

### **Continuing the Dialogue**

A Reply to Burchenal/Housen/Rawlinson/Yenawine

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In April 2008, Burchenal and colleagues wrote a commentary (April 2008, *NAEA News*), in which they take us to task for research reported in our recent book, *Studio Thinking*. Burchenal et al. reveal fundamental misunderstandings about our study and its place in the logical sequence of a program of developmental/educational research. In what follows, we describe our work, how it was misunderstood by Burchenal et al., and how the authors misrepresent their own research findings.

Like those who developed the Visual Thinking Strategies (VTS) program to help children approach works of art, we are developmental psychologists. Researchers in developmental psychology must first define and describe an end-state (for Piaget this was logical-scientific reasoning; for the creators of the VTS program, it is expert reasoning about the arts; for us it is expert teaching in the arts to understand the habits of mind artists use). Only after such foundational study has been conducted can experimental studies examine how children develop toward this state and test how and how well education fosters such development.

Many arts advocates, including Burchenal et al., have claimed that when students study the arts, their academic achievement rises. This is a claim about transfer of learning from one domain to another. A century of research in psychology has shown that transfer of learning from one domain to another is extremely difficult to demonstrate. Moreover, in the case of transfer from arts to achievement tests, there has not been a plausible theory for why such transfer might occur.

A decade ago, we analyzed the research on the relationship between arts and academic achievement by conducting a set of meta-analyses, published in the *Journal of Aesthetic Education*, 2000, 34(3/4). Out of ten meta-analyses we conducted, seven showed no causal relationship between studying the arts and some form of non-arts achievement. We concluded that the claims for the arts leading to academic improvement are not well-grounded in scientific evidence.

Indeed, we concluded that before further research on transfer from the arts to academic achievement could responsibly be conducted, two prior research steps were needed: (1) studies to uncover what is taught in arts classes; (2) studies to uncover whether what is taught is learned. By first focusing on what experts intend to teach in the visual arts, researchers can subsequently study whether students in art classes actually learn these dispositions and whether the teaching of these dispositions has an impact on students' reasoning outside of the arts. Only after these first two steps (defining what's taught in art, assessing what's learned) can researchers propose and test psychologically plausible mechanisms of transfer of learning from the arts to another domain. We therefore began a program of study to understand what expert teaching in the visual arts looks like. We published our findings in *Studio Thinking* (Hetland, Winner, Veenema, & Sheridan, 2007,

Teachers College Press) and wrote a synopsis of our argument for the *Boston Globe*, which was reprinted in the *NAEA News* (December 2007).

Our study focused on five high school visual arts classes in two schools in Boston where students can major in an art form (Boston Arts Academy and Walnut Hill School). We videotaped 38 classes (each 1.5-3 hours in length) and spent two years developing a coding manual and coding and analyzing the teachers' discourse, achieving high levels of agreement between coders of .7 to .9. We concluded that teachers were teaching eight important and potentially generalizable habits of mind: the dispositions to observe, envision, express, reflect, stretch and explore, engage and persist, develop craft, and understand the art world. We did not begin this study with a preconceived set of habits of mind; instead we discovered these habits from what we observed.

We also argued that while it is of scientific interest to understand transfer from the arts, findings of transfer should not be the principal justification for arts education. Justifying arts education in terms of transfer sets the arts up to be judged by effects that are not their central purpose; the arts' very existence in schools would be threatened if transfer does not occur. The arts must be understood as valuable in their own right, as subjects as important as those traditionally considered "core."

**Buchenal/Housen/Rawlinson/Yenawine make the following statements about our research:**

**1. They describe our study as "very short," and "small," and they imply that, because it was conducted in a specialized environment, it is not broadly relevant.**

We coded 103.5 hours of classroom video; we would describe our study as intensive. We studied five teachers, choosing depth over breadth because of the need to examine data closely; such choices are often made in qualitative work conducted to develop theoretical models. And we looked initially at environments in which the arts are taught comprehensively. Subsequently, we have seen the studio habits of mind being taught in a wide variety of non-specialized environments.

**2. They say that we argue that "studio experience teaches essential 'thinking dispositions'," that these are "inferred behaviors" "unproven" by our study; and that our arguments are "intellectually specious" because we do not provide evidence of learning.**

As mentioned, we do not infer or claim anything about what is learned. Learning and its assessment constitute a second phase of our work, currently underway and not yet reported. Instead we have analyzed what is *taught* -- what teachers *intend* students to learn. We provide evidence for what is taught and were careful to analyze our data in an objective manner that could be replicated.

**3. They say that, "Winner and Hetland know better" because in our literature review we "rejected virtually all research" attempting to document that art leads to academic achievement.**

Burchenal et al. are referring here to our meta-analyses mentioned above. We are not sure what they mean by “reject.” If they mean that we rejected the hypothesis that the cumulative body of studies showed that the arts caused academic achievement to rise, this is correct. If they mean that we rejected studies that we should have included in our meta-analyses, then we disagree. In the meta-analysis on arts and academic achievement, Winner and Cooper (2000) included all relevant studies from 1950 on with the dependent variables of either academic grades or test scores that reported numerical data to allow us to compute effect sizes (necessary for a meta-analysis).

**4. They say that our research “has none of the characteristics” that we demand of others.**

As we state, before studies can be conducted about what transfers from arts to academic achievement, we must first understand what is learned from studying the arts; and prior to focusing on learning, we need to understand what is taught. Only then can we put forth hypotheses about what might be learned, what learning might transfer, and how transfer might occur.

**5. They state our thesis as “the arts should be taught for themselves.”**

Did the authors perhaps misread our article title, Art for *Our* Sake, as Art for Arts’ Sake?

**6. They say our claims are “hard to take seriously, especially if you are indifferent to the arts already.”**

Our work is in fact being taken seriously. To cite just one example, superintendents in California’s Alameda County are supporting a program in which elementary school arts and classroom teachers use the studio habits of mind to design arts interventions to reach underachieving students, with the hope of instilling in these students some of the studio habits of mind. This initiative was described in the March 2008 issue of the *School Administrator*, read by most of this country’s school superintendents.

**7. They say that it should not be “a losing proposition to assert that art can help young people learn skills they need to be successful in school.”**

We agree. That was the point of our article. What we question is whether it has been conclusively demonstrated that, as Burchenal et al. state, the arts “develop skills that can even help with tests.”

**Burchenal et al. misrepresent their own research**

**They ask, “If, indeed, art experience can impact test performance, shouldn’t we call attention to that fact?”**

In the Visual Thinking Strategies (VTS) method, students are asked to make observations about works of art and support their observations with evidence. Students are asked to think about three questions as they look at art works: What’s going on here? What do you see that makes you say that? What more can you find? The authors refer to three studies they have conducted about the effects of VTS, and we comment on these below.

The first study referred to (Housen [2002]. Aesthetic thought, critical thinking, and transfer. *Arts and Learning Research Journal*, 18[1], 2001-2, pp 99-132) was a five year study of treatment classes (using VTS) and control classes (not using VTS). The children were 2<sup>nd</sup> and 4<sup>th</sup> graders as the study began. Burchenal et al. state that “In one instance, the test scores of students in 8<sup>th</sup> grade leapt 23%, an increase credited to VTS, though Housen herself did not try to prove causation; the correlation was obvious to all involved.” Since, as the authors acknowledge, even large correlations do not allow us to conclude anything about causation, mention of the “obvious” correlation seems disingenuous. More to the point, the scores reported were not standardized achievement test scores. Rather, they were scores on tests assessing the use of visual thinking strategies when observing art and non-art objects. In other words, this study tests whether a program teaching visual thinking strategies does in fact lead children to use such strategies in new contexts; its results demonstrate that. The study tells us nothing about whether VTS leads to improvement in standardized achievement tests.

In a second study (Curva, Milton, Wood, Palmer, Nahmias, Radcliffe, Ogartie, and Youngblood [2005], *Artful Citizenship Project: Three Year Project Report*. Wolfsonian Institute), elementary school children received instruction in VTS, and a comparison group did not. The executive summary concludes with the following bold statement: “This evaluation study shows that integrating art in the curriculum...clearly contributes to students’ critical thinking and measurable academic achievement as well. In fact, it would not be surprising to find that such curricular ‘enhancements’ may be the best test preparation the schools can provide.”

But to show that art contributes to academic achievement, one must compare the test scores of the arts group to those of the control group to see whether the art group’s scores rose more. The test scores are not reported in the study; and neither was such an analysis. Moreover, even if the art group’s scores rose more, one could only claim that art is the *best* test preparation after comparing art to other (perhaps more direct) types of test preparation. There was a significant correlation reported in this study for the VTS group between test scores and the skills taught (visual literacy and critical thinking), but it does not follow that visual literacy caused the test scores to rise.

In the third study referred to by Burchenal et al., the Isabella Stewart Gardner study, researchers examine the effects of VTS on student reasoning about art in the classroom, in the museum, and on standardized tests (Adams, Foutz, Luke, & Stein, [2007]. *Thinking Through Art: Isabella Stewart Gardner Museum School Partnership Program, Year 3 Research Results*). Adams et al. saw growth in strategies for visual thinking in the first two contexts (classroom and museum) but go on to say that, “When standardized test scores from the 2004-5 MCAS [Massachusetts Comprehensive Assessment System] and the 2005-6 SAT-9 were analyzed, there were no differences between treatment and control students” (p. iii).

Thus, none of the three studies to which Burchenal et al. refer show that arts learning causes rises in scores on the kind of tests that children now take in school. Nonetheless, the authors conclude differently: “Given roughly 30 hours of direct instruction over 3

years, we can predict skills that reliably transfer from the art experience to the distant world of language and math tests.” Curva et al. (2005, p. 6) quote Housen and Yenawine as stating the case even more strongly on their website (<http://www.vue.org>): “In all locations where VTS has been tested, both classroom and test performance has been seen to improve, and the effect in all cases has been attributable to VTS.”

We understand what is at stake here. And we understand the temptation to stretch the conclusions of certain studies beyond their reach, but scientific integrity demands a more rigorous approach, and the children we teach deserve better.

Educational administrators and teachers can certainly distinguish correlation from causality. To suggest that they will lose sight of the value of the arts if we cannot demonstrate a causal connection with higher test scores is insulting.

Clearly, the arts have much to offer—well beyond any relationship that may, in the future, be empirically established with test scores. If, in the end, this is proven, then great! But we have other and better reasons for keeping the arts alive and thriving in our schools.