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Department of Teaching, Learning, and Teacher Education

Art Practice as Research in the Classroom: A New Paradigm in Art Education

Julia Marshall
San Francisco State University

Kimberley D'Adamo
University of Nebraska-Lincoln, kdadamo2@unl.edu

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Julia Marshall, Professor, Department of Art, College of Creative Arts, San Francisco State University

Kimberley D'Adamo, Teaching Artist, Berkeley High School, Berkeley, California, kimberleydadamo@gmail.com

The notion that artmaking is a way to come to know about ourselves and the world has caught the imagination of professional researchers. Indeed, the artmaking process is increasingly accepted in experimental forms of qualitative ethnographic, narrative, and phenomenological research in the social sciences, psychology, and education (Cahnmann-Taylor, 2008; Leavy, 2009; McNiff, 2008).

Some artists and art educators are taking idea of using art practice in research a step further and claiming that art practice is research. That is to say, while art production can play a role in research studies, it also stands on its own as research (Smith and Dean, 2009; Sullivan, 2010). Both concepts, art in research and art as research, are grounded in the notion that artmaking is a form of inquiry, a kind of open-ended, artist/researcher-driven learning process in which new knowledge is discovered or constructed. This re-framing of art practice as research represents a paradigmatic shift in the way we understand research, art, and artists.

Rollings (2010) argues that the concept of art practice-as-research should be the foundation of a new paradigm in K–12 art education. What does this look like in practice? In research, it takes the form of art-based research. Art-based research, we believe, provides models for art practice-as-research in art education. This article examines one way art-based research could look in the art classroom: an art class at Berkeley High School in Berkeley, California. This article explains the tenets and pedagogy of this approach and follows the art-based research of one student in the class.

This art-based research model stands in marked contrast to conventional ways of teaching art. First, it stresses artistic thinking, creative process, conceptual skills, and research over technical artmaking skills. Second, student artwork is seen differently; it is considered a springboard for learning and evidence of learning, not aesthetic objects or images separate from research. Third, art practice is self-guided and motivated by student interest; the teacher sets the stage and acts as a guide and provocateur. Fourth, art practice-as-research stresses art as a means of exploring a wide range of concepts, from art and art processes to content and methods in other fields. The art-based model, therefore, promotes a natural and substantive integration with the academic curriculum. Finally, the model promotes metacognition; it incorporates "investigations" or activities that call attention to the kinds of thinking and learning that emerge through making art.

The study presented here stems from the Master's thesis of Kimberley D'Adamo, an art teacher at Berkeley High School, and from the authors' work together as designers of this art-based research model.

Art Practice In and As Research

The notion that art practice can generate significant new knowledge (and therefore qualifies as a research method) has influenced research in art education since Elliot Eisner first suggested it in 1970s (Barone, 2006; Cahnmann-Taylor, 2008; Sullivan, 2006). Since then, theorists and researchers have generated a substantial body of theory and experience that supports and expands on Eisner's claims. That subsequent work forms the basis for models of art-based research in the social sciences, healthcare, and education. This combination of theory and practice also provides a foundation for art practice as research in art education, and a strong case for the legitimacy of the knowledge generated through artistic means.

New Approach in Qualitative Research

Many theorists of art-based research (Cahnmann-Taylor, 2008; Cole and Knowles, 2008; Gray and Malins, 2004; Leavy, 2009; McNiff, 2008; Smith and Dean, 2009) agree that art practice transforms research in profound ways. Notably, it highlights and extends the research process, and opens up these processes to include creative, non-verbal ways of understanding a subject. Moreover, art practice introduces ambiguity, complexity, emotion, intuition, lived experience, and the celebration of personal interpretation or subjectivity into a realm that often strives for clarity and objectivity.

Art practice in research also illuminates the unique contributions that visual imagery and other nonverbal forms bring to inquiry in qualitative research (Smith and Dean, 2008). These contributions include capturing the ineffable, making meaning through metaphor and symbol, and communicating multiple meanings holistically to generate questions and stories (Weber, 2008).
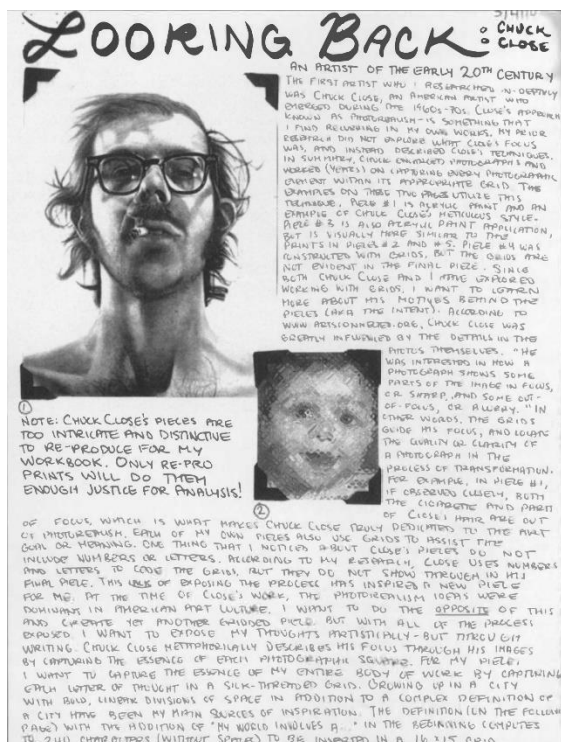
Figure 1: **Looking Back**. Page on Chuck Close from Research Workbook by Claire Hartinger.

These meanings are determined not only by the artist, but also by the viewer (Leavy, 2009; Sullivan, 2010; Weber, 2008). Furthermore, visual imagery sets the stage for vicarious, empathetic experiences that generate deep empathetic understandings (Eisner, 2008; Leavy, 2009) and raise consciousness (Leavy, 2009; Weber, 2008). Visual imagery is particularly suited for this because it is captivating and evocative; it grabs attention in powerful aesthetic ways (Leavy, 2009; Weber, 2008).

If considering art practice as research can so dramatically change methods and dispositions in professional research, just think of what it could do to transform attitudes toward knowledge and learning in general education.

A New Approach to Art

Framing art as research presents a new vision of art practice; making art is understood to be less about producing aesthetic objects and images, and more about exploring a topic or idea, responding intellectually and emotionally to it, and interpreting one's impressions artistically. Moreover, in art practice-as-research, an artwork is part of the process; it is not a stand-alone artistic expression, but instead a research text, a visual image with pedagogical or research functions (Leavy, 2009).

Furthermore, art practice is likened to research in other disciplines; it is seen to employ processes that are similar to research practices in other fields (Leavy, 2009; McNiff, 2008; Smith and Dean, 2009; Sullivan, 2010). This implies that inquiry through artmaking is rigorous and systematic in ways that are reminiscent of research in other disciplines, and that art practice can involve methods that are similar to those of conventional qualitative research (McNiff, 2008; Sullivan, 2008, 2010). These methods include conceptual procedures of research such as identifying and classifying emerging concepts, connecting these concepts, testing hypotheses, finding patterns, and generating theory (Leavy, 2009).

Nevertheless, art practice is different from other forms of research, and seeing these differences helps clarify what art practice-as-research is. For example, although art practice can include basic research strategies such as observing, collecting, analyzing, and interpreting information, these are not compulsory. Also, art-based research is less linear, rule-bound, and ordered; it is more iterative and improvisational, and open to serendipity to a greater degree than its more scientific counterparts (Leavy, 2009; Smith and Dean, 2009). Its malleable structure is seen as an iterative, cyclical web (Smith and Dean, 2009) or a path which often begins with curiosity, an aesthetic predilection, or a desire to explore or make something. That process continues with gathering ideas and information, leads to an idea or hunch, wends through creative processing, and culminates with products and insights that catalyze another venture down a new trail of learning and artmaking (Marshall, 2010).

Considering art as research also highlights art's grounding in reality and its core task of constructing knowledge through creative exploration and interpretation. It implies that art practice is purposeful. This does not mean that playful, less goal-oriented exploration with ideas and materials is excluded; it can be part of a research process or considered a form of research in itself. This studio "play" represents a different entry point into research. Smith and Dean (2009) call this **practice-based research**, and contrast it with **research-based practice**, conceptualized as the more goal-oriented, intellectual form that uses art practice to explore a subject. These modes of research are complementary and they have a similar purpose, which is not solely to make art but also to further knowledge by generating new insights, fresh perspectives, and understandings (Cole and Knowles, 2008; Eisner, 2008: McNiff, 2008; Smith and Dean, 2009; Sullivan, 2008, 2010). These insights emerge in both modes through the reflective processes of critique (Smith and Dean, 2009; Sullivan, 2010).

This brings us to the question: Is all artmaking research? Not exactly. For art practice to be research, it must engage the imagination and the intellect (Sullivan, 2008). To do so, imaginative creation must be framed and expanded through critique—a mix of documentation, analysis, conceptualization, and theorization—that entails mining, extracting, and connecting ideas from artworks to generate coherence and meaning (Smith and Dean, 2009; Sullivan, 2008). Creation in visual art research is manifested in visual imagery; critique entails words. Art practice-as-research then incorporates two modalities, visual and verbal, and these two modes weave together in an iterative process, each propelling and building upon the other. Equally important, for art practice to be research, the knowledge generated by it must be new (that is, it adds to our understandings or alters them) and meaningful to others (Smith and Dean, 2009; Sullivan, 2010). Reflection through verbal critique, whether orally or in writing, allows this to happen (Smith and Dean, 2009; Sullivan, 2010).

Art Practice-as-Research in the Classroom

The art-based research model borrows from three approaches to learning and pedagogy that are already familiar to educators: experiential learning, inquiry-based learning, and project-based learning. Experiential learning, as described by Kolb (1984), is learning through concrete experience followed by reflection on that experience, conceptualization of ideas evoked in the process, and experimentation with those ideas to take them further or test their validity. Inquiry-based learning is an active process of exploration and experimentation in which the end result is not fixed or fully known. In inquiry-based learning, success is assessed by how well learners develop experimental and analytical skills, rather than how much knowledge they acquire (Bruner, 1961). Project-based learning is a pedagogical approach that engages learners in focused inquiry-based learning projects, which require problem solving, decision-making, investigation, and reflection. These projects often begin with challenging questions or problems (Katz and Chard, 2010).

All three of these approaches to learning echo the thinking and actions inherent in artmaking; they therefore provide models of art-based research in the classroom. Art research is distinctive in its lacing together of creation and critique, and in its explicit correlation of art practice with research structures and methods. It is also new, in that it changes how students see themselves as researchers who consciously follow a research path of their own making to construct new meanings, new insights, and new knowledge.

The art-based research model described here stipulates the use of an essential tool: the **research workbook**. The inspiration for this "backbone" of art practice-as-research comes from the research workbooks used in the International Baccalaureate Program (IB) (International Baccalaureate Organization [IBO], 2007). For IB, the research workbook is a combination of notebook, sketchbook, laboratory, and repository of research findings that functions as a working document for personal investigation. In the visual arts, the use of a research workbook is intertwined with studio work. Student artists/researchers use their research workbooks to explore, experiment, and play with ideas; look for themes that connect these ideas; and record and examine historical/cultural influences that inform their artwork. The research workbook often also functions as a planning tool that allows ideas to take shape and grow.

Art-Based Research at Berkeley High School

Art-based research at Berkeley High School takes place in the school's IB art program. Kimberley D'Adamo, the teacher in the IB art program, found the IB model to be an excellent foundation for an art-based research approach because of IB's focus on independent, thematic art-based inquiry (IBO, 2007). Building on the IB approach, D'Adamo was able to develop a full art-based research model complete with teaching strategies and models of inquiry in which student artist/researchers learn about and practice art-based research. Although it takes place in the IB environment and is built on IB's approach, this model can be applied independent of IB, and is valuable and applicable in any art classroom.

As mentioned, art practice-as-research implies structure and systems in inquiry and reflection. This structure takes many forms in D'Adamo's art classes. For instance, the year begins with a series of investigative exercises in which students learn about and apply research methods employed in the sciences and social sciences. These investigations can involve an "anthropological" study of a chosen site, an "historical" study of a common object, or a "naturalist" observation of a natural form or phenomenon such a weather pattern or the growth of a seed. Students then interpret their "findings" artistically. During these activities, students record and map their creative research processes. With the investigative, analytical, and creative skills students acquire through these activities, they are prepared to choose themes and explore them on their own in their research workbooks.

Figure 2: *Geoffrey*. Painting by Claire Hartinger. Acrylic on canvas.

The research workbooks also have an explicit structure devised by D'Adamo for examining artworks. This format can also be modified for exploring related research and an artist/researcher's own ideas. There are four parts to the system: **describe**, **analyze**, **reflect**, and **connect** (DARC). **Description** calls for keen observation and vivid, detailed recounting of the visual characteristics of artworks. **Analysis** is of the facts gathered through research-significant aspects of an artwork, such as the intentions of the artist, the meanings behind the works, the cultural contexts in which the artworks were made, and the ways meanings are expressed visually. **Reflect** entails deeper thinking about the meaning of the work and personal interpretation of it. **Connection** has two basic applications: linking artworks and cultures to reveal an underlying theme; and connecting researched artworks and themes to a student's past and future artworks. The connection step frequently is a phase in which students come to see their work as a body of connected and developing ideas, and to plan ahead to new artworks.

The structured nature of this model also promotes **metacognition**, the understanding of one's thinking processes (Cropley, 1998). Metacognition fosters self-monitoring, self-evaluation, and self-reinforcement, which are inherent in creative process (Pesut, 1990} and at the core of the art-based research model. To promote metacognition, D'Adamo guides students in making lists of words to describe their thinking and learning and shows them how to map out their thinking processes visually. This dynamic combination of verbal and graphic representation makes conceptual processes accessible and, therefore, repeatable. Furthermore, D'Adamo continually asks questions throughout the semester that focus attention on learning, thinking, and creative processes.
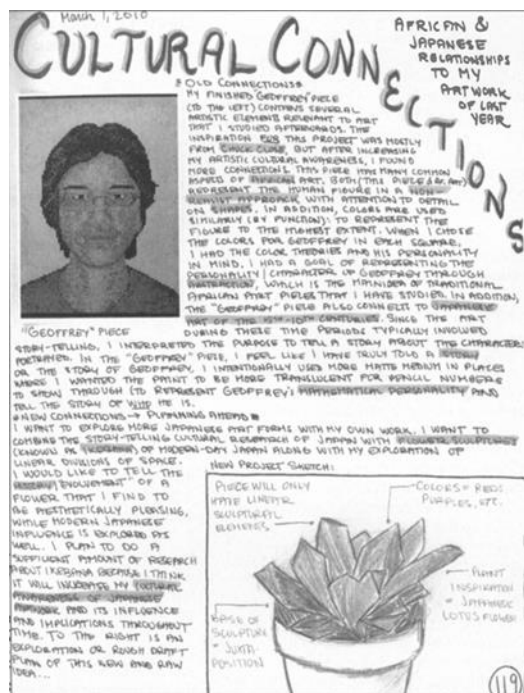

Figure 3: **Cultural Connections**. Page from Research Workbook by Claire Hartinger.

Claire Hartinger's Research

To illustrate how the art practice-as-research approach works at Berkeley High School and how art-based research functions in general, we examine the artwork, research, and statements of Claire Hartinger, who participated in the Berkeley 1B art program for two years was and a senior in 2009/2010. Like all art students in an 1B art class, Claire created a research workbook and a body of art pieces simultaneously.

Claire began her research with an interest in two-dimensional linear divisions of space. In her final artist statement, she attributed her interest in geometry, especially grids, to being surrounded all her life by a city, which she described as "aesthetically, architecturally linear" (D'Adamo, 2010}. This fascination with grids led Claire to explore artworks that were constructed on grids or clearly show grids in the final composition. In the first category are the works of Chuck Close, photorealistic portraits in which verisimilitude is accomplished through mapping an image on a grid. Claire researched Close and dedicated multiple pages of her workbook to his work (Figure 1). We see evidence of Close' influence on Claire's work in her portrait of *Geoffrey* (Figure 2). Beyond revealing her affinity to Close, this artwork led Claire to see how her taste aligns with other artworks and aesthetic systems. On page 119 of her workbook (Figure 3), Claire describes how *Geoffrey* relates to African art (which she explored on other pages in her workbook) in its bright colors, geometry, and abstraction. She also describes how *Geoffrey* has storytelling

Figure 4: **Untitled/Quilt by Claire Hartinger**. **Japanese Fabrics**.

qualities that she found to be similar to those in 10th century Japanese art, another topic she probed in her research. For Claire, storytelling in *Geoffrey* lies in the way her portrait tells the viewer about Geoffrey's mathematical interests and personality. This narrative is realized through formal means the strategic use of translucent paint to reveal the grid numbers underneath the surface.

In the same way she was fascinated with grids, Claire was also attracted to textiles. This interest led to her work with Japanese fabrics (Figure 4). From there, Claire segued into a study of quilts and Japanese patterns (Figure 5). As her reflection on fabrics and quilts progressed, Claire realized that textiles are woven grids, and quilts are composed of larger grids. As the theme of grids expanded and deepened, Claire came to an astoundingly perceptive insight: there is similarity between a **grid** (a compositional structure that juxtaposes elements in a visual image), a **net** (the underlying structure of textiles), and a **theme** (a conceptual network that links entities, ideas, and concepts).

Claire's research and artmaking remind us that artistic research is a path—a trail that starts with an interest or an aesthetic proclivity and branches out from there.
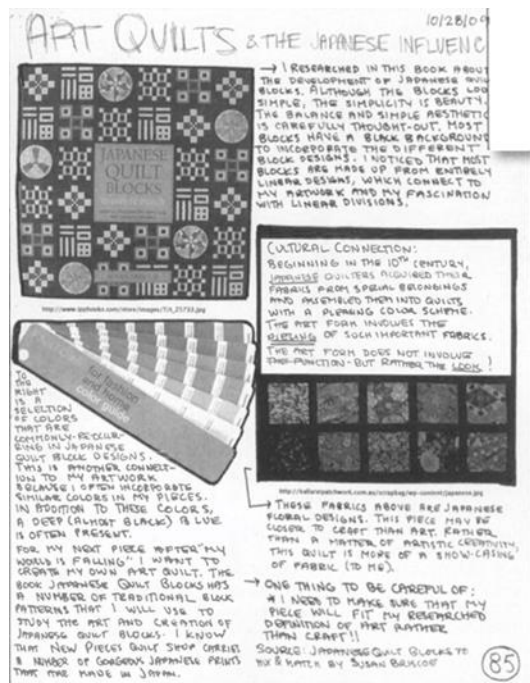

Figure 5: **Art Quilts and the Japanese Influence**. Page from Research Workbook by Claire Hartinger.

Often these branches weave together under a unifying theme that is revealed in the process of branching and weaving. Indeed, locating a connective theme is essential to art-based research; it generates meaning from the ideas found along the trail. Claire discovered these things during the research process. In particular, she came to see how making connections in research could be described as a grid. While equating research to following trails and constructing grids are profound insights into research, it also demonstrates another significant understanding: A visual form can embody and represent a complex concept. Perceiving these connections is a core conceptual art skill.

Furthermore, Claire's work suggests that the artistic research trail will often take an artist down tributaries that may not initially seem related to a theme. For instance, Claire examined the photography of Cartier-Bresson and Dorthea Lang, the works of Chinese artist Liu Wei, and the paintings of Balinese folk artists. In keeping with the principles of art-based research and the insights she had gathered from her reflection on grids, Claire looked deeply into these artworks and found the connective tissue: They all deal with illusion.

Claire seemed to veer away from her theme of grids when she researched Rene Magritte (Figure 6). She found herself entranced by Magritte and interested in the way he juxtaposes imagery to generate mystery and prompt the viewer to think. After stopping by Magritte on her research trail, Claire went into a new connection-making phase and constructed a network between Magritte and the illusionist works she had explored. She went back to her initial theme of grids and observed how the grid in her work and the work of Chuck Close generates illusions (as in the photography and paintings she studied) and catalyzes thought (like Magritte).

In her grid explorations (Figure 7), Claire shows how different grid configurations divide space and have different aesthetic and conceptual effects. In her statement at the bottom of the page, she wrote how she wanted to base her next artwork on a grid that provokes thought as Rene Magritte had done. Claire's artwork that most exemplifies her intent to create illusion and provoke thought is *Snowball Flowers* (Figure 8), a thin rectangular painting of a mysterious plant with circular bush-like forms on spindly branches, overlaid with horizontal lines that suggest a grid and create a thought-provoking tension between organic and geometric form.
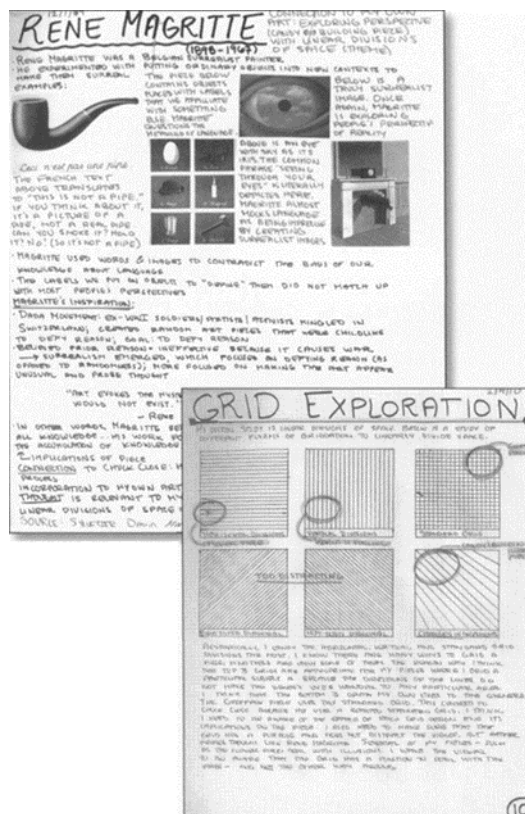
Figure 6. **Rene Magritte**. Page from Research Workbook by Claire Hartinger.

Figure 7: **Grid Exploration**. Page from Research Workbook by Claire Hartinger.

The painting and planning sketches in Claire's workbook (Figure 3) also reveal another core principle of art practice-as-research: Inquiry, gathering source material and weaving connections all generate creative leaps as well as new ideas and forms. These leaps, ideas, and forms are part of the inquiry trail; they take the learning further to generate meaning and deeper understandings through personal interpretation.

General Thoughts about Art-Based Research in the Art Classroom

Claire's work gives us a glimpse into the richness and depth of learning, as well as the joy and thrill of discovery that art-based research can engender. We turn now to a general overview of this learning and how it occurs in the classroom at Berkeley High School.

What do Claire and her peers say they learn from the art-based research process? Students report that they learn about the themes they have chosen to explore, the artists who have worked with these themes, artworks from various cultures that embody those themes, and how those themes play out in other disciplines. Most students claim that they acquire a new understanding of art, its purpose, and its processes. They see how an art-based research approach enhances art making; they grasp how observation, analysis, reflective thinking, and looking outside for inspiration prepare the way for creativity and artistic expression.
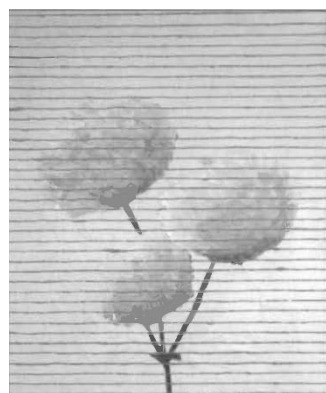

Figure 8: **Snowball Flowers**. Painting by Claire Hartinger. Acrylic on canvas.

Remarkably, students come to understand that the research and thinking skills they acquire in the art-based research classroom often have applications in other disciplines and, therefore, are transferable to a wide variety of academic studies. Many students observe that they already use their new research skills, such as trolling the Internet for information or mapping out ideas and information visually, in their other classes. In particular, a number of students remark how their newfound awareness of research has colored their readings of history; they now understand how historians bring their personal interpretations to their analysis of historical people and events. It is especially gratifying that these students believe that practicing art-based research has helped them to develop the motivation and skills to perform research in subjects that are less compelling to them than art.

Ultimately, students come to understand researchers themselves as artists with their own interests and ways of thinking. This perception gives them the motivation and license to work autonomously and governs their own learning and growth. This perception gives them the motivation and license to work autonomously, and governs their own learning and growth (D, Adamo, 2010).

Conclusion

Student experiences at Berkeley High School reveal the generative potential of the art practice-as-research approach—how deep, broad, and creative the learning can be, and how powerful this model is in changing student attitudes toward art and themselves as artists and learners. This model of self-directed, inquiry-based learning works well because student art practice is cast as research and is structured as research. As a result, students make discoveries and connections that go beyond their expectations. They also acquire skills and understandings that transfer into their academic studies. In particular, they find that learning can be engaging and that a trail of inquiry can lead them to new and fascinating places. In this

realization, they are transformed from students to learners and then to **researchers**—from receivers of knowledge to constructors of knowledge to individuals who discover and generate new knowledge.

This disposition toward learning can permeate all aspects of a young person's life at school, and in his or her life beyond school as well. It allows young people to see knowledge not as something previously or fully established, but instead as something incomplete on which to create something new, something of their own. In generating all of this—the deep learning and understanding; the transferable thinking and research skills; and the dispositions toward research, learning, and autonomy—we believe art practice-as-research has great potential for transforming the way we conceptualize, construct, and practice art education. This is a paradigm with power.

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