

# Learning through the Arts:

## From Theory to Practice in California

Liane Brouillette, UC Irvine

In his invited address at the American Educational Research Association in April, 2003, Philip Jackson spoke of the “tight resemblance” between teaching and art (2004). Drawing on John Dewey’s conception of the power of art to transform those who experience it, he quoted the paragraph from *Art as Experience* (1934) that is briefly excerpted below:

A work of art elicits and accentuates this quality of being a whole and of belonging to the larger, all-inclusive, whole which is the universe in which we live... somehow, the work of art operates to deepen and to raise to great clarity that sense of an enveloping unidentified whole that accompanies every normal experience (pp. 195).

Tying these insights to Dewey’s conception of moral faith, as expressed in the book *A Common Faith* (1934), Jackson explained that, for Dewey, faith was not bound to the creedal doctrines of any religion. Instead, it denoted a comprehensive attitude toward “ends so inclusive that they unify the self” (p. 22). In Dewey’s view, all ideals referred to possibilities yet to be accomplished. Thus, “all endeavor for the better is moved by faith in what is possible, not by adherence to the actual” (p. 23). Such faith required an ability to envision the promise inherent in relatively embryonic goods.

Since it focuses on that which is in the process of becoming, this power to envision produces no easily identifiable product that can be experimentally tested. Even so, the ability to recognize unrealized possibilities can exert a powerful effect upon a larger social group; it means that each person need not start from scratch. “What one person and one group accomplish becomes the standing ground and the starting place of those who succeed them” (Dewey, 1934,

p. 50). To those accustomed to thinking along such lines, the import for teachers and teaching is clear. However, in the present accountability-oriented educational environment, to focus on such larger purposes often leads only to the challenging question: How can one *prove* that this is so?

Philip Jackson wisely side-steps such controversy with the assertion that what unites teaching and art is that both constitute fields of social endeavor whose perceived goodness lies beyond question; they are treasured as ends sought by the culture at large. Moreover, the challenge presented to individual practitioners is capable of engendering a degree of sustained commitment and devotion worthy of becoming a chosen way of life. As John Dewey observed, speaking to an audience of teachers in 1906,

To feel the meaning of what one is doing and to rejoice in that meaning; to unite in one concurrent fact the unfolding of the inner life and the ordered development of material conditions—that is art. (Dewey, 1977, p. 292)

Yet, convincing as such arguments are to those whose own experience has demonstrated validity, persons whose experience has been in other areas may ask for additional evidence, drawn from fields outside the arts or education. In the battle for public resources, such demands create a dilemma for arts educators. Not wishing to treat aesthetic experience in a purely instrumental manner, merely as a means for teaching other academic subject matter, they still intuitively know that to deprive children of arts instruction is to handicap them in the development of powerful cognitive tools.

Searching out what other disciplines can tell us about the nature of these cognitive tools was the purpose of the Sciences for the Arts conference held on the Irvine campus of the University of California in April, 2000. By bringing together outstanding scholars in education and the arts, scientists from the UCI Center for the Neurobiology of Learning and Memory and the College of Medicine, the conference organizers encouraged members of the scientific,

artistic, and educational communities to share insights and explore possibilities for further research.

### **From Theory into Practice in California**

To establish an approach for understanding the relationships between cognition, culture, and education, I begin with the premise that mind is not a noun, something complete at its conception or its birth. It is, rather, a process whose growth is influenced by the ways in which the mind is used. The ways in which it is used are influenced by the culture in which an individual lives (Eisner, 2000, p. 3).

In his keynote address at the Sciences for the Arts conference, Elliot Eisner pointed out that the term “culture” has two meanings. In the anthropological sense, a culture is a shared way of life. In the biological sense, a culture is a medium for growing things. Both definitions are of importance for educators, for schools both provide the conditions for a shared way of life and serve as cultures for growing things. What schools grow (or at least aspire to grow) are minds. They do so through a designed environment that includes, but is not exhausted by, the curriculum. That environment is mediated by the process of teaching.

Making a point akin to that made by Philip Jackson, Eisner noted that the aim of the designed environment of a school is to help children learn how to invent themselves: “The curriculum defines the content—ideas, values, and skills—that becomes a significant part of the child’s cognitive repertoire. Teaching promotes the dispositions to use that repertoire when a child chooses to do so” (p. 4). Two of the most critical features of educational programs are what they enable students to learn and the dispositions they cultivate. Historically, however, the tension between teaching academic content and serving children’s developmental needs has been contentious, especially in the arts.

## **Finding a Balance between Disparate Views**

In the field of arts education, the years since World War II have been a period of intense dialogue and debate. As Judith Burton reminds us:

We sometimes forget that specialist art teachers are first trained as artists; thus, from the postwar generation of teachers trained to believe that expressionism offered direct access to the human psyche, we have witnessed the advance of modernism as a self-appointed pathway to the good, the true, the artistically significant in the culture (1994, p. 478).

During the immediate postwar years, artistic expression offered itself as a safe haven and creative outlet for the feeling system and claimed the natural artistry of the young child for its own. Then modernism advanced the value of “art for art’s sake,” claiming that the content of children’s feeling lives was not the domain of art, but of psychology.

The discipline-oriented movement in the 1960s arose at a time when arts educators had been forced to defend themselves against criticisms that they had failed the educative process by focusing unduly on expression of feelings, experimentation, and personal interpretation. Art educators began to advance the idea that art education had something to teach that was indigenous to art itself, drawing on mature professional insight and practice as a model.

If we look back over time we see that the discipline-oriented movement of the 1960s was based in the deeply held belief that artistic inquiry, whether located in practice, criticism, history, or aesthetic responsiveness, was at its heart a humanistic act of making meaning and fashioning understanding.... (Burton, 1994, p. 479)

This emphasis on mature professional insight and practice has, in many ways, affirmed the claim of the arts to a bona-fide place in the academic curriculum. The challenge has been to balance this study of established artistic conventions with a due respect for the fact that some very fundamental learning takes place through acts of artistry. To be emotionally meaningful to students, an arts curriculum must make room for genuine acts of inquiry, imaginative exploration, and development of expertise. As Maxine Greene eloquently observed:

Our core concern, of course, is with aesthetic education; but we do not regard aesthetic education as in any sense a fringe undertaking, a species of “frill.” We see it as integral to the development of persons—to their cognitive, perceptual, emotional, and imaginative development. We see it as part of the human effort (so often forgotten today) to seek a greater coherence in the world. (2001, p. 7)

The challenge for arts educators is to explain clearly, in terms that are convincing to policymakers, the contribution that the arts make to cognitive, perceptual, emotional and imaginative development. The impulse to better understand the role of the arts in the development of persons was the motivating force behind the Sciences for the Arts conference mentioned earlier in this article. Sponsored by University of California ArtsBridge, an outreach project that sends advanced UC arts students to work in K-12 schools across the state (<http://www.arts.uci.edu/artsbridgeamerica/>), the conference brought together scientists, artists, and educators to review recent research results applicable to arts education and assessment. Important areas of agreement and common interest were discovered.

In explaining how music is learned, neurobiologist Norman Weinberger noted that no single cell in the auditory cortex listens to everything. Different cells are tuned to one or another frequency. The more a cell discharges to a sound, the more tuned it is to the eliciting frequency. “In the laboratory, we give a tone that we can follow by food ... Since the brain is a curiosity machine and tries to make sense out of the causal fabric of the external world, the animal quickly learns that the tone has importance ... The result is that the cell actually changes its tuning—it becomes tuned to the frequency of the signal tone” (Weinberger, p. 48-49). The metaphor used to demonstrate this brain mechanism also had a direct bearing on Elliot Eisner’s observation concerning the role of the school curriculum in shaping a child’s cognitive repertoire:

Suppose we use the metaphor of the brain as a keyboard. And let us suppose that we learned that C was very important. One could expect that the brain would change so that more cells would be tuned to C. C gets an increased representation,

or it gathers more neurons to it as a magnet attracts iron particles. (Weinberger, p. 49)

Sally Ann Davis of the California Arts Council provided a view of how public policy regarding the arts was shaped. She drew applause with her description of two recent developments aimed at making the arts part of the core curriculum in public schools: adoption by the State Board of Education of academic content standards in the visual and performing arts and adoption by the University of California and California State University of a new admissions requirement in the visual and performing arts. Beginning in the year 2003, students applying for admission as freshmen either to the University of California or to the California State University system would be required to take a year of standards-based arts instruction.

The impending implementation of the California High School Exit Exam, which focused exclusively on math and language arts skills, created anxiety that in order to boost achievement in these fields high schools might cut back on elective classes such as the visual and performing arts. Making a year of high quality arts instruction a requirement for entrance into California's four-year public universities ensured that instruction in the arts would continue to be offered at high schools throughout the state. Yet some high school teachers and administrators expressed concern about the additional stress that adoption of these new requirements might have upon teachers and students.

Since each high school arts course to be used for UC admissions had to be approved by personnel in the UC Office of the President (UCOP), arts teachers throughout California would be required to submit revised syllabi that took into account the new content standards (artistic perception; creative expression; historical and cultural context; aesthetic valuing; connection, relations, and application). Many teachers were unsure what these new course syllabi were supposed to look like. Teachers who favored an "art for art's sake" approach wondered what

affect a more academically-oriented approach would have on non-college bound students who might possess talent in the arts but have little interest in pursuing further study at the postsecondary level.

When the conversation turned to “next steps,” high school teachers and administrators expressed a desire for assistance in complying with the new UC admissions requirement. Already University of California ArtsBridge, a system-wide outreach effort directed by Dean Jill Beck of the UC Irvine School of the Arts, was sending over 900 advanced UC arts students each year to work with teachers and their pupils in K-12 classrooms. However, no program was in place to provide professional development for teachers. The ArtsCore program was conceptualized to fill this need (<http://www.gse.uci.edu/artscore/>).

### **The Development of ArtsCore**

An almost unprecedented consensus is emerging among researchers, professional development specialists, and key policymakers on ways to increase the knowledge and skills of educators substantially. The new consensus calls for providing collegial opportunities to learn that are linked to solving authentic problems defined by the gaps between goals for student achievement and actual student performance (Hawley & Valli, 1999).

In 2001 the California Postsecondary Education Commission Eisenhower Professional Development State Grant Program awarded a three-year grant to Principal Investigator Liane Brouillette and co-directors Kim Burge of the UCI Department of Education and Jim Thomas of the Orange County Department of Education (OCDE) in order to develop an innovative program for secondary arts teachers in designated “low performing” schools. The project would include three summer institutes, each followed by three school-year workshops that would assist teachers in implementing plans initiated during the summer institutes. Teacher-leaders in the fields of

visual art, music, theatre and dance would be recruited to create integrated lessons that addressed the real world challenges faced by teachers.

From the beginning, ArtsCore was a collaborative project, involving university faculty, K-12 educators, and community arts organizations in an effort to use the classroom as a laboratory for developing new, teaching-centered ideas for improving student learning. The goal of the ArtsCore project was to help the average teacher to begin to approach the level of practice exhibited by exemplary practitioners. At the same time, participants were committed to exploring how arts specialists might collaborate with teachers in other fields in order to call upon the power of the arts to energize and extend learning. The language arts seemed a good place to start.

The intention of the new visual and performing arts standards had been to provide both meaningful experience and breadth of knowledge. When courses were submitted for approval for use in UC admissions, courses that emphasized performance and/or production were required to include appropriate critical/theoretical and historical/cultural content. “Appreciation” courses had to focus on making aesthetic judgments about art works and performances. In describing the criteria used in approving syllabi for courses that would be used to meet the new UC/CSU admissions requirement, UC admissions officers emphasized that courses were expected to include substantive written assignments. However, this caused problems for music, visual art, and dance teachers who had little experience in assigning or assessing written work.

As the ArtsCore project began, experienced arts teachers reported that, in spite of the recent state-wide emphasis on literacy, they were seldom consulted or brought into the conversation at their schools about how and where literacy skills could be reinforced in instruction. Professional development programs that emphasized traditional assessment of writing assignments did not take into account the heavy teaching, exhibition and performance

expectations of secondary arts teachers. Moreover, in the eyes of many arts teachers, “literacy through the arts” initiatives seemed to reinforce the problematic view that the arts were merely “instrumental”, a vehicle for teaching kids other “really important skills.” So ArtsCore began to work on a new model for improving academic achievement through the arts that would be developed by and for teachers, paying attention to what was known about enhancing literacy skills, while retaining the integrity of the arts curricula.

In developing this focus on the classroom ArtsCore took its cue from research carried out in connection with the Third International Mathematics and Science Study (TIMSS). That research showed that “how teachers teach” is far more important than increased spending, state-of-the-art facilities, mandatory homework, or special education (Stigler & Hiebert, 1999, pp. 1-2). When the focus was on teaching for specific student outcomes, and the classroom became a laboratory for developing new, teaching-centered ideas, teachers were able to change the way that students learned.

To this end, ArtsCore paired teacher-leaders in each of the arts disciplines with language arts specialists recruited by the California Reading and Literature Project. These teacher leader pairs spent a full 12 days preparing teaching-centered learning strategies and presentation units for use in the first ArtsCore summer institute. This institute, held August 12-16, 2002, involved 60 secondary level teachers. The teachers represented twelve school districts and 44 Title One schools that had been designated as “low performing” middle and high schools:

Teachers by school poverty level: <sup>1</sup>	
Low poverty (poverty levels below 35%)	6

---

<sup>1</sup> Note: “Poverty level is calculated as the percentage of students approved for free or reduced price lunch,” ArtsCore: Annual Program Report 2001-2002. Sacramento, CA: California Postsecondary Education Commission.

Medium poverty (poverty levels above 35%; below 50%)	0
High poverty (poverty levels above 50%; below 75%)	28
Very high poverty (poverty levels above 75%)	26

During the three follow-up meetings held during the 2002-3 school year, teacher participants discussed the evolution of their new literacy-infused curriculum and examined examples of student work. The student work was shared in discipline groups and then analyzed, using protocols designed by the project. This analysis of student work suggested that students could be engaged in high quality arts activities while also building literacy skills. Thus the arts curriculum need not be sacrificed to the goal of literacy improvement. However a lack of consistency across arts disciplines made it difficult to make claims of reliability, validity and generalizability. A goal for the second year was to build on what was learned in the first, focusing closely on a limited set of specific literacy components that were tested in the California High School Exit Exam (CAHSEE).

To prepare visual and performing arts teachers to use different assessment techniques that give students timely and effective feedback on their writing (and are manageable when these teachers are confronted with large class sizes and demanding performance schedules) specific strategies were introduced across the arts disciplines each day of the summer institute. For example, instead of providing extensive comments that made papers seem to “bleed” red ink, teachers were encouraged to choose one or two literacy skills with which students clearly needed assistance and concentrate on those. This kept both teachers and students from becoming overwhelmed, while also narrowing the task undertaken so that students could gain confidence from their progress in mastering the chosen skill(s).

### **Integrating the Visual and Performing Arts with the Language Arts**

Initial teacher-leader meetings settled on the definition of literacy in the language arts as “the complex, dynamic, interactive, and developmental process of making meaning with text” (Davidson and Koppenhaver, 1993, p. 12); *content area literacy* was defined as “the level of reading and writing skill necessary to read, comprehend, and react to appropriate instructional materials in a given subject area” (Readence, 1998, p. 4). ArtsCore teacher-leaders focused on reading and writing to learn, in order to improve arts instruction. This provided a residual of improved skills in reading and writing.

Linda Clinard, the California Reading and Literacy Project Director introduced the arts teachers to the California High School Exit Exam (CAHSEE) and helped them understand the literacy domains, strands, and standards that were tested. The arts teachers came to realize that they could target some of these skills in their arts instruction, thereby increasing student capacity to achieve on the state standardized test. The relationship between the literacy standards addressed in the CAHSEE and the California Standards for the Visual and Performing Arts was made explicit (Figure 1.)

Figure 1: Visual and Performing Arts Content Standards/California High School Exit Exam Relationship

California High School Exit Exam

**Reading: Word Analysis and Systematic Vocabulary Development**

1.1 Identify and use the literal and figurative meanings of words and understand word derivations

Visual and Performing Arts Content Standards

**Dance**

1.5 Apply knowledge of dance vocabulary to distinguish how movement looks physically in space, time, and force/energy

**Music**

1.4 Describe music according to its elements, using the terminology music

**Theatre**

1.1 Use the vocabulary of theatre to describe theatrical experiences

**Visual Arts**

1.2 Describe the principles of design as used in works of art, focusing on dominance and subordination

California High School Exit Exam

**Reading: Reading Comprehension**

2.3 Generate relevant questions about readings on issues that can be researched

Visual and Performing Arts Content Standards

**Dance**

5.3 Research and explain how dancers leave their performing careers to enter into alternative careers

**Music**

3.1 Identify the sources of musical genres of the United States, trace the evolution of those genres, and cite well-known musicians associated with them

**Theatre**

4.3 Develop a thesis based on research as to why people create theatre.

**Visual Arts**

4.3 Formulate and support a position regarding the aesthetic value of a specific work of art and change or defend that position after considering the views of others

California High School Exit Exam

**Reading: Literary Response**

3.2 Compare and contrast the presentation of a similar theme or topic across genres to explain how the selection of genre shapes the theme or topic

Visual and Performing Arts Content Standards

**Dance**

3.3 Compare and contrast universal themes and socio-political issues in a variety of dances from different cultural contexts and time periods

**Music**

3.3 Describe the differences between styles in traditional folk genres with the United States

**Theatre**

4.1 Use complex evaluation criteria and terminology to compare and contrast a variety of genres of dramatic literature

**Visual Arts**

3.3 Investigate and discuss universal concepts expressed in works of art from diverse cultures

The teacher leaders understood that motivation and practice are essential in a student's literacy improvement. Students in their classes were, for the most part, interested in the arts, motivated by the arts. Through ArtsCore, teachers found that they could better nurture students of art: students who could read about artists, write about artists, as well as write about their own artistic processes. Simultaneously, these students were meeting high school graduation requirements; they were improving both in the arts and in literacy. Even as they kept the arts at the core of all they did, the teachers began to develop clear arguments against the all-to-common

idea that arts classes were expendable “fillers” that could, at no real educational cost, be cut back to provide more time for the “basics.” As Maxine Greene has made clear:

We must make the arts central in school curricula because encounters with the arts have a unique power to release imaginations. . . . But the pleasurable does not mean the arts are to be used simply to “balance” what is thought of as the cognitively rigorous, the analytical, the rational, and the serious. (1995, p. 27)

### Measuring Success

At the beginning and end of the first ArtsCore Institute, teachers were asked to rate their confidence levels should they be asked to explain to students, parents, or other interested adults the expectations for writing that earned a “4” (highest score) on the two writing tasks included in the California High School Exit Exam. Marked improvement was seen in teacher confidence levels, as demonstrated in the following table.

---

---

**0 = Not confident   1 = Somewhat confident   2 = Confident   3 = Very confident**

Please write a number, from 0 to 3, to show how confident you would be if you were asked to explain to students, parents, or other interested adults the following expectations for writing that earns a “4” (highest score) on the two writing tasks included in the California High School Exit Exam.

<b><u>PRE</u></b>	<b><u>POST</u></b>
<b>1.72</b>	<b>2.55</b> ... <i>clearly</i> addresses all parts of the writing task.
<b>1.78</b>	<b>2.42</b> ...provides a <i>meaningful</i> thesis and maintains a consistent tone and focus and <i>purposefully</i> illustrates control of ... organization.
<b>1.78</b>	<b>2.52</b> ... <i>thoughtfully</i> supports the thesis and main ideas with <i>specific</i> details and examples.
<b>1.81</b>	<b>2.55</b> ...provides a <i>variety</i> of sentence types and uses <i>precise, descriptive</i> language.
<b>1.57</b>	<b>1.98</b> ...demonstrates a <i>clear</i> sense of audience.
<b>1.95</b>	<b>2.63</b> ...contains <i>few, if any, errors</i> in conventions of the English language. (Errors are generally “first-draft” in nature.)

<b>1.54</b>	<b>2.32</b>	Persuasive compositions authoritatively defend a position with precise and relevant evidence and convincingly address the reader's concerns, biases, and expectations.
N=35	N=32	
8/12/02	8/16/02	

---

Eight months later, at the last of three follow-up meetings (April 1, 2003), teachers were asked about changes that they had made as a result of their participation in the ArtsCore program. They reported significant gains in both quantity and quality of writing assignments.

---

As a result of your experience in ArtsCore, please write 0 to 3 to indicate the degree to which you made the following *changes in the writing assignments* you asked your students to carry out during this school year.

0=Not Used 1=Attempted by did not use regularly 2=Used more than once 3=Used frequently

- 2.33 Assigned more writing tasks/assessments with carefully-designed prompts (expository, biographical, daily art history writing...)
  - 2.39 Introduced explicit expectations related to writing (rubrics, scoring guides...)
  - 1.32 Demonstrated how writing tasks were aligned with CAHSEE writing standards
  - 1.48 Assigned pre/post writing assignments to demonstrate growth
  - 2.04 Expected students to write journals
- 

Even as the debate about imposing ever more detailed academic standards continued to rage at the national level, teachers participating in the ArtsCore program had become keenly aware that standards alone did not produce learning. Only through expert teaching did concepts come alive for students; only through patient practice were skills honed and improved. Feedback from ArtsCore participants expressed this clearly:

- I found myself incorporating more ideas throughout all my lessons instead of just thinking “this will be my ArtsCore lesson.”
- It became clearer to me that having a variety of writing experiences wasn't enough. I also

- need to give the students the rubrics and language with which to analyze their own writing.
- ArtsCore helped me identify essential standards of the CAHSEE that aligned with my existing curriculum.
- My introduction to ArtsCore opened my lesson plans to the wonders of using all forms of art to lead more students into successful writing. The concrete ideas translated directly into my lessons.

Yet, when the teacher-leaders met to reflect upon the Summer 2002 ArtsCore Institute, they realized that teacher participants would benefit from a more structured integration of literacy strategies into the arts curriculum. Thus, for the Summer 2003 Institute, the teacher-leaders worked to integrate specific literacy strategies into the example lessons participants would experience. Looking closely at the California High School Exit Exam (CAHSEE), they determined that if they taught the participants a specific strategy for each strand and used it in the context of the example lessons presented by the teacher-leaders at the institute, the participants would have a much better chance of successfully using specific literacy strategies in their own arts instruction.

At the follow-up meetings during the school year, participants could then bring student work as evidence of the literacy strategy implementation in their arts' instruction. Using this model, teacher leaders could facilitate ongoing discussion about how the literacy strategies worked in arts instruction, how students were improving in their literacy skills, as well as the impact that these strategies had on student achievement in the arts. This shared knowledge deepened the conversation regarding literacy building in the arts; it lead directly into the plans for subsequent ArtsCore summer institutes.

During the 2003-2004 academic year, the three ArtsCore follow-up workshops were expanded from weekday after-school sessions to a full day on Saturday. The focus remained on examining student work generated as a result of assignments designed during the summer ArtsCore Institute. As teacher confidence in implementing writing skills grew, the focus widened

from skills required by the CAHSEE to writing skills students would need at the postsecondary level. Samples of writing collected from students of ArtsCore teachers in the fall, then again in the spring, were evaluated by UC faculty who regularly helped to grade the “Subject A” examinations taken by all UC freshmen. This pilot project provided an external measure of student literacy skills that assisted the ArtsCore leadership in planning for a more comprehensive quasi-experimental study to be carried out in 2004-2005.

As Elliot Eisner has noted “We work in a normative field. We are concerned with promoting growth, so what we need to know is what contributes to the growth of mind in and through the arts” (2000, p. 5). Through the ArtsCore research, we have gained a better understanding of what influences learning in the arts and the language arts. We are, as yet, unable to make causal claims; findings to date have been confounded by the use of non-randomized volunteer groups and intact classes. Yet, through examining contextual and curricular influences on learning, we have gained a better understanding of the effect that learning in the arts can have upon other domains.

### **How the Arts Contribute to Educational Excellence**

Once widely considered a non-cognitive affective domain, the arts have increasingly come to be considered a cognitive domain, a change that carries with it important academic implications (Parsons, 1992 & Deasy, 2002). For example, Discipline Based Art Education (DBAE) was a reaction to the traditional emphasis on only developing artistic skills and fostering creative expression. DBAE transferred the focus of arts education to the representative ideas of the disciplines comprising art studio, art criticism, art history, and aesthetics (Getty Center for Education in the Arts, 1985). Although successful at increasing the intellectual content of aesthetic learning and encouraging development of the standards-based arts instruction we have

today, controversy surrounded DBAE's rigid curricular framework; this resulted in practitioner resistance (Smith, 2000 & Noddings, 1992).

Without the active support of teachers, who make the curriculum come alive for students, no reform effort can meet with more than limited success. "The task before educators," as Herbert Kliebard has noted, "is to develop a curriculum that meets the demands of modern living in a way that is visible to students. This does not mean a 'dumbing down.' Quite the contrary, it means restructuring the academic subjects in such a way as to preserve their intellectual dignity" (Turnbaugh, 1997, p. 184). That is the challenge that now confronts arts educators.

What art teachers have yet to do is to find ways of assessing changes in students' ability to handle complex learning tasks, such as the ability to relate isolated bits of information into larger contexts where it can fit. (Efland, 2002)

By exploring multiple pathways to learning, the ArtsCore teacher-leaders have explored ways to help teachers improve classroom instruction in the visual and performing arts while, at the same time, using arts instruction to help students integrate knowledge related to other parts of the core curriculum. Central to this effort is the attention paid to how students work with what they have learned. In contrast to other components of the school curriculum, the emphasis in evaluating student learning is not put on determining the quantity of knowledge acquired, but on the quality of its organization, on how vocabulary and concepts from the arts relate to other fields. This improved ability to organize their knowledge enables students to apply what they know in other situations, thus furthering their understanding.

ArtsCore participants have discovered that this involves more than finding connecting links among the various subjects, but requires the integration of that knowledge into the learner's lifeworld, that is, the symbolic matrix into which school subjects are placed in the effort to make them meaningful (Efland, 2002). Thus, instead of adopting a pre-planned curriculum, pairs of

literacy experts and teacher-leaders from the visual and performing arts develop integrated presentation lessons. During the summer ArtsCore Institute, participants experiment with cognitive tools and create curriculum. Thus, in one studio, music teachers might be writing their own lyrics to a 12-bar blues song while, nearby, drama teachers are comparing the acting techniques used in video clips that show Lawrence Olivier, Kenneth Branagh and Kevin Kline delivering the same monologue from Hamlet. Nearby, dance teachers explore the choreographic vocabulary of Twyla Tharp and visual arts teachers turn old library books into illuminated manuscripts.

At follow-up workshops during the school year, they look collaboratively at student work generated as a result of these lessons and adjust classroom practices in accord with a growing appreciation of the cognitive power of the arts. In this manner, the teacher-leadership model used in ArtsCore utilizes peer-based learning strategies to create a community of learners focused on the real work of teachers (Eisen, 2001). At the same time, the ArtsCore project continues to be nourished by its relationship with other research and outreach projects, both within the University of California and beyond. One outcome of the Sciences for the Arts Conference described earlier was the organization of the Center for Learning through the Arts (originally referred to as The da Vinci Research Center, to emphasize the historic unity of science and the arts). Building on the expertise and combined knowledge of university faculty in a wide range of disciplines, the Center sponsors programs that nurture a dialogue, across disciplines, about the role that the arts can play in learning. At the same time the Center houses outreach projects like ArtsCore that enhance collaboration among arts educators at all levels.

Members of the Center for Research through the Arts enthusiastically welcome the opportunity to enter into a dialogue with members of the larger arts community concerning how

best to further explore the “tight resemblance” between teaching and art (Jackson, 2004). Our work with students has been greatly nourished by the insights generated by a broad spectrum of scholars, researchers, and practitioners. We look forward with great anticipation to the continuation of this on-going conversation across disciplines and among educators working with students at many stages in their educational careers.

### References

- Burton, J. M. (1994). The Arts in School Reform: Other Conversations, *Teachers College Record*, 95 (4). 477-493.
- Davidson, J. and D. Koppenhaver. (1993). *Adolescent literacy: What works and why*. Second Edition. New York: Garland Publishing.
- Deasy, R., Editor. (2002). *Critical links: Learning in the arts and student academic and social development*. Washington, DC: Arts Education Partnership.
- Dewey, J. (1934). *A Common Faith*. New Haven, CT: Yale University Press.
- Dewey, J. (1934). *Art as Experience*. New York: Capricorn Books.
- Dewey, J. (1977). *The Middle Works of John Dewey, Volume 3*, Jo Ann Boydston (Ed.) Carbondale, IL: Southern Illinois University Press.
- Eisen, M. J. (2001). Peer-based learning: A new-old alternative to professional development. *Adult Learning*, 12(9).
- Eisner, E. (2000). Art in Mind: An Agenda for Research. *The Sciences for the Arts: Conference Proceedings*. Irvine, CA: University of California, Irvine, School of the Arts.
- Efland, A. D. (2002). *Art and cognition: Integrating the visual arts in the curriculum*. New York: Teachers College Press.
- Getty Center for Research in the Arts. (1985). *Beyond creating: The place for art in*

- America's schools*. Los Angeles: The J. Paul Getty Trust.
- Greene, Maxine (2001). *Variations on a Blue Guitar: The Lincoln Center Institute lectures on aesthetic education*. New York: Teachers College Press.
- Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco: Jossey-Bass.
- Jackson, P. W. (2004). On the "Tight Resemblance" of Teaching and Art. *Arts & Learning Research Journal*, 20(1). 1–17.
- Hawley, W.D. & Valli, L. (1999). "The essentials of professional development: A new consensus". P 127. In Linda Darling-Hammon & Gary Sykes [Eds]. *Teaching as the learning profession: Handbook of policy and practice*. San Francisco, CA: Jossey-Bass.
- Lockwood, A. T. (1997). Herbert Kliebard: The Supreme Context of Reform. *Conversations with Educational Leaders: Contemporary Viewpoints on Education in America*, Albany, NY: State University of New York Press.
- Noddings, N. (1992). *The challenge to care in schools: An alternative approach to education*. New York: Teachers College Press.
- Parsons, M. (1992). Cognition as interpretation in art education. In B. Reimer & R. A. Smith (Eds.), *The arts, education, and aesthetic knowing: Ninety-first yearbook of the National Society for the Study of Education* (Part II, pp. 70-91). Chicago: University of Chicago Press.
- Readence, J., T. Bean and R. S. Baldwin. (1998). *Content area literacy: An integrated approach*. 6<sup>th</sup> edition. Dubuque, IA: Kendall/Hunt Publishing Company.
- Smith, R. A. (Ed.). (2000). *Readings in discipline-based art education*. Reston, VA: National Art Education Association.

Stigler, J. W. & Hebert, J. (1999). *The Teaching Gap*. New York: The Free Press.