

Tips for Designing Successful Telecommunications Projects

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As access to the Internet becomes the norm, more and more educators are designing collaborative projects that make use of this powerful educational resource. What have those pioneers learned who first accessed this info highway? Lots! This article seeks to point out methods of designing projects that will improve chances for success as well as some examples of what has happened to some teachers along the way. Hopefully, this information will help “newbies” (those users that are new to the use of telecommunications and the Internet) and serve as food for thought for those seasoned vets who are out there on the “net” (the Internet)!

Among the educational telecommunications pioneers are Al Rogers, Yvonne Andres, Mary Jacks, and Tom Clausen. They suggested eight keys for successful telecomputing in an article in *The Computing Teacher* in May 1990. They are:

- 1) Design a project with specific goals, specific tasks, and specific outcomes. Be as specific as possible. Align the experience as closely as possible with traditional instructional objectives. Judi Harris, author of “Mining the Internet” in *The Computing Teacher*, frequently speaks about teachers as instructional designers. I couldn’t agree with Judi or these authors more. Be as specific as possible.
- 2) Set specific beginning and ending dates for the project and set a precise deadline for participant responses. Make and follow a time line giving adequate lead time to create interest in your project. These authors note that activity on networks peaks in correlation to traditional cycles of the school year. Busiest times are October through December and February through May. July is busy for summer school and I have noticed that schools in the southern hemisphere tend to seek collaborators at that time. Most successful projects are planned and announced six to eight weeks before an actual project is done. This gives the designer time to deal with cross postings if necessary and the participants time to get organized for the start of the project.
- 3) If possible, try your project with a colleague first on a small scale. This will allow the designer the opportunity to correct any prob-

lems that might not have been anticipated. This is an excellent suggestion if time, resources, etc., permit.

- 4) Request collaborators by posting messages on different BBS's or networks. Take the time to post on different lists. This can help the designer gather a broad cross-section of participants. With teachers accessing the Internet all around the world, it is not unreasonable to expect the possibility of international collaboration. Just beware that the project might not be possible in the environment of another country. For example, one school term someone proposed a project where schools submitted their name and school mascot. International participants who were not aware of this aspect of our school systems were almost immediately asking, "What are you talking about?" Or others that knew indicated mascots didn't exist in their schools noting this was perhaps an "American thing".
- 5) Give specific information about the project in the posted call:
 - a) goals and objectives
 - b) your location
 - c) grade level desired
 - d) contact person
 - e) timeline and deadlines
 - f) how many participants you would like
 - g) what will you do with the responses.

It is also important to include "snail" (regular postal delivery) mail as well as e-mail addresses. Last spring we participated in Mr. Paul Murray's Character Contest. Late May 1994 arrived and all of a sudden there are no clues or communications from Mr. Murray and his class. One can only expect the worst of some type has come to Mr. Murray when, in fact, he didn't have a clue his account would be closed on a particular date in May. As a result, he didn't send a message to the project participants to let them know he might have a problem. Both my students and I were worried about our collaborative friends.

Another area in which an online plan can run awry is the number of participants that can be managed in a project. Consider the plight of Mr. Sheldon Smith in California who put out a call for collaboration for the "Day in a Life" project. He ended up with responses from approximately 65 schools. He indicated he would send all responses to everyone. Without a means to send each reply to everyone at the same time and with literally thousands of chronologies from students around the country and world, Mr. Smith found he had a major management headache. If you decide

to allow any number of participants be sure that if you have a large response you will have the resources or time to share all the data if that is a project component. If the project calls for elementary school students, be sure that the call for collaboration properly reflects this.

- 6) Provide examples for the kinds of writing or data collection that students will submit. Last spring I designed a project that required data collection. I designed and included a template with all the data needed from each site that would speed up the collation of all the data. The totals could be shipped back to the participants on a copy of the same template. Put the time into project design so that problems can be minimized when the project is in progress.
- 7) Find responsible students and train them to be part of your project. This is also excellent advice. One attribute of those teachers I talk to and meet who use the Internet with their classes regularly is the willingness to give the extra time it takes to send and receive mail. In our school, two seventh graders collected the clues for the character contest (cited earlier) each morning. They distributed the clues to the others who participated. They easily fulfilled this role and they loved not having to wait each day to get the clues.
- 8) At the conclusion of the project, follow through on sharing the results with all participants. Even in paper format at a conference, participants as well as non-participants love to see the final project product. In one case, we collected recipes for the KIDS-94 project. The project took much longer than we planned because we decided to make a metric version of the recipes we received in addition to a standard version. This was a marvelous exercise in not only metric conversion for the kids but also in desktop publishing. We did present paper copies of our work at NECC '94 in Boston in June and hope to make them accessible to all participants via the KIDLINK gopher in the future.

Dr. Margaret Riel, education program manager for the AT&T Learning Network, has also contributed to the body of knowledge regarding successful telecommunication project design. She shares four ideas in the December/January 1992 *Computing Teacher* article "Telecommunications: Avoiding the Black Hole". Dr. Riel first suggests avoiding pen-pal only projects. She maintains the cost in terms of teacher planning time and student learning time in establishing and maintaining the electronic coordination is far greater than any educational gain that occurs. When I first thought about this suggestion, I didn't agree. After trying to get over 150 eighth graders to have an individual key pal exchange; however, I need to agree. My intention was to have the students learn the mechanics of using

our system using the keypal idea as a means to insure success. Dr. Riel's idea of writing to relatives or sending class to class e-mail is a good one. I will consider splitting my classes in half and getting two classroom e-mail accounts so that students will be paired to classroom partners who I know will respond to a message sent to them. This should improve the chances for success since the class can focus on learning to use the system knowing they will receive a response.

Secondly, Dr. Riel suggests networking with one or even two other classrooms. Her research for Learning Circles has shown that five to ten classes work ideally on a networking project. This range provides the maximum diversity at a size that is small enough for an intimate level of exchange.

Dr. Riel also emphasizes the need for a well-defined group project with a beginning and ending date and a written product. Enough can't be written or said about the importance of this aspect of designing a telecommunications project. This information is a recurring theme that appears repeatedly in articles about designing successful telecommunications projects.

Finally, she suggests that projects be designed as a part of a larger framework of classroom activities that can be enriched by information from different locations. Three specific criteria are offered for consideration. 1) The networking project should take advantage of the cultural or regional diversity represented by the network partners. Telecommunications allows students to interact with other students from around the globe using a phone line in a way that is much more cost effective than most other possible means of interacting. 2) The request from distant classes should be reasonable in scope. Distant partners should not be expected to become completely involved or immersed in a project. Distance teachers should be able to organize a response to enrich a lesson in one or two class periods. Having traveled to both Jordan and Russia, I can add that keen interest in integrating telecommunications abounds but numerous problems exist. At this time in both countries, access to not only phone lines or local access points but also simply cost and access to modems and cost of sending and receiving information limit or prohibit teachers' ability to integrate telecommunications in their classrooms the way they hope. Poor phone infrastructure also tends to be a problem in some settings. These teachers, in particular, will appreciate the possibility of making a limited but invaluable contribution. 3) The information collected should be of interest to a wide audience of students, teachers, parents, and others. Excellent point!

Each year ISTE's Sigtel sponsors an Online Activity Plan contest. Those submitting a plan are asked to describe an effective activity plan

that the individual has used in the classroom in a template the organization has devised. The template limits an entry to no more than two pages or 132 lines. This is a very clear and precise template and may be invaluable to the teacher who is just getting started in telecommunication project design. It reflects many of the concepts aforementioned.

Author's Name: _____

Other contributing authors: _____

School/Campus Name: _____

School/Campus Land Address: _____

E-mail address: _____

Telephone Number - (School/campus): _____

Telephone Number - (Home - optional): _____

1) Title of Lesson Plan: _____

2) Paragraph Summary of Lesson Plan: _____

3) Objectives of Lesson: _____

4) Hardware/Software Needed: _____

5) Telecommunications Resources Needed or Recommended: _____

6) Importance (Role) of Telecommunications in this Project: _____

7) Curriculum Area(s) Involved: _____

8) Grade Level(s) Targeted: _____

9) Classroom Management Strategies: _____

10) Class Time Required: _____

11) Print Materials Needed: _____

12) Procedures/Activities: _____

13) Method(s) for Evaluating Student Achievement of Objectives

