North Americans traveling abroad are often pleasantly surprised by the ease with which they are able to navigate major thoroughfares in Europe. This is because the road signs used in Europe are pictorial in nature. When a road narrows, an image on the sign shows this. The sign at a pedestrian crossing shows a figure walking.

In an international milieu, where dealing with multiple languages is routine, the utility of such communication is clear. Even when there is no language barrier, pictorial signs provide a means for communicating a message swiftly and effectively. The image of a hand dropping paper into a trash receptacle can serve as an effective reminder, even to young children.

Could similar strategies be used in American classrooms to assist students whose grasp of English is still uncertain? This article describes a program that used arts-based strategies to prepare students in diverse urban schools for the writing portion of the California High School Exit Examination. Used in combination with other teaching techniques, the writing activities also proved motivating to native speakers of English, encouraging the "wide awake" awareness of varied human perspectives described by Maxine Greene (1995).

For decades, evidence has been steadily accumulating that learning in the arts involves principles shared with other academic disciplines. The studies in *Critical Links* (Deasy, 2002), a compendium of arts education research, demonstrate that well-conceived arts activities have a variety of

positive effects beyond the initial conditions of learning. This makes the arts a potentially formidable ally in increasing student achievement (Bransford et al, 2004). But how can this potential be actualized? This article looks at how aesthetic experience can provide both a stimulus for writing and common ground for dialogue, prompting a process of reconceptualizing that encourages students to use writing as a way to explore relationships among ideas.

Improving Student Writing Proficiency

> Virtually every state in the nation is working to develop high standards for what students should learn in school ... What must be done now is to find ways of providing students with the learning opportunities they need to reach the new standards (Stigler & Hiebert, 1999, pp. 1-2).

Over the last 15 years, surveys in a range of English-speaking countries have consistently shown that employers rank oral and written communication skills as highly as--or more highly than--technical and quantitative abilities. The correlation between career success and writing proficiency is extremely strong. Yet, the 2007 National Assessment of Educational Progress (NAEP) writing test, found that only a third of the eighth graders in the United States perform at—or above-- the *Proficient* level in writing (Dillon, 2008).

Writing as Problem Solving

Writing is essentially a form of problem solving, and the problems involved can be thorny and demanding. Determining the information a reader will need--and deciding what information to provide--makes writing an intricate undertaking (Bruer, 1994; Hayes, 2004). At the same time, writing is a skill. Yet that skill is a "kaleidoscopic" process that requires the orchestration of many component skills (Dyson & Freedman, 2003). Therefore, teachers must balance writing as a meaning-making process and writing as a set of wide-ranging skills that are integral to the process. Moreover, since writing is a form of problem solving, improvement cannot be brought about merely by assigning drills that focus on likely test questions.

A writer's problems are ill defined; there are no ready-made or standard solutions. To make an abstract idea come alive on the page, the writer has to provide the reader with information on a variety of conceptual and linguistic levels. Determining what information a reader will need and deciding how to provide that information make writing an intricate undertaking (Bruer, 1994; Hayes, 2004). No natural laws apply; no foolproof algorithms exist. In addition, teachers must find a way to address the needs of students with diverse interests, ability levels, and cultural backgrounds.

The Value of Dialogue

When asked to write, students often complain that they can think of nothing to say. The blank page looms like a daunting vacuum, because students are unaccustomed to generating words without an audience. In

conversation, people provide each other with cues. They question for clarification, provide memory aids, and help each other stay on topic. In written composition, such supports are removed. This makes writing a harder, and fundamentally different, task than conversation. Even more difficult is activating and searching the appropriate memory stores to recall information in the absence of conversational prompts (Bereiter & Scardamalia, 1987).

This helps explain why novice writing is usually "writer based," structured according to the writer's experience rather than according to the reader's need to comprehend. Novice writers lack an internal feedback system. So, using a cue from the assignment, student writers search long-term memory for information about a topic, and then write down what they retrieve.

In conversation, the conversational partner’s signs of incomprehension, disbelief, or boredom prompt evaluation. But, when writing, nothing may happen to initiate evaluation, the function responsible for finding and diagnosing text problems (Bereiter & Scardamalia, 1982). These difficulties can be addressed by including writing as part of a broader dialogue that includes both oral and written components. In such situations, the responses of conversational partners can provide the feedback system that may be otherwise lacking.

Writing to Learn

The formal way that literature tends to be discussed in school makes it difficult for students to respond with the same sense of excitement and interest that motivate adults who read voluntarily on their own time (Smagorinsky, 2007). The "writing to learn" movement endeavors to enable students to experience that same sense of enthusiasm by using writing as a means to discover what they have to say. As Fulwiler and Young observed in the Introduction to *Language Connections: Writing and Reading Across the Curriculum* (1982)

> We write to ourselves as well as talk with others to objectify our perceptions of reality; the primary function of this "expressive" language is not to communicate, but to order and represent experience to our own understanding. In this sense language provides us with a unique way of knowing and becomes a tool for discovering, for shaping means, and for reaching understanding. (p. x)

As Bereiter & Scardamalia (1982, 1987) point out, the absence of a conversational partner can be a major stumbling block for young writers. Teachers may overcome this by including short writing assignments as part of a larger classroom dialogue. In contrast to classrooms where only one student answers, such quick-writes require each student to arrive at an individual solution to the problem posed by the writing prompt. This allows each student to jot down a few initial thoughts and revisit these ideas during

the following class discussion.

Although the ideas of only two or three student volunteers may be discussed in class, all have benefited from transposing their thinking to paper. Later, students may be asked to flesh out their initial ideas, based on insights sparked by the class discussion. Of course, students only derive these benefits when they are willing to invest energy and attention in carrying out these activities. This is unlikely if the topic is not interesting enough to engage their attention. Students also must have the background knowledge necessary to meaningfully respond to the prompt.

This is where the immediacy of arts-based prompts can provide a pivotal advantage. This holds true not only for visual images, but also for music, dance, and drama. Teachers have long known that compelling video clips from Shakespeare's plays can awaken the interest of students who might have invested far less energy in the learning process, had they only read Shakespeare's words in a book. The following section describes a project that used repeated participation in arts-based activities to help struggling students more effectively transfer their ideas to paper.

Integrating Writing Instruction and the Arts

Studies of the cognitive benefits that school-aged youth derive from instruction in the visual and performing arts have found that these benefits fall into three major categories: improved academic performance and test

scores; improved basic skills; and improvement in attitudes and skills that promote the learning process itself. However, an assessment of this body of research carried out by Rand (2004) found that most empirical research on the instrumental benefits of the arts suffered from a number of conceptual and methodological limitations. These limitations included weaknesses in empirical methods, absence of specificity, and failure to consider opportunity costs. This study attempts to address these concerns.

Most studies that focus on integration of the arts and the language arts make use of arts-based strategies integrated into language arts lessons. This study focuses, instead, on integration of literacy instruction into visual and performing arts classes. The researchers looked at literacy practices developed by high school arts teachers over a period of three years, as a result of participation in a teacher professional development program. The ArtsCore Program assisted teachers in responding to a new University of California admission requirement in the arts. Starting in fall 2003, all freshmen admitted to University of California campuses were required to take one year of standards-based art instruction. The syllabi for these arts courses had to be approved by admissions personnel in the UC Office of the President.

Using criteria similar to those used in scrutinizing syllabi for high school courses in science, language arts, and mathematics, UC admissions officers decided that arts syllabi must include written assignments as a

means of evaluating student understanding of course content. In addition, there must be evidence that students are able to use the language unique to each art form both to make critical assessments and demonstrate understanding of the historical and/or cultural context of a given work of art. This created problems, because veteran band, visual art, choir and dance teachers were not accustomed to assigning or evaluating student essays.

Teachers pointed out that they had time-demanding performance or exhibition schedules that left little time for reading student essays The ArtsCore professional development program was initiated to provide assistance to visual and performing arts teachers in designing written assignments and handling the workload associated with assessing student writing. A partnership between the University of California, Irvine, and the Orange County Department of Education, the ArtsCore program introduced teachers to writing-to-learn strategies that made it possible to integrate writing assignments into arts classes without (1) adding unduly to the teacher's workload or (2) diverting an unacceptable amount of class time from the visual and performing arts.

Arts teachers in the more affluent school districts, where most high school students had already mastered basic essay writing skills, were able to make the adjustment relatively easily. In diverse urban districts, teachers faced a greater challenge. The logistics of scheduling did not allow high schools to offer separate arts classes for college-bound students. Therefore,

teachers had to integrate the required writing assignments into classes that included both college-bound and non-college-bound students, as well as large numbers of English language learners.

In 2001, the ArtsCore project was awarded a state-administered Eisenhower grant to assist arts teachers in high-poverty schools in designing and implementing the written assignments required by the new UC admission requirement. Statewide, the stakes were high. So as not to penalize students planning to apply for UC admission in fall 2003, schools had to make the UC-approved arts classes available well in advance. Nor was it only UC applicants who would need these classes. The California State University System had decided to adopt the UC admission requirements in 2006. Beginning that year, students would have to take an approved arts course to be admitted to any California public university.

Collaborative Creation of Teaching Strategies

To facilitate development of the required writing assignments, ArtsCore paired teacher-leaders in visual art, music, theater and dance with language arts specialists. These teacher-leader pairs prepared integrated arts-and-literacy lessons for presentation at an intensive summer institute. The first institute, held August 12-16, 2002, involved 60 teachers from 12 school districts and 44 Title 1 schools. In the morning, the lessons prepared by teacher-leaders were introduced to participating teachers in disciplinary groups (visual arts, music, theater, dance). During the afternoon, teachers

designed their own lessons, adapting the teaching strategies that had been introduced in the morning workshop to their classroom needs.

By the end of the first summer institute, teachers had begun to develop an integrated arts-and-literacy curriculum. Then another challenge arose. In spring 2001, the first edition of the California High School Exit Exam (CAHSEE) was administered to a statewide group of volunteer ninth graders (Class of 2004). The CAHSEE targeted math and language arts skills that students were supposed to possess when they started 10th grade.

Large numbers of students in California's urban school districts had been unable to exhibit the required proficiencies, causing a delay in mandatory implementation of the CAHSEE while remedial efforts were undertaken.

In school districts where the failure rate had been high, the efforts at remediation were far-reaching. Many high schools prohibited students who had not passed the CAHSEE as tenth graders from enrolling in elective classes (such as the visual and performing arts) until they had passed the exit exam. In place of electives, these students took additional language arts and/or math classes. This curtailed enrollment in arts programs. Therefore, arts teachers were strongly motivated to help prepare ninth and tenth graders to pass the CAHSEE. To assist in these efforts, the ArtsCore writing assignments were re-designed to address skills required for the essay portion of the CAHSEE. When time allowed, ideas that came up in class discussions of quick-writes were organized into an outline for an essay.

Over the next two years, ArtsCore teachers reported increasing success in integrating writing into their classes. To assess the impact on student writing skills, a pilot study was carried out in 2003-04. In fall and spring, a sample of ArtsCore teachers asked their students to write essays under conditions that simulated the CAHSEE. The essays were evaluated, using the same four-point rubric used to score the essay component of the CAHSEE. UC Irvine English instructors scored the essays. This pilot study showed improvement in student writing skills. The results of a similar, but

larger, study carried out the following year (2004-2005) were even more promising. So, the California Postsecondary Education Commission provided funding for a quasi-experimental study that would examine the impact of the writing activities.

Testing the Impact of Writing-to-Learn in Arts Classes

To test whether the writing-to-learn strategies had improved student writing skills, a subset of ArtsCore teachers was matched to a control group that had not participated in ArtsCore. In September 2005, and again in May 2006, students of both treatment and control teachers were asked to write an essay to a prompt taken from a previous California High School Exit Exam (CAHSEE). UC Irvine English composition instructors scored the essays.

Treatment Group Performance Analysis

A total of 782 student pre- and post- essays were collected from ten control teachers (n=319 essays) and nine treatment teachers (n=463 essays)[i]. All essays were stripped of identifying information, including their "pre" or "post" designation. Performance analysis was conducted where both pre- and post- essay scores of a student were available (treatment n=249; control n=159). A summary of pre- and post-essay scores for students of treatment teachers is given in Table 1. A comparison of the distributions for pre- and post-essay scores reveals a general upward trend from pre-essay scores to post-essay scores.

Well over half (59.8%) of all students of treatment teachers scored a 1

(lowest score) on their pre-essays. The percentage of students of treatment teachers scoring a 1 on post-essays dropped markedly to 30.9%. The percentage of students of treatment teachers scoring a 2 increased by 15.3%, from 28.5% on the pre-essay to 43.8% on the post-essay. Perhaps the most striking finding was that the number of students scoring a 3or a 4 (highest score) on their essays more than doubled from 29 (11.6%) students on the pre-essay to 63 students (25.3%) on the post-essay.

Table 1: Treatment Essay Scores

	Pre-Essay		Post-Essay	
Score	**Freq**	**percent**	**Freq**	**percent**
0	0	0.0%	0	0.0%
1	149	59.8%	77	30.9%
2	71	28.5%	109	43.8%
3	27	10.8%	56	22.5%
4	2	0.8%	7	2.8%
Total	**249**	**100%**	**249**	**100%**

Although this aggregate comparison is revealing, what is even more interesting is a paired comparison that matches the pre-essay score of a particular student with this same student's post-essay score. For example, if a student received a 2on his/her pre-essay and a 3 on his/her post-essay, we know that this student increased his/her score by one rank and thus showed improvement between the beginning and end of the school year. This change could be attributed, at least in part, to curriculum changes made by the student's teacher as a result of the professional development received through the ArtsCore program. The distribution of all paired comparisons of pre- and post- essays for students of treatment teachers is shown in Table

2.

Table 2: Treatment Net Change

Change	Freq	Percent
-3	0	0.0%
-2	2	0.8%
-1	25	10.0%
None	109	43.8%
+1	88	35.3%
+2	23	9.2%
+3	2	0.8%
Total	**249**	**100.0%**

From the beginning to the end of the school year, there were more students of treatment teachers who increased their scores than students whose scores either decreased or stayed the same. Less than half (43.8%) of the treatment students had no change in essay scores. Over all, 113 (45.3%) students increased their performance, whereas 27 (10.8%) students had a decrease in performance. In addition, of those students of treatment teachers whose scores increased pre- to post-, between one fifth and one quarter (25 of 113 students, or 22.1%) increased their performance by two or more rank scores. A sign test ($p < 0.001$) confirmed that, where there was a change in score from pre to post-essay, the score was far more likely to have increased than to have decreased.

Control Group Performance Analysis

A summary of pre- and post-essay scores for students of control group teachers is given in Table 4. Comparison of the distributions for pre- and post-essay scores suggests a slight downward trend from pre-essays to post-essays. Sixty-eight, or just under 43% of all 159 students of control

teachers, scored a 1 on their pre-essays. The percentage scoring a 1 on the post-essay increased by 11 control students to 49.7%. The percentage of students of control teachers scoring a 2 on their pre-essays, 47.8% (76), dropped to 39% (62) for post-essay scores. The number of students of control teachers scoring a 3 or 4 on their essays remained relatively unchanged for post-essay scores with a gain of only 3 (1.9%) students, but with no students of control teachers scoring a 4 on the post-essay.

Table 4: Control Essay Scores

	Pre-Essay		Post-Essay	
	Freq	**percent**	**Freq**	**percent**
0	0	0.0%	0	0.0%
1	68	42.8%	79	49.7%
2	76	47.8%	62	39.0%
3	12	7.5%	18	11.3%
4	3	1.9%	0	0.0%
Total	**159**	**100%**	**159**	**100%**

This slight aggregate downward trend appears to be reflected in the distribution of all paired comparisons of pre and post-essay scores for students of control teachers shown in Table 5. Somewhat more than half (86 or 54.1%) of the control students had no change in essay scores, while just over one fourth (41 or 25.7%) of control students had a decrease in performance. Just 32 (20.1%) control students actually increased their performance and, of these, less than one fifth (5 of 32 students, or 15.6%) increased their performance by more than one rank score. Sign test results were not statistically significant, indicating that, where there was a change in score from pre to post-essay, neither an increase nor a decrease was more likely.

Table 5: Control Net Change

Change	Freq	Percent
-3	1	0.6%
-2	5	3.1%
-1	35	22.0%
None	86	54.1%
+1	27	17.0%
+2	5	3.1%
+3	0	0.0%
Total	**159**	**100.0%**

Limitations of the Quantitative Analysis

Given the research design, it was important that treatment and control groups had starting points that were as similar as possible. However, since the essay prompt was given to whole classes, not to individual students, matching was carried out using demographic data on SES, ethnicity, English language learner status and course description. No measures of the academic ability of individual students assigned to a specific class were available. Therefore, it was necessary to demonstrate that the overall distributions of pre-essay scores for treatment and control students were reasonably comparable.

An inspection of these aggregate tables suggests that the requirement that overall pre-essay scores for the treatment and control groups be comparable was not well satisfied. The pre-essay scores of treatment students turned out to be slightly lower than the pre-essay scores of control students. The median pre-essay rank score for treatment students was a 1, as compared to a median pre-essay rank score of 2 for treatment students.

Using the treatment student pre-essay score distribution as the expected distribution, this tendency is further supported by a highly significant ($p < 0.001$) chi-square goodness-of-fit test.[ii]

To defend against these criticisms, it should be pointed out that analysis of similar data from two previous years (utilizing a treatment-only design) appears to support the finding of an upward trend in regard to treatment student performance. Multiple years in which a similar pattern had been found across multiple grades in different schools or districts would appear to lend credibility to the conclusion that the professional development workshops attended by teachers and the writing-to-learn strategies subsequently utilized by teachers in the classroom had enabled students to improve their essay writing skills.

Qualitative Analysis

Qualitative analysis of the essays by the university faculty who carried out the blind scoring of the student writing established that low-scoring essays written by treatment group students at the beginning of the year were marked by the absence or insufficiency of three kinds of development, which were prioritized in the following order of importance: 1) lack of development of coherent lines of reasoning; 2) lack of good reasons to support the claims that had been made; 3) lack of any specific, concrete supporting details or examples (relevant or not). In those cases where a student's writing had improved over the course of the school year, this

improvement was accompanied by improvement in the quality of reasoning evident in the pre-and post-essays. This finding supports the argument that writing is a form of problem solving (Bruer, 1994; Hayes, 2004). Can this also be said of the arts?

Implications for Practice

Approximately half of the ArtsCore teachers were visual arts specialists. As a result, many of the writing prompts had a pictorial component. A favorite source of ideas for writing activities was *Looking to Write: Students Writing through the Visual Arts* by Mary Ehrenworth. A passage from this book touches upon a key function of the ArtsCore writing-to-learn activities.

> Maxine Greene (1995) returns often to the question, what *is* an aesthetic experience? If we focus on the notion of what makes an experience aesthetic, I think that it is the quality of actively engaging with an object or text and making meaning through that participatory engagement (p.7).

In music or dance classes, the aesthetic stimulus that led to students' active engagement may have differed from the stimulus used in visual arts classes, yet the process of making meaning through participatory engagement was similar. Students who spoke a language other than English at home did not have to master an unfamiliar academic vocabulary before they were able to respond. All could react directly to what they saw or

experienced.

Crossing Language Barriers

That very brief writing-to-learn assignments, usually read by only peers, should have had a measurable impact on student writing skills might, at first, seem improbable. However, the sense of improbability is lessened when one recalls the discussion of European road signs with which this article began. Pictorial road signs provide a means for communicating a message quickly and effectively, across language barriers. This allows motorists to bring their background knowledge to bear, allowing them to respond adequately even when they do not speak the language of the country through which they are driving. Arts-based prompts function similarly.

Unlike the international road signs, such prompts allow for a range of interpretation. For example, dance students might be asked to describe similarities and differences between video clips that showcased the choreographic vocabularies of Martha Graham and Twyla Tharp. Visual arts students might compare paintings by Picasso and Matisse, while theater students were asked to contrast video clips of Lawrence Olivier, Kenneth Branagh and Kevin Kline delivering the same monologue from *Hamlet*. In each case, students were encouraged to share their own responses, based upon close observation. English language learners did not need to learn the specialized vocabulary of the arts discipline before being able to

meaningfully take part.

Moving beyond "Knowledge Telling"

Mastery of academic English was only one of the challenges these students faced. There was the need to plan before starting to write. As noted earlier, 59.8% of treatment students received a 1 (lowest score) on their pre-essays. Therefore, most of the students in the treatment group began the school year with writing skills that were considered to be "below basic." The writing style of these students, as described by the university instructors who scored the essays, was consistent with what Bereiter and Scardamalia (1987) have called "knowledge telling." Each sentence may make sense, but the sentences do not build on one another. Instead, they seem to coexist on the page in random order, as might be expected of writing that was produced by a process of free association.

This type of writing results when students confuse generating content with producing a finished product. When children enter school, they have extensive experience with speaking but none in writing. So, when given a writing task, young children usually begin putting words on paper immediately, as if they were speaking. Planning is not part of their writing process. Later, they learn that the words in an assignment give clues they can use to search their memories, following chains of associations. If they do not learn how to break these chains, their writing will have no organization above the sentence level.

The high school students who received a score of 1 on their pre-essays had still not learned to break free of the chains of association and take the time to plan before beginning to write. Over the course of a school year, frequent experience with writing-to-learn activities--followed by opportunities to explain their ideas to others--helped these students to organize their thoughts and eventually their writing. But why had these students not learned these skills in their language arts classes? Students with "basic" or "below basic" writing skills were assigned to classes that emphasized drill and formulaic writing models. Problem-solving was not part of the curriculum.

Quick-writes allowed students to focus on what they wanted to say, recording their thoughts without stopping to worry about grammar and punctuation. Although there was no one "right" answer, students had to justify their opinions. For this approach to be effective, teachers needed to actively engage students in the writing-to-learn activities and subsequent discussions. Therefore, teachers experienced their own learning curves by becoming more adept at asking questions that led students to observe more closely, to ask their own questions, and discuss possible answers with classmates. The ArtsCore project owed its success, in large part, to the questioning skills of the teachers who volunteered to participate.

Theoretical Implications

The location of the ArtsCore project, in Southern California, helped to

shape the character of the program. Between 1983 and the late 1990s, outreach activities undertaken by the Los Angeles-based Getty Center for Education in the Arts (later renamed the Getty Education Institute for the Arts) strongly influenced the way that local teachers viewed the goals of arts education. The Getty generated a wide array of programs--ranging from teacher education institutes, to theory development monographs, to videotapes of effective arts teachers—which emphasized a broad focus on four areas of art education: creating art; art history; art criticism; and aesthetics. Now referred to as discipline-based art education (DBAE), this approach has become influential nationally. However, it is especially well established in the Los Angeles area.

The *Visual and Performing Arts Content Standards for California Public Schools* (2001) encourages teachers to a use a pedagogical approach similar to DBAE across the arts disciplines. Therefore it was natural for a collaborative project such as ArtsCore to adopt this approach. This shared experience with DBAE turned out to be a fortuitous circumstance, providing ArtsCore a shared frame of reference. As Elliot Eisner (2002) points out: DBAE addresses the four things that people do with art: make it; appreciate its qualities; locate its place in culture over time; and discuss their judgments about its nature, merits, and importance. Advocates of this pedagogical philosophy argue that it provides a more comprehensive approach to art education:

> We increase our understanding of the meaning of an artwork if we have worked with the materials and processes that artists use to create art. We also broaden our understanding if we know when and where a work was made, something about its creator, the function it served in society, and what art experts have said about it. (Getty Report, 1985, p. 13)

Others have argued that DBAE is far too preoccupied with the opinions of "experts," that is, with talking about art instead of making art. DBAE coexists with distinctly different visions of art education, which focus on goals ranging from: enhancing creative self-expression to using the arts to understand the broader culture, to solving socially important problems in aesthetically satisfying ways. Had the teachers participating in ArtsCore shared a different vision of arts education, less accepting of the assumption that writing and classroom discussion should be a major component of student exploration of the arts, the character of the project would have been different. So, were the results reported here specific to a particular pedagogical philosophy?

Practically speaking, there is no necessary connection between the literacy practices developed by the ArtsCore teachers and DBAE. The effect that the arts-based literacy strategies had on student learning was rooted in the non-rational, receptive act of artistic perception, which fostered a sense of engagement that had affective as well as cognitive aspects. Students

experienced "Ah-ha!" moments, which they felt an urge to share. Assignment of quick-writes encouraged students to express their insights through the rational and controlled activity of writing. But the affective element created a special kind of "public space" for dialogue.

As Greene (1995) observed, one awakens students by awakening their imaginations. Providing a space for meaningful discussion allows students to break free from taken-for-granted definitions and infuse the conversation with their own realities. Students engage with each other, building on one another's ideas. The common ground provided by shared artistic experience sparks insights that awaken participants to new possibilities. This creates an "exhilarating sense of growing awareness and capacity" (Wong, 2007, p.12), as the artworks being discussed--and the human world of which they are a part--expand in meaning and significance.

When students are asked, following the classroom discussion, to revise

their quick-writes into brief essays, the interpersonal conversation in which they have participated provides a basis for reconsidering and reconceptualizing their initial thoughts. Through a process that could be called *assisted* metacognition (Catterall, 2005), verbalized reflections on art enrich the inner conversation (Vygotsky, 1997) in which students must engage if they are to move beyond the "knowledge telling" (Bereiter & Scardamalia, 1987) that characterized their early writing efforts and begin to discuss relationships among ideas. For students who--like many of the young people taught by ArtsCore teachers--have experienced repeated failure in school, writing can seem a daunting task. Meeting the challenge gives rise to an energizing sense of discovery.

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[i] Teachers in the control group turned out to have smaller classes. An additional control teacher was recruited to enhance the number of student essays in the control group.

[ii] One expected cell frequency was less than the commonly accepted minimum value of 5.