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Problems in Perception: The Role of Art in Special Education

Patricia Koch

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Problems in Perception

Thesis Proposal for the Master of Fine Arts Degree

College of Fine and Applied Arts

Rochester Institute of Technology

Submitted by: Patricia S. Koch  Date: March 1, 1970

Advisor: ________________________________

Approved by Graduate Committee: Date: 3/5/70

Chairman:
Purpose of the Thesis

The purpose of the thesis is to investigate special approaches required to educate children with genetic damage, neurological impairment, emotional disturbances, and sensory-motor skills deficiencies; and to design and describe in a book form, art problems in perception that improve discrimination.

Scope of the Thesis

Bibliography of readings, 1969-70.

Participation in a learning disabilities workshop, observing, testing, and setting up remedial programs for children at the Forman Center, Board of Cooperative Educational Services #1, Fairport, New York.

Teaching art for two years to children from seven to seventeen years old, who are emotionally disturbed and perceptually handicapped.

Structuring a specific approach and procedure in the art room for meeting the basic needs of these children and attending to areas of deficiency.

Photographing the child in his task situation, citing and editing for relevant content. Cropping where necessary in developing prints.

Compiling and selecting examples of their work which best illustrate their invested energies, under controlled learning situations, which show specific goal direction.
Making color transparencies under proper conditions which will lend point to the text and provide a pleasing aesthetic to the printer page.  

Editing transparencies and printing according to the layout of the book.  
Writing a short text describing the purpose of a book on art in special education directed to a possible reader audience of classroom teachers, students in art education or practice teaching, and other administrative educators who are interested in developing structured learning classes for the special student.

In the final work: to design and execute it in book form; to establish a format and consistent layout plan, using selected text and illustrative material; exploring possible type composition, photographic procedures, and applied design in total aesthetic concerns, so that the book might be a pleasing experience to read. The sequence of problems to be illustrated will include painting, printmaking, body-outlines, and three-dimensional constructions.

**Procedures**

Attend Research and Methods Workshop  
Get acquainted with possible technical procedures in printing, photography, and graphic design  
Use technical help from library, faculty, and facilities
Settle on content to be communicated and format
Rough out text in outline; then fatten
Select type composition, after exploring choices
Select and sequence slides of the children at work
Add slides of the colored work where pertinent
Arrange near to relevant text in desired type face; change
type face if it's wrong fit, too heavy or too light
Agonize over fitting in and deleting
Rewrite text to fit space and page; compose in type face
selected; refit
Delete illustrations or crop to fit into page plan
Do cover, title page, table of contents, preface, intro-
duction, and appendix if needed
Number pages
Cover design and pages viewed constantly for over all
readability and design
Compute cost of materials
Keep a schedule of tasks completed, describing steps along
the way in all procedures
Write up report, review
Submit report and creative work to my advisor one week
prior to announced final date for submission to the
Graduate Committee

Alternative Proposals
1. To explore the graphic design and communicative potentials
of combined photography, printing, and design principles to
produce materials usable in combined form to tell a story
about the function of art in special education.

2. To prepare a mechanical for a book, or a sufficient part of a book, on children in the art room, their work, and the learning theory behind it.
The Graduate Committee approved your Thesis Proposal "Problems in Perception", and named Professor Hans Barschel as your Advisor. I suggest you see him and arrange for an orderly development of your Thesis in terms of content and date and do this in the very near future. Please follow the guidelines in the "Handbook of Graduate Study"; if you do not have a copy of the Handbook you may obtain one from Mr. Neil Hoffman, in the School of Art and Design.

Your project seems to be an interesting one, and I shall follow the development and completion with great interest. I have a suggestion to make: that Professor Remington serve as co-advisor, and that you give consideration to adding some resource people, or Thesis Committee member, from a member of the Behavioral Sciences faculty in the College of General Studies. Professor Leonard Barkin would be an ideal member of the Thesis Committee if he were available, but this appears to be unlikely in view of his schedule and commitments.

Sincerely,

H.J. Brennan, Dean
College of Fine and Applied Arts

cc: Mr. Remington
    Mr. Barschel
    Dr. Bernstein
    Graduate File
PROBLEMS IN PERCEPTION

The Role of Art in Special Education

Patricia S. Koch

Candidate for the Master of Fine Arts in the College of Fine and Applied Arts of the Rochester Institute of Technology.

June 3, 1970

Advisor: Roger Remington
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Questions

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SELECTIVE READING
PREFACE

The initial thinking for this project began in the classroom at the Board of Cooperative Educational Services #1, Fairport, New York. Its conceptualization grew in conjunction with the teaching itself and with review of that teaching made possible by a vivid photographic record of that teaching.

A photographer was needed who could act independently from the teaching encounter but who would look for expressions in art action that explain how the child's behavior is modified. John Stapsy, a senior at R.I.T., was interested. He was able to engage the administration of BOCES in financing the film costs. These transparencies were selected and glass-mounted for slide previews and professional talks. From these slides, and many not selected for mounting, the illustrations in this book were developed to demonstrate the function of art in special education. Color transparencies were taken of the children's art work by the author and suffer accuracy of color reproduction. But the blue shade is usable and imparts a quality I find attractive on the page.
THE PROBLEM

The purpose of the thesis is to investigate special approaches required to educate children with genetic damage, neurological impairment, emotional disturbances, and sensory-motor skills deficiencies; and to design and describe in book form, art problems in perception that improve discrimination.

The scope of the thesis is to include pertinent materials from selected readings which seem relevant to teaching in a special educational setting. A bibliography appears at the end of this thesis project and report.
FORMATIVE INFLUENCES

In order to better understand observation and testing techniques of children with learning disorders, I participated in a graduate level learning disabilities workshop directed by the department of Special Education of Syracuse University.

Specifically, I devised non-symbolic instruments for the child to explore and respond to, which was both visual and tactile. Categories of the quality of size, shape, color, texture, and placement were to be identified and matched. Information about the way the child attends to the stimulus, what he manipulates, verbalizes and recalls tell us how far along he has come from Piaget's concretizing stage into the activities of generalization and abstraction. My subject was a nine year old girl who had been described an infantile autistic.

Completion of a fifteen week inservice course in Methods and Materials of Remedial Reading for Learning Disorders included working with dyslexic children.

For two years I have been teaching art at the Foreman Center of BOCES to children from seven to seventeen, who are emotionally and perceptually handicapped. Dr. Leonard Barkin, head of teacher prepara-
tion of the College of Fine and Applied Art, recommended me to this position. Previous experience includes teaching ceramic and painting classes at the Art Gallery of the University of Rochester, the Jewish Young Men's and Women's Association, the Harley Day School of Rochester, and art and occupational therapy in the psychiatric department of Strong Memorial Hospital of the University of Rochester. In addition, I have set up and directed three summer programs in arts and crafts for children of deprived environments.

RESEARCH

Structuring a specific approach and procedure in the art room for meeting the areas of deficiency led me to explore a range of trials from total deprivation of stimulus to highly selective presentations involving ideation, appropriate materials and their inherent characteristics and tools to play with and discover how they work.

Problem solving processes were separated into short tasks within the logic of the whole problem. This reduced the number of critical factors the child had to attend to and retain.

Preliminary confrontation with a class included
the room arrangement, space allowances, materials availability, teacher-pupil interaction by verbal, visual and touch contacts. Reduction of all other irrelevant stimuli was critical to reducing distraction or preventing overly exciting motivation in the learning situation.

THE CHILD WITH LEARNING DISABILITIES

A child who is unable to control himself has to be given structured situations that resemble therapy techniques--working off tensions in a desirable activity which still provides the limits needed to avoid panic. A severely withdrawn child is reached on a one-to-one basis. The teacher and the art aide consult with the classroom teacher about behavior patterns that defy modification. The mental health staff is within the school building and available also for counsel.

In evaluation of the child, over the school year, we see growth in abilities to listen, to anticipate, to recall and locate previously screamed for materials, to tolerate a wider range of alternate possibilities, to complete the task, to enjoy relationships with the teaching staff and fellow classmates, to respect the tools and facilities of the art room, and to participate
in the exhibition of their work on the walls of the school halls. The child who previously had known school as a place to fail benefitted from the highly structured success setting in the art program.

We also experimented with very little structure, inviting the child to start a project of his own interest. This resulted in delay, deceit, false starts and flounderings of the most discouraging kind. It became apparent that the best initial start had to begin with their experiential background. A specific experience they could properly recall; a touch, a movement, a personal view could lead on.

This in turn was demonstrated in the class as a concept to be actively thought about in solving a creative problem. Without ever presenting a finished art or craft project, the process of doing and becoming was talked about. What moves in the wind? Let's see and feel the wind with tissue paper. The individual child becomes an inventor if he tries out various materials. How he resolves his design involves his perceptions of the concept combined with the properties of the art materials. The child is working at several ideational levels at one time, selecting and rejecting. At some moment he will begin to build.
PREPARATORY ACTIVITIES

Photographing the child in the process of building can be disruptive. Some parents have refused to allow their children to be photographed. Kids mugged, posed stiffly, felt inhibited, left their project, left the room. It was not until they had seen some of their pictures posted in the art room that they began to enjoy the record they were helping to make. Some pictures were severely cropped to remove disturbing backgrounds. As much of the room and environment is included in most pictures as will convey the whole scene and seldom the isolated fact.

Pictures were selected for illustrating the child's invested energies under controlled learning situations which show specific goal direction.

It is not the purpose of this thesis to demonstrate behavioral deviations that prohibit the child from functioning. Activities that are disruptive and destructive to the classroom and/or individuals are commonplace. These could be described and discussed in another work, more likely in art therapy and behavioral disorder. The educational goals designed for these children are an objective foremost in both the text and illustrative material of the thesis project. Embarrassing or depreciating photos were decided against
for reasons of suitability.

The photographs were arranged and selected for theme and fit into the behavioral objectives stated above, not according to art as an activity that classifies all printmaking together, all painting, all 3-D, and the like. The sequence is from dot to line, to the line that encloses shape, to forms of balance and design, to early pictorial—as suggested by Rhoda Kellogg in The Psychology of Children's Art.

THE THESIS

The work of Rhoda Kellogg surfaced to most influence my thinking on how to present this subject. It needed a general thesis: that these damaged children can learn we know. That they have not properly experienced their earlier childhood so that they can benefit from that learning is established. Rhoda Kellogg's sound developmental stages of early childhood art provided the norm of most children everywhere. My teaching experiment was designed to allow these special kids to reenter learning at their own level of readiness and be encouraged through the progressive stages.

BOCES provided a laboratory to observe art in action. The classes were open and visited by educators, administrators, graduate students, and parents of
prospective students for the Center. I had to defend the educational rationale behind the actions to each in his own terms.

COMBINING TEXT CONCEPTS WITH VISUAL COMMUNICATION

Professor Hans Barschel was agreeable to my change of advisor to Roger Remington, professor of graphic design, with whom I had studied interdisciplinary explorations of printing, photography, and graphic design.

The text of the book was written from a variety of approaches:

first, by describing the art problems in sequence;
second, by describing the child and his disabilities;
third, from a theory of general learning;
fourth, from the child's goals and views upon entering into the art activity, his sensations, his feelings;
fifth, as a behavioral scientist would describe each scene in a photograph of that art problem. What modifications of behavior are structured and rewarded? What really happened? How can the teacher learn from that child how that child does learn?
sixth, and in exhaustion and panic, I saw the ocean out there. It was decided best to grab a pailful
of something from each approach, keeping my personal views out of it. My missionary zeal had run out.

The resultant text, finalized without footnotes, gives the reader the developmental stages of childhood art; it describes within the processes of perception elements of concern to the teacher in setting up a remedial program; refers to a behavioral scientist, a linguist, an art critic and artist, psychologist and art teacher to give a span of views from the physiology of learning to the aesthetics of art, all lightly done and hopefully quickly moving for the reader.

The art problems are presented in order of class work, moving from the dot, through line, into early shape; from early design into strong design; from design into pictorial representation. The accompanying text is directed to a possible readership of classroom teachers, students in art education or practice teaching, and administrative educators who are interested in developing structured learning classes for the special student. Not everything is said. Much is inferred. Redundancy was avoided as much as possible, but recapitulation is hoped for in the graphic illustrations that follow. The short text juxtaposed to
the photographs can refer the reader back to the introductory text on development stages of childhood art, learning theory, and areas of deficiency.

PROBLEMS IN DESIGNING A BOOK

1. Achieving harmony between the type and the page size; whether the closest possible formal combination would provide subtle stimulation adequate to the reading of each page, or if each page should contain and seek the greatest contrasts.

2. Aesthetics and legibility depend upon the combination of contrasting forms, round-straight, broad-narrow, large-small, thick-thin, etc. Relationships between the printed and unprinted areas must exhibit tension. Values combined with equal values become monotonous, unrelieved.

3. Contrasts can be united in a harmonious whole. There are concepts which become real through their opposites, e.g., "above" in conjunction with "below", "horizontal" with "vertical", "far" and "near", "inside" and "outside", surface and space are no longer compatible opposites. They are for modern man either-or, and also "both-ended". Contrasts so greatly violent, such as light and excessively dark, or large and excessively small allow one element to be so dominant that the balance between the dominant and the less dominant is upset or never comes into being at all.
Combining contrasting forms (values) must be exercised so that the uniform effect of the whole remains unaffected. As Kudes Emil points out,

1) Kinesthetic effect is the "effect the perceiver of visual rhythm experiences at the motoric level". This is the result of a "sense of succession", "sound rising off silence", form on ground (figure-ground), intermetric intervals with tension graphically vertical, horizontal, etc.

2) Linguistically we pattern horizontally; a presence of pattern does encourage a system approach. Three possible variations can be as follows: a) vary composition, b) vary type face color in unchangeable text, c) vary text while type and composition remain the same.

TECHNICALITIES OF PAGE DESIGN

An initial layout was done at length. It proved to be useless because the proportions of the photographs could not be fitted into the allowed spaces. Fitting type would be an extensive job. However I learned much about the printed page at this level.

Starting anew with the photographs it became necessary to arrange them alone without text, in sequence
in a format combining color and black and white. The varying weights on the page worried me.

Type was selected from so many possibilities. Spartan Roman S4 sans-serif looked neat. 10A point size required 11 line advancement (10 plus 1 point space between the lines), 18 ems per 15 pica line. Thrwe 15 pica columns to a 10 x 10 page.

It took a skilled staff, perfect humidity conditions, no dust to cause electrical idiosyncrasies and inhuman patience to stay with this Linofilm machine. G's, p's, w's were dropping to the right and his and is were dropping to the left. Corrections by counting punctured tape and identifying the code for the letter was too impractical. I did learn line justification, how type size is filled on a page, and when to stop trying. Some type was too competitive on the page with photographs. Lightness of weight was a determining factor in selecting Spartan. After three full Fridays Mrs. Tompkins encouraged me to give up on their flukey luck and try a computer process. Some remarkable and humorous examples of why printers are extremely durable people will always cling to my mind. Mr. and Mrs. Tompkins were stalwarts.

Mrs. Janice Clark was engaged to set type on the IBM Selectric Composer System. It was decided that
cost would limit the type to that on the pages with illustration. The introduction and bibliography would not be set.

Universe medium came the closest type to Spartan Roman 4. Eleven point type with 16 points of leading (five points between the lines). A smaller UN 10/14 M for some paragraphs near photos of children's work, not included in flow of major text.

The Staromat 3019 Helvetica was used for title and headings. Standard darkroom procedures using AZO F-4 produced good black type. Eye judgments improved with practice. It took three half-day reserved sessions to produce the type in the book, preceded by instruction in how to adjust spaces, size and cleaning up. Finger smudges, misspellings, and poor spaces plagued this novice. Efficiency finally won out, perhaps at the cost of perfection. The word DEVELOPMENTAL on the table of contents was corrected. In haste I dry-mounted the wrongly spelled word. The Robertson repro camera was used to proportionately reduce the longest line that headed a page. All other settings were adjusted to that size and developed.

Selection of stock posed a shadow problem. Paper originally selected seemed too thin. When photographs were added, dark areas showed thru. I looked at very
expensive art books and found it a common problem. White vellum and heavy bristol were best, but poster board held the type and photographs best without warping.

A cover of red board was selected to contrast with the black and white predominance of the pages. The cover color and inside front piece colors remain in mind throughout the book by intensities and off-shades at unexpected pages, to provide some variation to avoid obvious keying by the same color. A red bar is used only once, where "hurt" and "wound-like-scar" illustrate the boy's feelings. Dividing boards of color separate and create transitions where the text or photographs don't spell it out.

The large photograph of the brain damaged child on the cover was chewed up by our family sheep dog. The negative is available and a new print can be made when time allows. We have since improved the diet of the dog with old New York Times financial sheets.

Mrs. Florence Weed, M.A. school psychologist from the BOCES mental health staff, was recommended by Dr. Linn, the staff psychologist, to act as a professional consultant. She has also agreed to serve on my thesis committee. Her comments are included at the conclusion.

Dr. John Ryan, professor of psychology of the College of General Studies, critically read and suggested
problem areas in need of transition, modification, and expansion. His notes follow those of Mrs. Weed. Suggestions from both were acted upon and I feel satisfactorily incorporated.

Mrs. Van Lare, the reading consultant at BOCES, was unable to contribute because of time limitations.

Mr. Remington reviewed the layout before dry-mounting. Trimming type strips and photographs proved agonizing. Narrow lines of type could not be held by the sweaty finger. Breathing, the very essence of life, was interrupted to reduce body movement. Coffee jumps were eliminated; eye twitch and martinis were suspended. Sheer grit, or TRUE GRIT, accomplished this far from perfect production. I am grateful to my husband for hours of gentle support thru this endeavor. Mr. Craig, department of printing, suggested that he do the machine cutting of the stock. Photography had the bind-punch for the spiral spine.

CONCLUSIONS

I didn't know how to plan a book. I tried several pages of differing formats and realized that a continuity throughout the book would depend upon a plan placing type in consistent columns of like width stabilizing a sense of expectancy. This was established, but the design lacked smack.
The black and white larger photographs were weak to powerful images. The small contacts floated too much. A color bar was decided upon to "hold" the pages that seemed to disperse. This established a horizontal hold I found very helpful throughout.

The cover and contrasting gold title page were keys to the color variations.

The "mock" book has exaggerated thickness due to dry-mounted materials and stock of poster board. A printed book would have a 3/8 to 1/2 spiral at the most. The box is designed only to preserve this original. There would be little reason to box a printed book, although it could enhance the package appearance.

Questions: Does the finished book contain attributes which lend to the narrative? Does the illustrative material arouse feeling for the child and inspire teaching? Does the text impart enough information to sufficiently inform without swamping what is primarily a graphic presentation?

I see it as conservative, not an overly personal conception, not obscure. I feel it is incomplete. It could be carried many steps further expressively and technically.
Pat-

A most scholarly tome - took a bit of quiet concentration for me to digest it fully, but what I then grasped hung together well and conveyed a spark of enthusiasm that is contagious - delightfully so.

I zeroed-in on the perception section particularly, and could find not a bit of factual sin or lass of omission or commission. A general comment, however - although they say, near the end, 'learning goals must be broader than the product achievement ...' a pursuit may be critical of the tendency to encompass a healthy bit of personality behavior theory (pages 6 and 7). And the implication that meeting these problems in perception offers a basic adjective therapy rationale. Many theorists would propose that this is only one part. No matter how valuable, in the overall plan for such therapy, especially for the child with emotional blocks to learning.

Actually, this may be put picking - I assume that you have made such inference in the general statement of your thesis.

At any rate, it is a thoughtful, well done section, and I think you should be applauded. We hope to be able to see the work as a whole.
As for a descriptive phrase next to your name—simply School Psychologist (M.A.) is adequate. If some specification of my qualifications would help in presenting this to meet suggestions of recent curriculum thi...thesis proposal approval, you might add something like:

F.W. Weed, M.A., School Psychologist
Mental Health Consultant, EDRA Project
Diagnostic Coordinator, Diagnostic Service Center (1968-69)

Please use your own judgement.

F.W.W.
P.6 - Shift in P 3 to new topic needs to be clarified —

P.7 Learning situations . . . . currently highly questionable as stated .

P.7. Superlative . . . . some-one else etc . . . (This is the sacrificial lamb — suffering Sp. Ed. Teach. Philos!)

P.5 - last P stated this way the Sp. Ed. Student is not in need of Sp. Ed. —

These factors may be and often are absent in the various students who constitute Sp. Ed. population.
Remarks: John Ryan, psychologist
College of General Studies
Rochester Institute of Technology

P. 5 - last # stated this way to P. 6
the Sp.Ed. Student is not in need of Sp.Ed.

These factors maybe and often are absent in the various students who constitute Sp.Ed. populations

16 - Shift in P. 3 to new topic needs to be clarified

7.7 Learning situations...Curriculm highly questionable as stated.

7.7. Impractical...some one other etc. (This is the
Not feasible! screams Sp.Ed. Teacher!)

Sacrificial Lamb!
P. 8. 1st P. - cont'd from P. 7 -

Beginning of P. 6, and not comparable concepts.

P. 6 - to - 11 -

True but you need clarifying statement of why or how this compares to "sp. Ed." Act.

See P. 12 - you did it here

13

by P. 15 - 16 -

17

P. 18

Jungian to Jung & his assoc. suggest

(that reality is all that they do)

Esp. Gestaltist from Jung's assoc. as another rationale
I would suggest

1. Rewrite in terms of (in any order)
   
   A. Art & its mature
      and implications
   
   B. Teacher - student
      (educational
      motivational
      material,
      etc.)
   
   C. Sp. Ed -
      1. Students do - don't
      2. Teachers need to do
      3. Art provides opportunity
         for teachers to do
         with students
         who can do . . . .
         who cannot do . . . .
There are a number of other areas in need of modification that in general these changes are most necessary.
SELECTIVE READING

This list includes works I found relevant to learning about areas of disability, the physiology and psychology of its manifestation, the teaching procedures most helpful, diagnostic and remedial methods used in academic areas, and art as a creative and aesthetic activity.

I find it impractical to arrange the list by such generalizations because each impinges upon the others. Therefore, the books are alphabetically arranged by authors. Reading was begun the summer of 1968 when I became interested in teaching art in special education and began to toy with the idea of a book and it continued up thru May of 1970.


_Typographical Research, Journal of_. January, 1967. (Source of Paul Klee material)


U. S. Government, Department of the Navy. _Eye-Motion in Pattern Recognition_. 1958.
