

A model for collaboration: integrating technology into the elementary media arts and studies curriculum

S. Nuss & K. Conely

Brookside Elementary School, Cranbrook Educational Community

Abstract

The model for technology integration at Cranbrook Schools Brookside, the elementary division of Cranbrook Educational Community Schools (www.cranbrook.edu), a private college preparatory day and boarding school in Bloomfield Hills, MI has been developed by the media arts and studies faculty, Dr. Shirley Nuss and Kimberly Conely, Ph.D., candidate. In addition to providing students with a broad and challenging academic environment, Cranbrook is world renown for its comprehensive integration of the arts into the overall elementary and secondary school curriculum. Using Cranbrook's well-established, art-based curricular framework as their impetus, the instructors created an interdisciplinary teaching model that would complement and enhance Cranbrook's philosophy and also address and help mitigate some of the disturbing trends in education perpetuated by the ongoing 'digital revolution.' The professor's approach to the overall integration of Cranbrook's philosophy with state-of-the-art technology in the media arts and studies class is based upon multiple methodologies and technologies including cinema studies, art history, analogue and digital photography, and computer visualization and enhancement. Their unique model utilizes three basic, grade appropriate, instructional components. The first focuses on the ideation-conceptualization process. The second phase incorporates technological instruction and execution. The third step is total integration of components one and two supplemented by further exploration and development of creative thought processes resulting in a comprehensive, multi-disciplinary student production project. For the purposes of illustration, samples of students' work (grades 3, 4, and 5) will appear throughout the following discussion.

Keywords: interdisciplinary, digital revolution, emotional connectivity, meta-cognitive, ideation-conceptualization, hegemonic, cognitive development, coded-language.



1 Introduction

This media arts and studies interdisciplinary technology instructional model was developed as a flexible platform for meta-cognitive planning strategies that incorporate the latest age-appropriate technology and visual enhancement software into their evolving curriculum goals and objectives. The following discussion will illustrate how the use of technology, including analogue and digital cameras, desktop and laptop computers, and various age-appropriate visual enhancement software can be appropriated as tools to enhance and expand, rather than provide the basis for, the learning strategies developed in a media arts and studies classroom. There are three basic student-learning objectives of this approach; the first is to provide the students with an opportunity to acquire the skills necessary to use technology as a means of expression and communication. The second, and most critical goal of this strategy is to familiarize students with the coded language of media producers and help them learn to use this knowledge as a basis for making informed decisions regarding the media's objectives and their specific media choices from internet gaming to television programming. Ultimately, we are trying to help students make and develop emotional connections to each other and their learning environments. As educators we are using technology to train the student to simultaneously see, conceive, create, connect with, and interpret his/her surroundings and experiences.

2 Counteracting a disturbing trend

The professors have created this model for technology in the media arts and studies classroom as an attempt to help balance a disturbing trend that has broad reaching ramifications regarding the overall education of the 21st century elementary student. In general the trend begins in infancy, when many of America's children are exposed to a wide range of uncensored media products in their homes including newspapers, magazines, video games, televisions with one hundred plus channels, on-demand cinema, and computers with 'always on' Internet access. Outside of the home, children are also unwittingly exposed to, and manipulated by multifarious forms of media including graphic signage of all types decorating billboards, buses, and storefronts, and video kiosks strategically stationed in every available superstore corner. Educators must begin to not only acknowledge the consequences of the 'digital revolution' and the ways it will affect a child's cognitive and cultural development in and outside of the classroom, but devise strategies that counterbalance the potential negative effects.

- Children spend more time watching television (on average more than 25 hours per week) than any other activity except sleeping.
- For every hour of regular programming a child may be exposed to more than 25 television commercials, which means they view as many as 40,000 television commercials every year.



Research suggests that young children may actually be unable to distinguish between programming and commercials. Whether at home or in school, children are not generally taught to recognize that commercials and most media are purposefully designed to sell them a product, service, and/or way of thinking.

- 78.9% of households with children in the United States own a computer.
- 53% of the teens surveyed report they use the Internet to browse, 51% to study or do research, 51% use it to send and receive email, and 32% use it to play games.

According to the National Institute on Media and the Family, “children between the ages of 3 and 5 are at a critical stage in brain development, specifically for the development of language and other cognitive skills.” Based upon the above data, educators can conclude that the combined average television viewing and computer/video game use is higher in actual hours of passive participation than normal family interaction and any regularly scheduled student teacher contact time. In the 21st century, media in all of its forms actually becomes the overall dominant influence on the development of brain neural networks because it displaces the time a child would spend doing activities that include primary verbal interactions deemed absolutely necessary for early, successful cognitive development.

Despite the results of this research, most media producers that focus on creating content for our youth readily acknowledge that they are accountable first and foremost to the advertisers, rather than the children and teenagers consuming their product. What has become the “teacher” or rather *‘in loco parentis’* in the home environment is primarily focused on pleasing the financial sponsor of the program. Current studies though informative, fail to reflect the actual media-initiated and cultivated simulacrum “culture” continually represented and ultimately perpetuated to undiscerning children, teenagers, and their parents. The reality represented in popular media is often based upon fabricated ideas and concepts. The consequence of this anomaly is that many of the dominant media initiated hegemonic ideas and images seem to go unquestioned and are readily adopted by children and their parents. In subtle, yet often frequent occurrences within programming and commercials, the so-called ideal body type is consistently shown, violence as a means of problem solving is perpetuated, and stereotypes are reinforced. Some researchers argue that the current epidemic of eating disorders, anxiety, and depression plaguing our nation’s children as they either strive to integrate and/or meet these unattainable images are a direct result of this unrealistic representation of reality. According to David Walsh, this deluge of sexually explicit, violence-centered media de-sensitizes and ultimately replaces the child’s ability to make the emotional connections necessary for successful learning, growth, and maturity. To counteract this desensitization, we recommend media arts and studies instructors create projects for students that stimulate emotional involvement.



3 The model – three instructional components

3.1 Ideation-conceptualization process

Each grade level project idea is conceptualised using a visual tool (figure 1) that is consistent with a students’ grade level curriculum, and developmental skills (emotional maturity, small and gross motor skills, visual recognition skills, and tested sequential learning capabilities). The ideation-conceptualization step is grounded in current research pertaining to brain development and learning. Research shows that long-term memory, which often involves factual/label and location components, should be supplemented by an emotional component that binds and contributes to the overall learning experience. It is important to note that a 10-year-old can readily remember the words to a commercial jingle and/or a sitcom theme song, but often has difficulty remembering a short poem or the basic multiplication tables he /she was asked to memorize. The emotional connections caused by continual exposure to commercials and sitcoms seem to trigger a memory response that is not consistent with the rote memorization practices indigenous to the educational setting. Robert Sylwester encourages educators to “help students begin to find relationships between the somewhat random, often trivial fact filled experiences of everyday life and the few enduring principles that define life-and then to help them create and constantly test the memory networks that solidify those relationships” (102). We have found that when developing a project that uses pre-visualization techniques and technology it is paramount to include an emotional connection experience to encourage and promote the development of the imprinted brain pathways.

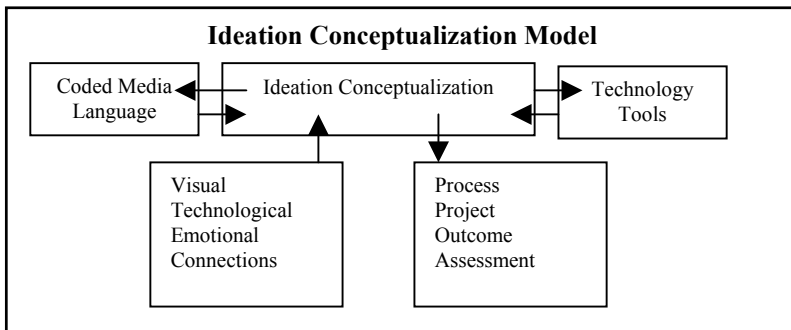


Figure 1.

3.2 Technology tools

The second phase of our program incorporates comprehensive technological instruction with consideration of age appropriate fine and gross motor skills as well as maturation level ranges for the purposes of successfully executing grade specific projects. This includes all applicable media related terminology from



cinema studies, photography, art history, television, radio, print, and computers. Students are given multiple opportunities for hands-on experimentation with image capturing mechanisms and exposure to a wide variety of computer software applications. During this phase of instruction we have noticed that male students are more apt to easily gravitate toward, and master the equipment quicker, while some of our female students initially hesitate before they begin to experiment. We have also noticed that with a gentle nudge of encouragement and additional hands-on instruction, the female students will quickly address their fears and readily embrace the technology as a new form of personal expression.

3.3 Project process, integration and outcome

The third step is total integration of phases one and two (listed above) supplemented by further exploration and development of creative thought processes resulting in a comprehensive, multi-disciplinary project. To effectively meet the stated goals, students are provided with the opportunity to create individualized projects that they can claim ownership of, and share with their classmates. To help students learn to self-evaluate and edit, progress and project critiques are scheduled on a regular basis using the SmartBoard technology. There is no doubt that students seem genuinely captivated and motivated when they have the opportunity to create an original expression.

4 The projects

4.1 3rd, 4th and 5th grade media arts and studies projects

In addition to building upon age-appropriate cognitive skill levels, our goals for student learning and enrichment cover three basic developmental and learning areas. First, we want to provide a learning environment that enables the student to continuously hone the necessary skills required to use available technology as a means of expression and communication. The second objective of our strategy is to familiarize the students with the coded language and subversive and overt objectives of media producers and help them learn to use this knowledge as a basis for making informed decisions regarding their specific media choices. On a regular basis we employ multiple strategies based upon the foreign language classroom for teaching the media's coded language including vocabulary lists, implementation of user specific vocabulary terms, and insist that students use technology driven and image making verbal descriptions when communicating with one another in the media arts and studies classroom. We provide ample opportunities for students to make and develop emotional connections by promoting the integration of topics, tools, and processes within their individualized project outcomes. Our primary goal is to train the student to simultaneously see, conceive, create, emotionally connect with, and interpret his/her surroundings and experiences will use the technology to communicate their feelings and ideas about these connections.



3rd grade

At the beginning of the fall semester, third graders were given an overview of the intended media arts and studies classroom project that would coincide with a scheduled homeroom sponsored, daylong field trip to Henry Ford’s “Greenfield Village,” a 90-acre outdoor museum featuring more than 300 years of history.



Figure 2: Student portraits taken by 3rd grade students for their Henry Ford–Greenfield Village Microsoft Word Publication.



Figure 3: Example of 3rd grade student digital photography for the Greenfield Village publication.

There are multiple learning opportunities created for the “My Trip to Greenfield Village” book project and include student created sepia toned author’s portraits and accompanying biographies, snapshots and descriptive narratives designed to be composited in an eight page Microsoft Word book publishing template. Prior to the daylong field trip students were instructed in digital camera handling and operation, basic camera framing and image

capturing techniques, and camera and image making specific vocabulary words. The students were given digital cameras and required to practice capturing images and encouraged to think about the various ways they could control image composition, size, and point-of-view. Students were exposed to turn-of-the-century photographic principals including longer exposures, plates versus film and digital capture, and sitter's demeanour. In addition, applicable terms for manipulating images to suggest the turn-of-the-century authenticity were introduced such as sepia, toning, contrast, brightness, oval masks, and cropping.

During the actual fieldtrip students created sepia toned portraits of one another (figure 2) and captured digital images of their tour experiences (figure 3). These images were then uploaded using ArcSoft Photostudio software, manipulated, and saved to their student folders stored on the shared server and later inserted into the Word template.

4th grade

Fourth graders were given an overview of the intended media arts and studies classroom documentary-style production that would emphasize and coincide with Cranbrook Art Museum's "100 Treasures" exhibit. There are multiple interdisciplinary student learning experiences that were designed for this project including the introduction to selected Cranbrook affiliated artists and their artwork, and the overriding conceptual principals behind documentary creation.

Prior to actually gathering images and interviews for the documentary, students were instructed in digital camera handling and operation, basic camera framing and image capturing techniques, and camera, image making, and documentary specific vocabulary terms. The students were given digital still cameras and required to practice capturing images of various aesthetic compositions, upload, log, and evaluate their images. To help prepare for the gathering of the actual documentary materials, the students were asked to sketch storyboards and describe the accompanying voice/over, music, and sound effect that would be heard on the soundtrack (figure 5).



Figure 4: 4th grade student practice storyboard.



The finished documentary-style project will include student captured digital still images and digital video of the artists during interview situations. The artist interviews occurred in the Brookside library (figure 6), at the museum exhibit opening, and via the Internet. Students visited the museum, wrote interview questions and took turns asking the artist about his/her schooling, family life, art styles, and influences. While some students were interviewing the artists and/or education curator, others were documenting the events using Sony Mavica digital still cameras, Sony mini-DV handycams, and sketchpads (figure 7).

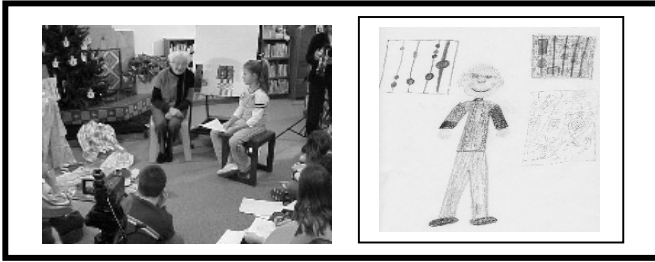


Figure 5: 4th grade students interview Cranbrook artist, Ruth Adler-Schnee. Note some students are drawing the interview, some are taking still images, and some are capturing the interview in video.



Figure 6: Digital still images captured by 4th grade students. (a) Samples of the artist's work. (b) Student drawing the interview with the artist.

5th grade

Fifth graders were given an overview of the intended media arts and studies production of a digital yearbook designed to further promote the emotional connecting by capturing their memories at Brookside on an interactive CD-Rom. There are several interdisciplinary student learning opportunities occurring within this project including pre-conceptualization using standard storyboarding techniques, digital image capturing and manipulation, sound design and voice-over recording, and hands-on experience using VR Worx 2.0, HyperStudio 4.0, ArcSoft Photostudio, Super Duper Music Looper, and Microsoft Word software. Students were also instructed in image composition, aesthetic principals, and digital specific vocabulary.

Each student's contribution to the CD-Rom consists of a series of portraits taken by their classmates (figures 7 and 8) supplemented by the student's voice-over describing their reasons for choosing this particular 'favourite' location and accompanied by an original soundtrack. Another element created by each student is a panoramic visual time-line of seven images documenting their 'favourite' grade-level experiences. The finished production will be screened at the 5th grade graduation dinner and a copy of the CD-Rom will be given to each family.



Figure 7: Fifth grade student digital portraits for "Brookside Memories CD Rom".



Figure 8: Fifth grade student digital portraits for "Brookside Memories CD Rom".

5 Conclusion

In conclusion, elementary school educators should strive to become more cognizant of the media surrounding and influencing our children. Acknowledging the existence of the wizard behind the curtain is a beginning, and teaching our children to become more like the wizard is our goal.



References

- [1] Hartley, John. *Communication, Cultural and Media Studies: The Key Concepts* (3rd ed). NY: Routledge, 2002.
- [2] Hyerle, David. *Visual Tools for Constructing Knowledge*. Alexandria, VA: Assoc. for Supervision and Curriculum Development, 1996.
- [3] National Institute on Media and the Family. <http://www.mediafamily.org/facts>
- [4] Norton, Priscilla, and Karin M. Wiburg. *Teaching With Technology: Designing Opportunities to Learn* (2nd ed). Belmont, CA: Thomson Wadsworth, 2003.
- [5] Restak, Richard, M.D. *The New Brain Modern Age is Rewiring Your: How the Mind*. Rodale Press, 2003.
- [6] Restak, Richard, M.D. *Mozart's Brain and the Fighter Pilot: Unleashing Your Brain's Potential*. NY: Harmony Books, 2001.
- [7] Sturken, Marita and Lisa Cartwright. *Practices of Looking: An Introduction to Visual Culture*. Oxford: Oxford UP, 2001.
- [8] Sylwester, Robert. *A Celebration of Neurons: An Educator's Guide to the Human Brain*. Alexandria, VA: Association for Supervision and Curriculum Development, 1995.
- [9] Walsh, David. *Media and the Mind: A Frank Discussion About the Media's Influence on Your Child's Development*. National Institute on Media and the Family, 1997.

