

The TeachNet Project: Changing the Way We Teach and Learn through New Media

By Ellen Dempsey, with Heidi Reinholdt

QUESTION: HOW CAN WE INTRODUCE TEACHERS TO THE WONDERFUL WORLD OF NEW MEDIA?

ANSWER: GO ONLINE WITH THE TEACHERS NETWORK TEACHNET PROJECT.

For three days in August 2000, several teachers participating in the New York City TeachNet Project (www.teachersnetwork.org/teachnet) gathered in a high school computer lab in downtown Manhattan for a workshop designed to address the technical, practical, and pedagogical issues surrounding the integration of new media into classroom curriculum. While there were the inevitable discussions of hardware, software, and various technological trials and tribulations, this group of teachers—all of whom had already used new media in their own classrooms and were preparing to serve as mentors to less experienced teachers—was at its liveliest when the conversation turned to the subject of how technology has influenced their teaching and the learning process of their students.

One teacher remarked, “It’s unbelievable. Kids who used to struggle to pay attention in class are so excited about learning; they come in early and stay after school to work on their projects. Kids of every level of ability get equally excited, too. There’s no competition, only individual enthusiasm and accomplishment.” Another emphatically nodded her head and agreed: “Absolutely. And there’s ownership. Kids use the Internet to research, they use the computer to create a report or a work of creative writing or a newsletter with a desktop publishing program, whatever—when they put all the tools together, produce something original, and see it with their name on it, on the class Web page or in that newsletter, they *own* it. They take tremendous pride in their work and want to do more.”

Clearly, technology is changing classroom education in powerful ways. The TeachNet Project was designed to explore and maximize the potential of the Internet and other new media for the development of curriculum materials *by* teachers, *for* teachers. The project, which began in February 1998, aims to maximize the support systems needed to help dedicated, enthusiastic teachers develop creative, digital, appropriate content for classroom use.

HISTORY OF THE TEACHERS NETWORK AND THE TEACHNET PROJECT

More than 20 years ago, the Teachers Network—then called IMPACT II—began in New York City public schools as a teacher-to-teacher networking program. We encouraged innovation in education by offering grants to teachers who developed original, creative classroom projects. Smaller grants were also offered to teachers who wished to adapt these ideas, reshaping them to work in their own classrooms. Awards ceremonies,

workshops, publication of an annual catalog of teacher-developed programs, newsletters, and interschool visits were also designed to help teachers exchange ideas. We were based (and still are) on the philosophy that success starts in the classroom and that teachers working with teachers is the most effective method for improving instruction.

Buttressed by research completed in 1985 by Dr. Dale Mann and his team at Teachers College at Columbia University, our continuing work has been supported by numerous foundations and corporations as well as the U.S. Department of Education—enabling us to reach more teachers and expand our programs and network. Ten years after Mann’s original research, in 1995, a revised study on the effects of our networking model at different geographic sites was completed. The study included more than 1,000 school sites in five states. This research showed that each teacher who receives a grant to disseminate his or her unit of curriculum reaches an average of 24 other teachers.* As of August 2000, the Teachers Network has given grants to nearly 40,000 teachers, and has programs through 28 affiliates across the United States—including Los Angeles, Chicago, and the state of Maine.

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In 1996, as the Teachers Network entered the Information Age, we launched www.teachersnetwork.org, a Web site that features interactive, thematic, hands-on curriculum projects for K–12 teachers and students. It offers teacher-designed projects and activities searchable by subject and grade level, bulletin boards, and a major area for new teacher grants and resources for teachers. The Web site allows us to connect teachers nationwide through bulletin boards and to make information easily accessible to them.

In addition, the Teachers Network staff—in collaboration with our affiliate directors nationwide—has selected a cadre of full-time classroom teachers to spearhead the development of

*Mann, Dale. “Can Teachers Be Trusted to Improve Teaching?” *Phi Delta Kappan* (September 1995), pp. 86–87.

our Web site. These educators respond to teachers' questions from around the nation and the world through the Internet. Taking advantage of the World Wide Web's interactive capability, the teachers create online curriculum projects across a range of subject areas, respond to questions posted by visiting teachers on an active bulletin board, and host scores of face-to-face technology integration presentations. They continue to be responsible for maintaining the majority of the site's current 7,000 pages of interactive projects and resources.

Our experience with developing curriculum for the Web led us to envision a special project—the TeachNet Project—to support teachers in infusing new media into classroom curriculum and into their own professional networking. Since 1998, by building a real and virtual network of teachers who are empowered to think creatively in an online educational environment, the TeachNet Project has multiplied exponentially our ability to reach hundreds of thousands of teachers nationwide. Supported by the AT&T Foundation, the TeachNet Project has moved beyond New York and is also operating in Boston, Miami, Chicago, Santa Barbara County (CA), Polk County (FL), and Akron (OH). For purposes of this article, we will focus on the TeachNet Project in New York City.

OBJECTIVES OF THE TEACHNET PROJECT

To meet the objectives of training teachers and encouraging collaboration among them, we identify technology-savvy teachers in public schools, called TeachNet mentors. The TeachNet Project in New York City is a schoolwide initiative in seven schools, with two TeachNet teacher mentors in each school. Teacher mentors each receive a \$1,000 time grant for hours spent on training colleagues, designing projects, and disseminating information. Each participating school receives a \$2,500 grant to support the mentee teachers with after-school or substitute funding, materials, and software.

The polished and professional appearance of the final projects on the Web site belies the hard work behind them. We must first train teachers to think "digitally" when working in a Web environment. TeachNet Project director, John Elfrank, leads teachers in this endeavor. The process includes communicating via email to address specific questions (Elfrank may be reached at jelfrank@teachersnetwork.org), visiting school sites to provide essential hands-on technical support, and conducting workshops throughout the year. Elfrank is documenting and analyzing this process as part of a two-year Carnegie Scholars project, sponsored by The Carnegie Foundation for the Advancement of Teaching.

Elfrank begins the school year by conducting a summer institute that enables mentor teachers to share best practices and learn essential skills for participating in the project. He also coordinates school-based training appropriate to the skills and knowledge of participating teachers, demonstrates and identifies technology, and instructs teacher mentors on how to use HTML editors in order to publish instructional materials on the Web.



Bonnie Glasgold and students at P.S. 101 in Brooklyn use the Internet to research information about the weather as part of a TeachNet curriculum unit. The TeachNet Project in New York City is a schoolwide initiative in seven schools.

SAMPLE TEACHNET CURRICULUM UNITS

Arthur Miller, Drama, and War Poetry
Bo Wu, Murry Bergtraum High School, New York City
www.teachersnetwork.org/teachnetny/wu

Developed for an 11th-grade English class, the focus of this unit is Arthur Miller, his play *All My Sons*, and how the theme of war is explored in drama and poetry. Students conduct research using Web resources on Miller, drama, war, and poetry; read Miller's play; keep journals; and critique and share their reflections on class readings in an online discussion forum.

The Label Project
Meryl Meisler, Institute for Collaborative Education, New York City
www.teachersnetwork.org/teachnetny/meisler

Appropriate for art students in grades 8 through 12, this project helps students create their own digital "self-portraits as labels" for display at a museum or gallery. These self-portrait labels, based on elements included in labels found on everyday commercial products, are created by students using new-media tools such as Photoshop and ClarisWorks. Students also visit museums and galleries, correspond with curators via email, develop and share critical interpretations of their work, and create their own online galleries.

How's the Weather?
Bonnie Glasgold, P.S. 101, Brooklyn, New York
www.teachersnetwork.org/teachnetny/glasgold

This fifth-grade unit on meteorology allows students to learn about weather by conducting research online, creating a database, generating reports, designing and creating instruments to monitor the weather, and making scientific predictions about the weather.

—Heidi Reinholdt

Teachers are guided through the training process and are given numerous resources to support their learning. In this way, teachers can share both the frustrations and rewards that are part of integrating new media into curriculum.

After the final new-media curriculum material is produced, it is carefully reviewed by our curriculum consultants for substance and accuracy. Next, our editor checks the content for any necessary revisions. Finally, our Web staff publishes the content on *teachersnetwork.org*—on the TeachNet Project page and on our searchable database of Teacher-Designed Programs. Despite many challenges, the TeachNet Project has helped usher teachers' interactive content into the Information Age.

Over the years, the Teachers Network has developed a large national network of teachers who serve as mentors and innovators, both nationally and locally. The Internet allows us the opportunity to tap into their creativity and to connect them—and their ideas—with teachers around the corner and around the world. The TeachNet Project builds on this connection and reinforces it with a backbone of both staff and technological supports. (See "A Network of People," page 19.)

LESSONS FROM THE TEACHNET PROJECT

We've learned many lessons and met many challenges through the TeachNet Project. For instance:

New Media Are Changing the Way We Teach...

Computers in the classroom are creating new opportunities and new challenges. For example, many teachers are finding that traditional classroom activities and materials are becoming obsolete. Bonnie Glasgold, a fifth-grade science teacher at P.S. 101 in Brooklyn, New York, developed a curriculum unit on meteorology as a TeachNet Project mentor in 1999. While her students spent time on the Web learning about weather-related topics and used word-processing and database tools to create reports and analyze data, she found herself using traditional reference materials only sparingly. "With the Internet, I rely less on books, other than some related literature, and more on current, up-to-date Internet facts."

Meryl Meisler, an art teacher at the Institute for Collaborative Education, a New York City alternative high school, developed a unit called "The Label Project" to help her students create self-portrait "labels" (modeled thematically after product labels) with the help of new media. She sees other changes in her classroom. "In contrast to my traditional art rooms, the physical space of my room, with computers bolted down close to one another, does not leave much room for students to do any planning work on paper. Sketches for storyboards, logo designs, etc., now must be completed as homework." Also, she says, "Students used to crumple up and throw away a paper on which they'd made a 'mistake.' Now they're much more prolific, but they must be reminded of the importance of naming and saving things prop-



Teachers Bo Wu (above), at Murry Bergtraum High School, and Meryl Meisler (left), at the Institute for Collaborative Education school—both in New York City—work with students in TeachNet curriculum units.



erly." Nevertheless, Meisler believes that the computer hasn't changed **everything**. "I still have the day's objective, vocabulary, and homework on the board when they come in. And I still enjoy the sound of students reading aloud from the board to review the day's activities."

... And the Way Our Students Learn

Glasgold sees changes in her students since the introduction of new media into her classroom. "First, most of them are very knowledgeable about the computer, and they enjoy showing and sharing this knowledge. They are also much more motivated and involved. I even find myself corresponding with them after hours—they are so excited about their work, they email me from home!" Meisler agrees, and her comments echo those of so many involved with TeachNet: "I'm amazed by my students' aptitude and enthusiasm for expressing themselves using the computer. The idea that their work can also be accessed on the Web or displayed in a professional-looking manner empowers them."

Bo Wu, an English teacher at Murry Bergtraum High School in New York City, is impressed by the ways in which technology has become a powerful tool for fostering communication. "New media create more opportunities for students to communicate with me and with their peers. They discuss their work in messages on discussion forums, emails, and instant messages. They are able to create a real writing community, and to share and critique each other's work in ways that were not possible before the advent of this technology."

Meeting Challenges

Although most teachers who use new media regularly have had to adjust their teaching styles to accommodate new

A NETWORK OF PEOPLE

The TeachNet Project is primarily a network of people around the world, connected by staff and technological support, including the following:

- **TeachNet Curriculum Specialist**—The focus of the curriculum specialist's role is on both *process* and *product*. Throughout the year, the consultant works closely with the TeachNet Project director to design the summer institute for the project's mentees, to refine curricular guidelines, and to implement ongoing support and services at each of the school sites ranging from the elementary through secondary grade levels. At each site, the specialist collaborates with mentors to address their unique needs and interests. Regular communication is conducted online and through periodic visits to the schools. The consultant fosters both a real and a virtual community of teachers. The curriculum specialist brings a constructionist philosophy and constructivist psychology of schooling that draws upon a tradition that views individuals as capable of constructing knowledge through experiences both in and out of the school setting and that rests upon the tenet that democratic, reflective, group problem-solving experiences are central to education and even to social progress. This process facilitates an exchange of ideas between TeachNet mentors and mentees, creating a strong, professional network. The relationship emphasizes the role of the teacher as the developer of the curriculum and the specialist as the facilitator.

- **Web Workspace**—Teachers need the support of each other and project staff throughout the school year. To help provide this support, a Web workspace was developed to offer online tutorials on technical skills required for the project, a curriculum-development Web space, a discussion space, resource listings, and templates for content development. To encourage the development of new curriculum materials, the TeachNet Project takes full advantage of the Web as a source of open process and communication. Project mentors and mentees go to the Web workspace to post their latest work for viewing—and can send and receive comments to/from peers and project staff. This solution maximizes ongoing communication among teachers at the schools participating in the TeachNet Project. The Web workspace also features a forum for ongoing discussions among project participants on program-related issues and new media in education. To facilitate quality control of developed curriculum, a project template on the workspace guides the teachers in developing projects. Ultimately, the project editor and curriculum consultant review the

output of these templates as well as the Web pages that the teachers develop.

In the TeachNet Project, new media play a vital role in both the delivery of instruction and in the process of the development of that curriculum. Just as Web forum participation, emailing, and Web authoring are part and parcel to the curriculum developed in the project—these same skills are utilized for project participation. Teachers communicate using email and the Web to develop projects that focus on these media as integral parts of the learning experience for students.



- **Staff Software Support**—A powerful aspect of the TeachNet Project is that it turns teachers into Web content producers. The simplest software—for example, such HTML editors as Netscape's Page Composer and Microsoft FrontPage Express—is used for this purpose. Both these products are free, easy to use, and available for both Windows and Macintosh operating systems. These programs also offer publishing tools that enable a teacher, with a single click of the mouse, to “publish” his or her project on a Web server. Realizing just how easy it is to create and publish a Web page, teachers become highly motivated to post their work on the Web. The appetite to learn and do more with Web pages is frequently the outcome of these experiences with teachers. The project provides regular opportunities for teachers to enhance their skills through online support, monthly site visits, and periodic citywide project meetings.

- **Publication and Editorial Quality Control**—A hallmark of the TeachNet Project is the publication of its teachers' new media lesson plans on the Teachers Network's Web site. Unlike some sites that merely function as clearinghouses for digital content, the Teachers Network insists on a high level of quality and consistency in the material it presents to its Web visitors. Accordingly, once all the steps (planning, creating, receiving feedback, editing, and revising) involved in creating a new curriculum unit have been taken, Teachers Network takes the process one step further by submitting the final unit to a copy editor, who shapes the piece into a consistent, publishable form. •

technology, for many teachers the biggest challenges thus far have revolved around technical rather than pedagogical issues. Even teachers that had a high degree of familiarity with computers have had to learn to use a variety of new media tools (everything from HTML editors to design and desktop publishing software) and to develop solid Internet research skills.

In addition, many aspiring new-media teachers find that their schools' computer resources are not always conducive to the kind of teaching they want to do. Glasgold says, “It's hard to find time to work with the children in class. My classroom doesn't have Internet access, so we have to work in other classrooms, the computer lab, or the library. Also, there are glitches.

Sometimes sites don't load or links don't work.” Even for teachers with the luxury of their own labs, these “glitches” can be a big headache. Meisler has learned to be her own technical support. “It's very difficult to maintain and update a networked lab. During my first year, I spent so much time on the phone to the Apple technical hotline, I referred to it as the ‘suicide hotline.’ Now, I have a better grasp of the technology, but it's still so difficult to find the time to keep up with the technical skills—especially in a creative manner.”

Time has proved to be a challenge for Bo Wu as well. She believes that teachers who want to take full advantage of new media must also be prepared to sacrifice more free time to research



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Photos by John Schaefer, courtesy of Teachers Network

Web resources, develop lesson plans, create Web sites, answer email, etc. Still, she feels that the main obstacle to integrating new media into the curriculum is resistance from colleagues and supervisors who prefer traditional teaching methods and materials. "Sometimes," she says, "you can find yourself surrounded by people who are against taking such a new approach. You just have to love what you're doing and believe in the magic power of new media."

THE FUTURE OF TEACHNET

Looking to the future, the TeachNet Project will continue to embrace and incorporate new and evolving technology. With the help of the AT&T Foundation, TeachNet mentors will soon be able to take advantage of streaming video (Internet-based video delivered directly from a Web server to a user's computer without a lengthy download time). The immediacy and convenience of streaming video will provide a powerful educational tool for creative students and a medium for teachers to

exchange ideas with colleagues around the corner—and around the world.

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As the project unfolds, the most important future consideration is what impact it is having and will continue to have on student learning. To assess that impact, the Teachers Network has contracted with the National Center for Restructuring Education, Schools, and Teaching (NCREST), a research center housed at Teachers College at Columbia University. In a three-year study, NCREST will document how the use of the Internet and other new media affects teaching and learning. This research not only will measure the effect of the TeachNet project on teachers and students, but also will inform and shape its ongoing development as we enter into an exciting and increasingly digital future.

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DEVELOPING TEACHNET LESSON PLANS

Getting Started—Ask yourself:

1. Will a teacher who taps into the TeachNet Web site be enticed by my completed template to want to read my fully developed lesson plan?
2. Will this teacher be able to replicate easily the lesson I have provided?
3. Have I incorporated technology into the lesson plan and allowed sufficient time for students to master the task(s) at hand?
4. Does my lesson plan address "the whole child (student)"?
5. Have I included elements of the lesson plan designed to make technology more than an isolated learning experience for the student?

The Process (Note: This may vary from school to school.)

1. Develop your unit (a series of 4+ lessons) in your own style.
2. Complete the online template and submit it as directed.
3. Save a copy for yourself, either on a floppy disk or on your hard drive.
4. Discuss your plan with your mentor(s) when appropriate.
5. Submit it to your mentor for review and posting.
6. Post it on the TeachNet lab site as directed.
7. Request feedback from TeachNet curriculum specialists and mentors.
8. Make adjustments in your unit plan and template according to the feedback.
9. Share the unit plan with your mentor and post it in final form as directed.
10. The plan will be reviewed, edited, and published on the national Teachers Network site.
11. Celebrate. Share your new publication with colleagues, friends, and family.

See more tips, strategies, and guidelines at www.teachersnetwork.org/curriculum/teachnet.htm.

—Kathy Morin, Teachers Network Curriculum Specialist