

## **Distance Learning in Schools of Rural Vermont Online Arts Mentoring**

Fern Tavalin, Director  
The WEB Project  
University of Vermont Southeast Regional Center  
157 Old Guilford Road #4  
Brattleboro, VT 05301  
tavalin@sover.net

Penny Nolte, Coordinator  
ARTT, Art Responding Through Technology  
The WEB Project  
58 Barre Street  
Montpelier, VT  
web@sover.net

Sandi MacLeod, Coordinator  
The Vermont MIDI Project  
Founders Memorial School  
Essex Junction, VT  
smacleod@founders.k12.vt.us

Beth Hughes  
Blue Heron Designs  
Saxtons River, VT  
heron@sover.net

**Abstract: In rural states such as Vermont, it is often difficult to find needed resources in a single community. New educational concepts, new technology, and new subject content require collaboration among those who carry some experience in at least one of these new areas. With the advent of the World Wide Web and the recent technological ease of digitizing images, sounds, movement and text, these collaborations can occur at a distance. In 1995 the US Department of Education provided funds to Vermont schools via the WEB Project, <http://www.webproject.org>, to build an innovative online network of students, teachers, artists, and community organizations working together to help improve student performance in the arts, humanities, and social sciences. Online Arts Mentoring in music composition (Vermont MIDI Project) and visual arts (Art Responding Through Technology - ARTT) formed the first two groups.**

High expectations and new standards placed on rural areas with limited resources can stress a system to collapse, or they can provide the conditions needed to spark ingenuity. Arts teachers in Vermont have chosen ingenuity over collapse and throughout the course of the last five years they have built an online system for support of these new standards that remains true to the

artistic process and inspires the students, mentors, and teachers who participate. By selecting a few key learning goals in critique, problem solving, communication, and personal development, an online arts mentoring system has been built to address many national and state standards. This paper tells the history of the network's development and shows the importance of technology in meeting those goals.

## **First Exchanges -- E-Mail and Attached Files**

In 1994 the state of Vermont, like many other states, offered monies to schools so that they could build a technological infrastructure and create models for effective distance learning. While most schools were thinking of hubs and routers, a small group of music teachers were worrying about meeting a new standard for music composition. Because few of the group members had ever been taught to compose, they faced many of the same concerns that teachers in other disciplines face: how can I teach something I don't know myself? The distance learning grant provided the initial computers and keyboards necessary to begin an exploration of this question together. With accounts from America Online, teachers sent e-mail and attached MIDI files to each other and to the network coordinator. Like many other early initiatives across the country, there were more discussions about what to do and how to do it than there were actual compositions exchanged. Measurement of success was counted in terms of numbers and types of messages, with an assumption that a reduction in technology related questions and an increase in actual music exchanges would show improvement. Other national projects (quote Judi Harris work) analyzed their beginning exchanges in a similar manner.

During the initial phase of the project, January - June 1995, the only guideline established was that people would send messages. Lots of messages were sent and the quality of student compositions was understandably low, with rare exception.

That the Vermont MIDI Project had begun something cherishable dawned on participants at both ends of a telephone line in 1995. The story below describes this event (MacLeod 1998):

“In the spring of 1995 I waited with a 9 year old student in southeastern Vermont who was sending a composition to students in northwestern Vermont as part of a tech fair demonstration about a new project in MIDI Distance Learning begun the previous January. Will waited patiently while 6 adults tried to restore the school's dial-up connection so that he could mail his music. He paced quietly for the next hour while the students in Essex Junction read and responded to his composition. Will was asking them what worked well and what they thought needed improvement in his piece.

A response from Essex finally came.

*Thanks for sending your piece. Good luck at the Tech Fair. A fifth grade class at Founders Memorial School listened and sends you these comments: Erin wants to know if you play the piano. How did you know what notes to choose? Jo liked the way it climbs and falls and likes how the rhythm keeps on rolling.... Joanna thought it was very creative it had a good beat and interesting notes... Lindsey wonders if it is finished because it doesn't sound like the end. She sang a pattern that would sound good as an ending....*

Will responded with relief and a wry smile, "How did Lindsey know my piece wasn't finished?? I have been trying really hard to figure out the ending. I tried 10 things that didn't work. I can really use this." He left quite excited that someone he didn't even know had recognized his dilemma. Will wrote back again, asking for Lindsey to send him the patterns that she had made up. Even though he didn't use the exact patterns that Lindsey sent, she had given him the inspiration to finish his composition.

## **Beginning a Structure**

An unstructured exchange continued until winter of 1996 when the network participants gathered in person for a meeting to discuss what was working and what needed improvement. Student enthusiasm for music composition using MIDI tools boosted the desire to continue the network. High on the list of priorities for improvement, however, was the demand for consistency in level of response (participants who were spending time giving detailed feedback to students in other schools were getting their feelings hurt when they received cursory response to their own work) and a request for help in teaching composition. These two desires provided a basis for the original structure of what would become Online Arts Mentoring. Guidelines for feedback were drawn up in the form of a three-point scale for reflection and critique:

### Generic Rubric for Assessing Student Responses

Level 3: Accurately describes the area being discussed. Gives detailed examples, references, connections or responses to general insights. Uses arts vocabulary.

Level 2: Accurately describes the area being discussed. Uses a mix of arts vocabulary and general terms.

Level 1: Gives general comments that could apply to other situations as well as the one under discussion.

A plan to incorporate artists-in-residence into the network was also designed. A concern on the part of the coordinator that the e-mail exchanges were not resulting in any noticeable improvement to the network as a whole, but seemed isolated to those who were receiving paired responses, was put on hold until the communications technology itself improved.

## **Formalizing the Structure in an Online Conferencing System**

In the spring of 1996, the MIDI network gathered in person once more to discuss whether or not the suggested improvements were taking hold. By this point, teachers realized that the students cared deeply about the compositions and took their e-mail responses seriously, again providing the impetus to continue. Together, they articulated the need for a description of what the students were trying to do and a request for specific types of feedback so that the level of response could be at Level 2 or Level 3 on the scale designed previously.

By this point in time, the World Wide Web was becoming accessible and early Web based conferencing systems were on the market that could be adapted for the MIDI network's

purpose with some additional cgi scripting and the development of a relational database. Funding for this particular effort and a broader extension to improve student learning in the Arts, Humanities, and Social Sciences came from the United States Department of Education, Technology Innovation Challenge Grants program with the funding of the WEB Project. Federal funds and a local match gave the system the resources it needed to prototype and develop ideas that were not yet available on the open market, and the WEB Project provided a link to learning in other content areas.

Design specifications were built so that the site would deliver a web-based system that would support the learning goals of the network, provide a system of assessment of the work, and create a database for future analysis.

### **Support the learning goals**

Using a web based conferencing system meant that computerized forms could reinforce three of the emerging network agreements:

#### ***1) Describe in detail what you are trying to do.***

Rich descriptions help the viewer understand the intent of the creator. It is helpful to know the assignment that the student is working on. Supplying this information gives the responders a context from which to comment. It is also helpful to know the stage of the work such as just getting started, in the process or completed.

#### ***2) Request feedback, but be open to more than what is asked for.***

Saying what it is that you would like to have input about helps the responder to focus and give comments that are useful. That being said, a responder may also wish to give comments about some aspect of a piece that have not been specifically requested. High school students, especially, have asked that mentors use their expertise to help them stretch their imaginations and the possibilities offered.

#### ***3) Give specific and detailed comments that are based on helping a person reach his /her intent.***

The goal of the online critique process is to develop multiple suggestions for how a student can go further with his or her work. That means that those giving responses need to listen to what is trying to be accomplished rather than responding solely from personal opinions, beliefs, or taste.

These agreements translated into a form with required fields for description of work and requested feedback and provided a link to an upload form for comments. All of the comments could be viewed as running text so that students could easily review the various, and sometimes opposing, ideas of others as they chose to use specific input to refine their compositions.

### **Provide a system of assessment**

The MIDI network had already established a scoring system for levels of response. A third level of password security was built into the web design so that, should the network desire, scorers could assess the level of response of each comment. Allowances were also made to score the compositions themselves, even though a scoring system had yet to be built in 1996. To build in rater reliability, the WWW design called for three scores of a single piece of work. If all three

scores agreed, then the file was to be placed into a “scored” archive. If all three scores did not agree, then the file would be placed into a “disputed” category so that agreement could be reached or the file discarded from analysis as “unscorable.”

### **Create a Database for Future Analysis**

If the online arts mentoring system remained as dynamic as the initial activity suggested, then it would be important to gather other data during the uploading which could be used later. Fields to measure classroom behavior over time (group work and locus of control), grade level indicators, and location were added to the form. A compromise between amount of data needed for research versus the desire for unobtrusive measurements resulted in the development of radio buttons and pulldown screens for these items. Questionnaires were also developed and the results are stored in an online database. Together with the data from assessment, the information gathered from the site forms and surveys can be used to make direct statements about student learning as a result of the conferencing system. A research project concerning the development of quality in the MIDI Project is currently underway.

### **Extending the System to Visual Arts**

As the music educators and composers showed what was possible when students, artists, and mentors collaborated, their network attracted the attention of art educators who decided to adapt the music composition model to online visual arts in 1997. Thus, another initiative in Online Arts Mentoring was born (Art Responding to Technology -- ARTT), using a similar pattern of reflection and critique of student work-in-progress.

From: Lee

Organization: VT Elementary School

My name is Lee , I am a sixth grade student . I need help on my pencil drawing, I have no clue what I should do next. Do you think you could give me some help? I like this drawing alot.

Requested feedback: What can I do to the background? What should I do with the bird's chest? How can I make the values show more than they do?

Comment Excerpt From: Joan Curtis, Artist

The strength of your picture so far, I believe, is the interesting composition. The way you have arranged the close-up eagle within the picture's edges is quite powerful.... I would like to see a little more description of the feathers you are seeing.... Is it possible to be more specific with your pencil?...

Comment Excerpt From: Ken Leslie, Johnson State College Visual Arts Center

....You asked about "background." This is the place where you can add information that will tell a bit of a story. Imagine how different this same drawing would be if there were tree branches and leaves in the background, or hunters with guns, or zoo cage bars. Not one line of the eagle has changed, yet the meaning of the drawing is completely different for each of those backgrounds....

From: Lee

Thank you so much for all of your remarks. What I ended up doing is I put bars in the back so it looks like it is in a cage in the zoo.

## **Building on Research to Inform Practice**

As the Online Arts Mentoring system was being developed, similar trials were occurring across the United States in other content areas, some of which were based on dialog as well. A literature search (Sherry in press) reveals that this process follows closely what Jenlink and Carr (1996) name “design conversations” and that the processes used to organically develop the online learning community embody the qualities of active learning articulated by the REAL Project (Rich Environments for Active Learning), especially that of cognitive apprenticeship (Grabinger 1996). A WEB Project survey taken in 1998 confirms that the Online Arts Mentoring system cultivates an environment where all participants are learning from the experience.

### **Mutual Benefits Chart**

- 1. Improving their work**
- 2. Getting affirmation**
- 3. Seeing range of examples**
- 4 giving critical feedback**
- 5. Learning to use technology**
- 6. Giving curriculum examples**
- 7. Better understanding the educational system**
- 8. Learning more about students**

Teacher researchers have been developing systems to decrease the learning time that has been involved in addressing new standards, higher expectations, and the use of telecommunications to improve student learning. Through a University of Vermont course on Action Research, the current MIDI coordinator has designed a professional development process for music (MacLeod et. al 1998) which has also been transferred to the visual arts (Tavalin et. al 1999). The characteristics of these processes include a mix which balances skill development, critical input on work in progress, and a learning environment in which all participants contribute and learn from each other.

## **Looking Toward the Future**

With the advent of Online Arts Mentoring, Vermont's teachers and students are given a portal through which they find access not only to each other, but to working artists and community arts organizations where professional collaborations and even personal friendships can blossom and grown. The use of asynchronous threaded discussions for critique of student work online has provided teachers with a resource that is there when they need it, while community organizations and mentors, <http://www.vaae.org/studios.html>, have gained contact with young artists starting their explorations of the field, and access to new technologies which would have been out of reach financially for them to invest in individually. During the 1999 spring gathering, network participants listed what is currently working well in the Online Arts Mentoring and what needs improvement.

### **What is working:**

- A developing sense of community among the teachers, students and artists/mentors
- A high level of enthusiasm amongst students
- A high level of exchanges about the postings. Students increasingly use arts vocabulary with precision to communicate abstract ideas
- Behind-the-scenes and online discussions about possibilities, planning, actions, problems
- System addresses creation as a process: 'The creative process,' rather than creation as an event

#### **What needs improvement:**

- A commitment that students reply once they have received comments
- Increased feedback to mentors about the usefulness of their comments
- A method for better management of time
- Increased participation of pre-service teachers

Having begun as an innovation, Online Arts Mentoring is entering a phase of institutional adoption, with agency sponsorship from the Vermont Arts Council which should lead to long term sustainability. As the process of online mentoring evolves and new members are introduced, it remains essential that they continue the conversation about what is working, how well it is working, and how to improve.

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