). School Portraits. Education Week, pp. 29-30 (DOE lib. 90).

DOE Lib. **78**
Title: Sample student drawings from the assessment at the school Y
Date: 1996, Haney
Source: Haney, Walter, CSTEEP, Boston College

Group:	Middle school
Topic:	Children's drawings of teachers in class
Misc.	US, more sample drawings DOE lib. 239, 240

DOE Lib.	**79**
Title:	Using student drawings, self-portraits and cooperative teacher drawings to encourage reflection in student teachers.
Author:	Sack, Trudy
Date:	1996, Sept.
Group:	Elementary, college, teachers
Topic:	Drawings of student teachers improve reflection of their work.
Misc.	US, Proposal, for results see DOE lib. 80, lit review DOE lib. 129, Diss. Seminar presentation DOE lib. 128, draft DOE lib. 126

Study looks at whether student teachers can use self-portraits, drawings of them by student teachers and by cooperating teachers can aid reflection of what they do. Teachers participating in the study will also be interviewed about the drawings.

DOE Lib.	**80**
Title:	Using student drawings, self portraits and cooperative teacher drawings to encourage reflection in student teachers
Author:	Sack, Trudy
Date:	1996, Sept.
Group:	Elementary, college, teachers
Topic:	Drawings of student teachers improve reflection of their work.
Misc.	US, Report (for proposal see DOE lib. 79), includes checklist of features to be found in drawings, and sample drawings, see DOE lib. 79 for other refs.

Study looks at whether student teachers can use self-portraits, drawings of them by student teachers and by cooperating teachers can aid reflection of what they do. Teachers participating in the study will also be interviewed about the drawings.

DOE Lib.	**81**
Title:	Picturing the past: Gender differences in the depiction of historical figures.
Date:	1996, April
Source:	American Journal of Education

Group:	5th and 8th graders
Topic:	Children's drawings of history
Misc.	US, request to referee article, sample drawings included, other gender refs DOE lib. 76, 163 - 165, article DOE lib. 122

Paper looks to see if there is a difference in the way males and females picture the past by asking them to picture themselves in historical gender neutral roles and to draw them. They were also asked to illustrate short textbook -like passages.

DOE Lib.	**82**
Title:	Effective Teaching
Author:	Fries, Kim
Date:	1997, Fall

Group:	• Adult non-educators (interview)
	• Adult non-educators, school-aged children (pictures)
	• Adult non-educators, one adolescent
Topic:	"Goodness of fit" between teacher and student
Misc.	US., drawings included, cross-ref. With DOE lib. 15

Paper looks at what effective teaching "looks" like, ie. what makes a "good" teacher apart from the transfer of knowledge. Semi-structured interviews were undertaken with a group of adult non-educators on their educational experiences and teachers. A second group of adult non-educators and children was asked to draw a picture of a "good" teacher" and a "bad" teacher in action. The third group of adult non-educators and a high school adolescent was asked to view the pictures and comment on them.

Paper posits that effective teaching is a function of the "goodness of fit" between teacher and students. That awareness of temperament or behavioral styles, and the emotional needs of the children contribute toward more effective teaching.

DOE Lib.	**83**
Title:	In search of consensus: Assessment of creativity in children's drawings.
Author:	Davidson, Lisa

Date: 1997, December

Group: First grade students
Topic: Creativity in children's drawings
Misc.   US, Drawing samples included

Study to determine if creativity is subjective by having using a disparate audience analyze drawings by first graders and then ranking them in terms of process, product, personality, and physiology.

DOE Lib.   **84**
Title: The Education Index from 1929-1997. Selecting "children's art" and "drawing"
Source: The Education Index

Topic: "children's art" and "drawing"

DOE Lib.   **85**
Title: Science and Scientists: A cross-cultural comparison of children's interests, experiences, attitudes and perceptions that may be of relevance for learning science with particular emphasis on gender aspects.
Author: Sjoborg, Svein; Mehta, Jayshree & Mulemwa, Jane N.
Date: 1996

Group: 13 year olds
Topic: Science education
Misc.   International, a few sample drawings, other Draw-a-Scientist refs DOE lib. 53, 162, 178

Invitation to participate in a study which posits that while science as a discipline is (to a certain degree) universal and objective, school science should be culturally dependent. Methodology is via questionnaire booklets administered to teachers and students. Student booklets include a section that asks the student to draw a scientist at work.

DOE Lib.   **86**
Title: Drawing bibliography

Topic: "children's art" and "freehand drawing"
Misc.   ERIC search using the terms "children's art" and "freehand drawing"

DOE Lib.   **87**, 22
Title: The Connected Mathematics Project: helping Minneapolis Middle School
                Students "Beat the odds." Year one evaluation report.
Author: Bartel, Anne & Winking, Deborah

Group: Middle school students
Topic: Results of the CMP in some middle schools in Minneapolis
Misc.   US, evaluation protocols included

DOE Lib.   **88**
Title: Elementary Art: A Comparison of Japan and the U.S.
Author: Deguchi, Makiko
Date: 1998, April

Group: First and fifth grade
Topic: A comparison of elementary art education between the US and Japan.
Misc.   US, Japan, For proposal ref DOE lib. 34

Paper looks at the differences in art education in Japan and the United States. There are
differences in emphasis, theory.

DOE Lib.   **89**, 113
Title: An investigation of two new kinds of assessment: Using student drawings to
                illuminate the educational psychology and the educational ecology of
                schools and learning, and testing students' writing via word processing
Author: Haney, Walt & Russell, Michael
Date: 1995, Sept.
Source: CSTEEP, Boston College

Group: Middle school
Topic: Using children's drawings of teachers to evaluate reform, and to study the
                use of computers in written tests
Misc.   Research proposal submitted to the Spencer Foundation

Includes:
• Haney, W. & Russell, M. Testing writing on computer: Results of a pilot experiment to
  compare student responses to the same items taken via computer or via paper and pencil
  (Draft).

- Description of CSTEEP
- Description of UDAC
- Description of Co-NECT
- Olson, Lynn (1995, April 26). School Portraits. Education Week (DOE lib. 90)
- Letters of support
- Advisory Panel

DOE Lib.   **90**, 176
Title: School Portraits.
Author: Olson, Lynn
Date: 1995, April 26
Source: Education Week
Pp.:   29 -30

Group: Middle school
Topic: Using children's drawings of teachers
Misc.   US, for Olson article on drawings of MCAS see DOE lib. 202

General description of the use of children's drawings of teachers in schools participating in the Co-NECT project.

DOE Lib.   **91**
Title: Drawing on school math reform: Using fifth grade students' perceptions to guide practice.
Author: Seldin, Amy
Date: 1997, Dec.

Group: Fifth grade
Topic: Children's perceptions of their own learning
Misc.   US, drawings included

Study looks at how children perceive themselves doing math in school and outside of the school through drawings.

DOE Lib.   **92**
Title: Hammond Scott Middle School student drawings.
Date: 1994, Fall

Group: Middle school
Topic: Children's drawings of teachers in class
Misc.   US, Drawings only

DOE Lib.   **93**
Title: Identification of attitudes toward tests through student drawings.
Author: Sartain, Stephanie
Date: 1997, April 30

Group: Elementary & Middle school
Topic: Students' attitudes towards test taking as reflected in drawings
Misc.   US, DOE lib. 94 for Ch. 1

Paper looked at students' attitudes toward taking tests through drawings of themselves taking a test.

DOE Lib.   **94**
Title: Chapter 1
Author: Sartain, Stephanie
Date: 1997, May

Topic: Whether test anxiety affects test performance
Misc.   US, for prelim. Paper DOE lib. 93

Chapter One of study which looks at whether test anxiety affects test performance by looking at children's drawings of themselves taking a test.

DOE Lib.   **95**
Title: Miscellaneous drawings

Group: Elementary
Topic: Children's drawings of themselves
Misc.   US, drawings only

DOE Lib.	96
Title:	Drawing ourselves into teaching: Studying the images that shape and distort teacher education
Author:	Weber, Sandra & Mitchell, Claudia
Date:	1996
Source:	Teaching and Teacher Education, 12, 3
Pp.:	303 - 313
Group:	University
Topic:	Student teachers' drawings of themselves
Misc.	Canada, book DOE lib. 3, article DOE lib. 234

Study looks at student teachers' drawings of themselves to investigate the pervasive influence of imagery in the emergence of teacher identity.

DOE Lib.	97
Title:	Drawing skills and science concepts in young children: A study of relationships.
Author:	Nelson, P. Laverne, Martin, Sue S. & Baldwin, Vernon G.
Date:	1998
Source:	Studies in Art Education
Pp.:	262 - 269
Group:	4 - 8 years
Topic:	The relationship between the development of children's drawing skills and their development in the cognitive area of science.
Misc.	US

The study is based on the belief that art is a child's first form of visual language and one which precedes writing. The use of art to acquire knowledge related to other disciplines is now an accepted practice. Many researchers including Gardner believe that there is a direct link between the art of young children and development in other cognitive areas. Children use both visual and tactile approaches to learning when they are involved in the arts , which in turn fosters greater understanding of cognitive concepts including those related to science.

This study looks at the relationship between the development of children's drawing skills and their development in the cognitive area of science. Children were asked to draw pictures "for us to keep." The pictures were evaluated on their aesthetic qualities and placed in one of four developmental levels. The children were then tested in science by looking at their ability to identify objects by the material they were made of. The results were correlated.

DOE Lib.	**98**
Title:	What headaches look like: Kid's drawings can communicate what words cannot.
Author:	Willis, Melinda T.
Date:	2002, March 5
Source	www.ABCnews.com
Group	4 - 19 years
Topic	Drawings by children of headaches
Misc.	US

A new study by *Pediatrics* looks at the drawings by children of themselves having a headache. Such results may be important as the prevalence of headaches in children is higher than people think, and drawings may help physicians and parents understand the severity of the pain.

DOE Lib.	**99**
Title:	Summary of evaluation of session at EMCF Program for student Achievement meeting in Chicago.
Author:	Haney, Walt & Foster, Rubin
Date:	1997, March
Topic:	How to determine what students really know and can do. .
Misc.	US

DOE Lib.	**100**
Title:	Ask ERIC Infoguides
Topic:	Alphabetical list of new infoguides on ERIC

DOE Lib.	**101**
Title:	Drawing conclusions: A re-examination of empirical and conceptual bases for psychological evaluation of children from their drawings
Author:	Thomas, Glyn V. & Jolley, Richard P.
Date:	1998, 37, 2
Source:	British Journal of Clinical Psychology
Pp.:	127 - 139

Topic: The state, validity and reliability of using drawings to evaluate children.
Misc.

Children's drawings are analyzed for one or more of the following reasons:
- Personality (trait) assessment
- Evaluation of current emotional states
- Evaluation of personal significance of topic depicted
- Assessment of intelligence or developmental level
- Assessment of possible neurological impairment

This paper is concerned only with the first three reasons listed above. A summary of current practice and concepts on the clinical use of drawing is given. Paper also looks at the different mechanisms that can influence what is drawn. Paper concludes that given the popularity of the use of drawings, there is little empirical proof of reliability. The authors recommend ways in which interpretations of emotional attitudes and experiences could be made from drawings to enhance reliability and validity.

DOE Lib.   **102**
Title: Report on the Student Reflection Assessment at Middle school X (draft).
Author: Haney, Walt & Gulek, Cengiz
Date: 1996, August

Group: Middle school
Topic: Results of Student Reflection form
Misc.   US (San Diego), For copies of form Part A ref. DOE lib. 103, drawings ref. DOE lib. 106

Student Reflection form consisted of close-ended questions, open-ended items and a drawing exercise. The report tabulates the responses to the close-ended questions, summarizes responses to the open-ended items and the drawings.

DOE Lib.   **103**
Title: Student Reflection Forms
Date: 1996, August

Group: Middle school
Topic: Student reflection form part A
Misc.   US (San Diego), For report DOE. Lib. 102, drawings DOE lib. 106

DOE Lib.   **104**
Title: Report on the Assignment on Children's drawings
Author: Teferra, Damtew

Group: Middle school
Topic: Dissertations using "children and drawings"
Misc.   Results on library search

DOE Lib.   **105**
Title: What do children think about the drawing process
Author: Pillar, Analice Dutra
Date: 1998
Source: NSEAD

Group: 2 - 6 years for 3 years
Topic: What children think about the drawing process
Misc.   longitudinal & exploratory study,
Developing research on the conceptions children have about the drawing process is important because teachers believe that children's drawing is not related to constructive aspects but to graphic alterations of drawing. Analysis of children's drawings tend to deal with the graphic, perceptive and psychological aspects of the drawing but not on what the drawing actually represents to the child.

The drawing situations involved spontaneous and controlled activities. Findings are summarized into different phases.

DOE Lib.   **106**
Title: Sample student drawings from the assessment at the school X
Author: Haney, Walt
Date: 1996,

Group: Middle school
Topic: Drawings from Student Reflection form
Misc.   US (San Diego), For copies of form Part A ref. DOE lib. 103, report ref. DOE lib. 102

DOE Lib.   **107**
Title: New grants program sponsored by John D. and Catherine T MacArthur
        Foundation and the Spencer Foundation
Author: Mueller, Peggy
Date: 1995, March
Source: Spencer Foundation

Topic: New grants program sponsored by MacArthur and Spencer Foundations
Misc.   Personal communication

DOE Lib.   **108**
Title: Spencer Dissertation Fellowships
Author: Lacey, Catherine A.
Date: 1996, August
Source: Spencer Foundation

Topic: Spencer dissertation fellowships for research related to education
Misc.   Personal communication

DOE Lib.   **109**
Title: Re: Application for a Spencer Foundation grant.
Author: Mueller, Peggy
Date: 1995, June
Source: Spencer Foundation

Topic: Application for a Spencer Foundation grant
Misc.   Personal communication

DOE Lib.   **110**
Title: Spencer Foundation grants
Author: Barcroft, John H
Date: 1995, July
Source: Spencer Foundation

Topic: Spencer Foundation grants information
Misc.   Personal communication

DOE Lib.   **111**
Title: The Spencer Foundation: Annual report for the year ended March 31, 1995.
Author: Spencer Foundation
Date: 1995, March
Source: Spencer Foundation

Topic: Spencer Foundation report
Misc.   US , Lists staff, aims, and grants, fellowships awarded

DOE Lib.   **112**
Title: 11th grade honors class drawings in response to a prompt.

Group: 11th grade
Topic: Drawings by students of themselves writing a paper
Misc.   US, drawings and prompt included

DOE Lib.   **113**, 89
Title: An investigation of two new kinds of assessment: Using student drawings to illuminate the educational psychology and the educational ecology of schools and learning, and testing students' writing via word processing
Author: Haney, Walt & Russell, Michael
Date: 1995, Sept.
Source: CSTEEP, Boston College

Group: Middle school
Topic: Using children's drawings of teachers to evaluate reform, and to study the use of computers in written tests
Misc.   Research proposal submitted to the Spencer Foundation, letter to Spencer VP included

DOE Lib.   **114**
Title: Personal communication

Author: Haney, Walt, Russell, Mike & Sack, Trudy
Date: 1996, April
Source: CSTEEP, Boston College

Topic: Spencer Foundation proposal
Misc.   US , Personal communication to Kathleen Donovan, Arlington
                     Superintendent of Schools, Response Doe lib. 120

DOE Lib.   **115**
Title: Personal communication
Author: Haney, Walt, Russell, Mike & Sack, Trudy
Date: 1996, April
Source: CSTEEP, Boston College

Topic: Spencer Foundation proposal
Misc.   US , Personal communication to Bruce Goldberg, BBN

DOE Lib.   **116**
Title: Personal communication
Author: Haney, Walt, Russell, Mike & Sack, Trudy
Date: 1996, April
Source: CSTEEP, Boston College

Topic: Spencer Foundation proposal
Misc.   US , Personal communication to Irwin Blumer, Newton Superintendent of
                     Schools

DOE Lib.   **117**
Title: Personal communication
Author: Haney, Walt, Russell, Mike & Sack, Trudy
Date: 1996, April
Source: CSTEEP, Boston College

Topic: Spencer Foundation proposal
Misc.   US , Personal communication to Frank Lentvorsky, Scott Middle School
                     principal

DOE Lib.   **118**
Title: Personal communication
Author: Haney, Walt, Russell, Mike & Sack, Trudy
Date: 1996, April
Source: CSTEEP, Boston College

Topic: Spencer Foundation proposal
Misc.   US , Personal communication to Carole Pelletier, Office of Professional
                    Practicum Experiences, Boston College

DOE Lib.   **119**
Title: Personal communication
Author: Haney, Walt, Russell, Mike & Sack, Trudy
Date: 1996, April
Source: CSTEEP, Boston College

Topic: Spencer Foundation proposal
Misc.   US , Personal communication to Charla Argo Wright, Dzantik'I Heeni
                    Middle School principal

DOE Lib.   **120**
Title: Personal communication (Response)
Author: Donovan Kathleen F.
Date: 1996, April
Source: Arlington Public Schools

Topic: Spencer Foundation proposal
Misc.   US, Personal communication to CSTEEP, response to DOE lib. 114

DOE Lib.   **121**
Title: Personal communication (Response)
Author: Wright, Charla Argo
Date: 1996, April
Source: Juneau School District

Topic: Spencer Foundation proposal
Misc.   US , Personal communication to Spencer Foundation in support of DOE proposal (response DOE lib. 119)

DOE Lib. **122**
Title: Personal correspondence
Author: Jackson, Phillip W.
Date: 1996, May
Source: American Journal of Education

Topic: "Picturing the past: gender differences in the depiction of historical figures"
Misc.   US, personal communication w/ comments from referees, article DOE lib. 81

DOE Lib. **123**
Title: Word processors and the acquisition of writing strategies
Author: Morocco, Catherine Cobb & Neuman, Susan B.
Date: 1986, April
Source: Journal of Learning Disabilities

Topic: Word processors and how they help learning disabled children manage the cognitive and emotional demands of the writing process.
Misc.   US

Article explores the opportunities provided by word processors for teachers of learning disabled children to help students in writing. It describes the typical kinds of writing problems and discusses ways the computer makes the child's planning and composing problems more accessible to teacher help. It also cautions that greater accessibility to the child's writing might impose on the child's involvement and ownership of the writing.

DOE Lib. **124**
Title: Drawing references
Date: 1996, Oct

Topic: Citations

DOE Lib.   **125**
Title: Personal communication
Author: Tai, Bonnie Hao Kuo; Mintz, Ethan & Duhaldeborde, Yves
Date: 1997, Jan.
Source: Harvard Educational Review

Topic: Reflecting student practice: using students drawings to illuminate the educational ecology of schools and to promote teachers education
Misc.   US , Personal communication to Walt Haney for article

DOE Lib.   **126**
Title: Using students' drawings, self portrait and cooperative teacher drawing to encourage reflection in student teachers
Author: Sack, Trudy
Date: 1995, Dec.

Group: College
Topic: Using drawings to help self-reflection in student teachers
Misc.   US, class paper, checklist & sample drawings included, lit review, dissertation seminar proposal DOE lib. 128, chapter DOE lib. 129,

Study looks at the use of drawings from students, cooperative teachers and student teachers themselves can help to foster the articulation and elaboration of the student teachers' philosophy of education.

DOE Lib.   **127**
Title: Flowers are red
Author: Chapin, Harry
Date: 1978
Source: ASCAP/Warner Records

Topic: How teachers can influence children
Misc.   Song

DOE Lib.   **128**

Title: Dissertation seminar.
Author: Sack, Trudy
Date: 1996, Feb.

Group: Student teachers
Topic: Using drawings to help self-reflection in student teachers
Misc.   Seminar paper Doe lib. 126, chapter DOE lib. 129

DOE Lib.   **129**
Title: Literature review and discussion of: Reflective teaching, practical theory of
               teaching and self knowledge in teachers
Author: Sack, Trudy
Date: 1996, Feb.

Group: Student teachers
Topic: Using drawings to help self-reflection in student teachers
Misc.   Chapter For dissertation, seminar paper Doe lib. 126, seminar paper proposal
               DOE lib. 128

DOE Lib.   **130**
Title: Reflecting educational practice: Using students drawings to illuminate the
               educational ecology of schools and to promote teacher reflection
Author: CSTEEP

Topic: Using children's drawings to document the educational ecology of schools
               and aid in teacher reflection
Misc.   Executive summary for Spencer Foundation grant proposal

DOE Lib.   **131**
Title: Personal correspondence
Author: Haney, Walt
Date: 1996, April

Topic: Using children's drawings to document the educational ecology of schools
               and aid in teacher reflection
Misc.   Cover letter for Spencer proposal, DOE ref. 130.

DOE Lib.   **132**
Title: Personal correspondence
Author: Haney, Walt
Date: 1996, April

Topic: Using children's drawings to document the educational ecology of schools
                and aid in teacher reflection
Misc.   Letter requesting support for Spencer Foundation grant proposal to John
                Fernandez, Newton Public Schools.

DOE Lib.   **133**
Title: Drawings as messages: The effect of a communication game upon
                production of view-specific drawings
Author: Light, Paul & McEwen, Fiona
Date: 1987, 5
Source: British Journal of Developmental Psychology
Pp.   53 - 60

Group: 5 - 6 year olds
Topic: How children draw
Misc.   UK

Article looks at conditions under which children's drawings are visually realistic. A game was set up in which 3 colored wooden blocks were arranged in a box. Child was asked to draw the blocks from his perspective so his partner can arrange another set of colored blocks according to his friend's drawing. In the control group individual students were asked to draw the arranged colored blocks just from their perspective. The game group of students produced more visually realistic drawings supporting the idea that even among young children, there is evidence of children drawing for a purpose.

DOE Lib.   **134**
Title: The effects of a communication task upon the representation of depth
                relationships in young children's drawings
Author: Light, Paul & Simmons, Brian
Date: 1983, 35
Source: Journal of Experimental Child Psychology
Pp.   81 - 92

Group: 5 - 10 year olds
Topic: Influence of specificity of communications on depth relationships and occlusion in children's drawings
Misc.   UK

Article looks at how young children have problems drawing depth relationships, ie. one object partially hidden behind another. The drawings tend two show the objects side-by-side or one above the other. Study wonders if children's drawings might be more visually realistic if instructions on perspective were more specific.

Students were asked to draw two different colored balls from their perspective although they had vied the balls from all perspectives. This was the control group. The other group was told and told that one child would make the drawing while the other would determine where the child doing the drawing had been sitting based on the drawing.

A second experiment was conducted in which the children were paired up. One child was seated and asked to draw the colored balls from his perspective. The other child was then given the drawing and asked to comment on its "correctness."

Generally, the need to communicate to another (as in the pairs) tended to produce more visually realistic drawings although the older the children, the more likely they were to do so even without instructions.

DOE Lib.   **135**
Title: Internal spatial relationships in young children's drawings
Author: Light, P.H. & Humphreys, J.
Date: 1981, 31
Source: Journal of Experimental Child Psychology
Pp.   521 - 530

Group: 5 - 8 year olds
Topic: Development of array specific and view-specific relationships in children
Misc.   UK

Article looks at how young children have problems drawing depth relationships, ie. one object partially hidden behind another. The drawings tend two show the objects side-by-side or one above the other. Experiments using a model house and a transparent beaker showed the same tendencies. When the house was placed inside the beaker, the drawings showed the model in the container. When the house was placed behind the beaker, it was drawn either above or beside the container. One hypothesis is that children distinguish between two classes of spatial relationships. Array -specific relationships features the viewer's visual world, ie. relationships intrinsic to the object. View-specific relationships are visual field specific, ie. show the objective from the viewpoint of the child.

Researchers arranged different colored blocks and ceramic pigs in different ways. With each arrangement, children were asked to draw what they saw. The drawings of the younger children tended to be array -specific with the objects in a horizontal line regardless of perspective. The pictures of the older children tended to be more view-specific.

DOE Lib.	**136**
Title:	Three into two won't go: symbolic and spatial coding in young children's drawings.
Author:	Ingram, Neil
Date:	1985
Source:	Visual Order
Ed.	Freeman, N.H. & Cox, M.V.
Pp.	231 - 247
Group:	3 - 8 years
Topic:	Symbolic and spatial coding processes in young children's drawings
Misc.	UK

Chapter reports on the results of comparisons made between two experiments designed to establish how children between 3 and 8 years represent three-dimensional spatial relationships on a two-dimensional picture surface. The results suggest two coding processes for representation. A symbolic code (consistent with Luquet's theory concerning the developmental transition from intellectual to visual realism) suggests that there is a tendency in young children to draw what they know rather than what they see. View specific spatial codes suggest that children are sensitive of their perspective in relation to an object.

The chapter summarizes the different theories for children's spatial development. The experiment consisted of six studies in which successive cues/details were added to different sized blocks, and children were asked to draw each from their viewpoint.

The results suggest that, contrary to other findings, very young children do possess both symbolic and spatial codes, ie. they can draw what they see rather than what they know.

DOE Lib.   **137**
Title: The emotionally disturbed child draws his family.
Author: Hulse, Wilfred C.
Date:
Pp.   152 - 174

Group: 5 - 14 years
Topic: Use of children's drawings to diagnose problems of emotional disturbed
       children
Misc.   US, drawings included

Case studies with drawings of emotionally disturbed children and their families. Interpretations
of drawings.

DOE Lib.   **138**
Title: Who's in my family? A longitudinal study of drawings of children of
       divorce
Author: Isaacs, Marla Beth & Levin, Irene Raskow
Date: 1984, Summer, 7(4)
Source: Journal of Divorce
Pp.   1 - 21

Group: 5 - 11 years
Topic: Family composition as seen through the drawings of children of divorce
Misc.   US, some drawings included

Chapter reports on the results of a pilot study that administered the Draw A Family Test to
children of divorce. 3 characteristics were analyzed:
- Family composition - who had been included in/excluded from the drawing
- Comparative size of mothers and fathers
- Changes over time - compares drawings made by children over a period of time

The study included not just drawings but also interviews with the children and their parents.

DOE Lib.   **139**
Title: Patterns of psychological test usage in the United States 1935 - 1982
Author: Lubin, Bernard; Larsen, Reed M. & Matarazzo, Joseph D.
Date: 1984, April

Source: American Psychologist
Pp.   451 - 454

Group: General
Topic: Frequency and usage of psychological tests and inventories
Misc.   US

Results seem to indicate the growing use of tests and inventories that include drawing.

DOE Lib.   **140**
Title: The relationship between parental divorce and the child's body boundary definiteness.
Author: Spigelman, Ami & Spigelman, Gabriella
Date: 1991, 56 (1)
Source: Journal of Personality Assessment
Pp.   96 - 105
Pub.   Lawrence Erlbaum Associates, Inc.

Group: 10 - 12 years
Topic: Effect of divorce on child's body boundary definiteness
Misc.   Sweden

Body boundary definiteness is an important facet of body image. People with firm body boundaries are see as having formed well-integrated, well-defined images of their own bodies, on the basis of which they are able to deal with others in a forthright and effective manner. People with less clearly defined body boundaries are seen as having infirm body images, which puts them at a disadvantage in dealing with others.

This study looks at the relationship between body boundary definiteness and divorce. The subjects were individually tested on a series of projective tests (including the Rorschach Inkblot Test) and interviewed. Results suggest that divorce does affect the body boundary definiteness of children.

DOE Lib.   **141**
Title: Figure drawings by young boys from father-present and father-absent homes.
Author: Lawton, Marcia J. & Sechrest, Lee
Date:
Pp.   304 - 305

Group: 6 - 14 years
Topic: Figure drawings by young boys from father-present and father-absent homes.
Misc.   US

Studies suggest that boys drawings of their families will differ depending on whether the father is present or absent. Results of this study do not show that.

DOE Lib.   **142**, 13
Title: How students see their writing: A visual representation of literacy.
Author: Black, Kathleen
Date: 1991
Source: Journal of Reading 35, 3
Pp: 206 - 214

Group: College
Topic: Illustrating the writing process
Misc.   US, drawings and refs. included

DOE Lib.   **143**
Title: Projection systems: and X-ray strategies in children's drawings: a comparative study in three cultures.
Author: Andersson, Sven
Date: 1995
Source: British Journal of Educational Psychology, 65
Pp: 455 - 464

Group: Grades 4 - 5
Topic: To what extent children in different cultures employ perspective projection systems and transparency strategies in their drawings
Misc.   Tanzania, Sweden

Theories on child development argue that there is a fixed relationship between age and stage of drawing development. Roughly, the stages are:
- Pre-logical period of early symbolic thought - child ignores shape and size of object in drawing.
- Intellectual realism - child draws what he knows rather than what he sees. Includes X-ray or transparency drawing, ie. drawing the handle on a cup even when he cannot see it.
- Visual realism -children draws from viewpoint and pictures are generally more realistic.

Willats proposed that a child's development towards perspectives can be classified into four systems:

- Orthographic projection - provides no information on depth as it represents an object on a frontal parallel plan
- Vertical oblique projection - consists of horizontal and vertical lines. In a cube, only the front and top faces or front and side faces are represented.
- Oblique projection - 3 sides of a cube are represented and the front, side and top sides are depicted in three dimensions by parallel oblique lines
- Perspective projection - photographically realistic.

Study asked children in grade 4 to draw a picture of themselves working in their classroom. Grade five children were asked to draw pictures of their future family and then the whole family in front of their future home. Pictures were scored according to transparency (eg. Whether the child had drawn what generally happens behind a wall), mixed viewpoints (side view of house and aerial view of beds), and projection systems (Willats' system). Results indicate there is no fixed relation between age and stage of drawing development.

DOE Lib.   **144**
Title: The family drawing test: A comparative study of children's drawings.
Author: Reznikoff, Martin & Reznikoff, Helga R.
Pp: 167 - 169

Group: 2nd grade
Topic: Children's drawings of their family to elicit information about their role in the family, relationships between parents and siblings and tensions in the home.
Misc.   US

Children were asked to draw pictures of their families including themselves. The drawings of girls were compared to boys, white with African-Americans, and low income with middle income groups. Boys more frequently place themselves in the center of their families and omitted the mother figure. African-American children more frequently excluded fingers and siblings. Children from lower income groups more frequently excluded mothers and drew the older siblings as the largest figures.

DOE Lib.   **145**
Title: Poetry IV

Group: Grade 12
Topic: Conformity
Misc.   Canada, poem by child

DOE Lib.   **146**

Title: References for an article by Spigelman, Spigelman & Englesson
Author: Spigelman, Spigelman & Englesson
Date: 1992
Source: Journal of divorce and remarriage, 18 (11/2)
Pp: 52 - 54

Topic: Drawings by children of divotce
Misc.   For article on same topic by Spigelman & Spigelman DOE lib. 140

DOE Lib.   **147**
Title: Attitudinal differences as seen in the drawings of traditional and
                    nontraditional students in a developmental mathematics course.
Author: Lerch, Carol

Group: College
Topic: Difference in attitude to math between traditional and nontraditional students
Misc.   US, very few sample drawings

Paper looked at the difference in attitude to math between traditional (aged 18 - 22years) and nontraditional (aged 25 years +) students. Students were asked to draw pictures of themselves in math class and interviewed.

Boredom and confusion was featured in many pictures by both groups. Traditional students seem to have a more negative attitude towards math and the instructor.

DOE Lib.   **148**
Title: Out of the crayons of babes.
Author: Trudeau, Garry
Date: 1995, Jan. 55
Source: The New York Times Magazine
Pp: 34 - 35

Group: General
Topic: What artists learn from children's art
Misc.   International, for child art and the masters DOE lib. 11

DOE Lib.   **149**
Title: Spencer Foundation Program Information
Author: Spencer Foundation
Date: 1996, Sept.
Source: Spencer Foundation

Topic: Spencer Foundation Program
Misc.   Brochure on how to apply for a Spencer Foundation Program grant

DOE Lib.   **150**
Title: The effect of drawing on memory performance in young children.
Author: Butler, Sarnia; Gross, Julien & Hayne, Harlene
Date: 1995, 31 (4)
Source: Developmental Psychology
Pp: 597 - 608

Group: 3 - 6 year olds
Topic: The effect of drawing on memory performance in young children.
Misc.   New Zealand

Paper looks at the effect of drawing on memory performance in young children. Two experiments were run. In experiment 1, five to six year old children participated in an event and were interviewed about the event a day later. Half the group was asked to draw a picture and then tell what happened and the other half, to just tell what happened. Only verbal responses were scored.

The experiment was repeated with a group of 5 - 6 year olds and a group of 3 - 4 year olds, and the interviews and drawings were administered one month after the event.

The results indicate that drawings helped the older children remember more. Paper considers the reasons why drawings improved memory performance (eg. As a source of retrieval clues, drawings allow children include details not usually mentioned in conversation, the duration of the interview). Results and research imply that drawings and direct questioning together are most effective in memory performance of young children.

DOE Lib.   **151**

Title: Personal Communication
Author: Haney, Walt
Date: 1996, Dec. 12

Topic: DOE
Misc.   Personal correspondence from Walt Haney to Robert Coles.

DOE Lib.   **152**
Title: Personal Communication
Author: Miech, Edward J.
Date: 1996, Dec. 5

Topic: Student drawing for "Class acts: Teachers reflect on their own classroom practice
Misc.   Cover letter from Edward Miech, Harvard Educational Review, with return of student drawing - drawing not included.
DOE Lib.   **153**
Title: How children learn to draw.
Author: Willats, J.
Date: 1977, 29
Source: Quarterly Journal of Experimental Psychology
Pp: 376 - 382

Topic: Children's ability to make realistic drawings
Misc.   UK, discussion only,

Realistic drawings are usually taken to mean drawings in perspective.

- Learning to draw means a progression through a series of discreet stages
- Each stage is more complex than the previous one is demands more abstraction
- With the exception of the last two stages it seems unlikely that much of the learning is due to explicit teaching
- What seems more likely is that as a child becomes aware of the limitations of a system and through maturation, is ready to handle more complex systems, he starts to seek alternate systems.
- The acquisition of drawing is similar to the acquisition of language in that the child "does not learn words," but "invents them for the things he wants to communicate. Furthermore, imitation does not appear to be a mechanism for acquisition." His inventions are not independent of the language he hears around him. They are closely related but independent in the creativity he brings to it, creativity which has to do with "the communication of concepts which he is cognitively able to handle."

DOE Lib. **154**
Title: Drawings from Co-NECT Spring assessments
Author:
Date: 1994, Spring

Group: Middle school
Topic: Children's drawings of a teacher working in his/her classroom
Misc. US, 3 drawings, for more DOE lib. 239, 240

DOE Lib. **155**
Title: Study of Students: pictures draws funding
Author: Sullivan, Mark
Date: 1998, Oct. 29, 7 (5)
Source: The Boston College Chronicle
Pp: 1, 5

Topic: DrawonEd (DOE)
Misc. US, article about DOE

DOE Lib. **156**
Title: Drawing conclusions
Author: Sullivan, Mark
Date: 1997, April 10
Source: The Boston College Chronicle
Pp: 8

Group: Elementary
Topic: Using children's drawings to look at the effect of test anxiety on children
Misc. US

Article on graduate student Stephanie Sartain's look at how children's drawings illustrate the effect of test anxiety on children.

DOE Lib. **157**
Title: Feedback from drawing in San Francisco
Author: Fierros, Edward Garcia
Date:

Topic: Feedback from teachers on student drawings

Misc.   US.

DOE Lib.   **158**
Title: Personal Communication
Author: Haney, Walt
Date: 2000, Oct. 3

Topic: DOE
Misc.   Cover letter to John Williams, VP Spencer Foundation to DOE Year 2
          report (DOE lib. 159)

DOE Lib.   **159**
Title: Drawing on Education: Using Drawings to study and change education and
          schooling. Report on Second Year of Project to the Spencer Foundation for
          the CSTEEP
Author: Haney, Walt; Russell, Michael; Bebell, Damian & Wheelock, Anne
Date: 2000, September
Source: CSTEEP, Boston College

Group: Middle school
Topic: DOE Year 2 + plans for Year 3
Misc.   US, for more DOE refs. DOE lib. 21

Update on personnel involved in DOE and summary of what has been done in Year 2. Includes
plans for Year 3. Appendix includes:
• Bibliography of materials collected during project
• Wheelock, A., Bebell, D & Haney, W. (2000, Sept. 6). What can student drawings tell us
  about high-stakes testing in Massachusetts?
• Lifford, J., Byron, B., Eckblad, J. & Ziemian, C. (2000, March). Reading, writing, reflecting.
  English Journal (DOE lib. 57).

DOE Lib.   **160**
Title: EOG can spell 'end of fun'
Author: Lu, Adrienne
Date: 2000, Nov. 13
Source: The News & Observer
Pp: 1

Group: 3rd grade
Topic: Reactions to the EOG (3rd grade reading and math test in SC).
Misc.   US, for MCAS DOE lib. 61, 200 - 202, response to WASL DOE lib. 199, taking the PSSA DOE lib. 75, taking a test DOE lib. 241

Article looks at responses from parents, teachers, etc. to the EOG. Mentions briefly what the children drew when they were asked to draw the test.

DOE Lib.   **161**, 197
Title: Personal Communication
Author: Orlich, Donald, C.
Date: 2000, November 14

Group: Grades 4, 7, 10
Topic: Critique of the WASL
Misc.   US

Cover letter from Prof. Orlich expressing about what children's drawings tell us about high stakes testing (DOE lib. 159). Includes his critique of the Washington state test (WASL) and two articles:
- Orlich, Donald O. (2000, February). Educational reform and limits to student achievement. Phi Delta Kappan , 468 - 472. Orlich questions whether higher standards will mean higher achievement in students. DOE lib. 198
- Harris, Wendy (2000, May 11). WASL a "monster" of a test. The Spokesman-Review, B1, B5. Article about the WASL and response to the test. DOE lib. 199

DOE Lib.   **162**
Title: Stereotypic images of the scientist: The Draw-A-Scientist-Test.
Author: Chambers. David Wade
Date: 1983 , 67 (2)
Source: Science Education
Pp: 255 - 265

Group: Kindergarten - grade 5
Topic: Determine age at which children develop distinctive images of scientists.
Misc.   Australia, US, Canada,

Short review of the image of scientists. Longitudinal study (11 years) in which the Draw-a-Scientist-Test administered to children and the drawings analyzed according to a set of predetermined indicators.

Results indicated that by the 2nd grade, the stereotype has begun to take root. Standard stereotypical features appeared later in drawings of children from lower SES. Only girls drew women scientists. Children with High I.Qs tended to produce standard features earlier. No real difference was found between English and French speakers. There were also a number of alternative images, eg. 'mad' scientists, 'destructive' scientists, secretive scientists.

DOE Lib.	**163**
Title:	Gender differentiation and young children's drawings.
Author:	Chen, Weigh-Jen & Kantner, Larry A.
Date:	1996, 23 (1)
Source:	Visual Arts Research
Pp:	45 - 51

Group:	Kindergarten, 3rd grade
Topic:	Gender differentiation in children's drawings.
Misc.	US, other gender related DOE lib. 76, 81, 164, 165

Sex desegregation programs have been actively promoted in schools and this study uses children's drawings to evaluate the effectiveness of the programs.

Research indicates that by age 4, children's awareness of differentiation begins as they learn to distinguish roles various people play. This age is also the transitional period in a child's artistic development, from scribbling to making symbols. There are gender differences in the level of skill exhibited by children, with females being from 6 - 12 months more advanced in their drawing abilities.

Children were asked to draw a picture about people.

Differences in gender were looked for according to nine variables/hypotheses:
- Girls are superior to boys in drawing skills
- Girls prefer drawing domestic scenes, boys like outdoor activities
- Girls tend to draw people, boys objects
- Girls prefer drawing real experiences, boys like fantasy or supernatural themes
- Girls prefer drawing quiet subjects, boys prefer active subjects
- Boys prefer to draw aggressive subjects
- Children prefer to draw their own sex
- Girls prefer curvilinear lines to boys' use of rectilinear lines
- Girls prefer somber colors to boys' preference for bright colors

Results indicate differences only in two dimensions:
- Girls are superior to boys in drawing skills
- Children prefer to draw their own sex

DOE Lib. **164**
Title: Sex differences and gender-role differences in children's drawings.
Author: Flannery, Kathleen A. & Watson, Malcolm W.
Date: 1995, 36 (2)
Source: Studies in Art Education
Pp: 114 - 122

Group: 3rd - 5th grade
Topic: Sex differences and gender-role differences with respect to levels of theme realism, aggression, expressiveness, and artistic skill shown in children's drawings.
Misc. US, other gender refs DOE lib. 76, 81, 163, 165

Sex differences in subject matter of children's drawings have been observed repeatedly in elementary school-aged children, and in children from different cultures. Are the differences the results of biological differences or based on the children's own self-categorization in terms of gender-role traits.

Students were asked to draw pictures of people involved in an activity. A Personal Attributes Questionnaire was administered.

Differences were looked for according to the following variables:
• Subject matter. Boys 'preferences for supernatural/fantasy themes
• Aggression as depicted in drawings
• Expressiveness. Whether drawings expressed emotions.

In addition, the investigation sought to examine whether there were gender-role differences in drawing. Hence, the following hypotheses were added:
• Male-typed children would produce more unrealistic themes than female-typed children
• Male-typed children would show more aggression in their drawings
• Female-typed children would draw more expressively
• Androgynous children would draw with greater artistic skill

The results seem to confirm the following:
• Subject matter. Boys 'preferences for supernatural/fantasy themes
• Aggression as depicted in drawings

With regard to gender-role differences, male-typed individuals produced drawings with significantly higher ratings of aggression.

DOE Lib.   **165**
Title: Student perceptions of a good teacher: the gender perspective.
Author: Jules, Vena & Kutnick, Peter
Date: 1997, 67
Source: British Journal of Educational Psychology
Pp: 497 -511

Group: 8 - 16 years
Topic: Similarities and differences between boys and girls in their perceptions of a good teacher, in a society where girls achieve superior academic performance than boys.
Misc.   Trinidad & Tobago, other gender refs DOE lib. 76, 81, 163, 164

Student essays entitled "A Good Teacher" and interviews were analyzed, coded for age development and compared between boys and girls. Content items identified were grouped as follows:
- Physical and personal characteristics of the teacher
- Quality of the relationship between the teacher and pupil
- Control of behavior by the teacher
- Descriptions of the teaching process
- Educational and other outcomes obtained by pupils due to teacher effort

From the results, six issues identified:
- Common concepts identified by boys and girls although girls identified more good teacher concepts
- Girls emphasized the importance of interpersonal relationships while boys placed importance on the ability to assert control
- A significant perception of 8 year old males was for good teachers to show sensitivity to a students' needs
- Increasing perception among both sexes, especially girls, that a good teacher encourages student learning through inclusive, participatory activities and allow mutual sharing
- For both sexes up to the age of 14, the good teacher was usually female, for 16 year old males, this was usually male
- Many of the differences that characterized male and female students were not found among the oldest age group.

DOE Lib.   **166**

Title: Misunderstanding children's art.
Author: Kellog, Rhoda
Date: 1973, April
Pp: 7 - 9

Group: Gen.
Topic: The capacity for creating art is innate, and children's art should be looked at and not discarded as scribblings.
Misc.   Internat., presentation to Nat. Art Edu. Assoc. Conference (Cross ref. With DOE lib. 167)

DOE Lib.   **167**
Title: Understanding children's art.
Author: Kellog, Rhoda
Date:
Pp: 31 - 39

Group: Very young children
Topic: Understanding children's art
Misc.   General, children's "scribbles" included, more Kellog Doe lib. 166

Children's self-taught art - the kind they produce before they come under the influence of adults - show remarkable consistency and definite stages of development:
- Placement stage - awareness of figure and ground relationships
- Shape stage - able to draw circles/ovals, squares/rectangles, triangles, crosses, Xs, and odd forms
- Design stage - putting simple forms together to make structured designs
- Pictorial stage - structured objects begin to look like real objects

Adults are too apt to dismiss children's self-taught art as scribbles. Hence intelligence tests that used children's self-taught art may be flawed. Children should not be taught art but should be allowed to develop their own art.

DOE Lib.   **168**
Title: Children's drawings of their classrooms: Development and social maturity.
Author: Kutnick, Peter
Date: 1978, 8 (3)
Pp: 175 - 186

Group: 4 1/2 - 11 years
Topic: Understanding children's drawings in regard to knowledge of the classroom and social understanding of the role of the teacher.

Misc.   UK

Children were asked to "draw a picture of a classroom with people in it." Upon completion, they were questioned about the content of their pictures. The pictures were sorted according to age group and analyzed for awareness of:
- Human figures
- Classroom and classroom objects
- The teacher

Other factors taken into account were gender, religion and SES. Results indicated that there were differences in drawings between:
- Children of different ages and expanding awareness of the human figure
- Boys and girls with the girls showing more advanced drawing skills

The content of the drawings also showed age differences in:
- The content and area covered
- The move from static to active figures
- The increasing presence of the teacher

As the children got older, the figures were depicted as being more active indicating perhaps that children became more aware of the role of the teacher and his/her authority instead of her mere presence.

DOE Lib.   **169**
Title: Interpreting children's drawings
Author: DiLeo, Joseph H.
Date: 1983
Pub.   Brunner/Mazel, Levittown:PA

Group: Children (latency period, approx. 7 - 11years)
Topic: Interpretation of children's drawings
Misc.   US, drawings included, earlier work Doe lib. 69

Following on his earlier work, this book explores in greater detail the interpretation of children's drawings. As children draw they talk, and DiLeo records this talk, even encouraging children to talk more as they draw. The book takes drawings by individual children, describes each and posits an interpretation for each. This is accompanied by a discussion on general/recurring characteristics.

DOE Lib.	**170**
Title:	They could not talk so they drew: Children's styles of coping and thinking.
Author:	Levick, Myra F.
Date:	1983
Pub.	Charles C. Thomas, Springfield: IL
Group:	2 - 10 years
Topic:	Child art: a synthesis of its origins, derivatives and meanings
Misc.	US, drawings included

This book expounds on two problems:
- The mental and behavioral processes essential to interpersonal relationships that are revealed by a child's free drawings
- The child's developmental level as ascertained through analysis of his drawings.

The book begins with an overview of art therapy. It describes the work of Freud and Piaget and attempts to reconcile the Freudian emphasis on the personal and emotional life of the individual and the relationship "between psychosexual experience and cognitive processes" with Piaget's interest in the mental processes that result in scientific thought. A major difficulty lies in one of the fundamental differences between the two: Piaget's developmental stages were fairly discrete while Freud's phases often overlapped. While Piaget concurred with Freud that there was no purely "affective" or "cognitive" state, he saw affectivity as a condition in structure information and viewed the two states as parallel with affect as the force in behavior and structure as cognitive. Using examples of children's drawings, the author tries to determine the developmental (Piaget) and psychosexual (Freud) stage/phase of the child' development.

DOE Lib.	**171**
Title:	Understanding children's drawings.
Author:	Malchiodi, Cathy A.
Date:	1998
Pub.	The Guilford Press; New York & London
Group:	Children general
Topic:	The multidimensional aspects of children's drawings and some ways of working with children and their drawings
Misc.	US, drawings included, for Machiodi's work with children from violent homes DOE lib. 6

The author describes the historical perspective of children's drawings and looks at their drawings in context. She recommends a phenomenological approach because it entails looking at drawings from a variety of perspectives, including developmental, emotional, interpersonal, as well as

taking into account the personal capacity for art and the therapeutic relationship of art. She suggests ways of looking at a child's drawings: its narrative and emotional content, the developmental and interpersonal aspects, the somatic and spiritual elements. She also discusses the ethical considerations in using children's drawings.

DOE Lib.	**172**
Title:	The kids market: Myths and realities.
Author:	McNeal, James U.
Date:	1999
Pub.	Paramount Market Publishing, Ithaca:N.Y.
Group:	Children general
Topic:	Children as consumers
Misc.	US & Asia, includes children's drawings of themselves shopping

Children are consumers: they spend money, they influence their parents' spending and they will continue to spend when they grow up. The author presents an overview of just how important the children's market is. He goes on to look at and explode some of the myths concerning children as consumers.

DOE Lib.	**173**
Title:	Art-based research.
Author:	McNiff, Shaun
Date:	2000 (2nd ed.)
Pub.	Jessica Kingsley Publishers, London & Philadelphia
Topic:	Art-based research
Misc.	US

The author is an advocate of art-based research which he defines as a "method of inquiry which uses the elements of the creative arts therapy experience, including the making of art by the researcher, as ways of understanding the significance of what we do within our practice." The objective of this book is to explore the various assumptions of research. The author presents the theoretical foundations of art-based research and reviews the research on art therapy. While he does not give a formula for doing art-based research, the author suggests ideas and ways of

realizing art-based research based on his own experiences with students.

DOE Lib.	**174**
Title:	Image-based research: A sourcebook for qualitative researchers.
Ed.	Prosser, Jon
Date:	1998
Pub.	Routledge Falmer, Philadelphia: PA
Topic:	Image-based research, mainly photography and use of photographs.
Misc.	International

The book, intended as a sourcebook, is a collection of essays on image based research. It is in three parts.

Part 1. A theoretical overview of the research
- *Chapter 1*. Banks, Marcus. Looks at how image based research has moved from film to include various forms/types of images. It also looks at the problems that arise between the culture of the image and researcher.
- *Chapter 2*. Harper, Douglas. Argues that visual sociology is qualitative research. It explores and critiques post-modern ethnography.
- *Chapter 3*. Henley, Paul. The changing role of film in ethnographic research.
- *Chapter 4*. Winston, Brian. Weighs the use of photographs as evidence.
- *Chapter 5*. Cronin, Orla. A critical review of the theoretical and therapeutic literature on the meaning and psychological significance of family photographs.
- *Chapter 6*. Becker, Howard S. Explores the importance of context in giving photographs their meaning.
- *Chapter 7*. Prosser, Jon. Understanding why image-based research has limited status in qualitative research.

Part 2. Images in the research process
- *Chapter 8*. Prosser, Jon & Schwartz, Dona. Considers the use of photographs within the sociological research process.
- *Chapter 9*. Ball, Michael. Uses a case study of Himalayan fieldwork to illustrate aspects of the visual availability of culture.
- *Chapter 10*. Adelman, Clem. Considers what might be acceptable as a valid photodocument by qualitative researchers.
- *Chapter 11*. Walker, Rob & Lewis, Ron. Creation of a school case study using multimedia as part of a distance course for teachers. The Hathaway Project.
- *Chapter 12*. Wakefield, Hollida & Underwager, Ralph. Mental health professionals have used a variety of image-based techniques, including drawings, in interviewing children about sexual abuse. The authors believe that interviewers should only used techniques that be defended in terms of their validity and reliability. Drawings, while useful to establish rapport, should be used if the child also verbally describes the abuse.

Part 3. Image-based research in practice.
- *Chapter 13*. Mitchell, Claudia & Weber, Sandra. Looks at school photographs as method and phenomenon.
- *Chapter 14*. Chalfen, Richard. A descriptive framework for the qualitative study of collections of family photographs.
- *Chapter 15*. Schratz, Michael & Steiner-Löffler, Ulrika. Pupils using photographs in school self-evaluation.
- *Chapter 16*. Warburton, Terry. Describes a semiotic approach to cartoon representations of teachers and education in the press.
- *Chapter 17*. Wetton, Noreen & McWhirter, Jennifer. **See below.
- *Chapter 18*. Chaplin, Elizabeth. Using Constable's 'The Cornfield,' the essay suggests that Fine Art is an area in which meanings can never be fixed.

DOE Lib.	**174**
Title:	Images and curriculum development in health education.
Author:	Wetton, Noreen W. & McWhirter, Jennifer
Date:	1998
Source	Image-based research: A sourcebook for qualitative researchers.
Ed.	Prosser, Jon
Pub.	Routledge Falmer, Philadelphia: PA
Group:	Primary
Topic:	Using children's drawings in a health education curriculum
Misc.	UK, Sample drawings included

Children's interest in health and well-being should be developed when they are young. However, the images used in health curricula are usually produced by adults and children can interpret them ambiguously. The authors suggest that a more effective strategy is to ask children to produce their own images through a technique call 'Draw and Write.' The original technique involved three phases:
- Teachers presented a short dramatic story in mime to a class of 7 - 8 year olds
- Children were asked to draw the two main characters at key moments of the story
- Children invited to write around each picture words to describe the character's feelings

The technique was used in a larger study to investigate health-related issues with children. The research led to a whole school planning program on health. The strategy demonstrated the language and images 'appropriate for children of different ages and at different stages of development, enabling teachers and curriculum developers to be truthful, while respecting and being consistent with children's own logical construction of meaning.'

DOE Lib.   **175**
Title: School climate: Measuring, improving and sustaining healthy learning
                  environments. Chapter 1
Author: Freiberg, H. & Jerome & Stein, T.A.
Date: 1999
Pp: 16 - 23
Source: School climate: Measuring, improving and sustaining healthy learning
                  environments.
Ed.   Freiberg, H. Jerome
Pub.   Falmer Press

Topic: Measuring school climate
Misc.   US, a few sample drawings included

School climate is defined as that quality of a school that helps "each individual feel personal
growth, dignity and importance, while simultaneously helping create a sense of belonging to
something beyond themselves."

Research into school climate has come up with a multitude of factors. Two direct but less
invasive measures of school climate are students' drawings and journal narratives by teachers
and/or students.

DOE Lib.   **176**, 90
Title: School Portraits.
Author: Olson, Lynn
Date: 1995, April 26
Source: Education Week
Pp.:   29 -30

Group: Middle school
Topic: Using children's drawings of teachers
Misc.   US, see DOE lib. 90, for Olson article on MCAS drawings see DOE lib. 202

DOE Lib.   **177**
Title: Personality characteristics revealed in drawings of deprived children who
                  differ in school achievement.
Author: Lourenso, Susan V; Greenberg, Judith W. & Davidson, Helen H.
Date: 1965, 59 (2)

Source: The Journal of Educational Research
Pp.:   63 - 67

Group: 4th grade
Topic: Personality characteristics revealed in drawings of deprived children
Misc.   US, African-American, low SES

Children were asked to draw two pictures and to circle themselves in the drawings. The drawings were entitled:
- My family
- A child in school

The study was interested in the personality dimensions of:
- Self-image. Scored for size, aspects of completeness, head proportion and facial expression.
- Parent-image. Inclusion/exclusion of parent(s), size of figure(s)
- Compliance and work orientation which were presumed to be related to achievement in school. The extent to which the child's drawing matched the title.

The results were summarized according to achievement ("good," "average," and "poor"), and by gender. Results indicate that:
- "Self" data was of relatively low standing for "poor" achieving boys
- Differences among achieving groups not large enough to support any definite conclusions but suggest that a linear relationship between achievement and self-concept exists
- In drawings of the family, mothers were drawn larger except by poor-achieving boys
- Among girls, size of the parent figure was positively elated to achievement level
- Good achievers seemed to comply more accurately with the instructions for drawing (perhaps they possess greater ability to focus on given task)
- For drawings of the child at school, girls produced more work-oriented drawings.

DOE Lib.   **178**
Title: Development and field test of a checklist for the Draw-A-Scientist Test (DAST)
Author: Finson, Kevin D; Beaver, John B & Cramond, Bonnie L.
Date: 1995, April, 95 (4)
Source: School Science and Mathematics
Pp.:   195 - 205

Group: Junior High School
Topic: Development and field test of a checklist for the Draw-A-Scientist Test.
Misc.   US, checklist and sample drawings included, students from rural schools

Describes development and field test of a check-list for the DAST-C. Elements from the original test were included and others, such as race, gender, and alternative images added.

Treatment students	Control students
• Completed career-oriented prog. in science	• Normal class curriculum
• Participated in group & individual lab activities, science discussions with faculty	• No exposure to field trips, materials focused on science as a career
• Participated in field trips to science/technology sites	
• One-week internships at field sites	
• Visited w/ university faculty mentors	
• Conducted research projects w/science teachers	

Procedure:
- All students pre-tested with DAST
- Treatment group completed DAST prior to summer program, control group tested at beginning of fall semester
- All students post-tested in November
- Delayed posttest administered to treatment students 5 months after posttest

Caveats:
- There may be more than one definition of "scientist"
- Changes in the wording for instructions can alter the type of drawing produced.

DOE Lib.   **179**
Title: *   American and Soviet children's attitudes toward computers.
Author: Martin, C. Dianne; Heller, Rachelle S. & Mahmoud, Emad
Date: 1992, 8 (2)
Source: Journal of Educational Computing Research
Pp.:   155 - 185

Misc.   *** Article missing from file

DOE Lib.   **180**
Title: Accessing practical knowledge: how? Why?
Author: Black, Alison L. & Halliwell, Gail
Date: 2000
Source: Teaching and Teacher Education
Pp.:   103 - 115

Group: Preschool teacher
Topic: Using journals and drawings to record self image of teachers and real problems of teaching
Misc.   Australia

Describes how teachers use "alternative forms of representation" (eg. Pictures, journals, stories, metaphors) for self-reflection in teaching.

DOE Lib.   **181**
Title: A clinical note: The kinetic school of drawing.
Author: Prout, H. Thompson & Phillips, Preston D.
Date: 1974, 11
Source: Psychology in the schools
Pp.:   303 - 306

Topic: The Kinetic School Drawing (KSD)
Misc.   US, for KSD refs DOE lib. 183,- 187

The Kinetic Drawing School is a variation of the Kinetic Family Drawing. The school is a major influence in the socialization of the child. The Kinetic Drawing School is an instrument to elicit a child's perception of school.

Children are asked to draw a school picture that includes the child, teacher and a friend or two, with everyone doing something. After drawing, the child is asked to identify each figure and describe what each is doing. Interpretation is by:
• Examining the human figures
• Examining the actions, styles, and symbols in the drawing
• Drawings are labeled.
Examples for areas of focus:
• Child's perception of himself in school.
    - The relative size of the child
    - Is the child's action positive, negative or neutral
    - Is the activity academic/similar to that of peers
• Child's perception of the teacher
    - The relative size of the teacher

- Is the teacher's action positive, negative or neutral
- How does the child compare himself to the teacher
- Are there indications of problems between child and teacher
- Child's perception of peers and peer relationship
  - The relative size of the child's peers
  - Are the peers' actions positive, negative or neutral?
  - How does the child compare himself to his peers?
  - Are there indications of problems between child and peers?

DOE Lib.	182
Title:	Evaluation with a new twist: Using children's drawings to gather information.
Author:	Van Tilburg, Emmalou
Date:	1987, winter
Source:	Journal of Extension
Pp.:	5 - 7
Topic:	Using children's drawings to gather information
Misc.	US

"Anything created by someone- a drawing, a painting, a piece of sculpture-is a nonverbal message from the creator about the inner self and that artist's world."

"Drawing is a natural mode of expression for boys and girls. It is a nonverbal language and form of communication; like any other language, it can be analyzed for structure, quality and content." (Koppitz)

As part of an evaluation for an educational program to be used by children with self-care children, there is a section which asks children to draw a picture of themselves doing their favorite after-school activity. There was no attempt to analyze the drawings, only to gather information. The pictures were scored on the following:
- Number of people in the picture
- Location of the scene in the picture
- Principal activity in the picture

Children's drawings provided useful data but care must be taken in interpreting results because drawings can include attitudes, emotions, perceptions and psychological state of the child.

DOE Lib.	183
Title:	An individual and group method for evaluating children's attitudes toward

	school.
Author:	Schrank, Frederick A. & Hayden, Charles
Date:	1981, December
Source:	Elementary School Guidance Counseling, Idea Exchange Column
Pp.:	137 - 141

Topic:	The Kinetic School Drawing
Misc.	US, KSD refs DOE lib. 181, 184 - 187

Column suggests use of the Kinetic School Drawing and a survey technique for use with primary school children in learning more about the attitudes of children to school. A brief description of the techniques is given.

DOE Lib.	**184**
Title:	A validity study of the Kinetic School Drawing technique.
Author:	Prout, H. Thomas & Celmer, David S.
Date:	1984, April, 21
Source:	Psychology in the schools
Pp.:	176 - 180

Group:	Elementary
Topic:	Relationship between the Kinetic School Drawing (KSD) responses and academic achievement
Misc.	US, predominantly white, middle and lower SES, KSD refs DOE lib. 181, 183, 185 - 187

KSD responses were correlated with achievement scores as defined by the composite achievement grade level sore from the Science Research Associates Achievement Test. The following measures were taken from drawings:
- In/out of school - whether child placed himself within school boundaries
- Engaged in an undesirable behavior, eg. Yelling, running, fighting
- Engaged in academic behavior, eg. Reading, calculating, responding
- Teacher height
- Child height
- Number of peers
- Distance between child and teacher
- Distance between child and others

- Koppitz score - using guidelines recommended by Koppitz (1968) for scoring emotional indicators
- Reynolds score - using modification of Reynolds (1978) guidelines for scoring emotional indicators

Data analysis
- Means & standard deviation or quantifiable measures and percentages for dichotomous variables
- Correlations among all variables
- Point biserial correlations for dichotomous variables
- Pearson product moment variables for continuous variables
- Stepwise multiple regression was computed on the achievement variable for the KSD variables
- Separate analyses for males vs. females

In general, results lend support to the validity of the KSD technique even though correlations were modest.

DOE Lib.	**185**
Title:	The Kinetic Drawing System: A review and integration of the Kinetic Family and School drawing techniques.
Author:	Knoff, Howard M. & Prout, H. Thompson
Date:	1985, January, 22
Source:	Psychology in the schools
Pp.:	50 - 59
Topic:	The Kinetic Family and School Drawing
Misc.	US, Includes information on psychometric properties, developmental norms, reliability, validity, and objective scoring studies, KSD refs DOE lib. 181, 183, 184, 186, 187

Gives a brief history and review of each technique.

DOE Lib.	**186**
Title:	A global approach for the interpretation of the Kinetic School Drawing (KSD): A quick scoring sheet, reference guide, and rating scale.
Author:	Andrews, Jac & Janzen, Henry
Date:	1988, July, 25
Source:	Psychology in the schools
Pp.:	217 - 238

Group: Grade 5
Topic: Scoring sheet, reference guide and rating scale for the KSD
Misc. Scoring sheet, reference guide and rating scale included, learning disabled
     vs. non-learning disabled, KSD refs DOE lib. 181, 183 - 185, 187

One of the weaknesses of the KSD has been the absence of a scoring guide or manual. This article describes the development of a scoring guide. The process involved reviewing the published material concerning the studying and interpreting of children's drawings, noting the possible indicators of psychological states/conditions, and then categorizing the information.

Global interpretation of drawings had the most promise for empirical support. To develop a systematic approach, an operational definition of global analysis was developed. Global analysis refers to the general (global) evaluation of drawings with respect to general dimensions such as pathology, structural form, self-concept, likeability, activity, depression, etc.

Considerations for scoring:
- Pathology
- Positive self-concept
- Structure: considered present when there is emphasis on the environment
- Likeability
- Psychological integrity: Based on
    - Whether written description matches drawing
    - how "recognizable" figures are
    - Whether drawing contains any strange, bizarre contents
- Positive activity
- Problems in relationship
- Placement and type of behavior

Generally, the drawings are examined with reference to the reference guide and then, in a checklist fashion, recording the appropriate response on the scoring sheet. The decisions are governed by the following principle: The dimension is considered present if the associated indicators are by and large contained in the drawing. This approach was used because:
- There is no evidence that researchers/experts place more significance on one sign in a dimension over another
- There is no support or information regarding a particular criterion to be used when a number of signs for a particular dimension appear to reflect that dimension
- Research findings on these dimensions have not been validated
- To facilitate hypotheses, a list of interrelated indicators as a general guide seems most appropriate

The rating system was developed by accumulating the indicators of the listed dimensions and ranking them with respect to their significance. Scoring was based on the judgement of clinical experts and inference because:
- Of the lack of empirical validation for reported findings
- Limited empirical research in the area of family or school drawings

- Experts' emphasis on indicators based on many clinical case studies
- Limited amount of empirical research and associated information

Based on the results, the authors concluded that:
- The reference guides and rating scales can be an aid to clinicians
- The reference guides and rating scales should be used by psychologists and clinicians familiar with the KSD
- More research needs to be done on the reference guides and rating scales
- The KSD should be one of multiple diagnostic tools

DOE Lib.	**187**
Title:	The use of Kinetic School Drawings to explore the educational preferences of gifted students.
Author:	Armstrong, Dorothy Ciner
Date:	1995, 18 (4)
Source:	Journal for the Education of the Gifted
Pp.:	410 - 439
Group:	Elementary
Topic:	Drawings by gifted children of their real and ideal classroom
Misc.	US, sample drawings included, KSD refs DOE lib. 181, 183 - 186

Gifted students are often distinguished from their peers by their interest and ability in learning as well as by their reflective insight into their own education. While studies have documented that gifted elementary and secondary students were able to provide self-reported data about their school experiences, no studies were found that asked elementary-aged gifted students what constituted appropriate gifted education for themselves.

This research builds on other studies in which gifted students verbally expressed their ideas for ideal classrooms. This research uses the KSD, which has been widely used to assess the cognitive and social-emotional development of handicapped/disturbed children.

Teachers completing a masters degree program in gifted education were trained to administer two forms - actual and ideal - to their own class of gifted children. Since the instrument had not been used to indicate educational preferences, there was no scoring guide. Two scoring forms were developed based on relevant and reliable indicators from previous studies with additional descriptors of the school experience. The two forms were the:
- *Specific indicators form* asked raters to analyze each drawing for the presence or absence of 114 specific items like interpersonal relationships. The scoring form included indicators consistently associated with emotionally distressed children. The final section of the form included items drawn from literature on developmental levels of children's drawings.
- *Global indicators form* asked raters to move beyond the discrete information provided by the specific graphic indicators within each picture to male holistic, qualitative assessments of the

picture as a combined image.

Inter-rater reliability. Two raters were used to rate each picture, one an expert in gifted children education, and the other in art education.

Data Analysis. Data from the Specific Indicators Form were analyzed to determine the relationship between the education students perceived they were actually receiving and the education they would ideally prefer.

In the results, three themes emerged from the study:
• The child's perception of peers and their relationships
• The child's perception of the teacher
• The child's perception of himself/herself in school.

The Global Indicators Analysis showed that gifted children could communicate about their actual school experiences and depict ways that schooling could be modified to be ideal for them.

Quote:
Words are an imperfect language for children. Their sensations and experiences find more exact and complete expression in another language, the language of art. Child art is like verbal language in that it possesses its own grammar and its own vocabulary. One cannot expect to learn all the principles of the child's artistic language at once. One would not expect to master a foreign language in an hour (Stern, 1966, p. 69)

DOE Lib.	**188**
Title:	What do freehand and computer-facilitated drawings tell teachers about the children who drew them?
Author:	Harris, Judith B.
Date:	1997, Summer, 29 (4)
Source:	Journal of Research on Computing in Education
Pp.:	351 - 369
Group:	5th grade
Topic:	What do freehand and computer-facilitated drawings tell teachers about the children who drew them?
Misc.	US, gifted children

A commonly held belief among educators is that children symbolically express essential aspects of their personalities in their artistic work. This article describes a qualitative research study that looked at
• the scope of verifiable information communicated through children's computer-facilitated and freehand drawings
• how the scope of content-validated information communicated through children's drawings differ when different tools are used by the artists.

Students were asked to draw three pictures (content and style determined by the artist), each in a different media:

- crayons, magic markers, and colored pencils for the "freehand" picture
- a touch sensitive graphics tablet and computer painting software for the "graphics" tablet
- choice of IBM Logo, Apple Logo II, LogoWriter for the "Logo" picture.

All the pictures were shown to two groups of teachers with experience working with Logo. Without being told that the pictures had been drawn by the same students, the teachers were asked to record their comments on viewer forms. The artists were also asked to name a parent and teacher who knew them to be interviewed about their perceptions of the students. Three types of information were collected:
- perceived age of the artist
- perceived gender of the artist
- nonprompted perceptions of the artists

While there were differences, there were no significant differences between the different media. Generally the range of verifiable artist specific data was least than information garnered through interviews with students, their parents and teachers. Using the different media to obtain information may be worthwhile but is time-consuming.

DOE Lib.	**189**
Title:	Study of achievement: An outline of a longitudinal study from Junior kindergarten through elementary grades
Date:	1964
Group:	Junior kindergarten - elementary
Topic:	Longitudinal study to assess the achievement of students
Misc.	Canada

- for test overview, see DOE lib. 190
- for scoring categories and administration instructions, see DOE lib. 191
- for scores, see DOE lib. 192
- other refs DOE lib. 193 - 195, 228

Brief description of the longitudinal study to assess the achievement of students. Study included the Draw-a-Classroom test.

DOE Lib.	**190**
Title:	The Draw-a-Classroom "Test": An overview
Date:	1966, September
Group:	Junior kindergarten - elementary
Topic:	The Draw-a-Classroom "Test": An overview

Misc.   Canada
- for brief description of longitudinal study, see DOE lib. 189
- for scoring categories and administration instructions, see DOE lib. 191
- for scores, see DOE lib. 192
- other refs DOE lib. 193 - 195, 228

An overview of the Draw-a-Classroom test, part of a larger study of achievement. The aims of this were:
- to allow a look into the world the child perceives and to see how this world is influenced by school experiences
- to obtain information about the developing concepts and ideas of the child in his mental, emotional and social areas of growth

Children were asked to "look around the room and draw [their] classroom." Drawings were scored according to certain "constants":
- Space. Are the drawings framed and what space is included (only the classroom or outside)
- People. Who are the picture and how are they drawn
- Objects. What objects have been included and where are they in relation to the child.

Reliability. Children were asked to redraw the same picture after an interval of approx. 4 weeks. Raters were drawn from a variety of backgrounds and ethnicities.

DOE Lib.   **191**
Title: Scoring categories and administration instructions
Date: 1966

Group: Junior kindergarten - elementary
Topic: The Draw-a-Classroom "Test": Scoring categories and administration instructions
Misc.   Canada
- for brief description of longitudinal study, see DOE lib. 189
- for overview, see DOE lib. 190
- for scores, see DOE lib. 192
- other refs DOE lib. 193 - 195, 228

Scoring categories:
- space
- drawing the person
- objects
- persons
- classroom constants

DOE Lib.   **192**
Title: The effect of having previously attended junior kindergarten on "Draw-A-

Classroom" test scores obtained in senior kindergarten.

Author: Rogers, Rex S.
Date: 1968

Group: Junior kindergarten - elementary
Topic: The Draw-a-Classroom "Test": Results
Misc. Canada
- for brief description of longitudinal study, see DOE lib. 189
- for overview, see DOE lib. 190
- for categories and administration instructions, see DOE lib. 191
- other refs DOE lib. 193 - 195, 228

DOE Lib. **193**
Title: *** Changes with time in the content of children's drawings: A longitudinal study with the "Draw-A-Classroom" test.
Date: 1968

Group: Junior kindergarten - elementary
Topic: The Draw-a-Classroom "Test":
Misc. *** article missing
Canada
- for brief description of longitudinal study, see DOE lib. 189
- for overview, see DOE lib. 190
- for scoring categories and administration manual, see DOE lib. 191
- for scores, see DOE lib. 192
- other refs DOE lib. 194 - 195, 228

DOE Lib. **194**
Title: A consolidated report on the "Draw-A-Classroom" test: A study of the drawing behaviour of children in Toronto Public schools.
Author: Rogers, R.S.
Date: 1969

Group: Junior kindergarten - elementary
Topic: The Draw-a-Classroom "Test": consolidated report
Misc. Canada
- for brief description of longitudinal study, see DOE lib. 189

- for overview, see DOE lib. 190
- for scoring categories and administration manual, see DOE lib. 191
- for scores, see DOE lib. 192
- other refs DOE lib. 193, 195, 228

Includes:
- introduction on the nature of the behaviour of drawing
- historical background and critical orientation of the research
- procedure used to collect the drawings
- development of the coding framework
- processing the data
- analyses and studies

DOE Lib.	**195**
Title:	A study of children's drawings of their classrooms
Author:	Rogers, R.S. & Wright, E.N.
Date:	1971, April, 64 (8)
Source:	Journal of Educational Research
Pp.:	370 - 374

Group:	Junior kindergarten - elementary
Topic:	The Draw-a-Classroom "Test": summary of report
Misc.	Canada

- for brief description of longitudinal study, see DOE lib. 189
- for overview, see DOE lib. 190
- for scoring categories and administration manual, see DOE lib. 191
- for scores, see DOE lib. 192
- for consolidated reported, see DOE lib. 194
- other refs DOE lib. 193, 195, 228

DOE Lib.	**196**
Title:	Children's views of technology: The role of age, gender, and school setting.
Author:	Levin, Barbara B. & Barry, Sean M.
Date:	1997, 8 (4)
Source:	Journal of Computing in Childhood Education
Pp.:	267 - 290

Group:	Elementary
Topic:	Influence of gender, age, SES, and the school/community context on

| | elementary-age children's thinking about computer technology. |
| **Misc.** | US, 2 sample drawings included |

Previous studies have shown that boys have more access to computers at home and at school than girls do, display more positive attitudes toward computer technology, and show a higher interest level in computers. More recent studies have indicated a trend towards greater equality, and gender differences are not significant for kindergarten and elementary age children.

Early NAEP studies noted that race, ethnicity, and class were also factors related to computer access, experience and competence. Overall, children from families who owed computers, white males, and students from high SES metropolitan areas showed distinct advantages over minorities, females, and children from low SES areas with regard to access and competence.

Research has also shown that while girls and boys may begin school with similar interests in and aptitudes for computers, this changes as they develop.

In this study children at two schools: one in a suburban, mainly white middle to upper middle class area, and the other in an urban, low-income, largely African-American neighborhood, were asked to draw a picture of a technologist. The children were then interviewed individually about their drawings with questions specifically designed to find out about children's thinking about the "gender" of their computers at home and in school.

The children's pictures were sorted and analyzed by grade level, by gender, and by school for the following features:
- Affect on the peoples' faces, ie. are they smiling?
- Setting to see how children viewed the various uses of technology, and where they envisioned technology
- Task to see how children viewed technology as being used
- Details. What peripherals, backgrounds, other technology were featured
- Exaggeration and size of the computer to the child.

Results:
- No difference between race or SES
- Some gender differences, eg. Boys had problems naming software with female characters
- Developmental trend, eg. Younger children tended to draw computers larger than themselves

DOE Lib.   **197**, 161
Title: Personal Communication
Author: Orlich, Donald, C.
Date: 2000, November 14

Group: Grades 4, 7, 10
Topic: Critique of the WASL
Misc.   US

Cover letter from Prof. Orlich expressing about what children's drawings tell us about high stakes testing (DOE lib. 159). Includes his critique of the Washington state test (WASL) and two articles:
- Harris, Wendy (2000, May 11). WASL a "monster" of a test. The Spokesman-Review, B1, B5. Article about the WASL and response to the test. DOE lib. 199

DOE Lib.   **198**
Title: Educational reform and limits to student achievement
Author: Orlich, Donald, C.
Date: 2000, February
Source   Phi Delta Kappan
Pp.   468 - 472

Group: Grades 4, 7, 10
Topic: Orlich questions whether higher standards will mean higher achievement in students.
Misc.   US, NAEP data

Orlich questions whether higher standards will mean higher achievement in students. Author believes there are developmental limits to student achievement

DOE Lib.   **199**
Title: WASL a "monster" of a test.
Author: Harris, Wendy
Date: 2000, May 11
Source   The Spokesman-Review
Pp.   B1, B5

Group: Grades 4, 7, 10
Topic: Reaction to the WASL (Washington state tests), for MCAS reaction DOE
                 lib. 200 - 202, 61, PSSA DOE lib. 75, EOG DOE lib. 160
Misc.   US

The WASL is a rigorous set of tests in math, writing, reading and communication, given in grades four, seven and ten. Additional subjects, including science, social studies, health and art, will be added. Ten graders must pass the WASL to graduate high school. Students who fail may retake in grades 11 and 12 although it has not yet been decided how many times students will be able to do so.

DOE Lib.   **200**
Title: Anxiety, dread color kids' drawings of MCAS testing
Author: Hayward, Ed
Date: 2001, April 3
Source   The Boston Herald

Group: 4th, 8th, 10th
Topic: MCAS
Misc.   US, DOE lib. 201 for Silber's reaction, for Olson article DOE lib. 202, also
                 DOE lib. 61, reaction WASL DOE lib. 199, PSSA DOE lib. 75, EOG DOE
                 lib. 160

A brief article about drawings by children of them taking the MCAS.

DOE Lib.   **201**
Title: No pain, no gain should govern in learning too.
Author: Silber, John
Date: 2001, April 3
Source   The Boston Herald

Group: 4th, 8th, 10th
Topic: MCAS
Misc.   US, DOE lib. 200 for general reaction, for Olson article DOE lib. 202, also
                 DOE lib. 61, reaction WASL DOE lib. 199, PSSA DOE lib. 75, EOG DOE
                 lib. 160

John Silber's response to negative images of the MCAS - that "comfort" of children is not a criterion for education.

DOE Lib.	**202**
Title:	Study of art draws conclusions on tests.
Author:	Olson, Lynn
Date:	2000, Dec. 13
Source	Education Week

Topic:	MCAS
Misc.	US, for previous Olson article on DOE lib. 90, for other articles on MCAS DOE lib. 200, 201, 61, reaction WASL DOE lib. 199, PSSA DOE lib. 75, EOG DOE lib. 160

Policymakers argue that high stakes tests will ensure students graduate with the necessary skills and knowledge and motivate them to work harder. Results from CSTEEP's study of children's drawings of themselves taking the MCAS suggest that high stakes testing may diminish how hard a students tries.

DOE Lib.	**203**
Title:	Understanding children's drawings: The path to manhood.
Author:	Strauss, Michaela
Date:	1978
Pub.	Rudolf Steiner Press, London

Group:	2 - 7 year olds
Topic:	Meaning in the drawings of young children.
Misc.	Europe, w/ notes on the Study of Man by Wolfgang Schad

Book is based on children's drawings collected over forty years by Hanns Strauss during the Waldorf School movement. The book describes the stages of development of children's drawings by using Steiner's "anthroposophical" science. According to anthroposophy, there is present in human intellect the ability to contact spiritual worlds.

The introduction children's drawings are compared to the art left by early civilizations. The three phases of children's drawings are described:
• Up to 3 years, the process arises in a dreamy way
• From 3 - 5 years, the child lets the arising picture take hold of his imagination
• From 5 - 7 years, the child creates a clear interpretation of a theme chosen before beginning to draw.

DOE Lib.   **204**
Title: What happens to children's drawings.
Author: Baghban, Marcia
Date: 1992, March

Group: Kindergarten, 1st grade
Topic: Loss of spontaneity in children's drawings as they get older.
Misc.   US, paper presented at conference of Nat. Council of Teachers of English

The study looks at why children's drawings loose their freshness and exploratory properties as they get older.

Children were interviewed individually on their feeling about drawing and writing. Included a checklist of drawing and writing materials available in the home.
Results indicated that:
- All children had crayons and pencils at home but most paper tended to be lined
- Parents often gave positive comments about their children's drawings but not writing
- Majority of children felt drawing was more fun than writing
- Majority of children felt drawing was easier than writing
- More children felt that drawing was faster than writing
- More children felt that writing was more important than drawing

Implications:
- Adults need to supply more messy materials for experimentation in drawing and writing
- Parents need to draw more in front of their children
- Parents must communicate that they care about writing in positive ways
- Teachers must value drawing and convince parents of its importance

DOE Lib.   **205**
Title: The emergence of the "nerd": An assessment of children's attitudes toward computer technologies.
Author: Barba, Robertta H. & Mason, Cheryl L.
Date: 1994, Spring, 26 (3)
Source: Journal of Research on Computing in Education
pp.   382 - 390

Group: Elementary & secondary
Topic: Attitudes of children toward computer technologies through the use of Draw-A-Computer-User test.
Misc.   US

Most adults view technology as an outgrowth of science. This study attempted to identify children's attitudes toward technological careers and to ascertain whether children share the perceptions of science and technology as adults.

Students were asked to "draw a computer user." Demographic data were encoded, in addition to career indicators and computer station indicators in the drawings. 15% of secondary students were asked to write one/two paragraphs describing their computer user.

For assessing children's attitudes, 4 questions were formulated:
- Do children view computer usage as an extension of science-related careers?
- Do students draw stereotypical images of computer users?
- Does a stereotypical image of a computer user emerge in children's drawings?
- Do children perceive computer usage as a male domain?

Results:
- Young children view computer technologies as part of everyday life, as part of many careers
- However, as children mature, their image of computer users change
- Secondary students depict fewer careers associated with computer usage
- The negative image of computer "nerd" emerges during the stage from childhood to adolescence

---

DOE Lib.	**206**
Title:	Classroom contextual drawings: An unobtrusive measure of pupil attitudes toward school.
Author:	Brooks, Douglas M.
Date:	1978, 3
Source:	Contemporary Educational Psychology
Pp.	175 - 181
Group:	4th, 5th, 6th grade
Topic:	Children's attitudes toward school
Misc.	US

The study looked at how children's drawings can serve as an unobtrusive tool to look at pupil attitudes toward school.

Procedure:
- Through a series of question, participating teachers were asked to place students into one of four categories: "accepted," "concerned," "indifferent," and "rejected."
- Students were asked to draw a picture and "imagine that they had just asked the teacher a question and the teacher was answering them."
- As the completed pictures were collected, students were administered the Describe Your School (DYS) Inventory

Hypotheses:
- A negative relationship between expressed pupil attitudes toward school and the expressed interpersonal proximity of teacher-pupil figures in a classroom contextual drawing
- A positive relationship between expressed pupil attitudes toward school and the expresses height ratio of the teacher-pupil figures in a classroom contextual drawing

In the analysis, four dimensions of pupil contextual drawings were investigated:
- Teacher height
- Pupil height
- Teacher-pupil proximity
- Teacher-pupil size ratios

Results:
Both hypotheses were accepted.

DOE Lib.	**207**
Title:	A computer study of selected features of self- and-other drawings by 385 children.
Author:	Cohen, Stephen M.; Money, John & Uhlenhuth, Eberhard
Date:	1972, March, 5 (3)
Source:	Journal of Learning Disabilities
Pp.	29 - 39
Group:	Elementary
Topic:	Establishing criteria for children's drawings of figures
Misc.	US

The scoring of human figure drawings is often impressionistic or conjectural. This paper aims to present normative statistics, relative to age, height, and sex, with respect to the presentation of similarity or disparity in the height of two persons.

Procedure:
- Students filled out general data sheets on height, age, gender, etc.
- On day of testing, children were asked to draw a picture of themselves and their best friend. On completion, the names of the figures were written in and children indicated which figure had been drawn first. The children were instructed not to make erasures.
- Then children were asked to draw a second picture of themselves and the examiner.
- The children were then measured to the nearest half inch.

Scoring:
- Each drawing was scored three times by the same person
- 25 randomly selected drawings were scored by another person

Conclusions:
Elementary school children normally discriminate and depict sameness in height in drawings. However, the proportional ration of height difference less accurately then height sameness.

DOE Lib.	**208**
Title:	Physical arrangement and age as determinants of environmental representation.
Author:	Dandonoli, Patricia; Demick, Jack & Wapner, Seymour
Date:	1990, 7 (1)
Source:	Children's Environments Quarterly
Pp.	26 - 36
Group:	Children 5 - 13 years, adults over 21 years
Topic:	Influence of age on the way individuals represent an everyday, real-life, large-scale spatial arrangement.
Misc.	US

As part of the interest in individuals' understanding of large scale space, there have been studies of people's ability to represent with models room-size layouts of furniture and groupings of buildings. Theory on environmental representation indicate that for children, mature geometric representations of space are not expected to emerge until the period of concrete operations (about 7 years). For younger children especially, structural features of space (eg. Landmarks) facilitate spatial representation and reconstruction. Research has shown that:
- clustering increased children's memory for spatial relations as well as for the specific and general area placement of items
- a meaningful orientation of items in the layout interacted with clustering to improve individuals' memory for the quadrant of the room where the item belonged
- an operative knowledge of classification increased children's memory for general location but did not enhance interactions with environmental organization.

As the shape, size, color of a room, the objects selected for inclusion, and the ways the objects are arranged will influence how they are perceived, remembered and represented, are there ways of arranging a room that are more adult or child centric/centered.

A pilot study was conducted with 6-8year old children and adults to explore their differences in memory and perception and to manipulate these differences in room arrangement to reflect child/adult centric arrangements. Children and adults were taken into a room for 2 minutes, then led out and questioned about the contents of the room. They also asked to group miniature objects that "belonged together" and use these objects to reconstruct the room arrangements. Results showed that:
- a room grouped in isolated, fragmented parts (part quality) would represent a child-centric arrangement
- a room grouped by socially relevant wholes of integrated parts (integrated) would be more

adult centric

Procedure:
- Subjects were divided into 2 groups
- One group saw an integrated adult centric room and the other a part-quality children centric arrangement
- After viewing the room, subjects were led to another room and asked to verbally recall the room they had viewed, to group miniature objects that "belonged together," to reconstruct the room with the objects, and to draw a picture of the room.

Conclusions:
- While the nature of the physical arrangement of the items in a room may affect the way in which spatial arrangement is represented, the cognitive status of the individual (child vs. adult) retain their efficacy regardless of arrangement
- Differences in representation depending on the medium for recall. In drawing, there were differences between 5 - 10 year olds and 11years plus. Many found the drawing task more difficult than the others
- Confirmed results of other studies in that adults exhibit socially relevant, integrated whole responses in their representation of the environment whereas children exhibited responses to parts.

DOE Lib.	**209**
Title:	Children-in-environments: Physical, interpersonal, and sociocultural aspects
Author:	Demick, Jack & Wapner, Seymour
Date:	1988, Fall, 5 (3)
Source:	Children's Environments Quarterly
Pp.	54 - 62

Topic:	Relations between aspects of the environment and the adopted child
Misc.	US

Examines the transactions of children-in-environments. This assumes that the child's environment is comprised of mutually defining physical (eg. home, school), interpersonal (eg. parents, teachers, peers), and sociocultural (eg. school and household rules) aspects. Analogously, the child is assumed to encompass mutually defining biological/physical (eg. health), psychological (eg. self-esteem), and sociocultural (eg. roles) aspects. This holistic study calls for conducting studies which simultaneously assess all three aspects of the environment in relation to all aspects of the person.

DOE Lib.	**210**
Title:	Perceived competence in drawing during the middle childhood years.

Author: Flannery, Kathleen A. & Watson, Malcolm W.
Date: 1991, Fall, 16 (2)
Source: Visual Arts Research
Pp.   66 - 71

Group: Middle childhood (3 - 5 graders)
Topic: Perceived skills in drawing in relation to perceived skills in other domains
Misc.   US

Children's perceived competence in the middle childhood years may be related not only to the development of drawing skills, but also to perceived competence in other domains. Longitudinal observations of children have noted that while older children's drawings becoming increasingly regular and realistic, they lose spontaneity and life. While older children can superficially alter their drawings in response to instructions to re0draw pictures in the manner of younger children, they can never quite recapture the playful quality of their earlier years. Perhaps because of the increasing focus on conventional realism, children may find that their skills do not meet their standards and the frequency of drawing drops off.

Thus, the objectives of this study were to:
- Examine children's free drawings for their level of realism, originality and pleasingness
- Assess children's perceived competence in drawing in comparison with perceived competencies in other domains

Procedure:
- The experimenter met with subjects' art class once a week for two weeks
- In the first week, the experimenter collected a drawing from each child. Subject chosen by the child.
- In week two, the Domain Competency Inventory (DCI) was administered. The items covered 11 domains:
- Reading stories, science, mathematics, social studies, writing stories, sports, acting, singing, drawing, dancing and making friends.

Scoring:
- Drawings were scored on a seven point scale for realism, originality and pleasingness
- A DCI score was computed by adding up the total number of domains (excluding drawing) for which the child had marked his competence as not at all good.

Results:
- The level of realism in children's drawings increased with higher grade levels
- The level of originality was judged to have increased with higher grade levels
- Males were judges to draw with greater originality, girls drew more pleasing pictures
- Perceived competence in drawing was negatively correlated with grade
- Grade was negatively correlated with making friends, dancing and singing
- Males perceived greater competence in drawing and sports
- Females perceived greater competence in writing stories, dancing and singing
- Greater perceived competence in drawing was associated with higher levels of realism and originality but not pleasingness

- No support for the prediction that greater perceived competence in drawing would be associated with lower perceived competence in language related domains (eg. Writing stories, reading)
- Greater perceived competence in drawing was associated in some domains with a visual-spatial component (eg. Mathematics and acting)
- Greater perceived competence in drawing was associated with children having fewer domain deficiencies.

DOE Lib.	**211**
Title:	Drawing as representation: The child's acquisition of a meaningful graphic language.
Author:	Golomb, Claire
Date:	1994, Spring, 20 (2)
Source:	Visual Arts Research
Pp.	14 - 28
Group:	Children (general)
Topic:	Different views of art development in children and a critique of Piaget
Misc.	For greater detail of Golomb's work DOE lib. 90

Piaget's theory of drawing development:
- Preschool. Children begin to explore spatial, Euclidean relationships but make little attempt to imitate the details of a model.
- Age 4 - 7/8. The child discovers intellectual realism and includes more detail but topological views continue to dominate and objects tend to be distorted.
- Visual realism emerges and objects are depicted more accurately and with greater photographic fidelity

Perspectives from the Child's Theory of the Mind.
Piaget's egocentric theories have been challenged by proponents of the child's "theory of the mind." Research has shown that young children can distinguish between reality and fiction, appearance and reality, and thus reveal much greater representational competence than Piaget held possible.

Perspectives from Art History
For proponents of this, all art is interpretational and realism, imitation is not the aim.

Arnheim's Theory of Representation
For Arnheim, representation is not reproduction and constraints to realism include the artist's medium. There are multiple solutions to representational problems so the individual child's artistic development is molded by an internal drive for simplicity and external demands of the object.

A New Psychology of Child Art
Development of art in children is not constrained only to the innate talent/development of children, or the end goal of realism or naturalism but also takes into account the demands of the subject and the context the child is in. Whether the child has received training, the type of instruction for the drawing, etc.

The author's reassessment of the nature of children's graphic representation points to the need to take into account the cultural context the child is in. Research into children's development in art must look beyond looking for either realism or naturalism in the end product.

DOE Lib.   **212**
Title: The Draw-A-Group Test
Author: Hare, A. Paul & Rachel T.
Date: 1956, 89
Source: The Journal of Genetic Psychology
Pp.   51 - 59

Group: 1st - 3rd grade
Topic: The Draw-A-Group Test
Misc.   US

The use of human figure drawings for the study of personality is extended in this to the drawing of a group to reveal the structure of it and the individual's adjustment to it. The test is designed to identify the status of the individuals in the group from leaders through followers to isolates.

Procedure:
• Children from private and public schools were asked to draw a picture of the children they liked to play with most in the playground and the activity they enjoyed doing with this group. Then they were asked to draw a picture of this and write down what was going on in the picture.
• As the children finish, information about the pictures, including the order in which the children were drawn and the children's names were recorded.
• The teacher of the class was asked to place the children in her class in rank order from the best leader to the most isolated with a brief description to explain the position given to each child.

Analysis:
• Criteria for analysis included the range of colors used, use of space and relative size of figures, hostile or threatening aspects of figures, unusual characteristics of figures, distortions or omissions, the nature of the activity, etc.

Results:
Positive correlations between the picture ranking and the teacher's ranking.

DOE Lib.	**213**
Title:	Projective drawings with children and adolescents.
Author:	Koppitz, Elizabeth M.
Date:	1983, 12 (4)
Source:	School Psychology Review
Pp.	421 - 427
Group:	Children & adolescents
Topic:	Projective drawings with children and adolescents.
Misc.	US

A brief history of the use of drawings as a projective technique is presented. This is followed by a discussion of major purposes of drawings in the assessment of school children:
- Evaluation of pupils' personalities with Human Figure Drawings (HFD)
- Assessing children's attitudes toward their families and their perception of their place in them through Family Drawings and Kinetic Family Drawings
- Exploring attitudes toward peers, teachers and school through School Drawing Techniques
- Drawings as reflections of children's values and attitudes toward social and cultural groups.

DOE Lib.	**214**
Title:	Talking drawings: A strategy for assisting learners
Author:	McConnell: Suzanne
Date:	Dec. 1992/Jan. 1993, 36 (4)
Source:	Journal of Reading
Pp.	260 - 269
Group:	Adults, primary
Topic:	Strategy of translating mental images into simple drawings to help students bridge the gap between comprehension and learning
Misc.	Australia, sample drawings included

To explore concepts and topics, students were asked to draw pictures. As more research was done, pictures were redrawn.

DOE Lib.   **215/1**

Title: The use and abuse of human figure drawings.
Author: Motta, Robert W.; Little, Steven G. & Tobin, Michael I.
Date: 1993, 8 (3)
Source: School Psychology Quarterly
Pp.   162 - 169

Topic: Human figure drawings
Misc.   US, DOE lib. 215/2 - 215/8

The use of human figure drawings as test instruments to assess personality and cognitive functioning has a long history and are widely used. This paper reviews data-based studies and concludes that there is little support for their validity. Ease of administration and anecdotal reports do correlate with real world outcomes and may explain their popularity.

DOE Lib.   **215/2**
Title: Human Figure Drawings in perspective
Author: Naglieri, Jack A.
Date: 1993, 8 (3)
Source: School Psychology Quarterly
Pp.   170 - 176

Topic: Critique of " The use and abuse of human figure drawings" by Motta
Misc.   US, Motta DOE lib. 215/1

A critique of " The use and abuse of human figure drawings" by Motta on the basis that the paper was not scholarly based on their limited knowledge of the literature. Contrary to Motta's suggestion, the Draw-A-Person Test Scoring System does correlate significantly with achievement.

DOE Lib.   **215/3**
Title: Human Figure Drawings: Abusing the abused
Author: Bardos, Achilles, N.
Date: 1993, 8 (3)
Source: School Psychology Quarterly
Pp.   177 -181

Topic: Critique of " The use and abuse of human figure drawings" by Motta
Misc.   US, Motta DOE lib. 215/1

DOE Lib.	**215/4**
Title:	"What's wrong in this picture?": Response to Motta et al's review of human figure drawings.
Author:	Gresham, Frank M.
Date:	1993, 8 (3)
Source:	School Psychology Quarterly
Pp.	182 - 186
Topic:	Critique of " The use and abuse of human figure drawings" by Motta
Misc.	US, Motta DOE lib. 215/1

Gresham supports Motta's claim the HFDs are not valid.

DOE Lib.	**215/5**
Title:	Comment on "The Use and abuse of Human Figure Drawings"
Author:	Kamphaus, Randy W. & Pleiss, Karen L.
Date:	1993, 8 (3)
Source:	School Psychology Quarterly
Pp.	187 - 188
Topic:	Critique of " The use and abuse of human figure drawings" by Motta
Misc.	US, Motta DOE lib. 215/1

Kamphaus & Pleiss support Motta.

DOE Lib.	**215/6**
Title:	An unjustified, sweeping indictment by Motta et al. of Human Figure Drawings for assessing psychological functioning.
Author:	Holtzman, Wayne H.
Date:	1993, 8 (3)
Source:	School Psychology Quarterly
Pp.	189 - 190
Topic:	Critique of " The use and abuse of human figure drawings" by Motta

Misc.   US, Motta DOE lib. 215/1

Holtzman criticizes Motta et al. for ignoring positive evidence that HFDs are valid for assessing certain aspects of personality and intellectual functioning.

DOE Lib.	**215/7**
Title:	The utility of Human Figure Drawings in personality and intellectual assessment: Why ask why?
Author:	Knoff, Howard M.
Date:	1993, 8 (3)
Source:	School Psychology Quarterly
Pp.	191 - 196
Topic:	Critique of " The use and abuse of human figure drawings" by Motta
Misc.	US, Motta DOE lib. 215/1

Knoff supports Motta et al.

DOE Lib.	**215/8**
Title:	A picture is worth less than a thousand words: Response to reviewers.
Author:	Motta, Robert W.; Little Steven G. & Tobin, Michael I.
Date:	1993, 8 (3)
Source:	School Psychology Quarterly
Pp.	197 - 199
Topic:	Response by Motta et al. to reviews of " The use and abuse of human figure drawings."
Misc.	US, Motta DOE lib. 215/1

DOE Lib.	**216**
Title:	Gilles Peress in Bosnia: A photographer's notes
Author:	Peress, Gilles
Date:	1996, Fall
Source:	Doubletake
Pp.	56 - 63
Topic:	Photographs and notes by Gilles Peres of his travels in Bosnia

Misc.   Bosnia, for *Doubletake* magazine DOE lib. 71

DOE Lib.   **217**
Title: Visualizing the internet: Examining images constructed by beginning users.
Author: Philleo, Thomas J.
Date: 1995, Oct.
Source: Eyes on the future: Converging images, Ideas, and Instruction. Selected
                   readings from the Annual Conference of the International Visual Literacy
                   Association. Chicago, IL

Group   Graduate students
Topic: Beginning users and non-users drawings of the internet.
Misc.   US, sample drawings included

Beginning users and non-users of the internet were asked to draw a picture of the internet.

DOE Lib.   **218**
Title: The therapist as poet.
Author: Rabin, Mury
Date: 1993, 7 (1)
Source: Journal of Poetry Therapy

Group   Adult
Topic: Poems and drawings by drug and alcohol abusers and their therapist.
Misc.   US, drug and alcohol abusers, poems and drawings included

DOE Lib.   **219**
Title: A drawing technique for studying certain outcomes of teacher education.
Author: Rabinowitz, William & Travers, Robert M.W.
Date: 1955, May, 46 (5)
Source: Journal of Educational Psychology

Group   Student teachers (elementary)
Topic: Differences in drawings of student teachers in different teacher education
                   programs
Misc.   US, a few sample drawings included

Student teachers at different institutions were asked to draw pictures of a teacher in a class. This article looks at the analysis and results of the drawings. The drawings were rated on:
- Pupil activity outside the direct control of the teacher
- Situations in which there is partial or total student control
- Extent to which the pictures portrayed tension in the relationship between pupils and teachers
- Drawings in which teacher and pupils were working together on some project

Conclusions:
- The type of teacher training program has consequences on the nature of the teaching concepts formed
- Illustrates how some aspects of teaching concepts may be studied to better understand the teacher education process

DOE Lib.	**220**
Title:	I dream of peace. Images of war by children of former Yugoslavia.
Date:	1994
Source:	UNICEF
Pub.	Harper Collins
Topic:	Words and drawings by children of war
Misc.	Preface by Vanessa Redgrave and introduction by James P. Grant. Drawings by children of Bosnia (DOE lib. 71) and Africa (DOE lib. 32)

Introduction by James Grant on how the words and drawings by children of war represent the healing process and a cry for peace.

DOE Lib.	**221**
Title:	An introduction to the psychology of children's drawings.
Author	Thomas, Gly V. & Silk, Angele M.
Date:	1990
Pub.	New York University Press
Group	Children (18 months to adolescence)
Topic:	Psychological theories of children's drawings
Misc.	Drawings included

Book provides a selective review of psychological theories of children's drawings and some recent research.

Chapter 1. A brief and selective history of the study of children's drawings.

Chapter 2. Briefly describes the general character of children's drawings at different ages:
- Eighteen months to two and a half years. Scribbling stage.
- Two and a half years to five years. Designs based on the tadpole schema emerge.
- Five years to eight years. Drawings become more realistic, X-ray drawings emerge.
- Eight years to adolescence. Visually realistic drawings start.

Chapter 3. Theories of what a picture is:
- Pictures as symbols.
- Perceptual theories of pictures:
  Ecological theories 1 (Gibsonian). Perspective-projection theories. Visual perception is the extraction of information from the "picture" produced by the visual input on the eye.
  Ecological theories II. Gibson's invariant information theory. Fundamental to visual perception is that the eye is constantly moving. Therefore a picture registers information but on a "surface" of known information.
  Constructivist theories. A perception is a perceptual hypothesis based on the incomplete evidence provided by the visual input to the eye, ie. observation is stimulus input to the eye and the image produced on the retina is often ambiguous and capable of different interpretations.
  Gestalt theory. This considers visual perception to be the interpretation of visual input organized into configurations which are more than (or different from) the sum of their parts.

Chapter 4. Why do children draw?
- Developmental Approaches:
  Drawing as play. Piaget. Drawing is the stage between symbolic play and mental images.
- Clinical Projective Approaches indicate that a child's artwork will be strongly influenced by his unconscious wishes and fears.
- Artistic approaches.
  Sensory/perceptual factors. Drawing is satisfying.
- Social influences.

Chapter 5. The drawing process and its effects.
- Compositional styles. Constructing and outlining.
- Graphic vocabulary. Simple shapes, pattern and movement preferences.
- Putting lines and shapes together. Positioning, sequencing and planning.
- Schemata. Repeated patterns or forms.
- Cues for alignment. Influence of relative position of drawer, local visual cues, and contextual cues.

Chapter 6. What information is presented in a drawing? The structure and appearance of a topic.
- Symbolic drawings. Symbols that denote rather than describe topics.
- Object-centered information. Pictures that present information on the structure of the object.
  Canonical representations. Views that best describes an objects characteristic features.
  Size-scaling within an object. Relative size of components of an object.

Transparencies. Pictures show what are normally invisible or occluded.
- Drawings of three-dimensional objects.
- Array specific information. Information about two or more objects in a scene.
- View specific information. Information about the viewer is conveyed.
- Size-scaling between objects.

Chapter 7. Expressive aspects of drawing. It is widely held that art is an expression of emotions and ideas as well as an attempt to produce a picture.
- Projective interpretations of children's drawing. Reporting and analysis usually on individual cases on the assumption that each item in the drawing will function as a symbol for some emotionally important aspect of the child's life and experience.
- Emotional indicators are based on the assumption that a child's anxieties would be reflected in the drawings.
- The depiction of emotionally significant topics is based on the assumption that the child will emphasize elements of special interest and personal importance in the picture.
- Art therapy is based on the assumption that expressions of art have therapeutic benefits.

Chapter 8. Exceptional drawing development. By puberty, drawing is no longer a natural activity for most children. This chapter looks at those groups of children with exceptional ability.
- The development of drawing talent in otherwise normal children.
- The gifted autistic artist.

Chapter 9. Children's drawings as art.
- Can children produce drawings with artistic properties?
  A comparison with modern art.
  A comparison with primitive art.
- Can children perceive artistic properties in drawing?
- Children's understanding of art.
- Art education.

Chapter 10. Conclusions and future directions. For all the research into children's drawings, there are gaps.
- Expression of emotion. Studies need to be conducted more stringently for greater validity and reliability.
- Drawing and early writing. There needs to be further research into the drawing-writing link.
- Drawing and thinking. Recent developments in the field include the realization that drawing is a complex achievement. More work needs to be done on the possibility that drawing facilitates thinking.

DOE Lib.	**222**
Title:	Using self-generated drawings to solve arithmetic word problems.
Author	Van Essen, Gerard & Hamaker, Christiaan.
Date:	1990, July/August, 83 (6)
Source:	Journal of Educational Research
Group	Elementary
Topic:	Whether drawings of arithmetic word problems facilitate problem solving

Misc.   The Netherlands, a few sample drawings

Elementary school children find arithmetic word problems difficult to solve. Although many of the difficulties are caused by a lack of logico-mathematical or linguistic knowledge, solutions are often hindered by a general lack of problem solving strategies. This article explored the effects of prompting elementary students to make drawings of word problems. There were 2 studies.

Study 1:
- A group of first graders and another of second graders.
- 4 tests were administered: a word problem test, a test to evaluate the quality of self-generated drawings of word problems, a number sentence test, a deductive reasoning test.
- Before the intervention, all 4 tests were administered during three sessions over 2 weeks.
- The experimental group was cued to make drawings, the control group was not.
- The intervention consisted of instructing the students to draw pictures of word problems. This was done over three lessons over four weeks.
- After the intervention all four tests were administered again.

Result:
- Children in the experimental group did not do better than those in the control group.

Study 2:
- A word problem test was administered to 5th graders before and after intervention.
- The intervention consisted of two group meetings during which students and experimenter made drawings of word problems.

Result:
- Children in the experimental group did better.

Conclusion:
- Fifth graders understood that drawings pictures of word problems facilitate solving them.
- However, drawing is only help students already have domain-relevant information. Then drawing the problem can help student to recognize and solve it.

DOE Lib.   **223**
Title: A new criterium in the assessment of the behaviour of the drawing child.
Author   Wallon, Phillippe & Baudoin, Claude
Date: 1990, 60
Source: British Journal of Educational Psychology
Pp.   338 - 348

Group   Primary
Topic: Evaluating children's spontaneous drawings
Misc.   Canada, Sample drawings and coding grid included

The evolution of spontaneous (ie. without a model to copy) drawing is related to the child's psycho-affective maturation. A few studies have assessed the process of spontaneous drawing but none have dealt with the developmental aspect. This study proposes a descriptive tool for evaluating a child's spontaneous drawing based on sequencing and direction of strikes/lines. The drawing itself was not directly analyzed. The two themes of a dog and a human figure were used.

DOE Lib.	**224**
Title:	Pictures of life in classrooms, and the search for metaphors to frame them.
Author	Weade, Regina & Ernst, Gisela
Date:	1990, XXIX (2)
Source:	Theory into Practice
Pp.	133 - 140
Group	Preservice teacher education students
Topic:	Interconnections between visual images and metaphorical (verbal) images about the everyday nature of classroom life
Misc.	US

Purpose:
- To explore the possibility of visual as well as verbal metaphors
- To examine the nature of metaphors in the language of teaching/learning processes
- To argue that the notion of a visual metaphor is problematic, and that metaphors are selective.

Method:
- Preservice teachers were given cameras and asked to take pictures of classroom life.

Results:
- The pictures and accompanying comments from preservice teachers represent their lives in classrooms in terms of their involvement with the children.
- However, teacher educators were concerned about the omissions in the pictures and words of what the children might be learning.

DOE Lib.	**225**
Title:	Expression of concepts through writing and drawing and effects of shifting medium.
Author	Wilder, Nancy Echols & Green Donald Ross
Date:	1963, 54 (4)
Source:	Journal of Educational Psychology

Pp.   202 -207

Group   4th grade
Topic: Expression of concepts through writing and drawing and effects of shifting
                    medium.
Misc.   US

If explicit verbal rules are given, subjects often show less ability to apply or transfer these rules than those groups who developed the concepts for themselves. Similarly, a shift from the expression of an idea in one medium to expression in another medium tends to create difficulty and confusion.

Method:
• Two very similar cuttings were made from a coleus plant and placed under different conditions.
• Two weeks later, half the subjects were asked to write about the differences between the two plants. The other half was asked to draw the differences.
• Then two previously unseen plants were brought out. All subjects were told they had been placed in similar conditions to the coleus plants and were asked to write and draw the differences between these two plants.

Results:
• On drawing the coleus, it was easier to draw the differences and easier to write about the cause of these differences.
• On drawing the second plant, both drawings and descriptions were scored lower than previously.
• While there were no significant effects, the authors suggest that a shift in codes (ie. from drawing to writing and vice-versa) may complicate a task.

DOE Lib.   **226**
Title: How can Chinese children draw so well?
Author   Winner, Ellen
Date: 1989, Spring, 23 (1)
Source: Journal of Aesthetic Education
Pp.   41 - 63

Group   Elementary
Topic: Art education in China
Misc.   China, a few sample drawings

Chinese children do not make childish drawings. Young children in China make drawings that

seem to challenge theories of the developmental course of drawing skills. Why?
- Chinese children draw well partly because of the way they have been reared, to comply and to concentrate.
- Children are not challenged to think visually and solve problems but given solutions to master.

The value of arts:

Value	China	West
Beauty	Central to the arts	A new vision/originality is valued more than beauty
Morality	Art must have function	Art can be enjoyed for its own sake
Emotion	Stylized	Personal Expression
Cognition	Mastery of style	Reflection

Art education should more properly be called art training with emphasis placed on the following aspects:
- Value placed on neatness and uniformity
- Value on schema mastery rather than breaking away from schemas.

Chinese art education does not seek to sensitize children to aesthetic principles of design, color, style, etc.

DOE Lib.	**227**
Title:	Children's sensitivity to expression of emotion in drawings.
Author	Winston, Andrew S.; Kenyon, Brenda; Stewardson, Janis & Lepine, Theresa
Date:	1995
Source:	Visual Arts Research
Pp.	1 - 14
Group	Preschool - grade 7
Topic:	Children's ability to create and detect expression of emotions in drawing
Misc.	Canada

Article looks at three studies of children's ability to create and detect expression of emotions in drawing.

Study 1. To explore developmental differences in the use of expressive strategies, and examine the way in which task variables might obscure the ability of young children to use abstract properties expressively.
Method:
- Children from grades 1, 4 and 7 were engaged in conversation to establish rapport.
- They were then asked to draw a tress that "showed happiness" and a tree that "showed unhappiness."

- Children were permitted to look at their first drawing while they produced the second.
- Half the children, were given 8 color felt tipped pens and no restrictions on content ("unrestricted"). Half the children were given 4 color felt tipped pens and instructed to draw only trees with no leaves or flowers ("restricted").
- After completion of drawings, a tape-recorded interview was conducted during which children were asked to clarify what they had drawn.

Results:
- Every child used at least one strategy for expression.
- Older children used significantly more themes, but only those in the unrestricted group
- Older children showed more expressive use of color, line direction, size and/or shape
- In the interview, older children were more likely to verbalize about the expressive properties of color.

Study 2. To investigate whether metaphoric competence would predict use of thematic or abstract strategies for expression of emotion in drawing. As visual metaphor sensitivity increases with age, an important question was whether visual metaphor sensitivity will predict expression in drawing if the effects of age ere removed.

Method:
- Same as Study 1 but for children from grades 2, 4 and 6. The Metaphoric Triads Task (MTT) was also administered.

Results:
- Grade was highly correlated with MTT scores, ie. greater skill at detecting visual metaphors was related to greater use of selected thematic and abstract strategies for expression of emotion in drawing.
- Although correlations were modest, the independence of detecting visual metaphors from grade level indicates that metaphoric skills plays some role in the development of expressive abilities.

Study 3. To examine whether pre-school children could successfully identify the emotions of happy, sad, and angry in specially constructed drawings under conditions to maximize their performance.
Method:
- Preschool and lower grade level children were shown pictures depicting three emotions: happy, angry, and sad. Half the pictures depicted the emotions thematically (eg. through changes in weather, etc.), and the other half abstractedly (eg. Through color, line, shape, size).

Results:
- When task demands are minimized and age-appropriate stimuli used, four and five year olds can detect the emotion in visual stimuli.
- Preschool aged children can detect both thematic and abstract forms of expression though the latter is more difficult.

DOE Lib.	**228**
Title:	The development of the Draw-A-Classroom test: A case study.
Author	Wright, E.N.
Date:	1964, June
Group	Kindergarten
Topic:	Use of the Draw-A-Classroom test as a record of child classroom behavior: Process for obtaining scoring criteria.
Misc.	Canada, paper presented at the Third Canadian Conference on Educational Research, DOE lib.189 - 195

The Draw-a-Classroom test is simple to administer but difficult to score. However, in attempts to do so it emerged that:
- It was possible to categorize and count
- The categories did reflect experience and maturation
- there was no clear perception of what was being counted

There were "constants" that could be looked at:
- Figures
- Space.
- Objects, and their relation to each other.

DOE Lib.	**229**
Title:	Child study, Fred Burke, and art education: Notes on a turn-of-the-century challenge.
Author	Keel, John
Date:	1976, January
Source:	Art Education
Pp.	25 - 29
Topic:	Fred Burke and art education
Misc.	US

Articles describes the authors interest in the American Child0Study movement and art education. He narrows his interest to three figures: Earl Barnes, Herman Lukens and Frederic Burke, only to concentrate on the life and work of Burke. Unfortunately, the Child-Study movement lost its impetus in America and Burke's notes on art education all but forgotten.

DOE Lib.	**230**

Title:	Some explorations of the effect of creative visual art experiences upon the poetry writing quality of eighth grade students.
Author	Frankston, Leon
Date:	196 (?)
Source:	Studies in Art Education
Pp.	42 - 59

Group	8th grade
Topic:	Whether art has creative effects on poetry writing
Misc.	US, 2 sample drawings and poems

"A commonly held assumption of art education is the belief of a transfer of the effects of creative art experiences to other phases of human performances and behaviors", that "art fosters and releases the potential creativeness of individuals by providing them with a stimulating atmosphere which encourages the originality and aesthetic sensibilities of individuals through visual means of self expression."

Method:
- Eighth grade classes were divided into two groups: one group received an art course and the other did not.
- All students were given three performance tests in art and three in poetry at the beginning and end of the semester.
- Some of the art and poetry tests shared the same themes.

Analysis. According to:
- Best performance
- Differences of matched themes of all performances
- Correlation analysis with art and poetry
- Comparison of language and non-language scores with art and poetry

Results. No significance difference in the poetry and art between students who took art and non-art course.

DOE Lib.	**231**
Title:	My school and me: Children's drawings in postmodern educational research and evaluation.
Author	Gamradt, Jan & Staples, Carolyn
Date:	1994
Source:	Visual Arts Research
Pp.	36 - 49

Group	Grades 1 - 6

Topic: Whether analysis of children's drawings might enhance understanding of
                local school cultures by providing an "insider's perspective" on school life.
Misc.   US, some sample drawings included

"For decades, visual arts researchers have used children's drawings to investigate a wide array of cognitive, developmental, and sociocultural issues. The resulting body of knowledge shows that systematic study of children's artwork has had both theoretical and pragmatic utility. Pragmatically, children's drawings have been used to inform clinical practice, identify developmental learning disabilities, and assess cognitive-developmental growth." Most empirical studies of children's drawings have been guided by these assumptions. Less has been done on the use of children's drawings to gain insight into the world. Most of the work done in this area has been on cross-cultural comparisons. However, the focus has been on the process of producing the pictures rather than the pictures themselves. Wilson has argued that an adequate theory of artistic development must acknowledge the link with culture.

Procedure:
- Children were asked to draw a picture showing "my school and me."
- Teachers were asked to complete a brief survey describing any special characteristics of the class, and to indicate how long the class spent on the task.

Analysis:
- Using Weber's standard content analytic procedures, a coding taxonomy focusing on the thematic content and selected characteristics of the drawing was developed. The taxonomy was revised several times.

Conclusion:
Children's art lends itself to formal interpretive analysis, even when content rather than form is used as the basis for analysis.

DOE Lib.   232
Title: Why Johnny can't draw.
Author   Gross, Larry
Date: 1983, March
Source: Art Education
Pp.   74 - 77

Group   General
Topic: The lack of art education
Misc.   US

The author laments on how "art" education has moved to the periphery of education.

DOE Lib.	233
Title:	The development of the concept of space as observed in children's drawings: A cross-national/cross-cultural study.
Author	Hess-Behrens, Betsy Nan
Date:	1974, Spring, 52 (3)
Source:	Educational Horizons
Pp.	143 - 152

Group	1st - 7th year of schooling
Topic:	Whether the concept of space is universally invariant in sequence and rate, and whether the capability to deal with the world through two-dimensional reconstructions is innate or affected by culture.
Misc.	International

Procedure:
- Children were asked to draw a picture of themselves at play with friends near their home or school.

Conclusions:
While interesting trends appeared in the study, more research is needed.

DOE Lib.	234
Title:	Using drawings to interrogate professional identity and the popular culture of teaching.
Author	Weber, Sandra & Mitchell, Claudia
Date:	?
Source:	?
Pp.	109 - 126

Group	Elementary, University
Topic:	The images that children and adults incorporate into their personal views of teaching.
Misc.	Canada, sample drawings included, book Doe lib. 3, article DOE lib. 96

"Drawings are a compelling source of data that has seldom used in educational research. For adults and children alike, drawing can express that which is not easily put into words." This chapter looks at children's and adults' drawings of teachers.

Procedure. Drawings were collected from:
- Elementary children asked to draw "a picture of a teacher." These children were then interviewed about the picture, asked to write about the picture, or join a discussion group about who teachers are and what they do.

- University students asked to draw a picture of a teacher. They were asked to write about their drawings and indicate why they had drawn the pictures the way they had. Some education students chose to draw another picture after their practicum experiences.

Some features:
- The persistence of symbols and stereotypes from the past, ie. the pervasive presence of traditional images of teachers and teaching.
- The importance of teacher appearance. Many of the pictures showed preoccupation with what the teacher wore.
- Teachers are women. An overwhelming majority of the teachers in the pictures were women, also a certain type of woman - the "old maid."

Conclusion:
The pictures overwhelmingly portrayed teachers as "traditional, usually pleasant, female figures of authority who point out or explain." Such pictures can be used to explore people's conceptions of teaching.

DOE Lib.	**235**
Title:	Meet the new headmaster.
Author	Walker-Taylor, Sherry
Date:	1983, September
Source:	School Arts
Pp.	28 - 29
Group	Ist grade
Topic:	A project, which included drawings, by first graders to get to know their new headmaster.
Misc.	US

As part of a project to get to know their new headmaster, first graders talked about and then drew pictures of the headmaster.

DOE Lib.	**236**
Title:	Drawing conclusions: Do children draw from observation?
Author	Smith, Nancy R.
Date:	1983, September

Source: Art Education
Pp. 22 - 25

Group 7 - 9 years
Topic: Do children draw from observation?
Misc. Us, a few sample drawings included

There is a common belief that young children do not draw from observation. This article looks at this belief. Two questions that arose from the literature review were:
- Would children choose to draw from observation if given the opportunity?
- How would pictures drawn from observation differ form those drawn from memory.

Summary:
- Children sometimes choose to draw from observation, and their observation pictures differed from memory drawings in that they included greater detail.
- However, drawings from observation did not include volume.

DOE Lib. 237
Title: Conditions increasing self-reflective learning in art.
Author Burkhart, Robet C.
Date: ?
Source: School Art Magazine
Pp. 23 - 30

Group College
Topic: Conditions increasing self-reflective learning in art.
Misc. US

Article looks at conditions increasing self-reflective learning in art for college art students.

Procedure:
- Students wee asked to draw a complex still-life.
- No grade would be given and no teachers in the room
- Photographs were taken at stages during the process.
- At intervals, evaluation sessions were held for reflection.

DOE Lib. 238
Title: Public buildings and child's art.
Author Dunser, Anna
Date: 1950, January

Source: American Childhood
Pp.   6 - 9

Group 3rd grade
Topic: Using buildings to stimulate art.
Misc. US
Article looks at how a teacher stimulates her students interest in art by taking and showing them various public buildings including their school.

DOE Lib. **238**
Title: Sample student drawings: Set 597-C1
Ed.   Haney, Walt & Gulek, Cengiz
Source: CSTEEP, Boston College

Group
Topic: 50 drawings by children of them taking a test
Misc. US, for more drawings DOE lib. 240

DOE Lib. **240**
Title: Sample student drawings: Set 597-C2
Ed.   Haney, Walt & Gulek, Cengiz
Source: CSTEEP, Boston College

Topic: 50 drawings by children of them taking a test
Misc. US, for more drawings DOE lib. 239

DOE Lib. **241**
Title: Student drawings
Ed.   Doda, Nancy
Date: 2000
Source: (Anne Wheelock)

Group Middle and high school
Topic: Drawings by children of themselves two weeks after taking a test
Misc. US, for more drawings DOE lib. 239 & 240

DOE Lib. **242**
Title: Personal communication (email).

Author.   Shay, Sally
Date: 2001, March 13

Topic: Use of pictures to evaluate "what works" in Title 1 schools
Misc.   US

Email from Dr. Shay expressing an interest in using drawings to evaluate "what works" in Title1 schools in Miami.

DOE Lib.   **243**
Title: The Village School
Artist.   Steen, Jan
Date: c. 1670
Source: National Gallery of Scotland, Edinburgh

Topic: The village school
Misc.   Dutch painting in the satirical tradition of Bruegel of a village school. For Bruegel's print, DOE lib. 244.

DOE Lib.   **244**
Title: The Ass in School
Artist.   Bruegel, the Elder

Topic: The ass in school
Misc.   Satirical print by Bruegel of the ass in school. Steen's "The Village School" is said to be based on this, DOW lib. 243.

"Though an ass goes to school in order to learn, he'll still be an ass, not a horse, when he returns."

DOE Lib.   **245**
Title: The Dame School 1887.
Artist.   Cotman, Frederic George
Date: 1850 - 1920
Source: Ipswich Museum, England

Topic: The dame school
Misc.   Painting of a dame school.

DOE Lib.	**246**
Title:	The Country School.
Artist.	Homer, Winslow
Date:	1871
Source:	The Saint Louis Museum (Modern Art)
Topic:	The country school
Misc.	US, painting by Homer of a country school.

DOE Lib.	**247**
Title:	The School Master.
Artist.	Ostade, Adriaen Jansz van
Date:	1610 - 1685
Source:	Musee du Louvre, Paris
Topic:	The school master
Misc.	Dutch, painting of a school master.

DOE Lib.	**248**
Title:	Drawing on Education: Using drawings to spur reflection and change.
Date:	2001, April 13
Source:	CSTEEP, Boston College
Group	Middle school
Topic:	DOE
Misc.	US, Powerpoint presentation of DOE for AERA, Seattle, refs DOE lib. 21

DOE Lib.	**249**
Title:	Literature Review
Author	Bebell, Damian
Topic:	Review of literature on children's drawing

Short review of the literature on drawing and children's drawing.

DOE Lib. **250**, 43
Title: Drawings by 5-year old Black preschool children of l
Leon and Gadsden counties in Florida: A study of the relation between their verbal and visual conceptions.
Author: Britt, Arthur, R. Sr.
Date: 1974
Source: UMI Dissertation Services

Group: 5 year olds
Topic: Relationship between a child's verbal and visual conceptions of likes and dislikes in his home
Misc. Summary of dissertation, full dissertation DOE lib. 43

DOE Lib. **251**
Title: Cultural tools and the classroom context: An exploration of an artistic response to literature.
Author: Smagorinsky, Peter & Coppock, John
Date: 1994, July, 11 (3)
Source: Written Communication
Pub. Sage Publications
Pp. 283 - 310

Group: 16 years
Topic: The use of different "cultural tools" (eg. drawing, poetry, etc.) in response to literature.
Misc. US, alternative school/treatment facility for substance abusers, for more general/holistic perspective of author's argument DOE lib. 252

"Many teachers and theorists regard writing as having almost mystical powers of expression and self-realization" however, however it is not the only mode of expression. The authors argue that there are a variety of "cultural tools - including writing, art, dance, and other mediums" that can be used by students to construct meaning. The use/value of the tool depends on the context, and are only useful when used in milieus in which they are valued as mediums of constructing meaning. The article is a case study about one student in an alternative school/facility who used the various tools to express his understanding, empathy with, response to literature.

It must be noted that in this case, the student had been drawing since childhood so was already familiar with this "cultural tool." He was also in a situation which supported the use of other forms of expression than writing.

DOE Lib. **252**
Title: Constructing meaning in the disciplines: Reconceptualizing writing across the curriculum as composing across the curriculum.
Author: Smagorinsky, Peter
Date: 1995, February, 103
Source: American Journal of Education
Pub. The University of Chicago
Pp. 160 - 184

Group: General
Topic: Argues for the use of other cultural tools such as drawing, dance, etc. for expression and promoting thought in other disciplines
Misc. US

It has been widely assumed that writing has a special capacity for promoting learning hence the popularity of "writing across curriculum" programs. However, broader theories of learning and communication have challenged the primacy of writing. This article
- reviews the psychological research on semiotics and multiple intelligences
- presents the author's own work on the construction of nonprint texts in disciplines other than English
- reviews studies conducted by the author on the production of nonwritten texts in English classes.

Psychological Theories:
- Semiotics. From a semiotic perspective, any sign system (dance, music, etc.) has the potential for offering a pattern of signs for creators to suggest and perceivers to interpret. Therefore, writing is no more or less valued than any other tool depending on the context for its use.
- Multiple intelligences. Gardner's theory of multiple intelligences identifies seven types of intelligence: linguistic, logical/mathematical, musical, spatial, bodily/kinesthetic, interpersonal and intrapersonal. Yet schools tend to limit what is accepted as legitimate means of expression to the linguistic and logical/mathematical.

Nonwritten texts in disciplines across the curriculum
Author looks at three high school courses: equine management and production, interior design, and architectural design, and at the different ways students construct meaning, facilitate thinking and expression using other means than writing (eg. constructing models).

Nonwritten compositions in English classes
Author videotaped a group of students in an alternative school/facility and their various responses to literature. For case study of one student especially, ref. DOE lib. 251.

DOE Lib. **253**

Title:	Reading as mediated and mediating action: Composing meaning for literature through multimedia interpretive texts.
Author:	Smagorinsky, Peter & O'Donnell-Allen, Cindy
Date:	1998, April/May/June, 33 (2)
Source:	Reading Research Quarterly
Pub.	International Reading Association
Pp.	198 - 226

Group:	High school
Topic:	Using other forms (body biographies) for interpreting literature
Misc.	US

Researchers are always looking to broaden conceptions of literacy and notions of what constitutes text. This has led to the recognition of nonverbal acts of composing as having potential for the development of new ideas during composing and the representation and further mediation of ideas through the production of and reflection on finished texts. Studies in intertextuality (response to the text) and intercontextuality (response based on previous social practice/learning) point to the need to view reading and writing as extended semiotic processes that are facilitated, constrained and influenced by a variety of situational social factors.

This study analyses the work of high school students in their various responses to characters in Hamlet. In this case, the response took the form of body biographies. Analysis was based on the finished "body biography" and transcripts of student discussions.

DOE Lib.	**254**
Title:	Toronto Study References

Group:	Kindergarten
Topic:	Draw-a-Classroom Test
Misc.	Canada, DOE lib.189 - 195, 228

Lists DOE references for articles on the Draw-A-Classroom test in the Toronto achievement study.

DOE Lib.	**255**
Title:	A little more history.
Author:	Gerlits, Bobbi Tayne

Topic: Classroom climate through pictures of the classroom

A brief descriptive list of paintings and drawings that depict the classroom from artistic renderings (Bruegel DOE lib. 244, Steen DOE lib. 243, van Ostade DOE lib. 247, Homer DOE lib. 246, Cotman DOE lib. 245) to children's drawings via the Draw-a-Classroom test (Toronto study DOE lib. 189 - 195, 228), and Kinetic School Drawings (DOE lib.181, 183 - 187).

DOE Lib.   **256**
Title: Some new articles worth looking at.
Author: Gerlis, Bobbi Tayne

Topic: Articles on drawing

Summaries of articles on drawing:
- Rabinowitz & Travers (1955). A drawing technique for studying certain outcomes of teacher education. DOE lib. 219
- Brooks (1978). Classroom contextual drawings: An unobtrusive measure of pupil attitudes toward school. DOE lib. 206
- Weade & Ernst. Pictures of life in classrooms, and the search for metaphors to frame them. DOE lib. 224
- Gamradt & Staples (1994). My school and me: Children's drawings in postmodern educational research and evaluation. DOE lib. 231
- Weber & Mitchell. Using drawings to interrogate professional identity and the popular culture of teaching. DOE lib. 234

DOE Lib.   **257**
Title: Art of grief: Picture-making helps children copes with Sept. 11 loss.
Date: 2002, March 8
Source: ABC news.com

Group: Children
Topic: Art therapy: children using drawings to deal with loss
Misc.   US

DOE Lib.   **258**
Title: English second language acquisition: A case study of two Taiwanese children.

Author:　　　　Hsu, Yuehkuei
Date:　　　　　1995
Source:　　　　UMI Dissertation services

Group:　　　　 4 - 6 years
Topic:　　　　　English second language acquisition
Misc.　　　　　 Taiwan, samples of the children's writing and drawing

The purpose of the study was to
- explore how two Taiwanese children learned English literacy skills,
- investigate attitudes, expectations and concerns of parents and teachers
- examine strategies used by parents, teachers and children in the process of language acquisition
- document the children's display of knowledge and skills in speaking, reading and writing English.

Samples of the children's writing and drawing were examined to try and understand their attempts at English speaking, reading and writing.

DOE Lib.　　　 **259**
Title:　　　　　The clinical application of projective drawings.
Author:　　　　Hammer, Emanuel F.
Date:　　　　　1978 (5th ed.)
Pub:　　　　　 Charles C. Thomas, Springfield: IL

Group:　　　　 General
Topic:　　　　　Projective drawing psychology
Misc.　　　　　 Sample drawings included

Book attempts to integrate the literature and research into the study of projective drawing psychology. Book is divided into eight parts.

Part I. Setting the stage. Looks at how the artist reveals himself through his work.
- *Chapter 1* refers to the work of artists. "When an artist paints a portrait, he paints two, himself and the sitter."
- *Chapter 2* refers to the work of the emotionally disturbed

Part II. Expressive components.
- *Chapter 3*. Looks at the expressive elements of a drawing.

Part III: Unit 1. Content components: Human figure drawing.
- *Chapter 4*. Levy looks at the basic assumptions behind projective figure drawing and analyses some specimen drawings.
- *Chapter 5*. Halpern looks at the case study of a troubled eight year old.

- *Chapter 6*. Machover looks at the case study of an adolescent.
- *Chapter 7*. Levy looks at the case study of an adult.
- Part III: Unit 2. Content components: House-Tree-Person (HTP) Drawings.
- *Chapter 8*. Hammer presents interpretations of the http technique using specimen drawings.
- *Chapter 9*. Http is a technique using administered with pencil and paper. Hammer suggests that a deeper level of meaning/information can be obtained with crayons/color.
- *Chapter 10*. Jolles looks at the case study of a child.
- *Chapter 11*. Hammer looks at the case study of an adolescent.
- *Chapter 12*. Brown looks at the case study of an adult.
- *Chapter 13*. Buck also looks at an adult but at drawings made before and after therapy.

Part III: Unit 3. Other projective drawing techniques.
- *Chapter 14*. Sidney Levy and Richard Levy talk about the symbolism in animal drawings.
- *Chapter 15*. Kinget gives an overview of the Drawing Completion Test.
- *Chapter 16*. Harrower talks about the most unpleasant concept test strategy as a tool for diagnostic and therapeutic use.
- *Chapter 17*. Hammer describes variations of projective drawing techniques including the Draw-A-Family, Draw-A-Person-In-The-Rain, Rosenberg Draw-A-Person, Eight-Card Redrawing Test, and the http Verbal Phantasy.

Part IV. Projective drawings integrated in one case study.
- *Chapter 18*. Hammer uses a case study to describe his use of the HTPP (House-Tree-Person-Person) technique, a combination of the one developed by Machover and Buck.

Part V. Research and clinical studies.
- *Chapter 19*. Heidgerd presents an overview of the research in drawing techniques.

Part VI. Projective drawing in a psychotherapy setting.
- *Chapter 20*. Naumberg gives an overview of the scope and function of art therapy.
- *Chapter 21*. Naumberg describes the use of art therapy in a case study with an adolescent.
- *Chapter 22*. Hammer describes how doodles can be an informal projective drawing technique.
- *Chapter 23*. Bender and Schilder discusses the problems in the drawings of two asocial boys.

Part VII. Relationship between drawings and the rest of the projective battery.
- *Chapter 24*. Hammer outlines some of the advantages of using projective drawings.
- *Chapter 25*. Landisberg looks at the relationship of projective drawings with the Rorschach test.
- *Chapter 26*. Shneidman looks at the relationship between drawings and TAT (Thematic Apperception Tests).
- *Chapter 27*. Hammer discusses the prognostic role of drawings.

Part VIII. The tying together.
- *Chapter 28*. Hammer presents some caveats and limitations to the use of projective drawings but advocates their use as a workable technique in personality evaluation.

DOE Lib.	**260**
Title:	The image of teachers in film.
Author:	Tan, Ann G. A.
Date:	1999, Dec.
Source	UMI Publications
Group:	Elementary & secondary teachers
Topic:	The image of teachers in film
Misc.	US, bibliography included.

Teachers are ubiquitous people and yet their images on the screen seldom match the reality. This study looks at the possible origins of both negative and positive stereotypes, how they may or may not be perpetuated by film.

DOE Lib.	**261**
Title:	Drawing on education.
Author:	Rosinski, Jennifer
Date:	1998, Nov. 16
Source	Metrowest Daily News
Topic:	DOE
Misc.	US, overview of DOE