Five Ways to Integrate: Using Strategies from Contemporary Art

BY JULIA MARSHALL

This article is for art teachers of all levels who want to teach through art and about art. The purpose of this article is twofold. It provides evidence that integration is a significant, lively and authentic art practice today and, therefore, studying about art and integrating it are compatible. It also offers teachers and students in elementary, middle and high school some concrete and doable art-based ways to connect art with the academic curriculum.

Integration and Contemporary Art

Integration makes sense. Many educators agree that making connections across disciplines—the natural sciences, social sciences, language arts, mathematics and the humanities—enhances learning and understanding of significant ideas (Clark, 1997; Fogarty, 1991; Jacobs, 1989). Art educators have also embraced integration as a way to explore concepts from all areas of inquiry through art and to connect art to real life issues and ideas (Krug & Cohen-Evron, 2000; Parsons, 2004; Stokrocki, 2005). Furthermore, there are exemplary concept-based models of art integration espoused by Taylor, Carpenter, Wallenauer-Morris and Sessions (2006) and The Ohio State Transforming Education Through the Arts Challenge (TETAC) Mentors (2002) now available to art teachers. Common to all approaches to integration, in general education and in art education, is a focus on key ideas—ideas that transcend disciplinary boundaries (Parsons, 2004; Stokrocki, 2005; Taylor, et al., 2006; The Ohio State TETAC Mentors, 2002).

Although integration is an accepted practice by many in art education, some questions remain. Could a focus on key ideas and the content of academic disciplines eclipse the study of art as a discipline? How do we reconcile integration with our goal of teaching about art? First, we need to understand that art is inherently connected to all disciplines; it addresses content and

Figure 1. Cornelia Hesse-Honegger, Scorpion Fly (1988).
Courtesy of the artist.
ideas from outside of art, including the ideas and information associated with academic disciplines (Parsons, 2004). Also, art is a form of inquiry with some processes and goals that are similar to those of other areas of study (Sullivan, 2005). This commonality between content and methods in art and other disciplines has always been true, but it is particularly evident in integrative contemporary art. Current conceptually-based art blurs disciplinary boundaries with its methods and content while simultaneously emphasizing a research component and drawing attention to disciplinary practices outside of art. Contemporary integrative art is, therefore, key to reconciling curricular integration and the study of art. It not only supports the notion that an integrated study of big ideas and interdisciplinary content are intrinsic to art practice, but also offers models for practicing integrative art.

This article presents five current art models based on five conceptual strategies or approaches contemporary artists develop to manipulate ideas and imagery to make meaning. All these strategies involve interpretation, re-interpretation and/or re-contextualization; essentially, they are ways artists change perceptions of things by re-framing them. While the strategies discussed here are methods I have observed and identified in integrative art, Gude (2004) has also noted similar strategies in postmodern art practice. This discussion, therefore, draws upon Gude’s (2004) postmodern principles, and my previous examination of contemporary art strategies (Marshall, 2007) to focus on artists’ application of conceptual strategies to integration. This is art integration that explores art’s connections to the academic disciplines through artistic interpretation of their content, ideas, and practices.
ONE: Depiction

Perhaps the most common and easy way of integrating art with science or social studies is depicting the subjects of that discipline. Depiction is essentially rendering a subject from observation. It is appropriate and useful for all age groups, from preschool ateliers of Reggio Emilia (Edwards, Gandini & Forman, 1998) to advanced art classes in high school where skills in naturalistic drawing are often emphasized. Depiction can range from activities such as: (a) drawing plants while studying botany, to (b) sculpting planets while learning about the solar system, to (c) depicting costumes of different cultural groups, to (d) illustrating a myth or story from one of those cultural groups.

Scientific illustration provides an excellent introduction for students to the idea of depiction. This is because it is informational and its purpose is to record and convey information clearly and legibly in visual form. However, scientific illustration also can be aesthetic. Due to their conceptual and aesthetic qualities, scientific illustrations are inspiration for some integrative contemporary art (Kemp, 2000; Marshall, 2004).

Cornelia Hesse-Honegger is one artist whose work falls into the category of depiction. Indeed, Hesse-Honegger began her career as a scientific illustrator. However, Hesse-Honegger’s work is more than depiction; it is illustration layered with meaning and it is the implications or meaning that makes it art. In her austere watercolors, Hesse-Honegger depicts with great clarity and detail insects she collects at nuclear test areas and accident sites, and nuclear power plants. These paintings reveal physical malformations in these insects that were caused by exposure to low level man made radiation (Hesse-Honegger, 2001). Hesse-Honegger’s work, represented here by Scorpion Fly (1988) (Figure 1), is particularly powerful because it retains the clarity and crispness of a scientific illustration while conveying a powerful message about the hazards of nuclear power. Her work

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provides an opportunity for discussing the differences between illustration and art. An artist such as Hesse-Honegger can introduce students to the way some artists observe and record the visible world; in recording what they see, they can discover and reveal underlying concepts and patterns.

**TWO: Extension/Projection**

Extension/projection entails speculation about possible outcomes, taking into consideration the impact of a given idea. This strategy is appropriate for all grade levels because it is easy for students to grasp. In a classroom, projection could be the basis of activities such as: (a) exploring and illustrating how organisms might evolve to survive on a warmer planet, or (b) imagining and depicting how an historical figure might respond to the world today, or (c) envisioning new technologies that could solve critical social and environmental issues in the future.

Parker Jennings is one artist who uses imaginative projection in ways that would appeal to students. In a witty series of posters titled *Wish You Were Here! Postcards from Our Awesome Future* (2008) (Figure 2), Jennings collaborates with artist Steve Lambert to illustrate a new vision of urban living in San Francisco. The artists imagine the old baseball stadium as a community garden, the municipal railroad as a twirling roller coaster and the entire city as a wildlife refuge. With this childlike projection into a playful, perfect future, Jennings and Lambert comment on present circumstances in the city while providing imaginative ideas for a better way of life.

Another artist, Alexis Rockman, also "projects" but he provides a less cheerful vision in his futuroistic predictions. In his *Rat Evolution* (1999) (Figure 3), Rockman imagines rats of the future that are based on his research into evolution and today's environmental hazards. These are super rats with big kangaroo legs and gigantic fangs that have evolved to survive in a world devastated by human intervention and pollution. Rockman is a painter who has mined this theme in many of his artworks. His imagery provides a good example of how an artist uses scientific research and facts as a springboard for his vision and social commentary. These are fictions that are grounded in reality and it is the combination of reality and fantasy that gives them such power. Alexis Rockman also teaches us that facts may be remarkable but imaginative interpretation and vision makes them all the more meaningful and compelling. From Rockman's example, students come to understand the critical role that art and fiction play in deepening our thinking and moving us forward.

**THREE: Reformatting**

When we see things in new contexts we often understand them differently and find new meaning in them (Lakoff & Johnson, 1980). Reformatting re-contextualizes a topic by picturing it or mapping it in a new visual format. It is an exceptionally evocative way to re-contextualize a subject because visual formats are inherently meaningful in themselves; they are 'scopic regimes' that signify ways of knowing, organizing and interpreting reality (Elkins, 1999). The re-contextualizing effect of reformatting is amplified when the format imposed is quite foreign to the subject. This happens in integration when ideas, objects or images from one discipline are presented in the format of a different discipline. Re-contextualization through reformatting is a subtle and complex idea. It is, therefore, an appropriate strategy for upper middle school and high school.

In the classroom, reformatting could involve using formats from the sciences to describe subjects not usually associated with them such as: (a) charting one's emotional world as a geographical map, or (b) arranging characters from popular culture like specimens in a natural history exhibit, or (c) illustrating one's life through a geological cross-section of a landform with artifacts of personal memories buried at different levels. Going in the other direction, reformatting content from science in forms associated more with art or popular culture, students could: (a) make postcards from a trip around their brains or minds, or (b) portray cells or organs as characters in a photo album, comic book or formal portrait, or (c) use images of these forms from biology as decorative elements on ceramic bowls or plates. The possibilities are endless and the effects can be quite imaginative and revealing.

Antony Azie and Sammy Cucher give us a good model for reformatting. *Their Naturalia Series* (2000-2001) is an example of reformatting using schematic or scientific illustration. In one image from the series, *Naturalia Plate VII-a: described in Grets: Ononanometrics of the P-cycle* (2001) (Figure 4), a psychological state is presented in the format of a detailed set of biological illustrations, complete with magnified anatomical details of an amorphous living organism and maps and diagrams of chemical reactions and processes that take place in it. This illustration not
only employs scientific ways of imparting information but also brings non-art visual symbols and forms into art to shape the way we think about intangible psychological states.

Mark Dion gives us another idea. In his many installations, which address and blur the boundaries between art and anthropology, biology and archeology, Dion lays out the specimens and artifacts he collects in his research in a very direct, scientific way; the component pieces are categorized, lined up and labeled. Since these artworks are not composed according to the principles of design or to have pleasing or dynamic arrangements as we see in conventional art but are assembled according to the concepts, rules, functions or systems associated with science, they bring to art a fresh approach to composition, display, and aesthetics. As evident in Dion's *On Tropical Nature* (1991) (Figure 5), reformatting is a strategy for integration that not only sheds new light on the subject of the artwork but challenges traditional notions of how art should be made and how it must look.

FOUR: Mimicry

Perhaps the most radical strategy in contemporary integrative art is mimicking the methods and using the tools associated with other disciplines. Mimicry is essentially a form of play-acting and can be done at different levels of sophistication in upper elementary, middle and high school. It can take many forms, such as doing experiments or using research methods borrowed from the social and natural sciences. For example, students could: (a) mimic botanists by collecting and studying plants from the local market and, using tools from their biology lab, dissect and study these plants for a drawing or sculpture, or (b) practice the methods of archeologists by digging up and analyzing artifacts made by another class, or (c) mimic anthropologists in studying notions of "cool" in their school by interviewing and photographing their peers and, using the data collected, create new ideal "cool" clothes and accessories.

Mimicking as an art strategy stretches conventional notions of art. To fully grasp mimicry we need to look at examples. Once again, Mark Dion supplies them. Dion often mimics the methods of scientists in his artwork. In doing so, he calls attention to the research protocols and practices of science while highlighting the artist’s role of observer and commentator. For example, in 1999 Dion and a team of volunteers combed the shores of the Thames River and recovered artifacts as part of an artwork called the *Tate Thames Dig* (1999) (Figure 6). The process of cleaning, cataloguing and arranging artifacts carried out by Dion’s crew of “archeologists” in lab coats took place in a tent outside the gallery and was a significant part of the exhibit. Dion’s research is, of course, not real scientific research but a form of performance art. It is mimicry that casts light on the ways science constructs knowledge and how art can reveal the ways it does (Coles, 1999; Renfrew, 1999).

FIVE: Metaphor

The concept of metaphor crosses disciplinary boundaries; we usually place it in language arts but metaphors are also conveyed visually. Metaphor is essentially the description of one thing in terms of another. It is, however, not a simple comparison in which two linked entities are essentially the same; in a metaphor entities have similarities and differences and there is a remote connection. It is the differences between the two that make a metaphor revealing and generative (Black, 1981; Lakoff & Johnson, 1980). Integration presents a rich source of subjects, ideas and images for metaphor making. Indeed, taking an image or idea from one discipline to describe concepts in another can create very generative metaphors. This is true not only because the connections in integration may be remote but also because each discipline provides a framework for understanding the world. Therefore, a metaphor that arises from integration brings with it many associations and implications.

Whether it is conveyed visually or verbally, metaphor is a complex concept that is most appropriate for high school. Explaining metaphor calls for prototypes such as David Wojnarowicz’s *Something From Sleep III* (1988) (Figure 7), which draws its imagery from astronomy. In it, we see the silhouette of a man peering into a microscope, the form of his body filled with planets and galaxies.
floating in deep black space. Here, human consciousness and the universe converge; the cosmos becomes a metaphor for our inner lives. With the inclusion of a microscope, Wojnarowicz adds another insight. He brings to mind how scientific tools shape and expand our perceptions, and how they introduce us to things that inspire our metaphors and shape our consciousness. The simple superimposition of imagery in this work generates deep insights and meanings. This is the power of metaphor.

Francis Baker’s *Everyday Garden: Intermemt 3* (2005) (Figure 8) is another example of an artwork that is based on an integrated visual metaphor; it takes its concepts and form from nature and gardening to construct a powerful metaphor for culture. The artwork is an upside-down tree with a root ball in the shape of a fist. It is evident that the roots are not in their natural state; they are not free to grow normally. While the fist form may allude to defiance, the roots are coerced. In fact, Baker grew the roots in a plaster mold. To Baker, this tortured tree is a metaphor for the way human beings are oppressed and molded by societal structures and values (Jones, 2007).

To generate integrative metaphors of their own, students begin with familiar subjects, such as their families, school or community. Then they brainstorm and list characteristics of their chosen subjects. In addressing family and community, students are describing social organizations. Therefore, to find associations that bridge disciplinary boundaries, they can search for imagery in their science textbooks or Google images from the natural sciences that they think could describe their subject. They then depict their topics using the imagery they have chosen from their research. For example, they could: (a) depict their community as a living cell, or (b) describe their school as a complex molecule, or (c) picture their family as a solar system. In constructing these metaphors, students can come to understand social organizations through the lens of an image of natural science. This pairing could generate fresh perspectives not only on the subject portrayed but also on the image used to describe it.

**Art Strategies and Learning**

According to John Dewey (1991), real learning requires the application of the skill or information to be learned. Artmaking adds an extra punch to Dewey’s notion of learning as an active process of application. In art making, learners not only apply information, they apply it imaginatively. They make it visual and they connect it with their own ideas and experience (Efland, 2002).

How do the five conceptual strategies discussed here foster learning through the application of knowledge?

The first art strategy, *depiction*, requires a learner to observe something closely and then reproduce the object. This builds skills in observation, analysis and applying what one sees. Also, reflection on the rendering process can help learners to see how knowledge of a subject is heightened through drawing or sculpting; it can come to understand how making visual imagery is a way of learning. In *projection*, strategy two, learners must analyze an idea in order to take it from what it is now to what it might be. This is an application that requires understanding of the idea and its implications. In strategy three, *reformatting*, learners see subjects differently in new contexts, thus acquiring new understandings of those subjects. Learners also come to understand how visual imagery and formats convey information differently. Strategy four, *mimicking* the methods of practitioners, allows learners to learn through experience.

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Table 1. Creative Strategies and Learning

![Figure 8. Francis Baker. *Everyday Garden: Intermemt 3* (2005). Courtesy of the artist.](image-url)
placing them in other people’s shoes. This gives learners a sense of the different ways knowledge is constructed. Strategy five, making visual metaphors, helps learners to hone their perceptual and analytical skills, and fosters symbolic thinking. Practicing these skills can start early in the elementary years with analogy making. This paves the way for the more remote and complex connection making necessary for constructing metaphors later in middle and high school.

The five integrative art strategies presented here also make for good curricula. It is remarkable how similar these strategies are to teaching and learning methods teachers already employ. They, therefore, reinforce the connection between the processes of artmaking and the ways we learn.

Conclusion

The five strategies presented here offer significant contributions to contemporary art education. First, they exemplify artmaking methods for an art curriculum that emphasizes the concepts and conceptual processes of art before the formal and technical “basics” of art. The focus is first on the conceptual strategies artists use to make meaning, not on their style, materials or technique. This aligns with Gudé’s (2004, 2007) principles for a postmodern 21st century art education. Second, students can use these five strategies within current concept-based models of art integration to explore key trans-disciplinary ideas. Third, using these strategies fosters an understanding of art in the context of the academic disciplines; art as a form of inquiry is emphasized and linked with specific techniques for investigation and interpretation. Above all, the strategies reconcile integration with the study of art. Providing ways to integrate art that are based on contemporary art practices and showing that art and integration go hand in hand, these strategies testify that learning through the arts is compatible with learning in the arts.

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ENDNOTE

1 Mimicry bears some resemblance to reformatting, strategy four. It is also an exercise in re-contextualization and the artworks often are in the formats of non-art disciplines. Mimicry is differentiated from reformatting because it focuses on the methods used by practitioners to create the artworks not on the forms those artworks take. Although reformatting could be the result of mimicry, they do not necessarily go together; a "reformat" can be realized through traditional art methods and mimicry can result in conventional looking artworks.

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