# *Web Site Design For Teachers:*
## *Making the Internet Connection*

## By Peter Pappas

Learn how to harness the power of the Internet to extend teaching and learning beyond your classroom. Find out how easy it is to build your own website. See examples of how real teachers (not just the "techno-wizards") build websites to help link students, teachers, administrators, and parents as effective educational partners. This guide offers a non-technical introduction to web design, resources, management, policy recommendations, and staff development strategies. It includes a companion website with links to resources, a school web policy, and samples of effective teacher-designed web sites.

Over his 30-year career in education, Peter Pappas has worked with districts from across the nation as consultant for technology integration, staff development, curriculum and assessment design. He has been the recipient of state and national fellowships and has authored or contributed to textbooks, teacher resource books, assessment packages, and professional journals. Currently he's exploring the ways that technology can be better harnessed to improve student performance and the quality of teaching and learning.

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## *Introduction*

Teachers, learning specialist and principals are well equipped to utilize the web to extend teaching and learning beyond the classroom. Instead of acting as passive recipients of all the best (and worse) that the web has to offer, with the proper training and resources, educators can be empowered to use the web in their own instructional designs. With new software, web design is becoming as easy as word processing. Before long, posting web pages to the Internet will be as common as desktop publishing a brochure.

This guide begins by focusing on three ways in which the web can be utilized to unite students, teachers, administrators, and parents into effective educational partners. It will then consider how one district went about resolving the policy, resource and training issues associated with fostering teacher-designed websites. For more information readers should access my "Web Design For Teachers" at www.edteck.com. It provides detailed instructions for building your own web page. The site's "Staff Development" link at will take you to the sites noted below.

## Connect with Your Students

Web-based support for instruction can provide your students with an online guide to course assignments, resources, instruction and a showcase for their work. "Sociology-the study of human society" is an example of a site I developed to support a high school elective. (See References for all URL's)

The site provides students with links to sociology resource sites and multiple links to an on-line version of the textbook. Many book publishers now create web-based teachers resource sites in support of their texts. By building my own course website, I'm able to point students directly to portions of the publisher's site that are relevant to our course syllabus. Students can also use the site to take quizzes that are automatically graded and reported to me via email.

 "Sociology" also provides a calendar of assignments with additional links to relevant resource material. This online guide is invaluable for assisting students who have missed class time. It also serves as a quick guide to anyone who might want to know about the course  - parents, resources specialist, librarians, colleagues, or the principal. My standard response to many questions is "check on the website. "

Each assignment includes a rubric and a showcase of student work. This serves to motivate students and to act a guide to helping them better understand the nature of quality work. "Sociology" provides a unifying element to the course and a round-the-clock guide to instruction, resources and student performance. It also saved me numerous trips to the photocopy room.

"Conduct a Survey" is an example of a web-based research project. It's designed to take the students through each step of a formal research project and use quantitative methods to investigate patterns of social values and norms among different groups of people. Students worked in teams to identify a research question and conduct a survey to find an answer to their question. Many students used a free

on-line survey builder to post and analyze their surveys.

The project includes a rubric and a showcase of student work. The students used my web design template to develop a site to highlight their project and findings. I provided them with a blank template and brought them to the computer lab. I gave them a quick introduction to FrontPage web authoring software and told them to copy and paste their text and images into the available pages. They received a fast lesson in how to build hyperlinks. Most of them were quite surprised to find that despite their lack of experience they were able to build acceptable web pages with a minimum of instruction.

## Connect with Faculty and Staff

I serve as the K-12 Social Studies Coordinator at Pittsford Central Schools, a suburban district which serves 5900 students in 5 elementary, 2 high schools and a large 4-house middle school. As coordinator, I work with teachers and administrators across the district as mentor, trainer, and program facilitator. I'm charged with coordinating the social studies program delivered by 30 secondary social studies teachers, hundreds of elementary teachers, learning specialists and librarians. "Teaching With Documents" (TWD) is a website designed to promote document-based instruction and assist teachers, students and administrators in making the transition to new standards, assessments and technologies. I developed the site in response to new social studies assessments recently adopted by New York State. NYS exams in Global History (10th) and American History and Government (11th) will each include a document-based question (DBQ) modeled after the advanced placement testing in European and American History.

"TWD" has proven to be effective tools to communicate with the school-community and create a K-12 social studies program that is cohesive, public, dynamic and successful at improving student performance. The site is based on summaries, excerpts, and direct links to "The Learning Page" / Library of Congress and "The Digital Classroom" / National Archives and Records Administration. My goal was to re-organize and present material from these two federal document collections to improve their functionality and correlation with New York State standards. "TWD" also includes original content, best practices from various contributors as well as links to other relevant district and state sites.

The site is divided into four sections. "Basic Resources" is designed as a quick stop for teachers who are looking for the easy access to teaching materials, lesson and source material.

- Worksheets: ready to be copied and used with students
- Intro Lessons: give students practice in working with documents
- Links to Sources: explore a variety of fine document collections

"Learn More," offers teachers additional instructional and planning tools.

- Analysis of Sources: introduces tools used by historians
- Types of Sources: examines categories of primary and secondary documents
- Lesson Framework: strategies for incorporating documents into instruction

The "Standards Section" provides links to district and state social studies standards. "State Testing" provides a link to the use of documents in the New York State assessments. The three assessment instruments used in NYS are featured in this section - constructed response, thematic essays and DBQ's. Each section includes:

- Descriptions of the question format and key elements
- Sample questions and rubrics
- Tips on how to develop questions
- Tips on how to prepare students for new assessments

"TWD" has proven to be an effective tool to improve the quality of document-based instruction and it's been a valuable resource throughout our district. One of our program goals is to more clearly define the skills and knowledge that students should master each grade level in our program. Teachers and administrators have developed explicit standards and testing to determine if standards have been met. "TWD" includes a new sequence in document-based skills with samples of DBQ's and rubrics available for each grade level 6-12.

"TWD" serves as a reference guide to the many resources on the Internet. It provides teachers with high-quality lesson plans that will enable their students to effectively access and critically evaluate historic documents. For example, teachers can quickly download worksheets developed by the National Archives and Records Administration formatted for use in the classroom. Teachers who are less adept at using the Internet can find instructions for how to download images and print material from the site.

"TWD" fosters creativity, initiative and collaboration among teachers and administrators. It's difficult to bring us all together at meetings, but the web serves as common a reference point to showcase different instructional practices and teaching strategies. Central office administrators and school principals can quickly refer to the site to stay up to date with new revisions in state standards, district standards and assessments. They can get a quick summary of how document-based instruction is being implemented in the district or download and print specific grade level standards or sample assessments.

The site has proven to be an easy access point for librarians, educational specialists and anyone interested in the many opportunities for interdisciplinary instruction. The site has been especially popular among elementary teachers interested in integration and project-based instruction. "Teaching with Documents" is designed to help teachers and students make sense of the vast amount of source material available over the Internet, and effectively bring these resources their work as historians. It provides easy access to analytic tools, instructional strategies, and links to source material and sample assessments. "Teaching with Documents" is one of many new ways that computer and Internet technology can be harnessed to improve the quality of teaching and learning.

## *Connect with Parents and the Community*

Using the web to communicate with parent and the community is best exemplified in my work as director of the "Summer Prep School." This program for academically at-risk students in grades 5 – 8 combines instruction in math, English, learning skills and technology with adventure training to improve skills, motivation, and performance. As director, I foster a collaborative partnership of teacher, parent, and peer to support our at-risk students. Our faculty receives training in instructional strategies and group facilitation. Parenting workshops foster a healthy learning environment at home and improve communications with the school.  High School and college students are trained to serve as peer mentors and positive role models. Together, we support our at-risk students with a challenging and successful adjunct to their middle school experience.

Effective communications with the program stakeholders is a key to the program success. Teachers were required to submit a weekly report on class activities and curriculum. These became part of a school website that was updated daily, and were collected in a weekly print newsletter for parents. The website also included samples of student projects and photographs of our many activities. Parents indicated that the web site was an important part of keeping them informed about the program and able to share in their children accomplishments. In addition we used on-line assessments of student skills to help design program and measure student progress. *MultiMedia Schools Magazine* (May 1999) documented this project in an article entitled "Take a Skills Snapshot: Employing Online Self-Assessments."

Readers are invited to browse the school website where you will find a more detailed guide the to program, course offerings and activities. You can find details of the weekly instructional strategies for each course. Student projects and Friday Activity days are well documented on the site. We also include a program guide with school schedule, parent's guide, student contracts and an overview of our evening

Parenting Workshops. The site also includes a link to survey responses from parents and student surveys. It enabled our larger school-community to share the success of our students and helped promote and grow our program.

## Staff Development and Policy Issues

I piloted a course in "Web Design for Teachers" in 1997. It was offered as a two-hour staff development course through our district teacher's center. Many teachers were able to grasp some of the fundamentals of page layout and building hyperlinks. A few left with a rudimentary start page and some links to other pages, but it did not adequately prepare most teachers to launch a web site. I learned a few important lessons from the pilot. On the plus side, I found out that the FrontPage software interface was very familiar to many, and most teachers quickly grasped the mechanics of page layout, formatting and hyperlinks. They were surprised to find out how easy it was to quickly create page and simple web site.

But I also found out that to prepare teachers to effectively develop websites, the program would need to address other needs. Teachers need to see the entire process of building and maintaining a web site. They need space on the server and experience in uploading and modifying their pages. Teachers needed support in the file management required in web sites. And most importantly, teachers needed ideas for building an instructional environment online.

As the result of my experience with the pilot I planned a more complete version for web design staff development. The first hurdle concerned policy issues. I met with our district technology management committee to resolve questions about content and server access for teachers. In many districts, teachers are not allowed direct access to the server. If they wish to post to the district server, they must first bring material to a webmaster to screen content and upload files.

That system tightly monitors the content of the sites, but it undermines the dynamic quality of the web. It extends the lead-time for site updates and modifications and almost guarantees that teachers will not use a site to post up-to-date material, such as student homework schedules. Instead our committee elected to allow properly trained teachers to have

direct access to the server and developed a sensible web use policy that defined the material that teacher could post online (see appendix). The committee also made a commitment to provide adequate number of FrontPage licenses (Mac and PC versions), so that teachers across the district would have easy access to web design software from numerous locations.

We gave teachers who successfully completed the course a unique password-protected entry point to the district server. They could log on to the district server from any computer connected to the Internet. They logged directly into their folder on the server and had no access to any other portion of the district server or website. They might accidentally delete file on their pages, but they wouldn't do any harm to the rest of the district site.

I felt the best way to teach web design was to develop a course web site that would really model the instructional advantages of the web. "Web Design for Teachers" includes instructional guides, resources, sample educational sites and a section to showcase the work of teachers who completed the course. The revised course was launched in the summer of 1999 and it taught in three 3-hour sessions. The sections were kept at 8 to 10 teachers, so that I would be able to accommodate many different skill levels. I originally planned for three sections, but found that the demand was so high that I had to expand to six sections. Even then I was turning teachers away.

The first 3-hour session was devoted to the basics of web design, layout, architecture and mechanics. The second session was devoted to examples of instructional uses of the web, web policy, and a chance for teacher to start to design a basic site. By the third session many teachers were uploading to the server. Follow up sessions were held so that teachers could bring their sites back in for troubleshooting and modifications.

That summer approximately 50 teachers attended the web design course. About two thirds, left the course with a working site on the district server. As one teacher said in her evaluation, "What I liked about this course was that I got to leave with a finished product." Many of the remaining third, attended a follow up session and now have a working site.

The course was so that successful that it's been included as part of the fall and spring staff development offerings. I've managed to distill the instructional time down to three two-hour sessions. Our success rate has continued with about two-thirds of the teachers successfully uploading their site. More importantly, virtually all the teachers left knowing that they were capable of building a site. Many of them are still working on the "perfect design," and looking forward to uploading when they get it "just the way they want it."

We now have over 70 teachers maintaining their own district sites. Some have simple pages with links to resources, schedules and contact information. But many have developed sites that have become very dynamic learning environments. You can see sample of these sites on "Web Design for Teachers."

## Conclusion

Across the country, districts are busy connecting classrooms to the Internet. Properly managed web has enormous potential in our schools. The Cupertino Union School District in California's Silicon Valley provides a great rational for expansion of the web in the classroom:

- Bring real-world relevance
- Provide students with an effective model of lifelong learning
- Bolster social, communication, and critical thinking skills
- Meet standards for inquiry-based learning
- Increase the authenticity of the learning environment
- Find role models for students

I'd like to take this model one step further. The next step is for our educational leaders to provide the training, access, policy and resources for teachers to produce their own web material. Educators are uniquely positioned as the gatekeepers to the best of what the web has to offer our children. More importantly, teacher-produced web sites can extend teaching and learning far beyond the classroom and can effectively unite students, teachers, administrators, and parents into effective educational partners.

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"Sociology-the study of human society"
http://www.edteck.com/edconnect/2_pages/students.htm

"Conduct a Survey"
http://www.edteck.com/edconnect/2_pages/students.htm

"Teaching With Documents"
http://www.edteck.com/edconnect/2_pages/staff.htm

"Summer Prep School"
http://www.edteck.com/edconnect/2_pages/parents.htm

"Web Design for Teachers"
http://www.edteck.com/eddesign/

*Appendix:*
### *XXXX Central School District*
### *World Wide Web Administrative Procedures*

**Value Statement:**
Original content housed on District-sponsored Web Server(s) or subsidiary pages will promote and enhance instruction and provide information relevant to the XXXX School Community. All content will support the District's Mission.

**I. Content:** All content is subject to District review. In order to be maintained, Web pages may require editing or removal at the direction of the Webmaster or Curator assigned to oversee the page(s). The Webmaster or Curator's immediate supervisor will resolve any unresolved questions related to Web page content.

Student Safety:

- Student First Names or Initials only are to be published, never the entire name including surname.
- Students in photographs will not be identified by:
    Name
    Phone Number
    E-mail Address
    Age
    Links to Personal Web pages.
- Students will appear in group images only.

Employee Privacy:

The privacy rights of employees will be respected. The District will not publish home phone numbers, personal e-mail addresses or photographs of employees without their express permission.

Appropriate Content:

All content and links covered by this policy will support the Value Statement and the District's Mission.

All content and links covered by this policy will not include inappropriate content, such as, but not limited to:

- Commercial use
- Political lobbying
- Promotion of illegal acts
- Any material considered libelous or slanderous
- Any material, which violates the Internet Acceptable Use Policy (Rules Covering Use # 8)

All Web pages must be free of spelling and grammatical errors except where original student work is to be displayed in original form.

## II. Design:

The XXXX Central School District recognizes the importance of Web publishing to enhance instruction and provide relevant information to the XXXX School Community. There are finite limitations to both server capacity and operational speed. Additionally, efficient management of files must be considered. In an effort to provide appropriate Web service to all members of the XXXX School Community, users will adhere to the following guidelines:

## IIa. Design Requirements:

- All first pages (start or launch pages for a site) must be called index.html (or index.htm).
- All first pages must have a link back to their origin page.
- All first pages must identify the person responsible for that page and include their e-mail address.
- The following statement should appear on each first page: *"If you encounter any problems with or errors on this page, please contact the person identified as the creator of this page at the e-mail address indicated. "*
- File names should not contain any spaces. Where possible, limit file names to eight (8) characters.

## II b. Design Suggestions:

The following items are suggested to improve enhance the ability of web pages to be viewed successfully by the widest possible audience:
- Limit the number of graphics on a page as they slow download time.
- Interlace graphics whenever possible.
- Keep the file size of animated graphics reasonably limited.
- Save graphics at no more than 100 dots per inch (DPI) before loading.
- Save graphics at no more than 256 colors.
- Use compatible colors within the 256 "safe color" range. (See http://www.mrxt.com/webdesign/Free/colors.htm for a listing of these safe colors and a brief explanation of how to combine them.)
- Insure that text color contrasts appropriately with the page background.
- Keep backgrounds simple - one color with no graphic overlays is suggested for most backgrounds. Background textures can obliterate text.
- Save photos as JPG or JPEG files.
- Where appropriate, it is helpful to the viewer to have a page identified by a banner (title), which announces the purpose of the page.

- Be sure to frequently check any links listed on a page to insure validity.
- Develop a logical hierarchy to your site before you begin design - DRAW A MAP.
- Whenever possible, use the simplest code available to accomplish the task.
- Whenever possible, keep images with the pages that reference them.

**III. Management:** In recognition of the importance of Internet communications and the burgeoning use of the Web by educators to communicate with the XXXX School Community, the District will designate a central Webmaster and Site Curators who will be responsible for facilitation of the websites contained on the District server.

**IIIa. District Webmaster:** The District Webmaster is the person who is responsible for the content and publication of the District - level website by coordinating and monitoring electronic publications for distribution over worldwide networks. The Webmaster is responsible for knowledge, understanding and compliance with this document and the Internet Acceptable Use Policy as adopted by the XXXX Board of Education.

Responsibilities:

- Maintaining the XXXX Website, including, but not limited to, file maintenance and security.
- Communicate with Site Curators regarding procedural and policy changes.
- Serve on the District Technology Management Committee.
- Maintain regular communication with the District Communication and Technology Offices, respectively.
- Fulfill the same duties as the Site Curator, but at the District level.

**IIIb. Site Curator:** A Site Curator is a person who is responsible to review the content and facilitate the publication of school or department websites by coordinating and monitoring electronic publications for distribution over world-wide networks. The Site Curator is responsible for knowledge, understanding and compliance with this document and the Internet Acceptable Use Policy as adopted by the XXXX Board of Education.

Responsibilities:
- Communicate with the XXXX District Webmaster and/or immediate supervisor to obtain approval prior to posting and distributing web pages on the District server.

- Maintain the school or department Internet connection, including, but not limited to the World Wide Web and File Transfer Protocol (FTP).
- Facilitate the creation of Web pages.
- Review initial submissions of Web pages for compliance with this document prior to electronic publication.
- Periodically review web pages for accuracy, currency and appropriateness.
- Facilitate uploading Web pages to the server.
- Supervise site security, including, but not limited to, User ID, Password, File Structure and File Maintenance.
- Serve on the building level (if appropriate) Technology Management Team.
- Report any attempt at security violations or other misuse or attempted misuse of the Web server to the District Webmaster.
- Attend meetings held by the District Webmaster.