

## CHAPTER 16

---

# **SOCIAL STUDIES AND TECHNOLOGY 2009-2034**

**David Valdez, B. Justin Reich, and Michael J. Berson**

---

The preceding chapters have traced the contours of the use of technology in the social studies over the past 25 years, a period marked by unprecedented technological change. Together, our collaborators have shown us compelling exemplars and illustrative failures; they have provided detailed maps of well-studied terrain and sketches of frontiers yet to be explored; and they have provided a clear portrait of the present and the cutting edge. Our task now, is to project further into the future. What will learning and teaching with digital technologies in the social studies look like in the next 25 years?

We approach this chapter with the belief that we must not let the future simply evolve. To reach a point where technology cannot be described as “oversold and underused” (Cuban, 2001), we must learn from our past to enhance the learning and educational experiences of future generations of social studies students. In this final chapter, we provide a hopeful vision of how, over the next 25 years, social studies educators might integrate emerging technologies into their learning environments. We offer this vision as a starting point for a larger conversation among social studies educators about what the future of learning in the social studies ought to

---

*Technology in Retrospect: Social Studies Place in the Information Age 1984-2009*, pp. 299–312  
Copyright © 2010 by Information Age Publishing  
All rights of reproduction in any form reserved.

look like, what role technology will play, and what we need to do in classrooms, teacher education programs, publishing houses, and public policy to bring about the best possible environments for nurturing young citizens.

→ Au: The names of TV shows and movies are italicized in APA. They are also sources that should be included in the refs. per APA.

Envisioning the classroom of tomorrow poses fundamental questions about how technology will shape future society. For decades artists have been imagining how networked computer systems will change our lives. At one extreme is a *Jetsons*-like world with brightly colored flying cars and mechanical assistants that help us to dress and do household chores. The *Jetsons*' technology is benevolent and allows for greater luxuries and human freedoms. The other extreme is the dark apocalyptic vision of *Blade Runner* where machines are necessary for survival, and the mystique of a Big Brother presence pervades technological innovations. We admit that our presentation here is more like the *Jetsons*: where technology makes certain facets of life easier and richer, but does not replace the fundamental tensions, drama, and comedy of the human experience. The *Jetsons* was funny, after all, because we still recognized ourselves in their transformed world. In this short chapter, we present a similarly aspirational vision, although certainly one role of social studies instruction in the decades ahead will be to prevent the scenarios of *Blade Runner, 1984*, and other technological dystopias from being realized.

The typical school morning in the year 2034 is not without similarities to today's classroom. The final bell rings, and a handful of flushed students are tardy to class. In some classes, students immediately pull out their networked devices, and log in to the online learning environment prepared for class by their teachers. In other classes, the period begins with the human connection that has been the hallmark of education for millennia, and screens and projectors remain dark as teachers and students connect and prepare for the day's tasks. Some things may never change, but by 2034, technology has enabled a more efficient classroom and pedagogical approaches that are personalized to student needs.

## SOCIAL STUDIES IN CLASS

Let us imagine a class period in the day of the life of one student, George, and his teacher, Jane. As George is sitting down to class, Jane asks her students to log into the landing page for her class in the school's learning management system, and students pull out their web-enabled devices. In George's school, every student has been issued a hand-held mobile device. This device, about the size of today's iPhone, has nearly all the functionality of a phone and laptop computer.

The cell phones of today have two major limitations: awkward data entry and limited screen size. The small keyboard size even on devices with QWERTY-style keyboards is cumbersome for anything more than limited text messages or keyword searches. In addition, the size of the visible screen limits how much data is displayed and how quickly a user can scan for relevant information. In 2034, these obstacles will be overcome with several different new technologies.

George can use his mobile device as a handheld and interact with a touch screen in his hand. The device even has “gestural interface,” which was pioneered at MIT beginning in 2009. George’s handheld recognizes his natural hand gestures in order to take and edit photographs, navigate the internet, and access databases, using the mobile phone as the processing unit (Mistry, 2009).

George can also project a real-scale virtual keyboard onto any flat surface, like his desk or a wall, and type naturally. His handheld can also project an image as small as a piece of paper or as large as a wall. George’s desk has a white panel built into the surface that he can flip up to use as a screen. With this handheld device, George has the option of remaining constantly connected with his learning environment. The types of handheld devices vary depending on student needs and customization features. There are some high-end products like tablets and cell phone interface tools as well as traditional mini-netbooks. In much the same way students have various calculators with multiple features and accessories, so too do students of the future have handheld devices with multiple price points and accessibility features.

At other schools, George’s friends use touchscreen tablets rather than the handhelds. Some schools maintain rigid regimes for ensuring that all students use the same platform, and at other schools, students and classes use differing devices but are united by the same platform. Some schools conduct all technological support and device repair on site, while others require students to be individually responsible for their own machines. Issues of equity remain, but the dramatic drop in the costs of these devices means that every student in the country is accessible to a machine for online communication, writing, and research.

As students log in, Jane asks her students to spend the first few minutes of class working on a “Do Now,” a brief activity to reorient the student towards the class period. For the previous evening’s homework, Jane asked her students to view a short web video about a new law that Congress passed and then to read a related *Wall Street Journal* article. Their assignment was to then find a related news video, online article, or paper clipping about the same story from another country and to compare/contrast the two pieces. Today’s Do Now is to review their previous night’s assignment, and to write a metacognitive reflection about how they com-

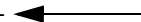
pleted the assignment, focusing on the skill of “transmedia navigation,” the ability to follow a story line across multiple media (Jenkins, 2006).

Completing the Do Now is a seamless process, and individualized for each student. George’s class interface automatically retrieves his completed homework assignment, and opens up a new entry in his online notebooks. A few of George’s classmates have not finished the assignment and, with the touch of a button from her administrative controls, Jane temporarily grants students web access to catch up on the homework rather than complete the Do Now. As in the past, illness, family challenges, motivation problems and other issues mean that students do not always complete their homework, but technology enables Jane to more efficiently use their time together to be sure that each student has meaningful learning opportunities throughout their class time together.

Before class even begins, Jane knows quite a bit about what her students did for homework and where they are in their learning process. The teacher spends no time collecting homework. She has already worked with her learning management system to evaluate the class’s homework, and she has a great deal of data at her fingertips in terms of who completed the assignment and what the students learned in the process. When she awoke this morning, her learning management system gave her a homework report, providing details about which students had completed the homework the evening before. The report notes what time the assignment was submitted, and utilizing a word count rubric and content evaluation application, the report indicates which students only partially finished the assignment. Each assignment is evaluated by a plagiarism detection tool that prevents multiple students from submitting the same assignment or copying material from the web. Since the teacher has given a similar assignment several times in years past, the LMS’s natural language processing software can use the teacher’s previous grades to identify which assignments are likely to be of high and low quality. Software tools also compare this assignment to each student’s previous assignments to evaluate spelling, grammar, length, usage, and so forth. Automated writing evaluation remains primitive, but teachers can still use this basic data to help chart each student’s progress and provide strategies for differentiated instruction. Later this evening, Jane will post brief feedback on each student’s assignment. Using natural handwriting on her touch-screen tablet, Jane’s feedback will be included in each student’s online portfolio for students and parents to review.

Since the teacher does not need to spend any time collecting homework, she can use her report to instantly connect with the few students who did not turn anything in or turned in substandard work. She spends the period of the Do Now connecting with students who are falling behind, rather than figuring out who is. After resolving their individual

Au: What does  
LMS stand for.  
Spell out  
abbreviations on  
first use.



issues, she returns to her desk station and announces to students that they have one minute to finish their journaling.

After a minute, she tells students to save their work, and then she sets up the students' interface for class. When students are in her class, Jane can control each student's mobile device. When the Do Now period ends, Jane calls up an interface for George and his peers which includes the class outline and objectives on the left margins of the screen, and the essential question for the day across the top. Access to e-mail, texting, the Web, and other programs is locked and unlocked by the teacher as necessary during class.

In order to facilitate discussion about transmedia navigation, the teacher asks one student to take notes. George volunteers, and Jane sets her classroom projector to project directly from George's mobile device. The teacher then darkens all other students' computers, so the pupils focus on the discussion in that room among their peers. Sometimes the most important skill in teaching with technology is knowing when to turn it off.

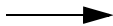
During the discussion, several students describe the challenges that they faced in finding media from other countries. Some simply found media that was published in English, but others wanted to get perspectives from different cultures. Some of these students used online translation tools to read print reports or listen to news videos; others asked friends in other countries to give a brief synopsis. Many of George's classmates have participated in virtual exchanges with students in other countries since their earliest years in elementary school, and virtually every student keeps up with friends around the world. Jane facilitated a conversation about the strengths and weakness of these approaches to translation and more broadly of the different media that students discovered, from the traditional media conglomerates to local citizen journalists reporting collaboratively around the world.

After reviewing specific dimensions of transmedia navigation, the teacher shifts the discussion to another skill: comparing and contrasting. In reviewing the assignments over her morning coffee, Jane noted that many students described both articles or videos rather than actually comparing or contrasting them, so she chose three exemplary assignments which she projects on the whiteboard and on her students' screens. The class discusses the assignment for a few minutes, and collectively they clarify how to compare and contrast effectively. The teacher then assigns different students to different tasks. Those who did an exemplary job on their assignment are asked to make an update to the "Compare/Contrast" article on the class' "Social Studies Skills and Habits of Mind" wiki. Most of the other students are tasked to revise their assignment, and the few who didn't turn their work in have a few additional minutes to catch up.

A small flashing light appears on Jane’s handheld computer indicating that class is halfway over. Even in 2034 with nearly all of the logistical work taken care of automatically, teachers are still pressed for time, so she gives students a few more minutes to work on their revision before changing the activity. For the second half of class, students are put in groups and asked to create a graphical organizer to compare the various international responses to the new American law. Students use a digital collaborative mind-mapping tool to organize their various articles and videos, categorizing the responses as supporting versus opposing and further delineating the opposing responses as procedural versus ideological. Each topic on the mind map is linked back to the original article or video, as students will be required over the next few nights to write a paper synthesizing the international responses to the new law. The essential question of the class period, “How is American domestic legislation shaped by foreign policy?”, remains at the top of students screen during the entire exercise. As the teacher wanders the room offering guidance and feedback, she continues to point students towards the essential question to keep their discussions focused. She also regularly glances at her own mobile device, which she has set to scroll through the screens of each of her students. When students appear to be off topic or off task, she wanders towards their desks to help them regain focus. Technology has not replaced classroom management strategies in 2034, but it has enhanced teachers’ awareness and ability to handle off-task behaviors.

Three beeps from Jane’s handheld indicate that only five minutes are left in the period, and she reviews the assignment for the next day. The notes that George has been recording are archived to the class wiki site and made available for students from other periods. George’s handheld interface now includes an exit card which has a brief poll about the day’s lesson and a space for an open response. Before leaving, he completes the poll and writes a few sentences about what he is eager to learn more about. All of the feedback is uploaded to the teacher’s desktop and stored for her review. George and his friends move on to their next class. Some students move to the school’s computer lab/media center where they are enrolled in online AP courses that are not offered at their brick-and-mortar school.

Au: What does AP mean?



In another social studies classroom exploring the same compare/contrast assignment, similar technology is in use. The teacher moves to the front of the room where a web-enabled wipeboard is positioned. The teacher projects some students’ homework onto the board. One student provides a link to an online German news article about the new U.S. law. The article was originally posted in German, but using translation software, the student was able to successfully understand the story. The teacher navigates to another student’s submission. This time, it is a Japa-

nese television news clip that has been posted online. The teacher shows the clip with English subtitles and asks students whether they felt the clip was balanced. Using a web-based polling system, the teacher asks students to use their cell phones to text their vote. Real-time data is projected onto the wipeboard. The class discussion is productive. A few students use their mobile phones and tablets to find additional materials and begin to e-mail their findings to the shared bulletin board on the class management site. Toward the end of class, the teacher reminds the class about the new homework assignment that has already been posted to the class site. The websites, news programs, and polling results were captured and stored on the class website. One student who was absent from class today will be able to go online and access the content, including the wipeboard comments from the day's lesson, and review the material at a later date. Another student who was present is convinced that one of the sites the class visited today was also discussed a few weeks earlier. He is able to go online and review the class archives of previous discussions and captured slides to check out his hunch.

### **ON AUTHENTIC WORK**

In the social studies classroom of 2035, a considerable amount of time is spent doing real and authentic work. Jane and her teacher colleagues have recognized that the classroom walls which sequestered students from meaningful community involvement could be breached with online technologies. Increasingly, businesses, governments, nonprofit groups, and other communities recognize the hunger that young people feel to solve pressing problems and engage with the world, and Internet connections allow school-community partnerships to flourish.

Through partnerships with local historical associations, history students comb online archives of audio, visual, and document materials, interview community elders, and piece together the stories and life histories of their communities. Through online forums, they share these stories back with the broader community who can provide meaningful feedback and critiques that let even young students feel a genuine sense of audience and purpose as they write. In the social studies class of 2034, students are dramatically involved in the fabric of their community, both physical and digital, and the effective use of technology allows students to meaningfully contribute, document, participate, and analyze the dimensions of their identities.

Civics students poll community members about local concerns, contribute to government forums about youth issues, and analyze publicly available data about government and business to better understand their

towns, counties, and country. Geography students using GIS systems help local governments better understand traffic patterns, help scientists produce detailed maps of reserve sanctuaries, or track recycling trends in a given neighborhood. ← Au: GIS?

Students studying global issues routinely interact with students across the world, and it's as common for students to work in groups with students on multiple continents as it is for them to work in their own classrooms. One of the highlights of George's year is when the school holds a lock-in where students sleep in the gymnasium and arise in the early morning to talk and work synchronously with their colleagues in Shanghai, Abu Dhabi, or Jaipur. Overseas teachers align curriculum goals with George's teachers each year to plan for topics of discussion and transcontinental live-video presentations. Later in the second-half of the academic year, the process is reversed.

Nearly all of this intellectual endeavor happens in the public sphere. The notion of handing a final performance of understanding to a single teacher is reserved only for very personal kinds of assignments in health or English/language arts classes. For the most part, everything students produce has an audience, and students are used to having their work evaluated by school peers, students in other schools, experts and professionals who give their time to review student work, and parents who have a window into school life.

All of these projects and performances do not entirely replace time devoted to the study of core, foundational knowledge. Economics students still study supply and demand, and U.S. history students still study the Civil War. But whenever possible throughout the year, social studies teachers motivate the study of these subjects with an authentic project-based approach in which students apply disciplinary knowledge to tackle real world challenges.

### **SOCIAL STUDIES BEYOND THE CLASSROOM WALLS**

Later that evening, George will be able to check his mobile device for his homework and additional communications from his teachers. Each student will consider his or her phone an essential classroom tool. With parent permission, teachers will regularly send text messages to students about homework, project deadlines, and even pop quizzes. When Jane finishes grading the day's homework, she can upload scores and comments to the school's server. This sends a message to a student's mobile device and to the parents as well, so George and his parents have real-time access to information about his class performance.



Since schools keep central databases for each student, Jane can use her mobile device to check educational applications that contain information about the learning style, personal strengths, and academic challenges of each of her students. As students enter each class for the first time, she downloads each student's profile. Instantly, she is made aware of how best to differentiate instruction for students while maintaining each student's privacy. Jane can continue to update the student profile so that other teachers can monitor the student's performance in all of his/her classes and provide necessary support. Teachers can send personalized messages to students about their performance, praising them for their participation or encouraging them to keep trying. Parents can be kept abreast of their student's performance and follow the profile of their child. Each of these tasks is no different from what motivated teachers do today. They check in with students about how well the material is being received and how to improve delivery of content. They consult with other teachers about students of interest. They contact parents and students to give feedback and address concerns. Utilizing technology like mobile phones will allow teachers to carry out many of the tasks they already do, but do so with greater ease and faster results.

The technology will also allow teachers to better communicate with families for whom English is not their native language. Improved translation applications will allow teachers to send basic communications to students and parents. As teachers post private feedback to each student about assignments or send comments about academic achievement, students and parents will be able to access the teacher comments in a variety of languages. For some families, this will become a valuable means by which to stay connected and informed about teacher expectations and student performance. Reciprocally, parents will be able to send communications to teachers in their native language, and the teacher will be able to use basic digital translation tools to comprehend the e-mail. There will continue to be a need for translation aides to assist during parent-teacher conferences or phone calls to home, but by 2034, there will be improved efforts in basic tools of communication for common school-related expressions and scenarios. In this way, Jane is able to assist her students in the mainstream classroom and can continue to provide differentiated instruction for all learners.

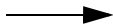
In the evening, as George is completing the night's homework, he logs onto the class website and reads the assignment. He has a question about the task. He is not quite sure if he can work with a partner to complete the assignment. The student checks his instant messenger service but sees that Jane has not logged on. The student then accesses the virtual teacher assistant from the class website. This avatar has been preprogrammed with responses to commonly asked questions from students and

is accessible during after-school hours. Avatars are used as digital representations of a person and may be accurate or fictitious projections of the person in a digital environment. Avatars have moved from gaming features to business applications, and Yahoo Inc., which has approximately 7 million users each month on its avatar-creation site, has licensed with private corporations for commercial marketing programs that guide online users through products (Noguchi, 2005). George uses natural speech or writing and asks his question to the avatar. This digital virtual teacher assistant clarifies the assignment parameters, and a log of the communication is captured and delivered to the teacher's digital dropbox.

Currently, avatars are used as facades for some instant messenger features or as an application in games and social networking sites, but it is likely that the future classroom will also have a supplemental cyberclass. Some classrooms, especially at the university level, are a hybrid of brick-and-mortar classrooms as well as some online class feature. This model will continue to expand to the secondary level. Not only may teachers post assignments, study guides, syllabi, and FAQs as they might today to their class website, they will also interact after school with students by use of an avatar. Although it may seem that the teacher is working extra hours from home, it will be possible for the teacher-avatar to operate independently from the teacher actually being online. The teacher-avatar will already be preprogrammed with a host of question-response scenarios, capable of transcribing student questions so the actual teacher may later read the dialogue and follow up with students in class or online. While the avatar may not be able to explain as clearly or completely some aspects of the curriculum, it will allow for some degree of nonschool hour instruction to continue, which may benefit some students who need to be reminded of assignment details or for students who may have missed class. The avatar will also be able to make some natural language translations for English Language Learners who may want to review the assignment at their own pace or practice their English. The teacher can assume control of the avatar at anytime and may arrange reviews or special discussions with virtual visitors.

These various features will break down the classroom constraints of time and space and allow students to engage in the social studies anytime, anywhere.

Au: Preservice  
is one word in  
Webster's.



### **ON PRESERVICE INDUCTION, IN-SERVICE TRAINING, AND EDUCATION RESEARCH**

Jane did not develop her technology integration skills on her own. Throughout her preservice and in-service training, our teacher had both

powerful role-models and effective instruction in theoretical frameworks and pragmatic concerns with implementing technology in the classroom.

Up until 2009, teachers' abilities to effectively integrate technology in social studies classroom were severely curtailed by the almost total absence of effective technology integration in preservice and in-service training. The teacher educators of 2009 were nearly all products of an educational system without technology, and as a result they had little personal experience with using computers or mobile devices within their teaching. Indeed, many teachers associated fear, anxiety, and worry with introducing new technologies in class, which required new preparation, new pedagogies, new conceptions of knowledge, and new ideas about student authorship and audience.

In those early years of the new millennia, however, teacher educators recognized a troubling disconnect between the media saturation in the lives of a new generation of "digital natives" and the technological isolation of the classroom. Some teacher educators held out hope that this divide would organically wane over time as younger, more tech-savvy teachers entered the profession, but the early results were not promising. Even as the oldest "digital natives" began entering the profession, their classroom experience and preservice training did not include examples of how to effectively integrate technology into teaching and learning. As a result, young teachers with great technological fluency and media saturation in their personal lives implemented methods that were well established during the nineteenth century. They continued to utilize the same format and tradition of classroom instruction they had personally experienced.

So what inspired teacher educators to commit to the hard work of transforming their curricula to include more technology integration, thereby providing models of excellence for preservice teachers? It was not the surfeit of new information available, or the radical shift of commerce into an online environment, or the convergence of print and online journalism, or the transformation of social lives and identity through social networks. The critical shift was in American politics, as politicians united their supporters through social networks, communicated directly to constituencies through *YouTube* and *Facebook*, and pushed forward a good governance initiative closely tied to generating transparency by publishing information online. Moreover, interest groups and civic leaders used the same tools to organize their supporters, volunteers, and advocates. Once Web 2.0 tools became firmly ensconced in the civic sphere, social studies teachers felt a compelling responsibility to immerse students in online communities and help prepare them for their roles and responsibilities as citizens in the twenty-first century.

Making this transformation required teacher educators to return to their syllabi and lesson plans, and begin modeling lessons that thought-

fully and effectively incorporated various technologies- computers, projectors, interactive whiteboards, mobile devices, and so forth. Since many teaching colleges and preservice teachers have better access to technology than many schools and K-12 students, teacher educators designed lessons that could be accomplished not just by students with 24 hour access to networked computers, but by students who might need to go to a library or stay after school to get access to computers. By being immersed in these classroom experiences as students, preservice teachers had the chance to experience and then design technology rich lessons that allowed students to access diverse sources, collaborate, and co-construct knowledge and understanding. These experiences in methods classes at the university level were supported by induction into teaching frameworks and pedagogical ideas that many preservice teachers learned in special courses focused on methods with technology.

Education researchers played a critical role in helping to advance pedagogy as this transformation was taking place. Many researchers continued in the rich tradition of design research (Dede, 2005) that had been developed over the previous decade, where researchers experimented with new methods and pedagogy and reported on their efficacy. Nearly all social studies methods teachers were involved in these efforts on one scale or another. In addition to these design methods, researchers recognized that extraordinary innovations were happening across the country in technology integration, and qualitative researchers developed a rich repertoire of case studies describing these efforts. At the same time, researchers also recognized that the continuous, real-time data produced by online learning environment would enable entirely new approaches to education research, where longitudinal analyses of usage statistics or semantic analysis of content could allow quantitative research to provide some context about the entire universe of wikis that offered some perspective of qualitative case studies. Innovations in technology-rich pedagogies sometimes emerged from concentrated research along any one of these methodological lines, but more often came about as a result of drawing insights across these differing kinds of studies.

By 2034, through a difficult period of growth, social studies educators have closed the media chasm between classrooms and the rest of the world, and technology and social media is an essential part of school life. To be sure, much about classrooms remain unchanged—the virtues of face to face exchange, debate and discussion, close relationships between students and teachers, the need to make content themes relevant, and the close reading of print text remain essential parts of school life. But these time-honored methods are complimented and accentuated by the new methods and pedagogies enabled by emerging technologies.

All of these important developments in teachers colleges and research universities are supported by professional development efforts within schools. Jane takes considerable personal responsibility for her own professional development. She has carefully designed her personal learning network to sensibly absorb information from several sources helpful for social studies teachers: some professional historian newsletters, blogs from other educators, and the NCSS ning. Her colleagues are members of similar networks, and so they regularly have shared texts to shape their discussions in department meetings. These teachers continue to share resources with one another and adapt ideas to their own needs—much as teachers of today foster a collegial respect for one another.

← Au: What is  
"NCSS ning."  
Clarify.

In addition to her personal learning network, Jane also has regular in-service trainings provided by her school district. Recognizing that hardware and software investments are worth little without developing the humanware of learning, federal, state, and municipal technology grants have been radically refigured over the last decades to require that technology purposes are paired with professional development training, to avoid the “oversold and underused” phenomena that dominated the end of the twentieth century and the beginning of the twenty-first century (Cuban, 2001). Some of Jane’s professional development is presented through face to face sessions on her campus, but she also regularly participates in webinars and online minicourses that she can complete, at least partially, on her own schedule. Professional development opportunities encourage effective infusion of technological resources and create productive systems of digital resources.

Every year, Jane’s school or department picks a theme to organize professional development so that the school is collectively making progress towards “the next level of work” (City, Elmore, Fiarman, & Teitel, 2009). Some years the focus is exclusively on an issue entwined with technology, some years the focus touches upon technology, and some years the focus is elsewhere. These regular professional development opportunities allow our teacher to continue to develop her skills with new media and new technology even as the digital landscape changes around her.

### CONCLUDING THOUGHTS

This chapter offers a glimpse into the future, yet this collective vision is a conjecture of just one of many possible scenarios that optimize the diffusion of technological innovation in our society and its translation into educational applications. No one knows for certain what the future will bring, and emerging technologies and revised pedagogic approaches to teaching could make the best-laid plans obsolete. What is inevitable is that

change will occur. The question is how proactive a role educators will take in ushering in a new age or whether they will hold tight to traditional practices and ways of thinking.

Although new media are not a panacea for education, technology innovation may offer rich and constructive experiences that extend beyond the potential of traditional media that has been a mainstay of teaching for centuries. Schools need to embrace the important shift toward digitally connected and mobile technologies that are pervasive in the lives of children. These tools provide an opportunity to not just support learning, but also they may guide and enrich students' experiences with access to ideas on a global scale, active engagement through critical analysis of information, and participation in inquiry and discovery that leads to the creation and dissemination of new ideas. Let us learn from our past, and embrace the future so that we can reap the benefits of the unprecedented technological change. Our students are counting on us to guide them into the future, their future. They rely on the skills that teachers foster, the examples that are modeled, and the ideas that are nurtured. The future offers a tremendous opportunity to be responsive to a world that has been transformed by technology. It is time to embrace this change and create learning experiences that are more extraordinary than anything we have yet imagined.

## REFERENCES

- City, E. A., Elmore, R. F., Fiarman, S., & Teitel, L. (2009). *Instructional rounds in education: A network approach to improving teaching and learning*. Cambridge, MA: Harvard Education Press.
- Cuban, L. (2001). *Oversold and underused: Computers in the classroom*. Cambridge, MA: Harvard University Press.
- Dede, C. (2005). Why design-based research is both important and difficult. *Educational Technology*, 45(1), 5-9.
- Jenkins, H. (2006). In K. Clinton, R. Purushotma, A. Robison, & M. Weigel (Eds.), *Confronting the challenges of participatory culture: Media education for the 21st century*. Chicago, IL: MacArthur Foundation. Retrieved from [www.digitallearning.macfound.org](http://www.digitallearning.macfound.org)
- Mistry, P. (2009). *Sixthsense: A wearable gestural interface*. Retrieved from [www.pranavmistry.com/projects/sixthsense](http://www.pranavmistry.com/projects/sixthsense)
- Noguchi, Y. (2005, November 22). Self 2.0: Internet Users Put a Best Face Forward Web Chatters Upgrade Their Identities for Virtual Life. *Washington Post*, p. A01. Retrieved on December 1, 2007, from <http://www.washingtonpost.com/wp-dyn/content/article/2005/11/21/AR2005112101787.html>

→  
Au: What's the  
title of the article  
in the edited  
book?