Art Education, Collaboration and the Internet

Craig Roland, The University of Florida

Paper presented at the 2003 National Convention of the National Art Education Association, Minneapolis, Minnesota.

As the Internet finds its way into more and more art classrooms, many art teachers are left wondering how to make best use of its capabilities and resources in their curriculums.   While there are a number of ways to use the Internet in teaching art (Greh, 2002; Prater, 2001; Heise and Grandgenett, 1996; Koos and Smith-Shank, 1996; Keifer-Boyd, 1996), some of the most powerful applications involve students taking part in online projects and classroom activities that foster interaction and collaboration within and across contexts. If you're an art teacher who's interested in pursuing student-centered, curriculum-based projects on the Internet, you'll find that such opportunities abound.   The only technology you need to get started is an email-program, a Web browser and a computer connected to the Internet. The following information will help you to develop appropriate strategies and to make good choices in achieving your curriculum goals.

Types of Online Projects

Online curriculum-based projects come in many different forms. They can be as simple as having teams of students in the same class search pre-selected online resources for answers to questions posed in a virtual treasure hunt or as complex as having students in different schools work on a social action project together and then publish their concerns, ideas and activities on a companion Web site. Although online curriculum-based projects may vary in design, focus and commitment, they tend to share certain features:

- They are authentically driven, inquiry-based activities in which students are expected to make use of the Internet in some way to attain certain learning outcomes.

- They usually require students to engage in collaborative work and research to achieve the desired outcomes.

- They often are built around a specific idea or theme, typically occur during a set time period, and frequently result in a product of some kind.

- They may focus on a specific subject area or integrate several subject areas.

- Many involve communicating, sharing, and working in partnership with students and teachers from different geographical locations, backgrounds and cultures.

In her book, *Virtual Architecture, Designing and Directing Curriculum-Based Telecomputing*, [1] Judi Harris (1998) suggests that curriculum-based projects involving online collaboration with distant partners or research using remote resources typically focus upon at least one of three primary learning processes: interpersonal exchange; information collection and analysis; or problem solving. Within each of three broad categories, she further identifies a number of different "activity structures" that teachers can use to design curriculum-based projects in which online tools and resources are used in educationally worthwhile ways. The following table describes these processes and structures:

Types of Online Curriculum-Based Projects *

Learning Process	Description	Activity Structures	Supportive Tools
Interpersonal Exchange	Individuals talk electronically with other individuals, individuals talk with groups, or groups talk with other groups.	Keypals, global classrooms, electronic appearances, tele-mentoring, question-and-answer activities, impersonations.	E-mail, asynchronous group discussion tools, Web chat, audio or video-conferencing tools.
Information Collection and Analysis	Activities involving collecting, compiling, and comparing different types of interesting information.	Information exchanges, database creation, electronic publishing, telefieldtrips, and pooled data analysis.	E-mail, Web browser and authoring tools, video-conferencing tools, Web chat, digital camera, scanner.
Problem Solving	Activities that promote critical thinking, collaboration, and problem-based learning.	Information searches, peer feed-back activities, parallel problem solving, sequential creations, telepresent problem solving, simulations, social action projects.	E-mail, Web browser and authoring tools, video-conferencing tools, Web chat, digital camera, scanner.

* based on the work of Judi Harris (1998)

Harris points out that these categories are not mutually exclusive and that some of the more successful educational undertakings incorporate aspects of all three. She further states that although the structures identified within each category may be helpful in designing curriculum-based educational telecomputing activities, teachers must decide whether the use of Internet tools and resources in a particular situation is "worth it." In making this determination, Harris suggests teachers consider two questions:

1. Will this use of the Internet enable students to do something they couldn't do before?

2. Will this use of the Internet enable students to do something they could do before, but better?

If the answer to both of these questions is "no," then here is no reason to use Internet tools and resources in this particular way.   If students can achieve the desired outcomes just as well or better with traditional tools and approaches, it's not worth the time and effort to use the new tools.

Getting Started

Harris' model provides a comprehensive look at the variety of options available to teachers who are interested in pursuing student-centered, curriculum-based projects on the Internet.   Still, with so many choices, the question remains "Where do I get started?"

Success in integrating the Internet and related new technologies into a school art curriculum depends as much upon the readiness of the teacher as it does on the readiness of students. If you feel a little shaky about introducing your students to the Internet, you may find security in beginning with a small group of students in an after-school situation, with a class of students already familiar with computers and the Internet, or with a lesson you've previously taught that lends itself to online learning.

It is unnecessary, or even unwise, to change your entire method of teaching or alter large segments of your curriculum all at once to accommodate the Internet–or any technological innovation for that matter. You need to allow yourself some time to get familiar with the Internet as well as the computer hardware and software you're using, in order to avoid any technical problems or frustrations when implementing an online project. Once you

are comfortable with the technologies involved, you will be in a better position to decide what kinds of online projects you wish to pursue with your students. With this in mind, let's look at a few alternatives.

Interpersonal Exchange: A Starting Point

Perhaps the most natural way for art teachers to make immediate use of the Internet as a medium for classroom learning is by arranging student art exchanges with other schools around the globe. Work completed with traditional art materials may be sent via postal mail or scanned and transmitted electronically over the Internet. Work done with the aid of a computer may also be sent over the Internet. Such exchanges typically involve students in each location creatively responding to a common theme and then sharing the resulting work with the other school(s) involved in the project. This activity can also be combined with an e-mail exchange to provide a richer learning experience for students.

Art students can use e-mail to exchange personal views, experiences and information with their peers around the world. This is a simple classroom activity, but one that can reap valuable educational benefits. It involves electronically linking individual students or groups of students of similar age across geographic boundaries for the purposes of sharing ideas, experiences, and information. Online projects built around e-mail exchanges can range from having individual students swap personal messages with their distant partners (known as *KeyPals*) to having two or more classrooms in different locations study a selected topic together during a specified time period and then meet online to exchange views and share information (known as *Global Classrooms*). The following examples illustrate how the Internet can be used to initiate, manage, and promote student art exchanges between schools:

Art Across America
In this ambitious project, a Wisconsin art teacher worked with her eighth-grade class to arrange a national exhibition of student artwork at her middle school in conjunction with Youth Art Month. A call for submissions was initially posted on the Getty's *ArtsEdNet Talk* listserv (www.getty.edu/artsednet/Talk). The resulting exhibition, entitled "Art Across America," included 70 pieces from 35 schools in 30 states and Iceland. A traveling version of the exhibition toured all participating schools over a two-year period (Bolyard, February 2001).

Art-e-bytes Virtual Gallery
www.education.monash.edu.au/resources/peninsula/art-e-bytes
This website showcases the results of several creative art collaborations between students at Monash University and other interested participants from around Australia and overseas. Some of the projects involve sequential creations with different media and technologies. (Burke and Jaeger, 2000).

My Place Asia Australia
www.curriculum.edu.au/accessasia/myplace
This project is an educational exchange between Australian schools and their counterparts in China, Japan, Korea, India, Indonesia and Vietnam. Students in the participating schools are asked to create visual artworks reflecting their ideas, feelings and beliefs about places of significance in their lives and write an accompanying short story. The artworks and the translated stories are mounted and laminated to form a series of traveling exhibitions that are shown in participating schools and other community venues.

Electronic Postcards

Second grade students in Fort Worth, Texas and in Los Angeles, California studied David Bates painting "Grassy Lake" and then used the software program KidPix ™ to create electronic postcards about where they lived. The e-cards were then exchanged between the two schools over the Internet. ("Electronic Postcards Link California & Texas Schools," ArtsEdNet OFFLINE Newsletter, The Getty Education Institute for the Arts, Winter 1999, 11, p.10.)

The Talking Heads Project

www.curriculum.edu.au/accessasia/talkingheads

In this intergenerational project, students are invited to create a visual portrait of an older person and to record that person's memories. When a number of Talking Heads portraits are displayed, they constitute a fascinating gallery of imagery and social history, providing wonderful opportunities for learning and discussion activities.

The easiest way to initiate a classroom exchange is by recruiting other teachers through an online discussion group or mailing list. Once participants are identified, logistical issues and other matters related to the exchange can be handled through e-mail. There are also a number of places to go to on the Web where you can find teachers and schools who are willing to participate in a joint classroom e-mail project or student art exchange. A list or these sources are provided at the end of this article.

WebQuests: Promoting Online Research in Art

The use of the World Wide Web as a tool for conducting remote research in the classroom opens up new avenues for supporting student learning in art—particularly in the areas of art criticism, art history, and aesthetics. The Web offers instant access to catalogs and archives of many of the world's major libraries, electronic galleries of professional artwork, the collections of world-class art museums, online art journals and newspapers, art reference services, art professionals, image archives, and much more. With an Internet-connected computer and a Web browser, students can tap into these global resources in combination with local research tools and traditional print resources like the school library and art journals or textbooks when doing research projects for art classes.

Students need to learn how to gather information on the Internet and then to synthesize it for class research projects. Allowing students to wander aimlessly through cyberspace consumes valuable classroom time and raises the possibility that they will access offensive or inappropriate materials along the way. One of the best ways to maintain control over the content students access via the Internet and ensure that their online classroom time is well spent in meaningful and guided activities is through the use of WebQuests.

WebQuests are designed as classroom inquiry-oriented activities "in which some or all of the information that learners interact with comes from resources on the Internet" (Dodge (1996). *Some Thoughts About Webquests*. http://edweb.sdsu.edu/courses/EDTEC596/About_WebQuests.html). They frequently entail collaboration among students within the same classroom who work with partners or in small groups to complete certain tasks.

WebQuests make the most of students' time on the Internet by engaging them in learning activities requiring an array of higher-order thinking skills. These activities typically revolve around six attributes including: (1) an introduction; (2) a "real world" task that is challenging and interesting; (3) a set of information resources needed

to complete the task; (4) a description of the process to go through to accomplish the task; (5) helpful pointers or guidance in organizing the information acquired; and (6) a closure activity in which students share and assess what they have learned.

Due to its authentic nature and broad applicability, the WebQuest model is one of the most documented strategies for integrating the Web with existing curriculum goals. There are literally thousands of WebQuests available on the Internet covering most school subject areas. The following WebQuests show how this model can be used to promote student learning in art:

The Art Historian
cte.jhu.edu/techacademy/web/2000/saldana
Students work collaboratively to research and present the key components of an art movement.

Gallery of Art-i-facts
www.teachtheteachers.org/projects/PWalker2
Students work in teams to plan an art gallery for a museum.

Guerrilla Girls WebQuest
members.door.net/webquest/GG_2x.html
Students research the Guerrilla Girls, an art activist group, and the issues that they raise in their work concerning discrimination.

Innocent or Guilty? Deciding the Fate of Sherrie Levine
www.artjunction.org/projects/levine_on_trial
Students decide the fate of Sherrie Levine, a contemporary artist known for appropriating other artists' works.

Jacob Lawrence: Exploring Stories
www.whitney.org/jacoblawrence
The Whitney Museum of American Art offers an excellent collection of WebQuests that explore various themes associated with the work of Jacob Lawrence.

Picture It! Museum WebQuest
www.kn.pacbell.com/wired/fil/pages/webarthistma1.html
Students work in groups to select four artworks for a classroom collection.

Taking the Plunge: Getting Involved in a Telecollaborative Project

Harris (1999) describes a *telecollaborative activity* as "an educational endeavor that involves people in different locations using Internet tools and resources to work together" (p. 55).   Most educational telecollaborations are designed and coordinated by teachers, and most use e-mail to facilitate communication between participants. Although the educational benefits vary depending on a telecollaborative project's purpose and design, in general they enable participating students to encounter multiple perspectives and expand their global awareness both of which are vital in constructing their own knowledge of the social world and of their place within it.

There are essentially two approaches to participating in a telecollaborative art project with your students. You can either join an existing online project or you can initiate one yourself. If you are just beginning to explore the Internet with your students, participating in an ongoing and well-established project offers a convenient way to become acquainted with the logistical components of online collaboration. Once you've tested the waters, you'll be in a better position to consider what sort of telecollaborative project you might start from your own classroom.

There are a number of places to go on the Web to find current and ongoing art projects. Many telecollaborative projects have their own Web sites where you can familiarize yourself with a project's participation requirements and register your class if you decide to take part.   There are also organizational sites that have large project registries that can be searched by subject area, grade level, time frame, and project type. Some of the more popular organizational sites are listed at the end of this article. For now, let's look at some ongoing telecollaborative projects that that can easily be incorporated into a school art program:

The Art Miles Mural Project
www.kids.state.ct.us/spotlight/mural/intro.htm
Students are invited to create murals that will be inked together with murals created by students from all over the world.   Also see the Art Miles Mural Project homepage at: www.the-art-miles-mural-project.org.

Community Stories
www.artjunction.org/projects/communitystories
Community Stories invites teachers and students to identify and investigate global forces, noteworthy individuals, important events, cultural influences, and other factors that have shaped their local communities in the past or the present. Based on this research, participants can create works of art, writings, Web sites, zines, or other creative expressions that communicate stories of their community. These works can then be shared with a worldwide audience through the project's website.

Earth Day Groceries Project
www.earthdaybags.org
The Earth Day Groceries Project is a cost-free environmental awareness project that teams up youth and grocers to spread the message of Earth Day. To participate, teachers simply borrow paper grocery bags from a local grocery store. Students decorate the bags with environmental messages about reuse, recycling, wildlife, or related themes. The bags are then returned to the grocery store on Earth Day, April 22 of each year where customers receive their groceries along with the message that kids care about our environment.

Empty Bowls Project
www.emptybowls.net/EmptyBowlsProject.htm
Participants create ceramic bowls, then serve a simple meal of soup and bread. Guests choose a bowl to use that day and to keep as a reminder that there are always Empty Bowls in the world. In exchange for a meal and the bowl, the guest gives a suggested minimum donation of ten dollars. The meal sponsors and /or guests choose a hunger-fighting organization to receive the money collected.

KidCast for Peace

creativity.net/kidcast2.html

This virtual event is scheduled each year to take place on Earth Day, April 21. Children of all ages come together to share their art live, and direct persons to their pre-built "KidCast For Peace" Web sites, VRML worlds, chat rooms, Interactive Music spaces, and so on. Depending on the time zone, children at each participating site responds to comments and questions from gathered local and cyber audiences. CU-SeeMe Internet videoconferencing software is used to enable real-time interaction between participating sites.

Monster Exchange

www.monsterexchange.org

In this popular e-mail project, students are asked to create original pictures of monsters and to write descriptions of their monsters. These descriptions are then exchanged online with students in another classroom who are challenged to retranslate them into monster pictures of their own. The written descriptions, original monster pictures, and redrawn monster pictures are scanned and uploaded to the project's Web site using the browser-based Monster Gallery Builder. Students and teachers can also take advantage of chat rooms and discussion boards for further conversation and feedback about the project.

ThinkQuest

www.thinkquest.org

ThinkQuest is an international competition that encourages students in grades 3-12 to work in teams to create content-rich, educational websites. A team may consist of as many as five students and two adult coaches. Students are encouraged to form teams over the Internet with students from other schools or countries who have different interests, skills and cultural backgrounds. ThinkQuest teams draw upon each member's individual strengths and skills to complete a Web-based educational project that they design for themselves. Teams can also participate in an online ThinkQuest community of students and educators who come together to share information and to assist each other.

Since its inception in 1995, over 100,000 students and teachers from 125 countries have participated in ThinkQuest, making it one of the world's most successful educational technology programs. All contest entries are uploaded to the ThinkQuest Web server and are freely available for classroom use. The resulting ThinkQuest library (www.thinkquest.org/library.html) of approximately 6,000 websites is an extremely popular educational resource that includes Web sites in most subject areas. The following is a small sample of art-related ThinkQuest websites from previous years' competitions:

> **Altered Images**
> 1998 ThinkQuest Internet Challenge
> library.thinkquest.org/15044
> This site shows how to alter and enhance digital images. It also explores the moral dilemmas that may be encountered in the digital-imagining process.

The Contemporary Art Experience

1999 ThinkQuest Internet Challenge

library.thinkquest.org/26183

Learn about contemporary women artists and their work.

From Pokemon® to Picasso, Art Rights and Wrongs

2000 ThinkQuest Junior Contest

library.thinkquest.org/J001570

This site teaches students the importance of getting permission to use copyrighted material on their Web sites. [2]

What other prospects for online collaborative art projects exist?

In addition to organizing long-distance art projects with other schools, you might explore the possibilities of local collaborative arrangements with an art museum or an art professional working in the field. These joint ventures might involve classroom visits to a nearby art museum or artist studio followed by students constructing a Web site to report on what they have learned.   Then again, the Internet might be used to bring art museum professionals or artists into the classroom, virtually speaking, to teach or mentor students, to exchange ideas, or to work with you and your students on a curriculum-based project.

Many art museums have turned to the Internet to expand their outreach to schools. In addition to providing online access to their collections and special educational resources, some art museums have formed partnerships with local schools to support curriculum goals and enhance student learning. The following Web sites exemplify this type of work:

Hoffer Elementary School

cmp1.ucr.edu/exhibitions/hoffer/hoffer.homepage.html

Meet students from Hoffer Elementary School and browse through several online exhibitions of their artwork made with traditional materials and new technologies. The work displayed on this site is the result of a partnership between the school and the UCR/Museum of Photography.

Visual Knowledge Program

www.vkp.org

The Visual Knowledge Program (VKP) is an educational outreach and curriculum development program based at the New Museum of Contemporary Art in New York City. Since 1984, VKP has paired professional artists with high school teachers and their students on a semester-long basis, with the goal of exploring new ways to integrate contemporary art with high school curricula.

Youth2Youth

www.youth2youth.org

On this site, teens in the Youth Insights program at the Whitney Museum of American Art share their knowledge and opinions on American art and culture with other young people around the world.

Formal and informal, face-to-face and online exchanges between students and artists or other working professionals can serve to meld the classroom with the world outside the school's walls, and are excellent ways to supplement the curriculum with current information. The following projects exemplify this type of work:

Interview with Jim McNeill–Tessellation Artist

www.art.unt.edu/ntieva/news/vol_9/issue3/inter.htm

Fifth-grade students in Forth Worth, Texas studied the tessellation work of New Jersey artist Jim McNeill and formulated a series of questions that were sent to him and subsequently answered through e-mail. The students then used McNeill's answers to write a collaborative article that was published online and in the January 2000 issue of School Arts Magazine. (Geiger Stephens and Walkup, January 2000).

Lynne Yamamoto

www.ps1.org/yamamoto

This unique Web site is the result of a collaboration between students at the Robert F. Wagner Jr. Institute for the Arts and Technology in Long Island, New York, P.S.1. Contemporary Art Center in New York City, and artist Lynne Yamamoto.

Spin City

www.photonet.org.uk/programme/projects/sohoweb/spintro.html

This online exhibition is the result of a collaborative project between The Photographers' Gallery and Soho Parish Primary School in Westminster, England.   Over fifty children, ages 9 to 11, worked with artist Erika Tan during the summer, using photography and collage to explore and piece together their own images of the areas in which they are growing up.

Planning and Coordinating Your Own Telecollaborative Project

Once you and your students have participated in an online art project (or two), you're ready to expand your Internet skills by planning and running your own telecollaborative art project. As with developing any unit of study or classroom project, it is important to take into account a number of aspects in order to provide a productive learning experience and to ensure that the logistical components of the project are manageable. Some things to consider when planning a telecollaborative project include:

- **Keep your first project simple**. For example, if you only have one computer with an Internet connection available, an e-mail project is a good starting point.

- **Know your technology**.   Make sure that both you (and your students) have practiced using the hardware and software that will be used in the project beforehand.

- **Consult local experts**. Ask for advise from teachers in your school who have done online projects with their students.

- **Talk with participating teachers**. Confer with teachers who have agreed to take part in the project so as to make certain of their intentions and that they don't anticipate any problems that might hinder or prevent their participation.

- **Get assistance**. Recruit and train responsible students to facilitate the project or enlist a local parent with Internet experience to assist in the project.

- **Locate your resources**. Hunt down any online and local resources (such as books, prints, CD-ROMs, experts, and so on) to be used in the project. Confirm their availability.

- **Don't forget PR**. Inform administrators and local news media of the project's existence and the students' accomplishments.

Harris (1998) recommends that teachers proceed through the following eight steps when planning and coordinating a telecollaborative project:

Step One: Choose your curriculum goal(s). The purpose of any technology initiative in the classroom should be to support or enhance student learning and performance. Thus, be sure that the learning outcomes of any planned online project are linked directly to your curriculum goals and that they cannot be accomplished, or not as easily, using more traditional teaching and learning tools.

Step Two: Choose an activity structure. Decide if your project will involve: (1) an interpersonal exchange (e.g., an online conversation between students in different schools via e-mail or a Web-based discussion board); (2) information collection and analysis (e.g., students gathering certain art-related information and then creating a Web page or online database to publish the results of the project); or (3) problem solving (e.g., students in different schools responding the same art problem or participating in a social action project together). Remember that while these structures may be used independently, you can also combine them when designing an online project. [3]

Step Three: Explore other online projects. Once you've chosen an activity structure, review other online projects that use a similar format or theme.   Seeing how other teachers describe and organize online projects can be helpful at this stage of the planning process.

Step Four: Determine the details of your project. Write a comprehensive description of your project that includes such details as: its title and purpose; content area(s) addressed; procedures and related tasks involved; technology requirements; desired number and grade level of participants; time frame; expected outcomes; organizer's e-mail address; registration information; and any additional information deemed appropriate. The more specific you can be, the better. [4]

Step Five: Invite others to participate in your project.   In order to advertise your project on the Internet, you need to write a brief description of it along with contact information and then post it on a mailing list (such as ArtsEdNet Talk) frequented by other art teachers or on a project directory, such as available through Art Junction (www.artjunction.org) or the Global Schoolhouse (www.gsn.org).

Step Six: Form Your Telecollaborative Group.   As you receive responses from potential participants, send each a copy of the project description you prepared in step four and the deadline for registering by return e-mail.   It may be useful to create a uniform registration message that asks for such things as the teacher's name, school name and location, number and grade level of students that will be involved, available technology, and any additional information deemed appropriate. This message can be saved as a word document on your computer and then sent as an attachment to interested teachers.

Depending on the nature and scope of the proposed project, it may be necessary to limit the number of classrooms involved. If you receive more registrations than you think you can handle, send an apology to those teachers who you decide won't be able to join. If you plan to run the project next year, you might want to ask them for permission to keep their e-mail address so that you can inform them of the starting date for the project next time around.   You also might want to have a few stand-by participants, in case someone drops out.

Before the project begins, it is a good idea to confirm that all participants can do what the project requires. Consider doing a test run in order to make sure of all participants' capabilities.

Step Seven: Communicate! Once the project begins, you role changes from one of planner to facilitator. Some general tips for running an online project include:

- Distribute periodic progress reports and reminders of upcoming deadlines to all participating teachers via e-mail.

- Be open to unforeseen events and be willing to make adjustments if necessary. Inform everyone immediately of any changes you make in deadlines or requirements.

- Offer technical assistance when you can, particularly to those teachers or students who are new to online collaboration.

- Keep online discussions on track and focused on the chosen topic or task at hand.

- Send out thank-you messages freely. Acknowledge exceptional contributions to the project.

- Include the names and e-mail addresses of every teacher involved in the project in all e-mail you send out.

Step Eight: Create closure. It's essential that your online project end with a final completed product (such as a virtual gallery, written report, or public presentation) that can be shared with all participants either through a Web site or a traveling exhibition which is sent to all the schools involved. After all the planning, collaboration, and hard work that everyone have expended, there should by an opportunity for all participants to benefit from what has been accomplished and to share it with others in their location.

Allow time for post-project informal exchanges between participants (both teachers and students) that enable them to share their perspectives on the project and to offer suggestions for improving the project if it is to take place again. Incorporate a selection of these responses into a written summary of the project to all project participants as well as your own school administrators.   Lastly, and perhaps most importantly, send out a personal "thank you" message to each participant and raise the possibility of working together in the future.

A Final Thought

One of our biggest challenges as art educators today is to prepare our students to live and work in the digital communication age. While the Internet and other emerging technologies offer students many unique and significant opportunities to engage in new forms of creative expression, learning, and interpersonal communication, we must not overlook our most important responsibility which is to teach students to use the tools they have available to think, to imagine, to create, to play with ideas, to explore, and to feel what it means to be human. As art educators, seeing to it that this kind of authentic learning takes place in our classrooms may be the greatest investment we can make in our students' future.

Footnotes

1   See the companion Web site for Judi Harris' book, *Visual Architecture – Designing and Directing Curriculum-Based Telecomputing* (1998) at http://virtual-architecture.wm.edu.

2   To get a teacher's perspective on the development of this ThinkQuest project, see *Art Rights and Wrongs: Learning about Copyright on the Internet*, by Neme Alperstein on the PBS Teacher Source Web site at http://www.pbs.org/teachersource/whats_new/techknow/july00.shtm.

3.   For examples of each of these three activity structures, see Chapter 2 of Judi Harris' book, *Visual Architecture – Designing and Directing Curriculum-Based Telecomputing* (1998) at http://virtual-architecture.wm.edu/Telecollaboration.

4.   For some helpful tips on designing an online project along with a useful planning template, see Al Rogers and Yvonne Andres' 1995 article, *How to Design a Successful Project* at http://gsh.lightspan.com/teach/articles/design.project.html.

References

Bolyard, M. (February 2001). Art across America. *School Arts*, 100 (6), 19.

Burke, G. & Jaeger, N. (2000). *Collaboration: From analogue to digital & back.* Paper presented at the 1999 World Congress of the International Society for Education through Art (InSEA). ERIC Document Reproduction Service No. ED451081.

Geiger Stephens, P. & Walkup, N. (January 2000). Connecting with an artist. *School Arts*, 99 (5), 46-50.

Greh, D. (2002). *New technologies in the artroom*. Worchester, MA: Davis Publications, Inc.

Harris, J. (1999). First steps in telecollaboration. *Learning & Leading with Technology*. 27 (3), 54-57.

Harris, J. (1998) *Visual Architecture – Designing and Directing Curriculum-Based Telecomputing*, Eugene, OR: International Society for technology in Education. **

Heise, D. & Grandgenettt, N. F. (1996). Perspectives on the use of Internet in art classrooms. *Art Education*, 49 (6), 12-18.

Keifer-Boyd, K. T. (1996). Interfacing hypermedia and the Internet with critical inquiry in the arts: Preservice training. *Art Education*, 49 (6), 33-41.

Koos M. & Smith-Shank, D. L. (1996). The world wide web: Alice meets cyberspace. *Art Education*, 49 (6), 19-24.

Prater, M. (2001). Constructivism and technology in art education. *Art Education*, 54 (6), 43-48.

** *Special thanks to Judi Harris for giving permission to cite her work in this article.*

Web Resources

The following sites provide helpful information on promoting collaboration in the classroom, both on and off the Internet:

Cooperative and Collaborative Learning
Concept to Classroom: A Disney Learning Partnership with Thirteen/Ed Online
www.thirteen.org/edonline/concept2class/month5
An online professional development workshop on how using small, cooperative groups can help improve learning in the classroom.

Electronic Collabration: A Practical Guide for Educators
www.alliance.brown.edu/pubs/collab/elec-collab.pdf
This comprehensive guide features an 11-step process for making online collaborative projects successful.

The Essential Elements of Cooperative Learning in the Classroom.
by Robert J. Stahl (1994)
www.ericfacility.net/ericdigests/ed370881.html
This Eric Digest article covers the essential elements for setting up and having students complete group tasks within a cooperative learning framework.

What Is the Collaborative Classroom?
by M.B. Tinzmann, et al. (1990).
www.ncrel.org/sdrs/areas/rpl_esys/collab.htm
This NCREL article describes the characteristics of collaborative classrooms, summarizes relevant research, addresses issues related to changing student and teacher roles, and give examples of a variety of methods and practices that embody these characteristics.

The Web Project
www.webproject.org
The WEB Project is a non-profit organization devoted to innovative, project-based learning in the arts, humanities, and social sciences by people of all ages through collaboration, community engagement, and technology.

NickNacks Telecollaborate!
telecollaborate.net
This site is full of helpful strategies and resources for developing and participating in telecollaborative projects.

To learn more about WebQuests, visit the following sites:

The WebQuest Page
edweb.sdsu.edu/webquest
This site offers a huge collection of links to WebQuests organized by subject and grade level, as well as articles, training materials and helpful tips on how to design your own WebQuests.

WebQuests 101: Tips on Choosing and Assessing WebQuests

by Tom March, MultiMedia Schools • October 2000

www.infotoday.com/MMSchools/oct00/march.htm

This article explores the subtleties of identifying, creating and using WebQuests in the classroom.

WebQuests For Learning

by Tom March (1998)

www.ozline.com/webquests/intro.html

An introductory article by one of the original authors of WebQuests.

There are a large number of organizations with Web sites designed to support teachers interested in using the Internet to arrange online projects between their students and those in other schools. A few of the more popular sites that provide this type of service include:

Art Junction

www.artjunction.org

Art Junction is dedicated to exploring ways of using the Internet to promote various forms of collaborative learning and interaction in and between art classrooms including collaborative art making, student art exchanges, debate, joint research, social interaction, and other communicative activities that are meant to foster meaningful art learning and cultural understanding.

ePALS

www.epals.com

ePALS is the world's largest online classroom community with over 3.8 million teachers and students from over 191 counties around the globe. The ePALs Web site offers an incredible number of resources, tools, and services including online project ideas, moderated discussion boards, private chat rooms, teacher-monitored Web-based e-mail and profanity filters, and instant language translators.

The Global Schoolhouse

www.gsn.org

Since 1984, the Global Schoolhouse has been a leader in online collaborative learning. Among the many resources available here is the *Projects Registry*, which offers searchable access to an extensive database of past and current projects.

iEARN

www.iearn.org

The International Education and Resource Network, or iEARN, is a nonprofit organization made up of almost 4,000 schools in over 90 countries, that encourages teachers and young people (K–12) to work together online to solve social problems and to improve the quality of life on earth. You or your school must join iEARN (for a yearly fee) in order to take full advantage of the services and resources available on the site.

Intercultural E-mail Classroom Connections (IECC)

www.iecc.org

IECC is a free online service sponsored by Teaching.com that is dedicated to helping teachers at all levels to arrange intercultural e-mail connections between their students and those in other schools. The IECC Web site offers access to several mailing lists, links to online resources, and survey forms for use in intercultural exchanges. More than 7,500 teachers in 82 countries currently participate in one or more of the IECC lists.

KIDPROJ

www.kidlink.org/KIDPROJ

KIDPROJ, a part of the KIDLINK network, offers students through secondary school opportunities to join global projects. Teachers and youth group leaders can plan activities and projects for their students by joining the KIDPROJ-COORD mailing list.

No portion of this paper may be reproduced without permission by the author. Contact Craig Roland via email at: (croland@artjunction.org).