Overcoming the “Digital Divide” in Social Studies Classrooms
by Roberto Joseph and Marlene Munn-Joseph

Since the early 1980s when computers began to infiltrate the educational system, schools with low access to computers or with outdated equipment were almost always the schools with large numbers of students of color. Lloyd Morrisett, the former president of the Markle Foundation, is credited with giving this disturbing trend the title “digital divide.” Back then the digital divide was about how many computers were available in schools based on race, ethnicity, gender and social class. The key concern was one of equality, a quantitative concept that is about counting the amount of computers available in schools.

In the mid-to-late 1990s, “digital divide” was redefined as access to the Internet. In 1998, in public schools with 50 percent or more minority enrollment the ratio of students to computers with Internet access was 18:1. It was 10:1 in schools with less than 6 percent minority enrollment. However, this gap has shrunk. In 2005, in public schools with 50 percent or more minority enrollment the ratio of students to computers with Internet access was 4:1, and 3:1 in schools with less than 6 percent minority enrollment. As a result, the term “digital divide” is undergoing yet another shift.

With the pressure on school districts to meet the federal requirements under No Child Left Behind, many schools, particularly in minority communities, are purchasing “drill and practice” software that emphasize route memorization and lower order thinking skills. However, in more affluent and largely White communities, technology is used to develop higher order thinking skills. The “digital divide” is now about the types or the quality of ways technology used in the classroom. Social Studies teachers can address the new “digital divide” in a myriad of ways. There are various types of instructional software and new web-based tools that social studies teachers can integrate into the curriculum that promote higher order thinking.

There are five types of instructional software that social studies teachers can use with students: drill and practice, instructional games, tutorials, simulations, and problem-solving environments. Software is considered instructional when it includes at least one of the following features: information, examples, guidance, practice, feedback, and an assessment of student learning. Teachers can use visual graphics, virtual worlds, field trips, and digital storytelling to enhance instruction, although these are not considered instructional software unless they incorporate these other features.

A broader use of emergent technologies, especially web-based technologies, that promote skills such as analysis, synthesis, problem identification, meaning making, and determining the validity of information, will address the issue of a quality and equitable educational experience, as well as alter the traditional roles of teachers and students. One change will be that teachers will become more dependent on the technical expertise of students.

**Drill and Practice** software provides exercises in which students work on example items, usually one at a time, and receive feedback on their correctness. This type of software is not meant to introduce new information or to teach a topic. It is presumed that the teacher has already provided the instruction, and is using the software for practice and route memorization. This type of software is perhaps the most popular in schools and generally does not promote higher order thinking. Characteristics of good Drill and Practice software include: Adequate coverage of the content domain, user control over the pace of the presentation, answer judging, appropriate feedback for correct and incorrect answers, immediate feedback, motivation, and saving teacher time. Sample social studies activities/software include: vocabulary skills, memorizing important dates, people, states and capitals. Owl and Mouse Educational Software's U.S. Map Puzzle is an example of a social studies drill and practice software that assists students in learning the U.S. states and capitals (http://www.yourchildlearns.com/puzzle_us.htm).

**Instructional Games** are a form of drill and practice software designed to increase motivation by adding game rules and/or competition to learning activities. Characteristics of good instructional games include: appealing formats and activities, instructional value, physical dexterity, and minimum violence/aggression. Sample social studies activities/software include: National Geographic Trivia Trek 2002 and Classroom Jeopardy! U.S. History, Geography and Civics.
Tutorial software is designed to include an entire instructional sequence similar to a teacher’s classroom instruction on a topic. Tutorials generally present new information to students using various computer-based instructional strategies. This type of software provides many examples helping students gain a solid foundation for the concept(s) to be learned. Tutorials provide guidance with feedback and an assessment of student learning. Because instruction is embedded within the tutorial, this type of software usually provides teachers with the opportunity to be a guide on the side. Characteristics of good Tutorial software include: Extensive interactivity, thorough user control, appropriate pedagogy, adequate answer-judging and feedback capabilities, appropriate graphics, and adequate recordkeeping. Sample social studies activities/software include: Plato Secondary Social Studies Worldview. The Global Studies program offers 450 hours of instruction, 39 chapters, practice questions, a glossary, 450 biographies, 33 essay questions with sample essays, over 1800 questions, and mini lessons.

Simulated Problem Solving Environment is a computerized model of a real or imagined system that is designed to immerse students in problem-solving scenarios. Generally there are two kinds of simulations: those that teach about something and those that teach how to do something. Simulations in social studies generally teach about something. The most popular simulations for social studies are situational simulations that provide students hypothetical problem situations and ask them to react. This type of software typically encourages higher order thinking skills. Characteristics of good Simulation software include: compress time, slow down processes, get students involved, make experimentation safe, make the impossible possible, save money on other resources, allow repetition with variations, and allow observation of complex processes. Sample social studies activities/software include: Oregon Trail 5th Edition, Decisions, Decisions 5.0, and Where in the World is Carmen Sandiego?

Visual Graphics software that allows students to represent abstract concepts concretely is very popular in schools. Students can create concept maps, neighborhood maps, work with graphic organizers, and design timelines based on various historical periods. This type of software helps students to represent knowledge in multiple ways Inspiration 8.0 is a very popular program that allows students and teachers to design concept maps and graphic organizers. Mapmaker’s Toolkit allows student and teachers to create and interpret current and historical maps. Timeliner 5.0 allows students to create their own timelines, or you can use the many templates that come with the software.

Virtual Worlds and Field Trips provide social studies teachers with innovative ways of enhancing geography skills. Social studies teachers can use Google Earth (http://earth.google.com/) to take students on virtual field trips around the world. Google Earth provides satellite imagery, maps, terrain, and 3D buildings to bring the world's geographic information in your classroom. Second Life (http://secondlife.com) is an online 3-D virtual world that many educators are looking into for educational possibilities. Social studies teachers can work with students to recreate and reenact historical periods. Users interact with each other within the 3-D virtual environment as avatars—a 3-D virtual representation or persona of self.

Digital Storytelling is on the rise in many schools today. There are many different ways of designing a digital story. Students can create personal narratives allowing them to share experiences and center learning through their own voices. Students can create photo stories that examine historical events and inform or instruct. This type of software encourages design and creation. Students can shoot and import video and digital photographs. Start with Microsoft Photo Story 3, a free software for Windows (http://www.microsoft.com/windowsxp/using/digitalphotography/photostory/default.mspx). You will just need to download Windows Media Player 10 in order to view and use Microsoft Photo Story 3.

Emerging Web-based Technologies for Social Studies Classrooms

The communicative technologies described below move students from knowledge acquisition to knowledge production. These tools allow students to conduct research and share their work with others and to receive feedback and critique. These tools also allow other students across the globe to assist in knowledge production.
Web 1.0 was a read-only system in that all the websites that you visited could only be viewed but not changed or edited. Web 1.0 required knowledge of Hypertext Markup Language (HTML) or a web editing tool such as Dreamweaver in order to make changes to a website. Web 2.0 is a read/write system in that websites can be changed and edited from any web browser without knowledge of HTML or a web-editing tool. Some of the exciting new Web 2.0 technologies are: Blogs, Wikis, Really Simple Syndication (RSS), and Social Bookmarking.

Blog is a type of web-based personal journal that can be organized around the blogger’s reflections, interests, or even course topics. People who visit blogs add comments that show up below the blogger’s reflections. These comments become a permanent and important aspect of the blog. One of the many reasons people blog is to get feedback from visitors. Good places to start are Edublogs (http://edublogs.org/) and Wordpress (http://drrob.wordpress.com/). As students post assignments on their blogs, they create an online portfolio where the instructor and classmates can comment on the work. Social studies teachers can also create a classroom blog organized around the topics in your curriculum. Individuals with knowledge of the topic can be invited to comment. A good example of this can be found at http://eev.liu.edu/KK/na/implementation.htm.

Wikis are websites that anyone can edit. They provide teachers and students with new opportunities to collaborate and publish work in a web-based environment. The most popular example of a wiki is the free online encyclopedia Wikipedia (http://www.wikipedia.org/). A good place to start with wikis is Peanut Butter Wiki (http://pbwiki.com/). Education World has a good set of resources to help you learn more about wikis (http://www.education-world.com/a_tech/sites/sites079.shtml). For a list of ideas on how you can use wikis in your classroom, visit http://wik.ed.uiuc.edu/index.php/Wiki_in_a_K-12_classroom.

RSS stands for Really Simple Syndication or Rich Site Summary. RSS allows students to receive multiple news feeds in one website. When a news story is updated, an RSS feeder will check for these new stories, collect them and send them to your website. The most popular RSS readers include Bloglines (http://www.bloglines.com); FeedBurner (http://www.feedburner.com); Feedster (http://www.feedster.com); Google Reader (http://reader.google.com); MyYahoo! (http://my.yahoo.com/s/rss-faq.html); and Technorati (http://www.technorati.com).

Social Bookmarking allows students to access, store, and organize your bookmarks over the Internet. One of the most popular social bookmarking websites is ‘Del.icio.us’ (http://del.icio.us/). Each time you save a website to your bookmarks you have the option of providing several keywords to describe the site. Teachers can give students access to their “delicious” website where they can access your bookmarks. This helps teachers direct student research projects.

Digital Video and Youtube allow students to create and display their own educational videos. July 23, 2007, was a historic moment for technology and politics in the United States, as CNN hosted the YouTube Debates. Students were asked to create a video of themselves asking a question for one or more the democratic candidates (http://www.youtube.com/watch?v=B5mDCDAkOiQ). One question that was selected for the live airing of the CNN program was “Is Obama Black Enough? Hillary Woman Enough?” (http://www.youtube.com/watch?v=utf4-LPhUz0).