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Wherefore art thou, Telecollaboration?

By Judi Harris

It's puzzling. 84% of U.S. teachers surveyed a year ago agree that students having Internet access can improve the quality of education. 75% say that the 'net can be used to find learning resources to help meet new educational standards. Yet only about 33% say that use of online resources is well integrated into learning and teaching in their classrooms. (NetDay, March 2001; CNN, March 2001) What's the problem?

Is it an access problem? Apparently not. More than 95% of U.S. schools are connected to the Internet, and 80% of U.S. classrooms have 'net access.

Is it lack of technical skill? Doesn't seem to be so. 87% of the teachers surveyed said that they feel comfortable using the Internet.

Is it an equipment problem? To some extent. About half of the teachers consulted say that insufficient bandwidth, technical support, and/or equipment hinders use of Internet resources for learning.

Is it a time problem? Perhaps—at least in part. 78% of teachers surveyed said lack of time is the most important reason for not using the Internet more in their classrooms. How much is the Internet getting used? Half or more of the teachers in every demographic group report using it instructionally for less than 30 minutes each day at school. Only 6% use it for an hour or more each day.

Is it a problem with what is expected of teachers? Could be. 73% of teachers surveyed reported not feeling "pressured" to use Internet tools and resources in curriculum-based instruction.

In addition to the challenges named above—and perhaps more importantly—this conundrum may exist because of limitations in the ways that many teachers *think about* using online tools and resources in their teaching.

Prevailing Notions

Dave Sackett, a member of the survey's research team, said that "most teachers see the Internet merely 'as a kind of electronic library' and not a place to get ideas or communicate with their colleagues." (CNN, 2001). This finding was supported by the results of a much larger study of 4100 technology-using U.S. teachers in 1998. Though 68% of the teachers responding to that survey reported helping students to use the Internet to locate information, only 7% "had students e-mail at least 3 times during the school year, and even fewer involved students in cross-classroom collaborative projects or in Web publishing." (Becker, 1999)

Among the minority of U.S. teachers who use Internet tools and resources to directly support their students' curriculum-based learning, it seems that proportionately few, overall, do so in telecollaborative or telecooperative ways. Let's take a closer look at this pattern.

Types of Telecollaborative Learning Activities

There are 18 different types of telecollaborative activities that have been identified to date (Harris, 1998). These are grouped into three genres of online activity:

- *Interpersonal Exchanges* are those activities "in which individuals talk electronically with other individuals, individuals talk with groups or groups talk with other groups" (Harris, 1998, p. 18). Interpersonal Exchanges include: keypals, global classrooms, electronic appearances, telementoring, question-and-answer activities, and impersonations.
- *Information Collection and Analysis* activities are those which "involve students collecting, compiling, and comparing different types of interesting information" (Harris, 1998, p. 33). Information Collection and Analysis activity structures include: information exchanges, database creation, electronic publishing, telefieldtrips, and pooled data analysis.
- *Problem Solving* activities promote critical thinking, collaboration, and problem-based learning. Problem Solving structures include: information searches, peer feedback activities, parallel problem solving, sequential problem solving, telepresent problem solving, simulations, and social action projects.

For your reference, these activity types are described in the table appearing at the end of this article.

Recent Types of Telecollaborations

We've already established that the majority of U.S. teachers who help their students to make use of Internet resources frame this work as *telere*search, or locating and using information found online. Among the minority of teachers who help their students to use Internet tools to communicate with others, what are the most prevalent types of learning activities used?

We can find answers to this question by examining messages posted to a popular public email list called *Hilites* (<http://www.gsn.org/lists/hilites.html>). *Hilites* is a well-established, moderated, K-12 classroom project announcement list sponsored by the Global Schoolnet (<http://www.gsn.org>). The Global Schoolnet's founders have been supporting project-based use of online tools and resources in K-12 classrooms for more than 20 years. Any teacher can post his/her classroom project announcement to the *Hilites* list, and teachers from all over the globe do so regularly.

I examined each of the 101 project announcements that were posted to the *Hilites* list during the months of August, September, and October 2001, classifying it according to the predominant telecollaborative/telecooperative activity structure that it reflected. (You can see these projects for yourself by accessing the *Hilites* archives on the Web at: <http://www.gsn.org/lists/hilites.html> .) The table below displays how many of each kind of activity were posted to *Hilites* during this three-month period.

Genre	Activity Structure	Number of Projects Posted to <i>Hilites</i>, 8/1 /01– 10/31/01
INTERPERSONAL EXCHANGE	Keypals	0
	Global Classrooms	6
	Electronic Appearances	1
	Telementoring	0
	Question & Answer	0
	Impersonations	2
INFORMATION COLLECTION AND ANALYSIS	Information Exchanges	23
	Database Creation	0
	Electronic Publishing	6
	Telefieldtrips	1
	Pooled Data Analysis	8
PROBLEM SOLVING	Information Searches	3
	Peer Feedback Activities	1
	Parallel Problem Solving	6
	Sequential Creations	8
	Telepresent Problem Solving	2
	Simulations	1
	Social Action Projects	8

There were a total of 9 interpersonal exchange projects, 41 information collection and analysis projects, and 29 problem solving projects posted by K-12 teachers from around the world during this three-month period. (There were an additional 9 projects posted that did not directly involve students, and another 13 that were repeated project announcements.) Note the clear preference reflected in these numbers for students *exchanging information* in different ways—and the apparent lack of enthusiasm for projects focused primarily upon discussion or communication.

Why might this be so?

Telecooperation or Telecooperation?

What do the most popular kinds of telecommunicative activities in this chart--information exchanges, pooled data analysis, sequential creations, and social action projects--have in common? Among other attributes, they involve students doing related activities in different places and at different times, then *viewing* others' similar products, data, or activities online—usually via a Web page. In these projects, any *analysis* (comparison, contrast, reflection, critique, etc.) of this information takes place *within each* participating classroom, rather than *across* classrooms via email, public discussion areas, or teleconferencing.

What do the least popular kinds of telecommunicative activities in this chart—keypals, telementoring, question & answer and database creation projects, all of which were not represented *at all* in 3 months of project announcements—have in common? They require interaction online *between or among* participating classrooms, often over an extended period of time. They also require active and ongoing coordination to be successful.

In making this comparison, I am reminded of an analogy that a professor of mine used when explaining collaborative learning techniques. She asked us to imagine two preschool children playing in a sandbox who were happily sitting next to each other, each building her own sandcastle. Occasionally, these two would talk with each other, share a shovel, or exchange a bucket. Their castles resided side-by-side in the same sandy space, but were built and admired separately.

My professor then asked us to imagine the same two children in the same sandbox, working *together* on a single sand castle. "How might the children in these two scenarios behave differently?" she asked. We chuckled, imagining the louder and more frustrated sounds in the second scene.

What does the first scene represent? *Cooperation*. The second? *Collaboration*. Which is more challenging? The answer is clear. For most Western educators, who have been trained to be "private practice teachers" (Ravitz, Becker, & Wong, 2000), the more that we have to negotiate with others (students and/or teachers) what we are and will be doing during a learning activity, the more challenging the activity is to conduct.

Which draws upon and develops learners' higher-level social learning and problem-solving skills? The latter, of course. Though collaborative activities are more difficult to do and to facilitate, participants receive multiplied benefits from having to understand and incorporate plans, procedures, and perspectives different from their own. The truly collaborative process usually requires higher-level thinking and interaction.

And our lesson? True curriculum-based telecollaboration is still relatively rare in K-12 classrooms. Why? Consider the obstacles cited at the beginning of this article. What was the most often-cited reason for not helping students to use the Internet in their curriculum-based learning? Lack of time. Which requires more time overall: cooperation or collaboration? Probably the latter. Why? In telecollaborative projects, each communication can be sent only after thoughtfully considering the messages recently shared by others. School schedules can interfere with and impede regular, extended, and in-depth online interaction.

What now?

If it's true that telecollaborative learning activities are more challenging to organize and more time-consuming to do than telecooperative activities, can we expect telecollaboration to continue to be practiced rarely? Yes—with one important exception. *If superior educational benefits for telecollaborative learning activities are perceived clearly by teachers making instructional choices on behalf of or with their students, telecollaborations will flourish.* Projects like the ones in Table 2 can help to demonstrate, by example, the power of curriculum-based telecollaboration.

To paraphrase a famous quote from Bel Kaufman's *Up the Down Staircase*, then, please let this be both a challenge and an invitation to you. Have you done a powerful telecollaborative project with your students? What about the nature of their learning was so remarkable? *L & L* readers (myself included!) would like to learn from you. Please consider writing an article for *L & L* about your experience with this project and the learning benefits it cultivated. As more of these examples are shared, more teachers may be willing to incorporate telecollaborative activities into their students' curriculum-based learning.

Table 1.

Genre	Activity Structure	Description
INTERPERSONAL EXCHANGE	Keypals	Students communicate with others outside their classrooms via email about curriculum-related topics chosen by teachers and/or students. Communications are usually one-to-one.
	Global Classrooms	Groups of students and teachers in different locations study a curriculum-related topic together during the same time period. Projects are frequently interdisciplinary and thematically organized.
	Electronic Appearances	Students have opportunities to communicate with subject matter experts and/or famous people via email, videoconferencing, or chatrooms. These activities are typically short-term (often one-time) and correspond to curricular objectives.
	Telementoring	Students communicate with subject matter experts over extended periods of time to explore specific topics in depth and in an inquiry-based format.
	Question & Answer	Students communicate with subject matter experts on a short-term basis as questions arise during their study of a specific topic. This is used only when all other information resources have been exhausted.
	Impersonations	Impersonation projects are those in which some or all participants communicate in character, rather than as themselves. Impersonations of historical figures and literary protagonists are most common.
INFORMATION COLLECTION AND ANALYSIS	Information Exchanges	Students and teachers in different locations collect, share, compare and discuss information related to specific topics or themes that are experienced or expressed differently at each participating site.
	Database Creation	Students and teachers organize information they have collected or created into databases which others can use and to which others can add or respond.
	Electronic Publishing	Students create electronic documents, such as Web pages or word-processed newsletters, collaboratively with others. Remotely-located students learn from and respond to these publishing projects.
	Telefieldtrips	Telefieldtrips allow students to virtually experience places or participate in activities that would otherwise be impossible for them, due to monetary or geographic constraints.
	Pooled Data Analysis	Students in different places collect data of a particular type on a specific topic and then combine the data across locations for analysis.
PROBLEM SOLVING	Information Searches	Students are asked to answer specific, fact-based questions related to curricular topics. Answers (and often searching strategies) are posted in electronic format for other students to see, but reference sources used to generate the answers are both online and offline.
	Peer Feedback Activities	Students are encouraged to provide constructive responses to the ideas and forms of work done by students in other locations, often reviewing multiple drafts of documents over time. These activities can also take the form of electronic debates or forums.
	Parallel Problem Solving	Students in different locations work to solve similar problems separately and then compare, contrast, and discuss their multiple problem-solving strategies online.
	Sequential Creations	Students in different locations sequentially create a common story, poem, song, picture or other product online. Each participating group adds their segment to the common product.

	Telepresent Problem Solving	Students simultaneously engage in communications-based realtime activities from different locations. Developing brainstormed solutions to real-world problems via teleconferencing is a popular application of this structure.
	Simulations	Students participate in authentic, but simulated, problem-based situations online, often while collaborating with other students in different locations.
	Social Action Projects	Students are encouraged to consider real and timely problems, then take action toward resolution with other students elsewhere. Although the problems explored are often global in scope, the action taken to address the problem is usually local.

(Dawson & Harris 1999, P2)

Table 2.

Global Novel Project

<http://www.beaumont-publishing.com/books/englishatwork/globalnovel.htm>

Grades: 9-12 (and adults)

Here is an excellent peer feedback and electronic publishing activity designed primarily for advanced EFL and ESOL classes. In it, six to seven online classes are teamed to write a novel, with each class creating a different chapter. After a team writes their chapter and posts it to the project's mailing list, other classes read it and send the team comments. Having reviewed the comments, the team makes necessary revisions and submits the final version of the chapter. Once the final version of a chapter is finished, the next team takes the story from there. When the entire novel is complete, it is added to the project's Web site. When visiting this project's site, be sure to check out the previous examples on the Southern Hemisphere page!

(Source: <http://ccwf.cc.utexas.edu/~jbharris/Virtual-Architecture/Telecollaboration/>)

The Great Debate Project

<http://www.schoolworld.asn.au/debate/>

Grades: 6-12

Hone your students' debating skills with this parallel problem solving activity! 'The Great Debate Project' features a series of ongoing debates (via email and Internet pages) among students from around the world. School World, the project's sponsor, chooses serious and not-so-serious topics, which range from relations between 3rd World and industrialized nations to the Spice Girls. Classes (and homeschooled

students) choose a position on one of the topics, and send a message of intent to participate. If the groups who have chosen the opposing positions on a given topic are of different ages, the younger class has the choice of whether or not to accept the challenge. Judging is done by a panel of teachers. Registration in the School World project is required, but costs nothing.

(Source: <http://ccwf.cc.utexas.edu/~jbharris/Virtual-Architecture/Telecollaboration/>)

ThinkQuest

<http://www.thinkquest.org/>

Grades: 4-12 (and adults)

In the words of this remarkable project's developers, "Through ThinkQuest, young people work together in teams, use the Internet to research a topic in science, mathematics, literature, the social sciences or the arts, and publish their research as an educational web site for peers and classrooms around the world."

"ThinkQuest participants learn the 21st century skills of online collaboration, Internet research, asynchronous project management and web communications. They think critically about their selected subject and organize their research into a format that educates and engages their audiences."

"Teachers, parents and other interested adults support the participating young people as coaches, technology mentors, and subject-matter guides. They leave the hard work of defining the project, organizing the work, conducting the research and mastering the web technologies to the participating ThinkQuest team members."

(Source: <http://www.thinkquest.org/>, 'What is ThinkQuest?' tour)

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