# Avatars, Blabberize, and cell phones: ABC's of 21st century skills to teach social studies.

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*The Digital Age is revolutionizing education. Educators need to be well-informed about the variety of technology tools available. Technology tools captivate the interest of students and encourage high-levels of engagement. Often, the daily lives of students are rich in technology, while teachers lack the knowledge or skills to integrate technology into the curriculum. Through the use of the 18 free innovative technology tools profiled, teachers can enhance instruction and students' motivation levels in a social studies classroom while connecting to international standards for technology education and 21st century skills.*

The fact that technology today pervades almost every aspect of life, from home to work to play, results in profound implications for educators. Students are able to connect and create with their peers and with the wider world in ways that were unfathomable just a few years ago. Learning tools such as media and telecommunications, and network technologies are rapidly evolving into a powerful support system for acquiring knowledge and skills needed for modern life.

A new generation of media savvy students has infiltrated the schools. One recent study by Rideout, Foehr, and Roberts (2010) found that 7th through 12th graders indicated they spent on average 90 minutes per day sending or receiving texts. Within the last five years there has been almost a 30 minute increase of computer use with average time at one hour and 29 minutes. Facebook has over 845 million users around the world that log on daily. Half of the younger users (ages 18-34) check their Facebook accounts within a few minutes of waking up and 28% logon before getting out of bed (Facebook, 2012). Prensky (2010) termed this generation as *digital natives* due to their constant use of technology. From communicating, scheduling, or playing games to shopping online, or finding information, students use technology as avenues for entertainment, communication, and information. However, technologies that students regularly access outside school are noticeably absent in some classrooms.

## 21st Century Skills

The days of using a chalkboard to impart knowledge to students is long in the past. In order to connect to the media-infused lives of students and prepare them for the many technological tools used in the workplace, educators must be fluent with the next generation of technologies and prepared to interact with students using the myriad of tools that are available. Not that many years ago teachers communicated with parents through telephones and notes sent home by the student. Now teachers use blogs, write emails, create webpages, send text messages, "tweet," or host electronic video meetings. Many classrooms are moving toward embracing 21st century learning skills with encouragement from state departments of education and school districts (Gewertz, 2008). Critical attributes for 21st century education include technology and multimedia skills, student-centered work, integrated and interdisciplinary subjects, project-based and research-driven class work, and relevant, rigorous and real-world assignments (Partnership for 21st Century Skills, 2011). The Partnership for 21st Century Skills has developed a Framework for 21st Century Learning. Four key areas are detailed as necessary to embrace 21st century skills:

(a) Mastery of core subjects and 21st century themes;
(b) Learning through creativity, critical thinking, and collaboration;
(c) Life and career skills; and
(d) Information media and technology skills.

Two key components within information media and technology skills area are students' ability to create media products and apply technology effectively. For students to design media products they must have an understanding of a variety of media options and how to appropriately utilize the technologies. There is movement away from simple print assessments to embracing projects that utilize several forms of technology with students working collaboratively with other students (International Society of Technology in Education, 2007; Maxwell, Stobaugh, & Tassell, 2011). See Table 1 below for a comparison of learner requirements for students in the 20th versus the 21st century (Partnership for 21st Century Schools, 2011).

**Table 1. Contrasts between a 20th and 21st Century Learner**

| 20th Century | 21st Century |
|---|---|
| Print is the main instrument of teaching and learning. | Performances, projects and multiple forms of media are used for learning and assessment |
| Passive learning | Engaged Learning |
| Students perform independent assignments in the classroom. | Learners work collaboratively other students within the classroom and other people around the world. |
| Teacher delivers the content: teacher-centered instruction. | Teacher is facilitator or coach: student-centered learning. |

**NETS for Students**

Technology expectations have been further clarified by the International Society of Technology in Education (ISTE), the largest teacher-based organization in the field of educational technology. ISTE advocates for improving the teaching and learning process by advancing the effective use of technology in K–12 schools. The organization introduced technology standards for students in 1998 and revised them in 2007. The student technology standards promote the use of technology by K-12 students to design products and increase their problem-solving skills. These standards suggest that teachers partner with students to define high-quality tasks and products

aligned to standards.  The National Educational Technology Standards (NETS) for Students emphasize six areas:

- Creativity and Innovation:  Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.
- Communication and Collaboration:  Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- Research and Informational Fluency: Students apply digital tools to gather, evaluate, and use information.
- Critical Thinking, Problem Solving, and Decision Making:  Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions.
- Digital Citizenship:  Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
- Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems, and operations. (National Educational Technology Standards for Students, 2007).

There are clear parallels between the NETS for Students and the Framework for 21st Century Learning. Concepts included in both documents include: creativity, critical thinking, collaboration, and technology skills.  Through the use of technology, students can master core subjects while generating creative products and solutions, critically examining information, and collaborating with experts and other students.

There are many free technology resources available to teachers.  This article will profile 18 technology tools that address three of the NETS for Students dimensions as well as key concepts within the Framework for 21st Century Learning – a) Creativity and Innovation, b) Communication and Collaboration, and c) Critical Thinking, Problem Solving, and Decision Making.  Teachers can masterfully integrate student use of technology by teaching content in a way that promotes creativity, critical thinking, and collaboration while building life and career skills.  All of these attributes can be integrated into a social studies classroom provided that teachers embrace technological changes and are willing to become 21st century learners with their students.

**Creativity and Innovation**

Technology can encourage students to be creative and innovative as they design new products or think up new ideas. *Animoto* (http://animoto.com/education), *Slide Rocket* (http://www.sliderocket.com/) and *Photo Peach* (http://photopeach.com/) are sites that allow users to create a moving slide show with music, pictures, and text.  Users can create sophisticated presentations that go beyond the typical PowerPoint.  With each of the technologies, students first would select images that appropriately match their content and upload them to the site.  The creators would then write the text that would be included. Finally, students would select the music that would play in the background.

Each of the technologies have tutorials and support resources.  For example, Slide Rocket has a section of their website dedicated to supporting users (http://support.sliderocket.com/home).  In addition, each of these technologies has unique properties.  One popular feature in Photo Peach is the option to embed timed quiz questions in the presentations.  This option gives presenters an opportunity to formatively assess the audience's understanding.  Animoto, a similar technology, has a cell phone app so that students can create presentations on their cell phone.

Students often enjoy the creative elements on this site as well as the quick creation of a professional presentation.  With Slide Rocket, PowerPoint presentations can be uploaded so presentations can be viewed at a later time.

Use of these sites can challenge students to think deeply, as they critically examine key events.  Projects utilizing these technologies might include defining a key event of a presidential term, contrasting the positive and negative impacts of a mixed economy, or proposing a solution to a local environmental problem.  Students could work on these projects in groups and share the presentations with the class.  Students can embed statistics, quotes, and other messages to inform and persuade their audience to take action.  Additionally, public presentations allow students the practice in becoming effective communicators. An example of a sample social studies assignment using an Animoto presentation can be found at: (http://animoto.com/play/hUG1o1HULoYzMVG hn14g4g). In the assignment, students summarized the themes of Washington's Farewell Address and analyzed how those themes apply to life today.

*Blabberize* (http://blabberize.com) is a website that allows the user to upload a picture and then record voices to make that image speak.  The "talking picture" shows a moving mouth on the image. First, students upload or choose a picture to be used as an image.  The creator then selects the points on the mouth that will open and close to say the words to be recorded.  Finally, students record their own voices. For example, students can use a picture of Dr. Martin Luther King and record statements about what they believe Dr. King would say about President Obama's administration.  Using pictures of other historical figures, students can record thoughts addressing current day issues.  How would an historical figure address a problem today? While engaging in entertaining activities, the students are thinking critically and creatively to complete these types of tasks.

*Go Animate* (http://goanimate4schools.com/) is another engaging resource using avatars (graphic representation of a character) to speak the script the author writes or records.  The use of avatars is an entertaining and effective way to hook the students' attention, review key components of a lesson, or introduce classmates to each other.  To create a Go Animate project, students would first select among the many choices of avatars and backgrounds.  The creators may include one or two avatars. Then, students can either record their voice or type in the dialogue.  The following web link provides an example of social studies assignment where students used Go Animate to make a spoof video of a debate between President Obama and Mitt Romney about which presidential candidate best represents the wishes of the Founding Fathers (http://goanimate.com/videos /0kEQ3uoJ30F0?utm_source=linkshare).  Students could also write a fictional dialogue between two major leaders during World War II to discuss opposing views of various battles. This site can be used as an alternative for student oral presentations.  Furthermore, the use of a "talking picture" (such as an historical figure) can be a humorous addition to any lesson. To engage critical thinking skills, students can select an historical person and create a speech from the point of view of the historical person about a current event.  If the Founders of our country could speak, what would they say about the current Tea Party?  These prompts require students to be creative and critically examine the backgrounds and beliefs of these figures and apply that knowledge in a new situation.

*Glogster* (http://edu.glogster.com/) is a web version of a poster with some interactivity. This link is a specific version of Glogster for teachers.  Users can create online collages or posters on this website with embedded photos, videos, graphics, sounds, and drawings.  Glogster provides opportunities for students to use their creativity while bringing an element of fun into assignments. Ideas for this site include making book reports, presentations, and class projects.  The Glogpedia Library also has a wealth of examples for students or teachers to review (http://edu.glogster.com/ glogpedia/).  Students could use this site to introduce themselves to the class by profiling their interests and strengths in this interactive format.  Glogster could also be an opportunity to show comparisons between concepts.  Students could show the relationship between supply and demand or the process of production, distribution, and consumption of a product.  Students could also

summarize the background of a historical figure or pretend they are a historical figure and design an "about me" poster.

*Facebook* (http://www.facebook.com/) is a social networking site that allows people to communicate with each other via the web. Facebook can also be a tool to create profiles of famous people in history. For example, a Facebook page of George Washington, first President of the United States, might include photographs and key decisions during his presidency, as well as, friends that would have lived during his time period. A Facebook page for geography content might include links to websites, books, maps, and photos representing the five themes of geography. Students can also use *The Wall Machine* (http://thewallmachine.com/) to create fake Facebook walls with pretend conversations between people.   Students can use these sites to challenge their classmates to creatively consider the beliefs and perspectives of historical figures as they must imagine what they would say in conversations as shown on the link provided with a hypothetical conversation between American presidents Franklin Delano Roosevelt and Barack Obama (http://thewall machine.com/3538Qv.html).

## Communication and Collaboration

Another area of the NETS for Students is that students should be able to communicate and collaborate.  Digital technologies can support this process.  Technologies can also support global and cultural understandings through communication with diverse audiences.  They also build students skills to contribute to team projects and develop collaboration skills.  Skype, Google Docs, Wall Wisher, and Lino It are some technologies that support students in communicating and collaborating to enhance learning.

*Skype* (http://www.skype.com/intl/en-us/home) is a resource that allows the user to make free internet calls with video capabilities.  To Skype, users download the Skype program from the Internet and connect a web camera to the computer if it does not have one attached.  Users create a user name and within minutes the program is ready to begin calling. Social studies teachers can easily connect with people in various states or other parts of the world to give students an opportunity to hear perspectives from various regions.  A classroom in Kentucky could connect with a classroom in Illinois to talk about Abraham Lincoln. Since Lincoln was born in the first state and grew up in the other state, it would be interesting to hear the students' perceptions of the great American President.  Classrooms could also connect with the local weatherman and ask weather-related questions.  While studying geography, an expert could provide real-time information about the current status of the threats to an environment for an endangered species. This technology allows experts who might have little time to visit a class an opportunity to quickly join a class without having to leave the job.  With smart phones, expert speakers can even connect to classrooms while they are in a coffee shop or walking down the street.  By connecting with real-world experts students might see the connections between their classroom work and the world.  Additionally, teachers can use this as a resource to have inter-classroom game competitions between two schools.

*Google Drive* (https://**drive**.**google**.com*)* is a technology tool that allows students to collaborate on documents online, across classroom or schools on a project, or even from home.  Through this site, students can continue their work in various locations without having to email the assignment to each other and wonder if they had the most recent draft.  This technology can enable classes to have collaborative projects across classrooms and even across disciplines.  To use this technology, students need to sign up for a free Gmail account.  Once logged in, the user can create a document and then select to "share" the document with others.

There are many ways to utilize this technology.  With a theme on adaptations, students could design a flow chart showing adaptations of the colonists while coordinating with a science teachers about adaptations of animals.  Extending this theme, students could work jointly with

English students examining a novel and ways the characters adapt.  Students could even work across school borders by partnering with another school to create projects.

Wall Wisher (www.wallwisher.com/) and *Lino it* (http://en.linoit.com/) are sites that allow for collaboratively developed online wall postings.  To create an online board, the creator would need to input a user name and then select to start a new board.  Next, the creator would provide the web link for the online board to participants.  An example of social studies assignment using Wall Wisher is provided where students posed questions after reading about the development of democracy in ancient Athens (See Figure 1).

**Figure 1. Wallwisher Example**
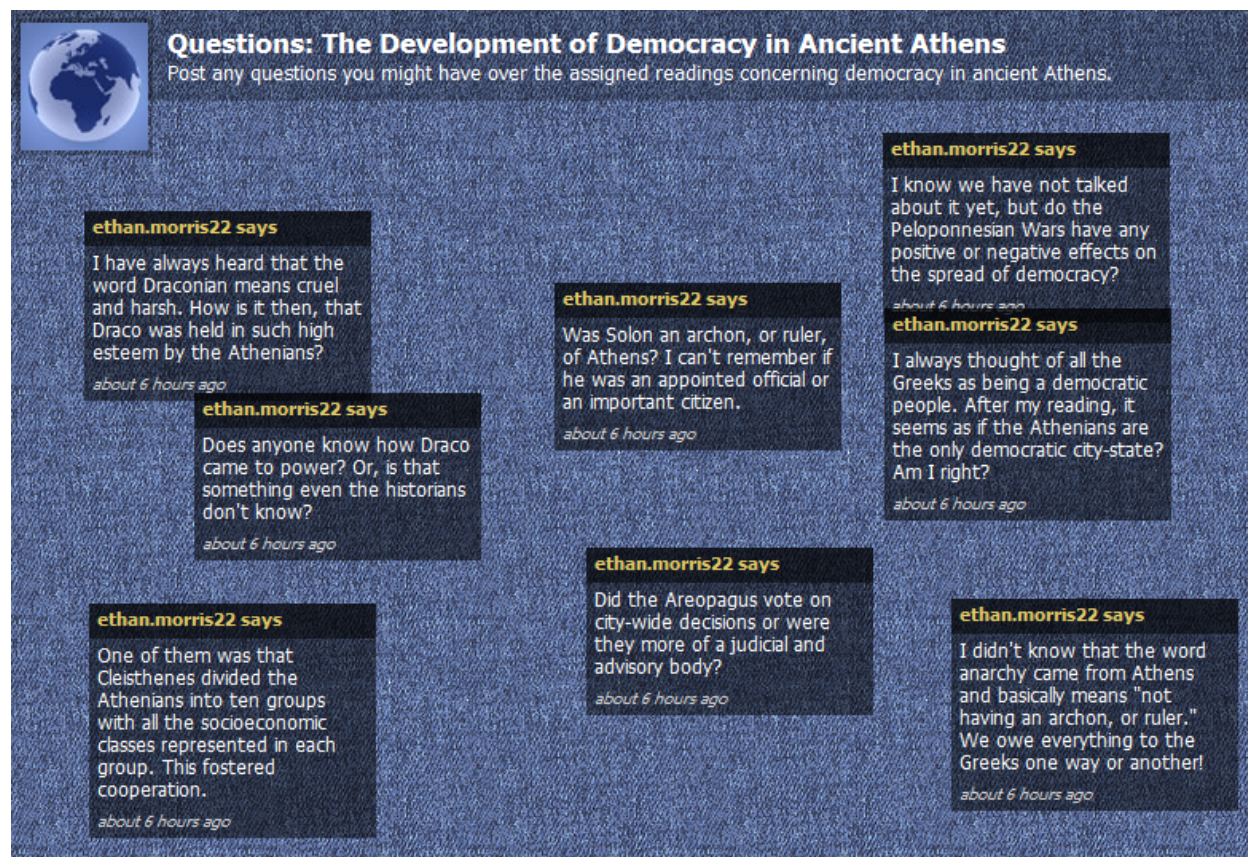


These sites would be particularly helpful for those schools who have embraced the one-to-one laptop initiative.  This tool is helpful for students to post questions, concerns, or thoughts about content being presented.  Instructors could then respond to those prompts to clarify information.  In schools where the students have laptops or meet in computer labs, this site provides teachers a great way to collect student feedback.

**Critical Thinking, Problem Solving, and Decision Making**

To engage students in thinking, students can investigate real-world problems, collect and examine data to identify the best ideas, and consider various perspectives to select the best solution. The use of word clouds and online polling provide students the opportunity to accomplish these tasks.

*Tagul* (http://tagul.com/), *Tagxedo* (http://www.tagxedo.com/), and *Wordle* (http://www.wordle.net/) are online resources that create word clouds.  The word clouds can be in specific forms or randomly shaped.  Words that are inserted more frequently than others in a text, show up with larger font size (See Figure 2).  Students can copy text from primary sources, including speeches and letters, into the site to identify key words that are prominent in the text. Students can then hypothesize why the author repeated certain words.  Students can even examine their own use of words by inserting their writings to determine which words they use most frequently and if those words are clearly the most important words in the text.  Students can also create word clouds to summarize a time period, event, or characteristics of a person.  A student would need to carefully examine which words accurately describe the time period, event, or person with larger words in the word cloud indicating which ideas were more important.

**Figure 2. Tagxedo Example**



Cell phones can be used in the classroom with *Poll Everywhere* (www.polleverywhere.com), a website that transforms cell phones into a student response system.  When students text the appropriate number assigned to each multiple choice answer choice, the website creates a chart showing students' selected choices (See Figure 3).  With this chart, teachers can get quick formative assessment feedback to address misconceptions on critical thinking questions.  This type of resource reduces the amount of time teachers spend grading assessments while providing them real-time data to adjust instruction.  In addition, the site allows text responses, so an open-ended question can be posed for students to text their thoughts.  This format gives everyone a chance to participate in the discussion without fear of embarrassment at a wrong answer.  It only takes seconds for the results to show up on the screen.  While some districts have opposed using cell phones in K-12 classrooms, through Poll Everywhere cell phones can be effectively utilized to enhance learning while integrating technology that students use on a daily basis.

**Figure 3. Poll Everywhere Example**
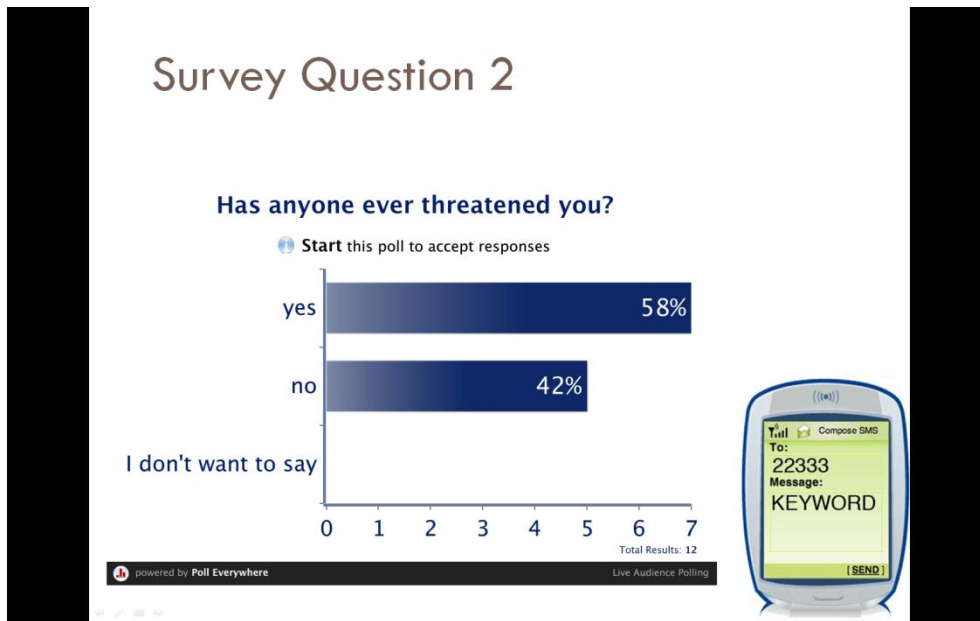


Another web site, *Poll Daddy*, (http://polldaddy.com/) provides a similar resource, with students using computers to respond to the question rather than cell phones.  With these technology resources, teachers can pose high-level thinking questions, such as, "If you were hired as a political strategist in charge of the campaign of George Washington to run against President Obama for President, what key element would be your priority?"  This type of questioning can initiate an engaging classroom debate.  Students can also use these technologies to collect data about authentic topics.  For example, students concerned about their lack of input into school decisions could create a poll presenting four ways students could be more involved and ask classmates to vote on the best idea.  Another option would be to pose open-ended questions so students could generate ideas.  Additionally, these technologies could be used to poll students on who they would vote for in the next election.  Students could then use the data to write paragraphs explaining the data and drawing appropriate conclusions.

Poll Daddy and Poll Everywhere are technologies that work best when posing one question. However, if the student wants to create a more complex survey, *Survey Monkey* (http://www. surveymonkey.com/) can accommodate many questions.  This website hosts templates to use to construct the survey.  This site can be used in many ways including constructing polls and questionnaires to obtain participants' feedback or conducting community research. The polls can be sent out by email, and then data collected can be projected in a chart. All of these technologies can engage students in critical thinking, problem solving, and decision making.

## Conclusion

Technology is ever present in the daily life of students. In order for teachers to meet the needs of students and engage them in active learning, traditional instructional strategies must evolve to embrace the use of technology.  All of the resources listed above are free online resources that can enhance instruction, assess understanding, and promote students' technology skills.  Some of the sites include paid versions which provide more bells and whistles, such as, Animoto, Glogster EDU, PhotoPeach for Education, and Go Animate for Schools.  With paid versions, the sites will

allow the teachers to set up individual accounts for their students.  However, students can still create assignments using free versions of these technologies.

By embracing technology in the way conceptualized by the Partnership for 21st Century Learning and the NETS for Students, students will be able to learn in their "native language," as coined by Prensky (2010), with technology naturally embedded into the daily operation of classes. In this way, the millions of dollars spent each year on technology will not stand idle, but change classrooms into 21st century learning centers, and positively impact student learning.

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