Developing Creative & Cognitive Skills through a Comprehensive Arts Education

By Deborah Umphrey
My objective:

- Define what is a good comprehensive art study program
- Provide evidence through research that this kind of art program can contribute to cognitive development
- Advocate policy improvements to support this program

To achieve this objective, I will attempt to answer what is the evidence of what children learn when these cognitive skills are initiated.
What does a good comprehensive art program of study look like:

- A study of art history & culture, art criticism, studio processes & aesthetics, all can contribute to cognitive development by providing students with opportunities for multiple ways of learning (Gardner’s theory)
- Implementation of a classroom culture favorable to critical thinking to include discussion, inquiry, problem solving, decision-making, and a free exchange of ideas
- Implementation of a learning environment known as constructivism (students construct their own meaning and assessments becomes part of the learning process); this supports the traditional way art educators have always promoted the arts
- Implementation of a relevant curriculum by selecting contemporary artworks to be used in instruction (Brewer)
Literature Review:

Karen Hamblen’s article: Theories and research that support art instruction for instrumental outcomes

- Art study promotes increase in academic achievement & may transfer to other disciplines?? Not sure about it
- Outcomes should not be the only goal for art programs – Agree!!!
- Instrumentalism is only acceptable when the art program endures in its entirety – Agree!
- Hamblen cites several studies that claim to show transfer however she admits claims are vague.
What researchers have found so far –

Overview: Cognitive scientists & art educators conducted research that shows cognitive experience is **conceptual, perceptual & linked with the aesthetic**

**Charles Dorn’s book – Mind in Art** – Dorn cites research about cognitive theory as a relationship between creating art & intellect where art is “**conceptual** as an idea, form, or type of communication”

His findings:

- Cognition helps to manage **concepts** permitting learning, mentally linking & forming new concepts; developing logic.
- In children’s drawings, visual clues are displayed as **concepts** when an object is not present, their vision dominated **conceptual** processes, their language influenced their drawing **perception** & their sensual/aesthetic feelings affected their drawings; as their maturity increases, comprehension of **concepts** of objects increased.
Finke’s research (1985) – Theories relating mental imagery to perception

- Students visualize mental images that hold information, experiences, & imaginings
- Students categorize images & concepts by constructing & reconstructing based on previous learning experiences

Data helps us to understand Eisner’s theory – that visual art cognition is perceptual, that it does not need to connect to reality, nor does it have to rely on images previously constructed in the mind.
Finke’s research (1996). Imagery, creativity, and emergent structures

- Finke discovered the *creative cognition* approach – processes lie beneath creativity & imagination engage cognition that can either be intuitive & spontaneous or planned & controlled.

- Example: Subjects visualized emergent properties of an image of which they were unaware of when the image was initially formed. For instance, imagine merging of a lion’s body with legs of a frog to discover how the imagined creature may behave; cognition is engaged when the properties of the image spontaneously emerge which may not have been considered before or even deliberately imagined.

Heid’s article gives an account of Damasio’s research on aesthetics:

- Recent brain and cognitive research have found connections between our mind & feelings that cannot be disconnected without cognition loss.
- Therefore, cognition is influenced by our emotive responses, which affects our rational thinking.
- Children, who do well with intrapersonal intelligence (Gardner’s theory on multiple intelligences), learn from internal cognitive ways, which includes feelings & other mental abilities.
Siegesmund (2004). Somatic knowledge and qualitative reasoning: From theory to practice

Siegesmund reviews Eisner’s book, *Art and Creation of Mind* & explains that conception & perception are linked to the aesthetic; in the book Eisner defines somatic knowledge (a feeling of rightness) & qualitative reasoning (ordering of quality relationships).

- Siegesmund summarizes Eisner’s theory as:
  - perception of sensory impressions
  - conception of emotive representational forms
  - expression in media
- Defined in stages, art begins as non-linguistic & ends as linguistic transformation
  - Example: when an artist paints details of a new landscape; he/she will perceive more than just mere images, but mental concepts; the artist retains in memory sensory impressions & emotional responses from the initial encounter and translates these feelings to the art product
Milbrandt, Felts, Richards & Abghari (2004). *Teaching to learn: A constructivist approach to shared responsibility*

Overview: Cognitive theory has been found to support the traditional approach to teaching a comprehensive art study program using the constructivist approach

- Students actively engage creatively in art production & utilize cognitive skills of analysis, interpretation, problem solving, & construction of meaning called cognitive divergence
- Students integrate fragmented information into previous stored information, Efland calls flexible cognition.
Summarize this research:

- Guided research to prove theory has the capacity to create change and influence educational policy by readdressing the issue of what contributions art has made to cognitive development.
- Art study in a comprehensive art program can contribute holistically to the intellectual, cultural, & aesthetic development of students.
- Art creativity depends on highly cognitive processes that spark perceived images or conceived ideas.
- During aesthetic experience, one can construct meaning, which requires creative & critical thinking skills.
- I believe that cognitive research is the key which will help persuade those skeptics that art should be studied for its own sake because of its many benefits which is something art educators already know.
Policy Recommendations

- Develop a comprehensive art program for Pre K-16 to include aesthetics, relevant contemporary issues (Dr. Brewer), art history, art criticism & studio production; use a traditional art learning environment
- Support qualitative & conceptual cognitive research to identify what children should know & do in the art classroom.
- Develop an art education program assessment at each level for all parts of a comprehensive art study curriculum. Assessments should be formal and part of every art teacher’s curriculum & should include different forms of assessment, including portfolio, journals, written test, essay.
- Strive for shared & extraordinary leadership (Chapman) and collaboration by involving art educators from universities & public schools, community arts organizations, volunteers, and parents to advocate art instruction.
- Focus on “substance over form” (Hope), because only arts educators, who prove to be the true masters of substance/content, continue to be instrumental in writing policy and performing the instruction within the arts disciplines.
What may change as a result of these recommendations:

- Influence art educators, cognitive scientists, and those who provide funding to continue supporting cognitive research which can have a profound effect on changes in policy.
- Advocate policy that a comprehensive art education program is important to art learning and cognition.
- Persuade those who provide school funding that comprehensive art programs of study have a positive impact on cognition and motivation of students.
- Improve public opinion that the arts is important as a core subject.
- Convince parents and the community that the arts can improve cognitive skills that are essential to a student’s success in school now and in the workplace tomorrow by disseminating this information.
A Comprehensive Art Education Program

What is a comprehensive arts education program and what can it do for our students?

It is a study of art history and culture, contemporary art, art criticism, studio processes and aesthetics, all of which can contribute to cognitive development by providing students with opportunities for multiple ways of learning. It includes a curriculum, which creates a classroom favorable to critical thinking to include discussion, inquiry, problem solving, decision-making, & a free exchange of ideas. It has the ability to transform education by development of higher cognitive thinking skills, which are essential to success in school now and in the workplace tomorrow. The skills that are developed are found in cognitive (knowledge), affective (attitude), and psychomotor (skills) domains of thinking:

• **Cognitive skills:** Cognitive scientific research has shown that the arts develop decision-making skills, conceptual ability, problem solving, and critical thinking skills. These skills can be best acquired through the opportunities offered in a comprehensive art education program. Current research also shows the arts cultivate creativity while developing the imagination.

• **Affective skills:** Art students learn to create meaning for themselves when they create art, which has also been found to contribute to cognitive abilities; art also cultivates a certain disposition and motivation for students to work harder in school.

• **Psychomotor skills:** Art students use sensory skills to guide motor activity.

*Since an arts education helps students to acquire a diverse range of cognitive abilities, lifelong learning skills develop, which will continue to help students succeed in higher learning and in their careers.*


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A Comprehensive Art Program Survey

What should your children know and be able to do in the Arts?

Eighth grade art students should be able to:

☑ relate various types of arts knowledge and skills within and across the arts discipline.

☑ communicate proficiently in at least one art form, including ability to define and solve artistic problems with insight, reason, and technical proficiency.

☑ communicate at a basic level in the four arts disciplines – dance, music, theatre, and visual arts; includes knowledge of tools, materials, techniques and intellectual methods.

☑ develop and present basic analyses of works of art from structural, historical, and cultural perspectives.

☑ have an informed acquaintance with exemplary works of art from a variety of cultures and historical periods.

Thank you for your participation in our survey!

References


