

Adventures with Cell Phones

Teachers are finding creative ways to turn the basic cell phone from a digital distraction into a versatile learning tool.

Liz Kolb

When 7th grader Sarah walked into her history classroom a few minutes before class began, she immediately took out her cell phone and began text messaging. She wasn't texting her friends, though. Instead, she was participating in the class brainstorming poll that her teacher had projected on the whiteboard. The teacher was using Poll Everywhere (<http://polleverywhere.com>) to ask students to give their opinion about the most important cause of the U.S. Civil War (slavery, states' rights vs. federal rights, the election of Lincoln, social issues,

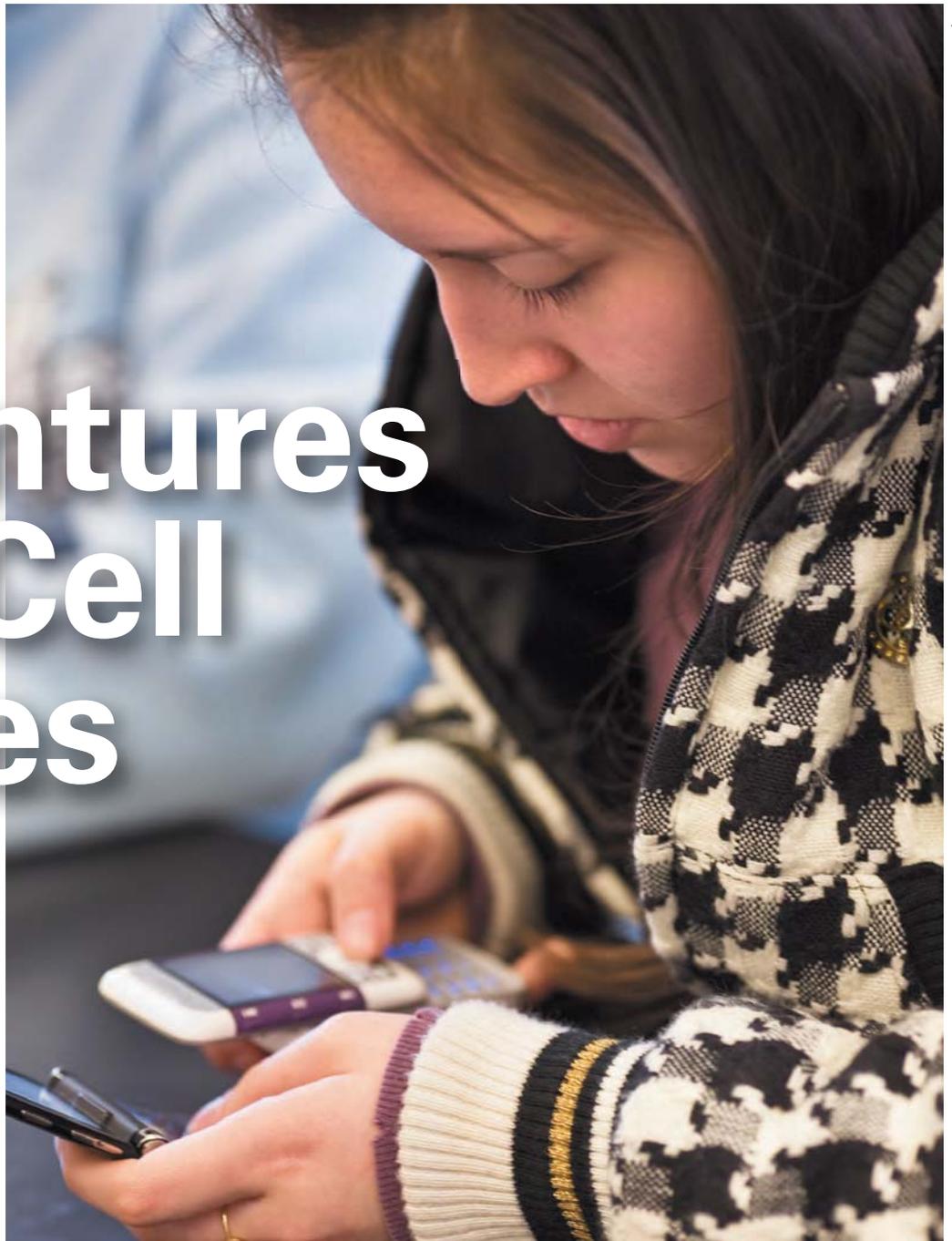
or financial issues). Sarah sent in her response, and then watched the percentages in the bar graph on the whiteboard change as more students texted in their votes.

When class began, Sarah's teacher asked the students to send another text message, this time explaining their reason for the selection they made. Sarah sent her answer, but as she watched other students' responses pop up on the whiteboard, she began to think about other viewpoints. Because the answers were anonymous, students felt comfortable giving their honest opinions.

After the teacher led the students

in briefly reviewing the range of comments they had sent to the brainstorming board, she put the students into groups and asked them to create an 8–10 minute podcast debating the merits of two different viewpoints on the major cause of the war. To research their two viewpoints, the groups used their mobile phones to search different sources on the mobile Internet. Once they gathered their data and developed their podcast, they called in to the teacher's Google Voice number and recorded their podcast in her private account. The podcasts immediately became downloadable MP3 files. Later, the teacher would listen to them on her

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phone, evaluate them, and text message her feedback to the students.

As students left class, the teacher told them to use their phones to take a picture of the bar code she had posted by the doorway. When they did so, Lincoln's Gettysburg Address and a short video from Ken Burns's documentary *The Civil War* appeared on their phones, along with their homework assignment—read the text, watch the video, and then send a 140-character text-message summary of the Gettysburg Address to the class brainstorming board. The next day in class, the students would compare and evaluate the various summaries.

Why Cell Phones Are Important in Learning

When I was a high school technology coordinator and secondary social studies

teacher, I wrote strong policies to keep student cell phones out of my school because of the distraction and cheating they could cause. Today, I hear many other educators express the same concerns. They worry that allowing cell phones in schools will lead to more problems with cheating, distraction, sexting, or general laziness in learning.

Although I believe we should not ignore these concerns (see "Using Cell Phones Appropriately," p. 42), I've changed my perspective in the last five years. After using cell phones in my own teaching at the University of Michigan, I've become a strong advocate for allowing teachers and schools to use them as a learning tool. Here are a few reasons why.

Class time is precious. Cell phones can help teachers increase the amount of class time spent on teaching and learning. First, because most students already know how to use a cell phone



(often better than their teachers do), there is no need to consume class time teaching students to use new instructional hardware and software. In addition, integrating cell phones into learning means that many technology-based activities can occur outside the classroom, freeing up class time to focus on learning content. Students do not even need to bring their cell phones into the classroom to use them for learning—they can collect images, videos, and audio recordings on their cell phones for homework and send them to the teacher or a class website.

Cell phones can save money. The great majority of students own a cell phone—98 percent of 9th–12th graders, 83 percent of 6th–8th graders, and 43 percent of 2nd–5th graders (Project Tomorrow, 2010). When schools tap into this resource, they get the benefits of technology without spending money on additional expensive hardware and

software. If students do not own a cell phone, many cell phone activities can also be done over a landline (with a toll-free number) or via the Internet.

Students love them. It's indisputable—students are incredibly fond of their cell phones. They never leave home without them. Integrating their favorite device into learning can get students more engaged with classroom content.

Cell phones facilitate learning anytime, anywhere, from any source, at any pace. Twenty-first century students don't want learning to be confined to a classroom or even a library. They want to be able to learn anytime (even at 2:00 a.m.); anywhere (even at the mall); from any source (for example, researching lunar eclipses by connecting with the NASA website, Wikipedia, a space

observatory in South Africa, and their own interest group on Facebook); and at their own pace. A cell phone lends itself to this type of learning. With it, students can connect to the Internet while they wait in line, document current events while those events are happening, or text message with others in their learning group about a project on the go.

Students need preparation for 21st century jobs. The abilities to text message, take mobile photos and videos, and connect to the Internet by cell phone will almost certainly be required for many future jobs. Although students know how to do many of these activities, they do not usually understand how these skills could be helpful in their future professions. If schools model how to use cell phones to organize, network, schedule, and gather data, students may see their phone as a tool for future professional growth rather than just a toy.

Students need to learn mobile etiquette and safety. Fifty-two percent of 10–17-year-olds who use cell phones say they send text messages while watching a movie in the theater; 28 percent send messages at the dinner table (Dias, 2007). Additionally, students often do not understand the repercussions of sending potentially embarrassing text messages (which are often not private and can be retrieved by cell phone companies); using inappropriate chat language; or publishing mobile media on the Internet without permission. Cell phone instructional activities give educators the opportunity to talk with their students about mobile etiquette.

Mobile phones can empower students who are visually or hearing impaired. For example, by coupling the phone with websites like Dial2Do (www.Dial2Do.com), students who are visually impaired can send speech-to-text e-mails, blog posts, tweets, reminders, posts on a Google calendar, and so on. In addition, these students can listen to podcasts, web pages, e-mails, or Google calendar posts. With Dial2Do, students who are hearing impaired can take advantage of text-messaging features to participate in activities that normally require oral communication—they can use sites like Google Voice (<http://google.com/voice>) to view text transcripts of voice-mail messages.

Learning Activities with Cell Phones

Teachers are leading students in exciting learning activities with cell phones. All the following activities can be done with a basic cell phone that has a camera and text-messaging capabilities (no need for a smartphone).

Activity 1: Podcasting, Oral Recordings, or Oral Quizzes

Probably the easiest activity to do with a cell phone is to create instant podcasts and oral recordings. Many resources on the Internet allow students to post their

phone calls online as audio files or podcasts. Teachers can also create a Google Voice account (<http://google.com/voice>) that provides a free local phone number—associated with the teacher’s phone or a voice mailbox—on which students can leave recorded homework assignments or test answers.

For example, a Spanish instructor uses her Google Voice account to give oral quizzes. Through Google Voice, she sends a text message to her 23 Spanish 2 students telling them when their oral quiz is ready. The students call in to the

A basic cell phone can be the Swiss army knife of digital learning tools.

teacher’s Google Voice number, listen to a greeting she has created giving them their quiz instructions, and then speak their answers. When each student hangs up, his or her quiz becomes an MP3 file in the teacher’s private Google space. The Spanish teacher then receives an e-mail or text message that she has a new voice-mail message. She can call in to Google Voice or log in online to hear the quizzes. In addition, the teacher can send a text message to each student directly from Google Voice with the student’s individual evaluation.

Because Google Voice archives voice-mail and text-message communication, there is a running record of all activities and progress. If the teacher chooses, she could make the oral quizzes into podcasts by uploading them to a podcasting service, such as iTunes, and requiring students to subscribe to the podcast.

Activity 2: Mobile Geotagging

Mobile geotagging is the ability to post media (photos, video, audio, or text) from a mobile phone to a specific point on a map. Although geotagging usually requires a global positioning system (GPS) or Bluetooth, some web-

sites couple with basic cell phones to allow geotagging. For example, Flagr (<http://flagr.com>) allows users to create public, semiprivate, or private maps. Anyone who has a Flagr account and is a member of a particular map’s group can send a photo or text message to a specific point on that map.

Teachers in many subject areas can use geotagging to enhance learning. For example, students in a middle school biology class who are studying different biological species can take pictures of species in their local com-



munity and then send each picture and a description of the habitat where they found the species to the class Flagr map. Back in the classroom, the teacher opens the Flagr map, and the students begin to identify the species and discuss why they were found in each particular habitat.

Another site that captures locations through mobile phones, GeoGraffiti (<http://geograffiti.com>), creates voice-marks—audio postings to specific map locations. For example, a history teacher assigns his students to create an audio tour about local history. The students go to various historical monuments and buildings in the community and then phone in historical summaries of the significance of these sites to GeoGraffiti, which places the oral recordings in the appropriate geographic locations on the map. This activity enables students to research local history, practice public speaking, and learn geography in one assignment.

Activity 3: Digital Storybooks

Although there are many ways to create digital storybooks (such as Photostory, iMovie, Jumpcut, and VoiceThread),

Using Cell Phones Appropriately

Before you begin using mobile phones for instruction, teach students how to use their devices appropriately, legally, and safely. Here are some sample activities:



- Show and discuss the brief video *Digital Dossier* (www.youtube.com/watch?v=79IYZVYIVLA)—which describes all the digital records that accumulate about a typical person from conception to death—to make students aware that all mobile messages, media uses, and calls are part of their permanent record.

- Discuss how to stay safe in the mobile world, using websites like ConnectSafely (www.connectsafely.org), which includes social network safety tips for teens and parents.

- For middle and high school students, show the MTV special on sexting (www.mtv.com/news/articles/1631123/20100203/asher_roth.jhtml) and encourage them to take the sexting quiz online (www.athinline.org).

- Give students a survey assessing what they know about mobile phone use (their own phones as well as the public nature of their text messages, GPS location, and phone records). Discuss the results. For elementary students, you can use the WoogieWorld website. At www.woogiworld.com/educators, students can sign up to play games that teach them cybersafety, cyberethics, cybersecurity, and cyberhealth.

- With middle and high school students, discuss examples of students and professionals who have lost jobs or been in court as a result of text messaging, sexting, or media sharing via cell phone. For example, see www.oprah.com/packages/no-phone-zone.html (texting while driving) and www.mtv.com/news/articles/1608002/20090327/story.jhtml or www.cnn.com/2009/CRIME/04/07/sexting.busts (sexting).

- Develop consequences for inappropriate actions conducted on cell phones—focusing on the act itself, rather than the tool used to conduct the act. For example, school rules are commonly already in place to prohibit cheating, failing to pay attention in class, or saying or doing something inappropriate during class.

- Keep parents informed of any cell phone activities the class conducts through permission forms, parent information nights, and even by inviting parents to participate (via their mobile phones) in the activities.

many of these resources depend on computer or Internet access. This means that students cannot create the digital stories anytime, anywhere. Yodio (<http://yodio.com>) enables students to create and participate in individual or collaborative digital storybooks using a mobile phone.

For example, a class of 1st graders on a trip to the zoo creates a collaborative digital storybook with Yodio concerning what they learned about the animals on the trip. Each parent chaperone has a group of four or five students, who take turns calling in to the Yodio phone number (on the parent chaperone's phone) and recording their observations about an animal, perhaps even capturing the animal's sound. Students also take a picture of their chosen animal with the cell phone. Back at school, the students log in to Yodio and create a digital storybook combining their recorded narrations and photos.

Activity 4: Student Organization

Students often have mixed results when they use hard-copy assignment notebooks to organize their school assignments. Cell phones can help with organization if students take advantage of services like Jott (<http://jott.com>) or Dial2Do (<http://dial2do.com>). These voice-to-text services enable users to call in reminders to themselves, send e-mails or text messages to groups of people, create posts, create a schedule on a Google calendar, listen to their Google calendar, listen to their e-mail, and even listen to podcasts and webpages on the go. For example, a high school student who does not have Internet access at home could call in to Dial2Do to check on homework assignments and set up homework reminders.

Activity 5: Photo Projects

Imagine a homework assignment in which 4th grade mathematics students take pictures of different polygons they see in their everyday lives and instantly send them (along with a short text message describing the type of polygon) to a private space online. The next day in class, the teacher opens the private space and uses it to illustrate polygons and their connection to students' lives, leading to a lesson on how to measure these polygons.

This activity can be done using the photo-sharing sites Flickr (<http://flickr.com>) and Photobucket (<http://photobucket.com>). Both sites have a private mobile address that can be used on any mobile phone; all the teacher needs to do is set up the mobile account and give students the address.

Activity 6: Classroom Response Systems

Classroom Response Systems (sometimes called *clickers*) are an exciting and engaging way for students to take instant polls and quizzes or even to record attendance, but these

systems can be costly for schools. Resources like Poll Everywhere (<http://polleverywhere.com>), Wiffiti (<http://wiffiti.com>), and TextTheMob (<http://textthemob.com>) enable teachers to turn basic cell phones into classroom performance clickers at no charge. Students can send poll responses and ideas achieved through brainstorming directly to an interactive webpage—either in the classroom to see instant results or outside the classroom to send in responses that the class can view and discuss the next day.

For example, when students walk into their math class, the teacher projects onto an interactive whiteboard the question, How do you define a right angle? The students use their cell phones to text in their definitions, which instantly appear on the whiteboard and serve as the introduction to the lesson.

Activity 7: Information Gathering

Teachers can design instructional activities that help students learn how to use their cell phones as an anytime, anywhere research and information-gathering device. For example, while on a field trip to historical Williamsburg, Virginia, a teacher tells his class to send any questions that occur to them to the free information site ChaCha (<http://chacha.com>). One student wonders why a certain building was constructed in such an odd way. No tour guides are around to help, so he calls 1-800-chacha, asks his question, and gets a text-message answer back in minutes.

The Future Is Here

Many teachers are discovering that a basic cell phone can be the Swiss army knife of digital learning tools. Even if they did not grow up in the digital generation themselves, they have come to

accept the mobile phone as a ubiquitous presence in the everyday lives of both elementary and secondary students. I share these educators' belief that it's time to stop banning mobile phones and start integrating them into learning. 

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