

Engaging 21st Century Learners: A Multidisciplinary, Multiliteracy Art-Museum Experience

Arlene Barry, University of Kansas, abarry@ku.edu

Abstract

This study discusses the impact of a multidisciplinary collaboration between a university-affiliated art museum and a literacy course required for pre-service middle school and high school teachers. The purpose of the art museum visit was to encourage future teachers of English, science, social studies, foreign languages and mathematics to offset their typical heavy use of the textbook with visual art. Results of a survey distributed to participants after licensure and once they were out in the schools teaching, indicated that the art museum experience influenced their use of the visual arts and art museums in their current instruction and their students' subsequent learning. Additionally, their personal use of art museums and related expertise increased.

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Introduction

I am charged with preparing pre-service middle and high school educators to teach literacy in their content areas. This is done through a course titled Reading and Writing across the Curriculum. Each year when I meet these pre-service teachers (those in our Teacher Preparation Program), I tell them that I honestly enjoy this adolescent literacy course. I have an adolescent son myself who has struggled with reading and I have taught this course to individuals who have become his middle and high school content teachers. Therefore, I have seen first hand that if I do a good job teaching content literacy, these educators do a good job, teaching students like my son. Ultimately, it is my job to help these pre-service teachers learn techniques for helping their students access the text in their disciplines (English, science, social studies, math, foreign languages, and art). As lovers of their content, and initially reluctant to spend time on literacy, I must begin the process of reading and writing across the curriculum with these pre-service teachers themselves. I try to get them to view literacy through multiple lenses. Therefore, the purpose of this research was to determine the impact of a pre-service, multidisciplinary experience on the instructional and personal behaviours of a group of educators currently teaching adolescents in the United States. This experience emphasised the power of images as an instructional tool, and the use of a community art museum as a resource.

Background

Pre-service middle and high school teachers in the state of Kansas are required to take “Reading and Writing across the Curriculum,” a course designed to enhance “knowledge of procedures used to improve reading efficiency in all areas of the curriculum ... appropriate to the level of the student” (State Board Requirements 91-9-144, 91-1-80). In this literacy course, educators become familiar with methods for teaching their content to adolescents who may lack enthusiasm for the subject matter or have little ability to learn it easily, especially from printed text. To accommodate these striving readers, I encourage the pre-service teachers to offset the heavy use of the textbook with visual tools or visual art, following the work of Dowdy and Campbell (2008) and Eisner (1998). This multiliteracy (deriving meaning through multiple communicative modes like language, images, sound) approach is “part of a much broader movement within the sciences, social sciences, and humanities to conceptualize the visual as part of a general theory of communications” (Duncum, 2004, p. 254). In addition to addressing Gardner’s (1983) notion of multiple intelligences, the use of visuals may be critical for learning (Stuht & Gates, 2007); motivation (Burton, Horowitz, & Abeles, 2000); and a move toward cultural pluralism (Hatton, 2003). Gullatt (2007) wrote that a rich bank of mental images is necessary to construe sophisticated language, and Paivio (2007) found that students might be better able to organise and store information as mental images. In regard to reading comprehension, Gambrell and Koskinen (2002) stated that understanding occurs when readers build connections between the text and their knowledge, as well as among different parts of the text. Mental images can induce learners to build those connections (Sadowski & Paivio, 2004). Indeed, student motivation may be increased when content areas are related (Rabkin & Redmond, 2006). Taylor (2004) even advocated using art to create a service-learning experience involving high school students and the community.

Due to the breadth of images available in an art museum and the provocative, multidisciplinary content inherent in works of art, our university-affiliated art museum presented an ideal resource. Some recent thought-provoking exhibitions at the Spencer Museum of Art (SMA) have been: “International Posters for Peace, Social Justice, and the Environment;” “Elevator Poetry;” “Quilting Time and Space;” “Unbinding the Fetish;” “Dias de los Muertos (Days of the Dead);” “The Scale of Climate Change,” and “Made in China: Observations and Understanding.”

The curator of education at the SMA and I examined the Spencer collection to identify works of art that could trigger discussion, further reading, writing and research for each content area. Learning theories were considered in this process. For example, due to our understanding of schema theory, and the critical role schemata play, we know that connecting one’s background knowledge with new information is key to memory and comprehension (Rumelhart, 1980). Working hand-in-hand with schema theory, another learning theory, constructivism, posits that individuals construct meaning from stimuli they encounter (Spivey, 1997). This active process of connecting the new to the known and making meaning can be seen in the comments of course participants. One SMA task for English majors, for example, was to examine three different works depicting Julius Caesar and to discuss the stories these works presented. Caesar was used as one of our subjects, because high school English teachers in the US are traditionally required to teach Shakespeare’s play, *Julius Caesar*, and many of them have indicated apprehension about doing so. The museum works chosen included a Renaissance narrative panel depicting four scenes from the end of Caesar’s life, a 19th-century print showing

Brutus with the ghost of Caesar, and *Aloha*, a contemporary work by John Buck (Figure 1).



Figure 1. John Buck. (U.S., 1946). Aloha, 1978. Photo courtesy of the Spencer Museum of Art, The University of Kansas, Gift of Professors Raymond & Elizabeth Goetz & Family.

Schema activation and interest are apparent in this pre-service teacher's comments:

At first I did not think I knew very much about Caesar, but after I viewed the three works of art, it all seemed to come back to me. I now remember Caesar's harsh use of military force, his affair with Cleopatra, and his famous victory words, 'Veni, Vidi, Vici!' When I saw Brutus being haunted by Caesar, I immediately began remembering other details of Caesar's life, such as his notable contributions to Roman politics and history. Also, after seeing the works, I became genuinely interested in learning more about Caesar. (Jeniece, Pre-service Reflection, 1998)

Other English majors began brainstorming the meaning of the symbolism in Buck's work. Social studies majors joined in with historical information and a science teacher shared his knowledge of the Roman aqueducts. Some of the pre-service teachers who had never read any of Shakespeare's plays soon read *Julius Caesar* and a couple went on to read *Antony and Cleopatra* so they could promote their own theories of Buck's use of symbols. The collaboration noted by Guthrie and Humenick, (2004) that is critical for generating interest in reading was evident in this and other groups in our class.

Two years after this group graduated and Jeniece was out teaching, she called me from her Texas school to ask if Buck sold any replica sculptures. “I need something like *Aloha* to get my students engaged,” she said. At that point I began wondering about the effects of the SMA visit on participants who are currently teaching.

Study

Since students were positive about the museum experience at the pre-service level, I wondered if they continued to use visual arts and museums once they began teaching. Now that many of these individuals were licensed and out in the schools, I wanted to know if the SMA activity carried any long-term effect. Therefore, approximately 446 graduates, who completed Reading and Writing across the Curriculum within the last 15 years, were surveyed. Participants were asked if the SMA project influenced their (a) teaching, (b) use of images from art museums, (c) student learning, or (d) personal connections with art museums and visual arts.

Participants

Subjects in this survey research were individuals who met the following three criteria: (a) graduated from the School of Education; (b) obtained a teaching license; and (c) took a course in the Curriculum and Teaching Department titled, Reading and Writing Across the Curriculum. Survey participants were initially identified using a PeopleSoft course history file. Significant effort was expended to locate contact information for subjects. The University Alumni Association was able to provide contact information for fewer than 20% of grads so additional assistance was sought from other university organisations and the State Department of Education. From all sources, contact information was located for 446 individuals who met the above criteria. Of these surveys sent out via email address, a home address, or a school address, 307 (69%) were returned; however, more than half of those were emails that bounced back or mailed surveys returned and marked “Return to Sender, Address Unknown.” Therefore a total of 115 completed, usable surveys were obtained. Of these, 55% were female, 45% male; 85% Caucasian, 5% Asian, 8% Hispanic, 2% Black. Content areas represented in returns were 26% English, 23% science, 18% social studies, 15% math, 11% foreign languages, and 7% other (SPED, ESOL, administration, gifted, at-risk). The majority of these educators taught grades 10–12 (78%) and had 7–10 years of teaching experience.

Methods

A “structured survey” was the research tool initially chosen to contact all participants. Afterward, however, because this initial survey did not provide an in-depth look into any classrooms, “semi structured interviews or qualitative interviews” (Baumann & Bason, 2004, p. 288) were used with a small subset of those participants. This “multimethod” research (Hunter & Brewer, 2003) provided richer, more layered information. Additionally, correspondence with in-service teachers and course reflections from pre-service teachers has been kept since 1998.

The structured survey was a self-administered questionnaire, developed to determine the impact of the pre-service SMA project on the subjects identified above. The questionnaire was shared with two program area colleagues at the

participating university, and two former students who had taken part in the SMA activity. This was done to obtain feedback regarding clarity, readability, to avoid “specification errors” (de Leeuw, 2008) and ensure valid answers. Changes were made based on the feedback from these four individuals.

Because email addresses could be obtained for less than half of the subjects, two methods were developed for data collection. One was a computer-assisted online Web survey using a software program called SurveyMonkey located at www.surveymonkey.com. The other method, used for those with either a home or school address, was the traditional mail survey. Internet surveys and mail surveys with reminder postcards were each sent at least twice.

Using the Council of American Survey Research Organizations online calculator (www.custominsight.com/articles/random-sample-calculator.asp) to determine the accuracy of my survey results, my confidence level is 90% with an error rate of 6.6%. Responses are discussed below. Raw survey data can be obtained from the author. Pseudonyms have been used throughout.

Structured Survey Analysis

A key question asked was, “Did the SMA activity cause you to use visuals in your classroom that you might not otherwise have used?” Responses actually surprised me: 50% answered “yes,” 27% answered “no,” and 23% were either not currently teaching or unsure of the direct effects of the activity. A slightly higher percentage of English majors reported an effect, but all subject areas were represented in the affirmative. I honestly expected less carry over. I say this because content reading courses in the US have historically been unpopular (see Jacobs, 2008). Middle and high school teachers generally take content or adolescent literacy courses because they are required to do so for licensure. Their academic content specialties are both vocation and avocation and they tend not to see the incorporation of literacy as a component of their job. As one high school social studies chairman said to me, “If I wanted to teach reading, I would have become a reading teacher!” Additionally, the instructional practices of middle and high school teachers are frequently rooted in a tradition that does not involve multiple literacies. As Nokes (2008) explained from his research and observations of history classrooms, “Traditionally, reading in history classes involves students silently reading from their textbook in class or at home and answering questions at the end of the passage or on a worksheet the teacher or textbook publisher has designed” (p. 36). Nokes came to the conclusion that social studies teachers need to combine reading strategy instruction (like questioning the author) with opportunities for social interaction and critical analysis.

Works of art lend themselves to these kinds of activities. Instead of questioning the *author* (Beck, McKeown, Hamilton, & Kucan, 1997); however, by using our course’s broader notion of text (digital text, images, signage, diaries, maps, etc.), students can question the *artist*. Using Buck’s sculpture, for example, questions might include: What is the significance of the snake, or the rug, or the scythe in this work? Why is it titled *Aloha*? Why are the knife-wielding hands coming out of the rug? Why was Caesar murdered? Positions could be supported with written research.

Nokes and Hansen (2007) noted that other types of informational text, even as common as newspapers or journal articles, let alone photographs or paintings, are seldom used in history classrooms today. Similarly, Akbaba (2009), a Turkish

researcher, referred to the “traditional teaching methods” in history as consisting of “lecture,” with teachers asking questions and students answering them afterwards. The results of Akababa’s experimental study indicated increased academic achievement when photographs were incorporated and analysed while teaching history. The SMA has an extensive photography collection that can be accessed online or in person. Perhaps one explanation for the dearth of visual art usage in the classroom is that it simply did not occur to educators to use it. As Hernando (1998) said in the early years of my course, “Thanks for the inspiration ... I would have never considered a museum” (Pre-service Reflection). This general sentiment was repeated annually, as seen in the recent comments of Tyler: “I didn’t realize the wide array of connections a teacher can make using visuals in the classroom” (2010, Pre-service Reflections).

Clearly, a didactic approach to instruction is not unique to one content area. Other researchers have noted similar approaches in math and the sciences as well as social studies. Yuruk, Beeth, and Andersen (2009), for example, described a traditional science instruction as a “lecturing format.” Shor noted decades ago (1993) and Seiler and Allison (2010) reconfirmed in their urban science classrooms, that “students see real education as something done to them, not something they do; real education means the teacher telling students what to think and do, rather than dialoguing and negotiating with them” (p. 89). Knowing that educators in my class later engaged their students in self-selected community research projects, at least in part because of the SMA activity (discussed in semi-structured interviews), was affirming.

Efforts to expand their use of course materials were evident in responses from another question in the structured survey. When in-service teachers were asked if the SMA activity caused them to use images from an art museum in their classrooms, 41% said, “yes.” Of the 52% who said, “no” however, half said they did use images from the Internet or that they used museum images, just not ones from the SMA. Many in-service teachers wrote back saying that they visited and used works from the online collections of such art museums as the Metropolitan Museum of Art, the Art Institute of Chicago, the Nelson Atkins Museum of Art, etc. Numerous respondents made a point to say that they would like to take their students to visit art museums, but that the expense, distance and time prohibit such trips. Also, as always for teachers, preparation time is a factor. As one teacher noted, “It takes time to find appropriate images.” “Unfortunately,” another reported, “with so much pressure on test scores, there is not adequate time to teach both the subject for the test and this [art related] type of activity.” The lack of time was the number one reason given for not using museum or other visuals.

Whether or not an in-service teacher used images or museum images often depended on the school environment or administrative policies. For example, one said, “I taught in an urban Houston school district and any sort of field trip was not approved. [However,] I did use images from the Internet that are located in museums” (Avi, Structured Survey, 2008).

In response to a survey question about the outcome of their use of a visual or museum image, all who wrote a response said that outcomes were positive. Comments varied and included such feedback as: “enhanced learning;” “Improved pre and post reading comprehension;” “deeper knowledge and comprehension;” “more engaged;” “good break in the routine, good discussion;” “sparked an interest;” “increased connection to text, more ideas;” “overall enjoyment;” “more integrated understanding;” “Enhanced discussion. It does reach the kids who

gravitate to the arts;” “helps with descriptive writing and figurative language;”
“Some students found focus through the art to better understand mathematics;”
“My kids loved the project!”

Finally, although some respondents said that they did not use the works of art in their teaching, they did, as a result of the activity, incorporate art into their personal lives:

Using artwork to teach reading in my content area, math, would have detracted from my mission of getting 7th grade students who cannot add or subtract on grade level.” [However,] I went back to the SMA on multiple occasions after the field trip. I remember really enjoying the activity & appreciated that you had us do practical, hands-on activities that we could use in our classes & you were always sure to make it specific to our content area...I became more interested in historic art myself and consequently, visit more art museums during my travels. (Lynda, Structured Survey, 2008)

Other categories of outcomes included the following: 68% reported that the SMA project made them think about incorporating works of art into their instruction, 28% now collaborate with an art teacher, 26% now visit an art museums as a result, 8% have taken their students to an art museum, and other individual changes. One in-service teacher, for example, admitted that the activity “gave me a taste for museum education that I still hunger for. Some years ago I looked into a museum education degree at KU, but I could not meet the demands of the required schedule” (Marissa, Structured Survey, 2008).

Interview Layer

As previously noted, in order to find out more specific kinds of lessons in which in-service teachers engaged as a result of the SMA activity, one individual from each of the core content areas represented in the course (English, math, science and social studies) was selected, based on availability and interest for an in-depth interview. One of the four in-depth interviews was face-to-face and the other three were conducted through a combination of telephone and e-mail. Each interviewee chose her format. The following are some of the stories shared by teachers in these four content areas. Many of the benefits noted in the research literature for visual and museum arts are also seen in practice in the comments of these teachers.

Mathematics.

One urban mathematics teacher, Savannah, teamed with the art teacher in her high school. According to Savannah, since administrative expectations were low for the struggling learners in this school, she attempted to try a more innovative approach. Using state and district standards, she and the art teacher developed a course titled “Geoart” which combined geometry and art. She wanted to motivate the students by having them apply mathematical concepts to hands-on activities. In one such activity, the class used geometry to create a “contemporary area rug.” Students chose shapes and found the perimeter, area, and dimensions of each. They had to use obtuse, right, complementary, and supplementary angles and multiple concentric circles. They applied the “four color theorem” to their rugs. (This theorem states that “Any map in a plane can be colored using four-colors in such a way that regions sharing a common boundary, other than a single point, do not share the same color” (Weisstein, 2010, p. 1.) Each individual worked on an 8 ½ by 11 squares, which were painted. When the project was finished all squares were put together to make a massive wall hanging.

Additionally, geometric constructions like mosaic tiling and mandalas, (parts of circles and sectors) found in Islamic designs, Celtic artwork, and the tribal artwork of Africa were used. The artwork of these various groups was accessed in art books and through the Internet. Savannah said that she spent time talking about the ways the history and beliefs of each of these groups influenced their art before she began the math component. Students learned to use a protractor and compass to construct many of these designs. The image below is a contemporary example used from the Spencer collection and a good one for piquing teen curiosity. It incorporates youth culture logos within the mandalas. Essential math was practiced in all of the art-related activities.



Figure 2. Fred Tomaselli. (U.S., 1956). Blotter Logo Mandala Grid, 1991. Photo courtesy of the James Cohan Gallery, New York. Purchase: Elmer F. Pierson Fund, Spencer Museum of Art, The University of Kansas.

In evaluating the visual and museum art relationships, Savannah said, “Many students found focus through the art to better understand the mathematics. Some students were distracted by a concern about their lack of artistic ability. However, this was something continually addressed to help students realize that I was assessing mathematics.” Ultimately, however, she believed that the level of student engagement in these and other art-related projects she developed motivated her students and enabled them to make significant progress on annual assessments. Savannah deemed their assessment results an “unexpected, school-wide” accomplishment.

English/Communication Arts.

Feedback from another teacher showed use of the visual and museum arts in a communicative capacity. Juanita’s Communications class worked collaboratively with the Spencer Museum of Art to develop podcasts (pre-recorded audio programs), which are now available at the museum and online. “I wanted to talk about art as communication with my classes and to give them the opportunity to interact with a piece of art and then communicate with a ‘real world’ audience about the piece and their reflections.” Students selected a work of art; they researched the work and its artist and the time period in which it was done. They wrote and then recorded an informative podcast, which invited the museum patron to examine the painting and think critically and creatively about it. Juanita noted that it took about 2 1/2 weeks for the entire project, including a museum visit, doing the background research, writing and workshopping the podcast, and then recording. The students used information from the Spencer, their school library, and online resources. Because the impact of my teaching is ultimately seen in the students of those I teach, an example of one eighth grader’s podcast and the work he used for inspiration is included below.

Howl is a fiberglass sculpture crafted by Luis Alfonso Jimenez. Luis was born in El Paso, Texas in 1940 and from age 6-18 Luis became an apprentice for his father, who made neon signs. After studying art and architecture in college, he began working in New York City, but later realized that his art inspiration came from southwest America, so he moved to New Mexico. One night when Luis was driving home, he came across a howling coyote whose back had been broken. To put the coyote out of its misery, he wringed [sic] its neck. This night went untold until he decided to share the incident through a sculpture. The sculpture “Howl” is the story he told. The coyote has a very shaggy and unkempt look, portraying a wild animal. In the sculpture there doesn’t seem to be a broken back, however, when you look at its right paw you will notice that it’s held up as if it was broken. Luis may have been trying to express his despair in another way. The coyote has a look of pain amongst it, maybe even hunger. His ribs are poking out of its skin. It seems to be an unhealthy animal. The colors used are cool colors. There’s purple and blue. The cool colors seem to express the dark and cold night where Luis saw the coyote. There are also imaginary colors like glitter. What could this represent? Is it a reflection from the moon and the stars? Do the moon and stars show how the coyote was once in a pack like the stars, but now alone like the moon? A lone wolf, but in this case, a lone coyote. Last of all you see his dark, bloodshot eyes. A last bit of rage as the animal is about to die, crying out in pain. This is a very meaningful piece of art. The story he tells may not be visible at first but after close examination

you will see what Luis himself saw that dark night. (Ali, eighth grade, 2008, SMA podcast)



Figure 3. Luis Jimenez (U.S., 1940). Howl, 1986. Photo courtesy of the Spencer Museum of Art, The University of Kansas.

The teacher concluded her comments with her evaluation, saying, “This was an awesome project! The kids really got into it, and I was very impressed with their final podcasts. They really took the challenge seriously. They are so proud that their podcasts are out there in the ‘real world’ for anyone to listen to.” Additionally, she explained, “This collaborative project has been the highlight of the academic year for many of my students. They absolutely loved it, and were simultaneously truly challenged by it.” The only negative aspect of the project she noted was learning to use the technology.

Social Studies.

An English and social studies collaboration is evident in a project in which this teacher used resources from the Eisenhower Presidential Library, located in Abilene, Kansas. She said that she worked with the archivists and curators there to incorporate a wide variety of primary source documents and artefacts. The curriculum Mona developed and implemented associated with this particular project has been in use for seven years and even won a “National Archives

Award.” Interestingly enough, this teacher noted, “Your class was my first exposure to this rich cross-curricular educational experience.” Clearly, once the seed is planted it takes off.

Students begin this 7-day project with a tour of the Eisenhower Library and an orientation to primary source documents and their use. Students are allowed to choose from 32 topics. They engage in research using 6 sources (2 book, 2 internet, 2 primary sources) and produce a project or power point with an additional visual aid. Topics have included, “The beginning of environmentalism: the Echo Park controversy,” “The end of the polio menace: the Salk vaccine,” “Are we out of the kitchen yet? Women’s rights during the 1950s,” “Operation wetback: illegal Mexican farm workers,” “Science at mid-century: the international geophysical year, 1956-57.” The end product is an informative speech with a visual aid. The image below has been used in the discussion of illegal Mexican farm workers. It draws attention to human rights violations as it centres on Esequiel Hernandez, an innocent shepherd who was shot by the border patrol in 1997.

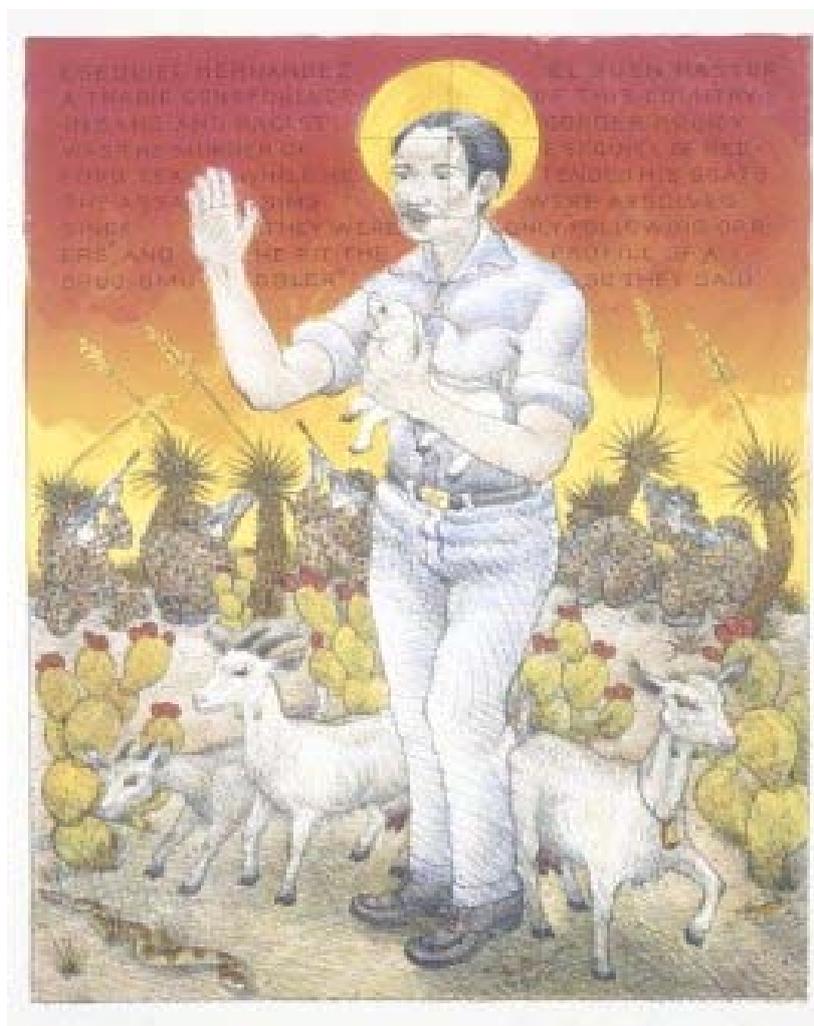


Figure 4. Luis Jimenez (U.S. 1940). El Buen Pastor, 1999. Photo courtesy of the Spencer Museum of Art, The University of Kansas.

Science.

Carlita, a middle school science teacher in New York City, began by describing her class as “the most diverse both racially and economically that I had ever taught.

Fortunately,” she continued, “because the school philosophy was to draw connections between domains of knowledge,” she found it easy to integrate her science content with others. One unit she described teaching was on the human body. Initially, the art teacher was asked to come into her science classroom and talk about Greek and Italian sculpture, the body and how the masters like DaVinci studied human anatomy in order to draw and sculpt better. Contemporaries, like physician-photographer, Jon O’Neal, whose work is available at the Spencer, were incorporated as well. The point of using these photos was to talk about the purpose of procedures like autopsies and biopsies. With his photographs, O’Neal stresses the deception of outward appearances. Even though all of these bodies look healthy, they are all HIV positive.

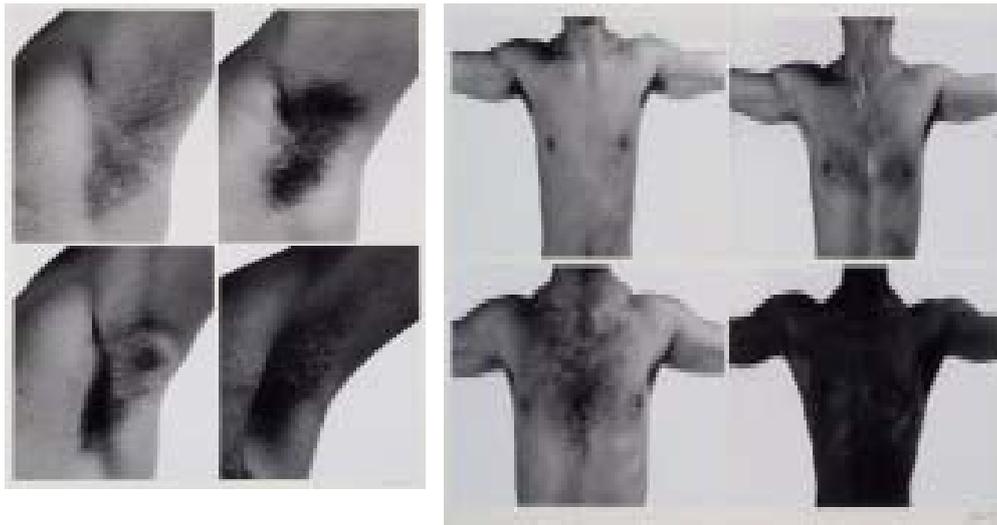


Figure 5. Jon O’Neal. (U.S., 1957). The Bonham Project (armpits; arm/chest), 1989. Photo courtesy of the Spencer Museum of Art, The University of Kansas.

While Carlita taught the science and function of several bodily systems, the physical education teacher came in to share her expertise. The physical education teacher talked about the digestive system and provided information about good nutrition and exercise in conjunction with this. Science and physical education teachers co-taught the cardiovascular system, with one teaching the way the heart functions and the other explaining heart rate related to exercise. The art teacher collaborated by having the students do drawing of forms and still life pieces. In the culminating lab for this unit, these middle schoolers spent 2–3 days (90 minute sessions) dissecting a fetal pig. Students worked in “DaVinci Notebooks” in which they used what they learned from the art teacher on contour drawings to first draft the external features of their pigs. Once the dissection began, they were required to choose 2–3 organs and draw and label them. During those lab days microscopes were set up in the lab. Students could examine organs in greater depth with the microscope. Both the art and physical education teacher cycled in during lab time. Carlita explained that she had to do a lot of scaffolding for this unit to occur. Since she was using brand new and very sharp dissection tools for the first time with these students, they practiced dissecting fruit in previous labs. She said that they spent several days going through the vocabulary and that she taught her students to really look at the pictures and read the captions.

She concluded by saying that this was one of her most satisfying units and that she had literally no discipline issues. The feedback from parents (who were amazed that she did a fetal pig dissection in 6th grade) and her administrators was great.

Conclusions

In summary, visuals play an important role in learning and growth. Visual art both in and outside a museum can assist with language development, comprehension, specific content concepts, memory, motivation, and the facilitation of cultural pluralism. I have been conducting a collaborative, inter-university project with a literacy course to get content teachers to think of ways other than a textbook to present information. This multiliteracy, multimodality approach was new for many undergraduates. As Juan said, “Using art to teach Spanish history and culture is, surprisingly, something that had not dawned on me prior to our class exposure to it” (Pre-service Reflections, 2010). Individual works of art and related issues were posed to these pre-service teachers to get them to read, write, think, and discuss core subject concepts. The art museum was used to get them to consider images in a context rather than in a text.

In order to determine whether or not a similar activity was continued after the transition from pre-service to in-service teaching, a follow-up survey was developed and distributed to 446 former course participants across content areas. Those who responded represented all subject specialties included in the course (social studies, English, math, science, and foreign languages); all grade levels (middle school, junior and senior high school) and years of teaching experience ranging from 1–25 years. Based on their self report, the SMA activity taken during pre-service did influence their teaching by having them use visual and museum images they would not otherwise have used, had a positive effect on student learning and caused them to either visit art museums, collaborate with an art teacher, think about ways to incorporate works of art, and in one case even look into a museum education degree. The in-depth interviews indicated that in practice, at least some teachers had reconceptualised literacy as a multimodal “social practice” located in social settings.

Finally, it is always reinforcing to correspond with former pre-service teachers. They say things that make me want to continue to stay in touch: “I have to tell you that it was quite a boost just to receive your letter of interest about the work I have done. Too often it feels that (as a teacher) our hard work goes completely unnoticed and unappreciated, so this was quite a reward for me” (Mona, Structured Survey, 2008).

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Permission has been obtained for use of the images included.

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