This paper argues that a major objective of art in the schools is to enhance visual perception and that there is a close correlation between school achievement and visual perception scores. Children's art growth is discussed, and it is argued that dittoed drawings and coloring books are harmful to this growth because they promote a narrow and negative concept of what art is about. Art involves the acquisition of complex perceptual and cognitive skills that are related to skills needed in reading. A study designed to find out how art affected scores of children on the Metropolitan Readiness Tests is described. The findings suggested that children's reading readiness could be improved through art lessons that stressed the inclusion of details. An exemplary art lesson is outlined, and it is concluded that the visual arts are basic to reading because they develop the ability to differentiate details and to integrate them into progressive orderliness. (TS)
The function of art education in the process of general education is constantly being defined and redefined. In my opinion, a major objective of art in the schools is to enhance visual perception. Reading is probably considered the most important subject in the elementary school. But, we must remember that a child is an indivisible unit. When we deal with one aspect of a child's growth, other aspects are affected. Many studies have shown that the visual perception and understanding of line, shape, size, texture, and color are as basic to reading, math, science, music, and social studies as they are to art. In other words, there is a close correlation between school achievement and visual perception scores.

Children live and learn in a visual world full of visual obstacles. Art, being a visual activity, can help children develop the visual skills necessary to cope with many of these obstacles. Since the advent of television, children are exposed to more and more visual learning instead of verbal learning. Some educators believe that a child learns more from television, primarily a visual media, than he does from his teacher. Marshall McLuhan has said: "If the classroom remains primarily a verbal learning experience, in a very real sense, the child may have to interrupt his education to go to school.

A recent study showed that school children watch T.V. about 20 hours per week. First graders watch about 15 hours a week while fifth graders sit before the "Electronic Babysitter" for about 25 hours a week, or more time than he spends communicating with his parents or teachers. I have a three year old who has not only learned his ABC's and numbers, but is now beginning to read. Almost all of this, he has learned from television; primarily Sesame Street and Electric Company. The point is, these programs rely heavily on visual learning and teaching children to use visual skills.

The eye is the most elaborate, the most subtle, and the most versatile of all our senses; it dominates our other senses; it is the door through which 90 percent of our learning enters. It is the most sensitive of our senses. Yet we know very little about the training of the eye and leave that training up to chance. I think that someday, in the near future, there will be some time allotted in the elementary school for "Visual Education," and art will be a large part of this "Visual Education."

A good question to ask at this point is: "How much of visual perception is learned and how much are we born with. It is impossible to talk to babies to find out what they see when they first open their eyes, but there was an interesting study done with a group of adults who had been blind since birth and had gained their sight through cataract operations. They, in effect, experienced the same visual learning that occurs with babies at birth, but were in the unique position of being able to talk about their visual learning experiences. They had to learn to see. It turned out that even the most intelligent had to count the corners of triangles and squares in order to tell them apart. (M. Von Senden, Space and Sight, Glencoe, Ill.: The Free Press, 1960) This confirmed what Piaget had stated earlier; that visual perception is for the most part learned, and visual perception is an acquired ability rather than a natural one.
A child's art growth begins at birth, when he first starts to see, touch, hear, smell, and taste. When a child is about one year old, he will begin to make marks. These scribbles represent his first attempts at graphic and symbolic expression. Gradually, he will gain more skills in manipulating the materials until he is able to make crude shapes at about age four. Don't tell a soul, but Leonardo da Vinci was once a scribbler! Hard to believe? In fact, each of us once scribbled! And, all symbolic communication begins with scribbles. As we all know, parents are a child's first teachers, and maybe his most important teachers. A random and exploratory use of art materials should not be thought of as wasteful. The child is gaining skills in the use of tools and materials. These skills are necessary in order that he may later learn to draw symbols.

A parent once pointed to a child's symbol for a dog and said, "That does not look like a dog!" The child pointed to the parent's symbol, the word "D 0 G," and said "That does not look like a dog either."

Sensory experiences are very important for young children. Psychologists tell us that rich percepts will evolve into rich concepts. Most art activities for young children stress concrete, sensory, perceptual experiences.

When a child is about four or five years old, he begins to invent symbols for objects in his environment. These symbols evolve out of a rather accidental combination of abstract shapes. An essential element of school learning is the ability to use and understand visual symbols. A child who can manipulate and understand concrete art symbols will have little trouble manipulating and understanding more abstract visual symbols such as letters and numbers.

The details that a child includes in his symbols are an indication of his intelligence. A young child's symbols represent his concepts of objects within his environment. They do not represent an attempt to copy the visual characteristics of objects; the symbols are conceptual. For this reason, the amount of details included in a child's symbols is an indication of his awareness and often used to measure his conceptual development.

The first indication of a child's attempt to order his symbols in space is the ground line. This same concept, putting symbols in a definite spatial order, is necessary in order to learn to read and write. Therefore, the ground line is a good indication that the child is ready for a meaningful reading and writing program. The ground line is two-dimensional in nature and denotes a left to right motion, in the same fashion that letters are arranged to form words, and words arranged to form sentences.

I firmly believe that dittoed drawings and coloring books are harmful to children's growth. The only thing a child can do with a dittoed drawing or a coloring book is fill in the outlines with color. There is no opportunity for expressing emotions. Suppose the child hates dogs, or loves dogs; how can he express this with a ready-made drawing of a dog? There is no opportunity to make visual decisions, which is the backbone of the learning experience in art. Without the opportunity to make visual decisions, no learning or growth can take place. They undercut a child's confidence and promote dependency. When you give the child a ready-made drawing to fill in, you are telling him, in a non-verbal way, that you have no confidence in his ability to do his own drawing. Many times a child will say, "I can't draw a dog,"
Match each picture with the correct color.

- Circle: yellow
- Scooter: yellow
- Dog: red
- Fish: red
- Crab: blue
when he really means, "I can't draw a dog like the one in the coloring book." Not being able to draw one like in the coloring book, he will often ask the teacher to draw it for him. Furthermore, dittoed drawings and coloring books promote a narrow and negative concept of what art is all about. They imply that art is easy, requires no thinking, and is simply a matter of filling in a ready-made drawing with flat color. Dittoed drawings and coloring books are busy work and have no learning value. Some argue that they teach the child to stay within the lines (eye-hand coordination). The fact is, however, that the child is more apt to stay within the lines, and therefore develop eye-hand coordination, if he colors his own drawings.

Art involves the acquisition of complex perceptual and cognitive skills that are related to skills needed in reading. I'm not going to stand here and tell you that art is the cure-all for kids who have reading problems. But, I do suspect that failures to master the differentiation of visual symbols on the printed page, the inability to see the difference between a "D" and a "B", and the inability to arrange letters in their proper spatial order, is due to some degree to perceptual immaturity. Unless a child can recognize and manipulate visual symbols, he cannot learn to read! A child who can understand, recognize, and manipulate concrete art symbols should have little trouble manipulating and understanding more abstract symbols such as letters and numbers.

A couple of years ago I did a study to find out how art could affect scores of children on the Metropolitan Readiness Tests. The study was related to Florence Goodenough's work involving details in drawings as an indication of conceptual development. It was also closely related to Gestalt Psychology which says that children tend to perceive things as wholes and ignore details. The Metropolitan Readiness Tests deal a lot with the ability to see and manipulate details. The sample used in the study included all the children enrolled in the first grade of a rural Appalachian school. The treatment group was given an art lesson each day for ten consecutive school days. The control group had no formal art instruction during this period. During the experimental treatment, the main objective was to attempt to influence the treatment group to include more details in their drawings. In general, the procedure used was that of asking questions and making statements concerning the topic. This was an attempt to stimulate the children into using their passive knowledge, and therefore illustrate the assigned topic in a more detailed manner. To make a long story short, the children who were taught art lessons that stressed the inclusion of details accumulated a significant pretest-posttest increment in their scores on the Metropolitan Readiness Tests, while the control group showed no significant pretest-posttest increment. The finding suggested that children's reading readiness could be improved through art lessons that stressed the inclusion of details. This conclusion should not be misconstrued. I do not propose that this should be the only type of art lessons given to children. But, I would suggest that art instruction should include at least some strategies that develop the child's ability to recall and delineate fine details in his environment.
ART LESSON 1

Problem:

Draw a picture using the topic "What My House Looks Like." Put as many details in the drawing as possible.

Materials:

Large, soft-lead pencil without an eraser.

11" x 14" sheet of white drawing paper.

Motivation:

"Remember the last time you asked a friend to come to visit you and you tried to tell your friend where you lived? Instead of telling your friend, it might have been easier to draw a picture of your house and give it to him. I would like for you to draw what your house looks like in your picture today. It will probably be easiest to draw the front of the house since that is the way your house looks to someone who comes to see you. Try to remember: Is your house long and flat or is it narrow and high? Are parts of your house higher than others? Roofs have many shapes. Some are pointed; some are flat; some have several slopes. Draw your roof and put the chimney and pipes coming out if there are any. Draw your front door. Is it plain or does it have a window or carving to make it fancier? Is it in the middle of your house or close to the corner? Your friend would want to know where to knock when he comes. How many windows are on the front side of your house? Are they big or small or are there some of each kind? Can you see the curtains or window shades from the outside? Many houses have a porch or a stoop where your friend can stand if it is raining. You may play with your friend on the porch if it is muddy outside. Draw the front porch and the sidewalk leading up to it. Add the shapes of the bricks or wood that your house is made of. If you have time, you may want to draw some of the trees and flowers in your front yard."
It's been my experience that children have more difficulty with ideas than they do with materials. Materials are concrete and children can learn to deal with them relatively quickly. Dealing with ideas is another matter. This is where motivation comes in. "I can't draw." "Show me how to draw it." "I don't know how to do it." These comments frequently come from elementary children who have not been motivated in an art class. The results are usually "blah" pictures that say nothing. Motivation might be a parent's and elementary teacher's most effective tool in teaching art. Usually these people do not have a great deal of knowledge and skill in art, but they should have the ability to motivate children to think of creative ideas. One of the best motivational techniques is to conduct a colorful, lively, discussion which should include thought provoking questions that stimulate children to think. In addition, it is important to get excited about the child's art work. If you are not excited, it is very unlikely that the child will be excited.

In summary, I might say that, taken by itself, the maxim "Through Art to Reading" may sound blasphemous to the aesthetic purist; but as one facet of the visual arts' constructive potential, it may have its points. The contribution of art to the area of language development should not be overlooked.

There are two fundamental things that the human mind is able to do: 1) differentiate, and 2) integrate. (Buckminster Fuller) Both of these operations are basic to reading and are stressed in art. The visual arts develop the ability to differentiate details and to integrate them into progressive orderliness.

Of course, art goes beyond the development of practical vision. Life means more than simply surviving. Experience in the arts is a type of callus remover, a vehicle by means of which one's nerve endings become acute and responsive. In an age when need for sensitive human beings was never greater it is paradoxical that attention to their development in the schools is so neglected. It would be an overstatement to say that education in the arts is sufficient; without it, however, the prospects look bleak. (Elliot Eisner) Although the sciences provide the means through which man achieves survival, the arts are what makes survival worthwhile. (NAEA)

To put quality art programs in our schools takes money, and the people who appropriate the money seem to have higher priorities. I look forward to the day when schools will automatically receive the funds they need, and the Pentagon holds bake sales to buy tanks. (Terry Herndon, NEA)