

Art is Good for my Brain?

A Researched Article by Diane S. Spears, EdD Christian Education



"Seattle Moonlight" © by D. S. Spears
oil on canvas
image size: 40"x34"

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by

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This article is included in the elementary and high school Spears Art Studio Christian art curriculum manuals. It contains researched information that proves the efficacy of teaching the fine arts for maximum student development. Please take time to read this and present it to your parents, principals, headmasters, and board members.

Many educators seem reluctant to add art to curriculum preparation, because they feel they:

- cannot add more preparation to the load,
- lack experience with art,
- don't want to deal with the mess or space required for art.
- In addition, art extensions in curriculum guides already provide practice in eye-hand coordination, (color, cut and paste projects).

Extensions in curriculum guides, however, are generally not “solid” art instruction. Even superficial art experiences are valid, but solid art instruction should relate to Scripture and at least one other core subject and to other fine arts. All fine arts (visual, music, theater, dance, writing) are necessary for developing children’s brains, and well worth the extra effort to provide space and materials. Solid art instruction does not aim at making professional artists of students who have other ambitions. It promotes creative thinking, problem solving, discernment, comparison, and learning how to see accurately. These are life skills needed for success in any endeavor, as students now, and later in leadership and business.

BRAIN RESEARCH

Brain hemisphere research began by identifying the origin and process of creativity (B. Edwards, 1979). Researchers discovered that our highest cognitive activities are performed by specialized brain areas and pathways concentrated in one hemisphere or the other. However, some brain processes are performed equally well by both hemispheres. Traditional education has emphasized kinds of learning that are processed primarily in the left hemisphere - analytical, language, symbols, and time consciousness. New stimuli, problems, music, and spatial reasoning are processed first by the right hemisphere. Research has proved that

- the full creative process involves integration and harmonious functioning of both brain hemispheres; and
- the creative process stimulates “traditional” learning by creating new thought patterns and symbols. Students are thus able to apply problem-solving skills to the arts, and then apply those same skills to other learning and life situations.

Many excellent articles and books, based on sound human brain research, show direct links between better brain development and the presence of fine arts as independent study and as integration into core curriculum. The arts not only reach more students with differing learning styles and “intelligences,” (Howard Gardner, 1973,1993; T. Armstrong, 1994), but also reinforce content areas and academic skills, thereby positively impacting the cognitive, psychomotor, and affective learning domains.

How does inspiration work? Inspiration is a process that involves more than the brain. Inspiration is stimulation of the mind or emotions to a high level of feeling or activity; something that

causes a desire to express an idea. Ingredients of inspiration are

- imagination (recombination of mental images from past experiences into new patterns)
- intuition (direct knowledge, judgment, meaning, or idea that occurs without any known process of conscious thought; a spiritual component).
- steps in the creative process are:
 - saturation (information research),
 - incubation (where imagination is at work), and
 - illumination (sparked by intuition).

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Learning Domains

All the fine arts have a profound influence on both the cognitive and affective domains with observable student achievement:

1. Cognitive:

- (a). the acquisition of organized knowledge in the traditional manner of rote instruction where textbooks, materials, and laboratory demonstrations are used and where teaching is by telling; and
- (b). steps beyond the acquisition of knowledge and learning how to use that knowledge while exercising higher order thinking skills.

2. Psychomotor: the development of skills with “hands-on” activities using a wide range of tools such as computers, calculators, and scientific instruments. Skills are acquired in reading, writing, speaking, listening, observing, measuring, estimating, and calculating. The student actively participates, and the teacher acts as the facilitator or coach.

3. Affective: greater understanding, by awakening the creative and inquisitive powers through the deeper experiences inherent in the fine arts. (Howard Gardner, 1973).

HOW ART HELPS

If we are to truly educate, expecting and demanding higher levels of thinking from our children, we must address all learning domains, styles, and “intelligences” in a systematic, natural progression that integrates information with real life application. The methodologies and content of fine arts do just that. Before learning can take place in any subject, the student must be taught HOW to think. This requires analysis - a higher order thinking skill. How to think and problem solving are inherent in ALL fine arts learning experiences, “stretching” and challenging students to think critically and “outside the box”. They can make “mistakes” in art and learn how to “correct” them for successful products as part of this learning process without affecting their academic grade point average. Students are encouraged to experiment and take risks. The fun atmosphere of fine arts enables assimilation of much more information more quickly and effortlessly, developing both brain hemispheres.

Our modern world of intense and rapid visual stimuli has programmed a great number of children to be primarily visual learners. Therefore, an abundance of visual aids, suggestions for extending learning, and opportunities for interpretation must be integrated into the core curriculum making information visually concrete in art. Students who miss information about design, color, depth perception, how to cut straight, how to think the quickest, most economical solution, etc., will not

progress to their potential. All fine arts assist in developing manual skills, problem solving, critical thinking skills, and perceptual awareness. Fine arts instruction is INDIVIDUALLY SEQUENTIAL, building upon skills from previous experiences.

Visual arts also introduce, develop, and reinforce important values in life. Students learn patience, perseverance, appreciation for varied expression, aesthetic awareness, respect for materials, and academic information. All of these help establish a foundation for personal goals, because students learn a great deal more than just information. The arts are an opportunity to reach students who are otherwise unresponsive and unconvinced that a particular study is relevant to their own lives.

Art projects do not have to be elaborate to produce benefits. Even the simplest ones can have profound effects. Younger children need gluing experiences to learn dexterity and the proper amount of glue. In this way they learn to respect materials and to use them wisely. Common materials and “throw-away” items found at home can be useful. Children can learn that, instead of throwing away a “mistake,” to rework it, producing something different than planned, often with surprising and pleasing results. “Useless” items can be redeemed and can challenge thinking into a creative venture. A very good example of this is the bronze sculpture *Baboon With Young* by Pablo Picasso. Children are thrilled when they identify the face as a child’s toy car.

Seeing Accurately

A great benefit of visual arts studies is learning to see accurately - useful in every life situation. We have heard about ten different people giving ten different descriptions of the same accident, illustrating inaccuracy and/or incompleteness of seeing, often the result of emotional triggers about accidents. But more often, it is the result of ASSUMING information according to previous experience or understanding rather than really seeing it. About the age of ten, children desire to make things look “real”. Their frustration stems from lack of practice in really looking at things. Children (and adults) often assume that a certain line is so, when if they really looked at it, they would draw it differently.

Art and Mathematics

Using visual arts to teach mathematical concepts is a superior strategy, especially for students having difficulty with abstract concepts. Students learn basic visual arts mathematical principles of balance, repetition (pattern), spatial relationships, proportion, symmetry, estimation, and geometric properties in nearly every art activity. Drawing compasses create fascinating designs using radius, diameter, circumference, angles, etc. Many projects use a ruler for measurement and as a straight edge. In this way, worksheets that only add to the “math anxiety” can be replaced by enjoyable activities to integrate functions of both brain hemispheres. When left brain hemisphere analytical and symbolic skills and right brain hemisphere spatial and intuitive skills join in fine arts, an understanding of mathematical and language principles are the result, allowing greater success on tests and in life. Combining visual art and music is amazingly effective (C. Blackburn. 1996).

Art and Language Arts

Visual arts are particularly useful in developing language arts skills. New vocabulary is inherent in every study. Verbal expression is encouraged in comparing works of art. Written descriptions and emotional responses to artworks can reinforce grammar and handwriting. Students begin to look at artwork critically using valid art principles as guides rather than just personal tastes. They will begin to know why a piece of art is successful or unsuccessful.

Music is also a foreign language using symbols (musical notation) that make “sentences” with beginning, middle, and ending, just as the written word does in sentences and paragraphs. Music students can in three years or so, go from being introduced to music to “reading” and then performing difficult “masters” works. Contrast this achievement with the “normal” curriculum demands (i.e. public school) in which a large percentage of students do not demonstrate masterful fluency in reading the English language until high school (or even college!). Music is directly related to speech, thus providing integration of both brain hemispheres, enabling the learning of more language than in a spoken mode. In addition, spoken language is practiced in song lyrics.

Drawing and the SAT

Classical Greek and Renaissance Italy linked literature, science and philosophy to intellectual ability specifically through drawing (S. Simmons, 1995). Art is natural for integrating all core curriculum, and for teaching difficult abstract concepts. Research by the College Board on SAT scores has shown that K-12 students who have at least four years of fine arts instruction score 40 points and more higher on both math and language than those who have had none (College Board, 1989).

HIGH STANDARDS

Students need many opportunities to learn patience. This life value is difficult to teach in any medium, but easier in art. Art requires time and thought to be part of every activity for higher quality. Young students may create simpler pieces, but they can rise to high standards. Some teachers and parents have been unknowingly indulgent, attributing poor performance to the developmental level of the student, rather than setting the standard for excellence. This does not mean that mistakes are outlawed, or that students are driven beyond their ability. It bears restating - students’ abilities can be stretched relatively painlessly by challenges inherent in art, and “mistakes” are safe as part of the learning process without repercussions in grade point average. Students should be encouraged to experiment and take risks. Creativity is stimulated, and students realize they are on a “trip” of learning that has relevance to their being.

CHRISTIAN STANDARDS

High standards apply to the quality of art in the successful use of art principles, and to content. Controversy and disagreement about art usually involves political or religious art. Censorship of the creative process is debatable, but there should definitely be censorship about public display of morally inappropriate content. The art world applies no such restrictions, but allows immoral expression by placing emphasis on the shock value or skill displayed in rendering the idea rather than content. Mere expression of an idea is not necessarily art.

Christians must remember that there are sources of inspiration that are not godly. We must have knowledge of God’s Word and know Him, so that we do not yield ourselves to the inspiration of darkness, but be a light to this dark world. Scripture admonishes us to

- pursue godliness in everything we do, say, and think (I Timothy. 6:11).
- think on those things that are lovely and of a good report (Philippians 4:8)
- study Creation to learn about our Creator (Romans 1:20)

The art principles of unity, beauty, balance, harmony, and creativity so grandly displayed in Creation are attributes of God Himself and cannot be fully understood or appreciated without learning about Him. Imagine how much FUN the Lord had in creating the universe! By using the Word of God as the standard, we can discern that much popular and famous art will not inspire us, nor glorify God. Since it is so easy to fall into negative thinking, impressionable children certainly

should be encouraged to create “lovely” art and be directed away from worldliness and expressions of violence.

Art can be a powerful tool to reach the world, no matter what form art takes - visual, literary, musical, theatrical, mathematical engineering (architecture, etc.), or crafts. And it does not require religious content. The very line and color quality (“personal signature” of the artist) can reveal light or darkness of the soul.

SUCCESSFUL ART

Successful art will adhere to principles of art and will make a statement, which allows the viewer to draw a conclusion, adding to his knowledge of life, even if that knowledge is only intuitive.

Therefore, high standards in art require excellence in the:

- execution of art principles;
- use of materials; and
- expression of a morally acceptable idea.

Each criteria requires patience in that sometimes an artwork requires a second or third try, or simply reworking the first try.

All educational settings should include art instruction to have healthy, balanced students. Don't be afraid to explore the arts on a regular basis and learn along with your children. You can discuss unlovely or even controversial art with older children to help them develop discernment. The study of fine arts is so comprehensive that it should not be limited to intermittent experiences. Like studying God's Creation, fine arts teach us about ourselves, about the world, and indirectly about God Himself.

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