

Excerpted from

Cell Phones in the Classroom

A Practical Guide for Educators

Liz Kolb

Cell phones have become mini-computers; no longer simply classroom distractions, they are now powerful classroom tools. Your students can use their cell phones to document science labs, record oral exams, and research information. You can use your cell phone to poll your students, communicate with parents, and update your class blog. In *Cell Phones in the Classroom*, you'll get great ideas from educators around the world and from the many lesson plans and tutorials.

This excerpt gives you just a taste of the examples in the book by highlighting two case studies and one lesson plan. Learn how Judy Pederson, a language arts teacher from California, uses Web 2.0 tools in conjunction with student cell phones, and how Jarrod Robinson of Victoria, Australia, incorporates student cell phones into his physical education classes. You can also try out a sample lesson plan and start a live student radio station.

Case Study 7 ■ Judy Pederson

Valley High School, Santa Ana, California



Level	High School (Grade 9)
Subject	Language arts
Cell Phone Use	Inside and outside the classroom
Cell Phone Activities	Text messaging, phone calls
Web 2.0 Resources	ChaCha, Poll Everywhere, Twitter, Blogger Mobile, Textnovel, Flickr Mobile

The Inspiration

Judy Pederson is a ninth grade English teacher in Santa Ana, California. Most of her students are first-generation Americans whose primary home language is Spanish.

Pederson was working on her master's degree in education technology when she noticed that most of her students had their own cell phones. Working in a school where very few of her students had Internet or even computer access outside of school, Pederson realized that student cell phones might be one way to connect her students to learning via Internet sites outside and inside of school. She searched the Internet and bookstores for ideas on how to use student cell phones in learning and came across the blog *Cellphonesinlearning.com* (the author's blog). She found that the blog provided many ready-to-use suggestions on how to couple basic phones with learning and decided to try a few activities. She began by using cell phones for polling students.

School Demographics

Cell Phone Culture

The following describes the cell phone demographics in Pederson's classes.

60–70% of the students had cell phones

Of the students who had cell phones:

80–90% could send text messages

90–95% could take and send photos

30–40% had mobile Internet

Social and Economic Data

3,067 students were enrolled in middle and high school

54% of students pass the statewide reading proficiency

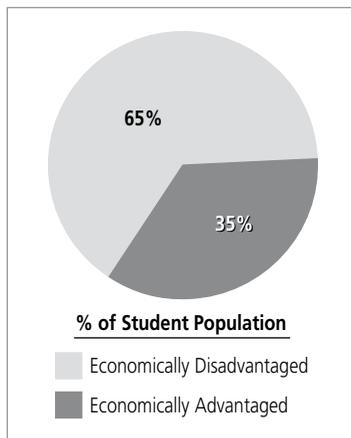
59% of students pass the statewide math proficiency

16% of adults in the district have at least a bachelor's degree

53% of adults in the district have at least a high school diploma

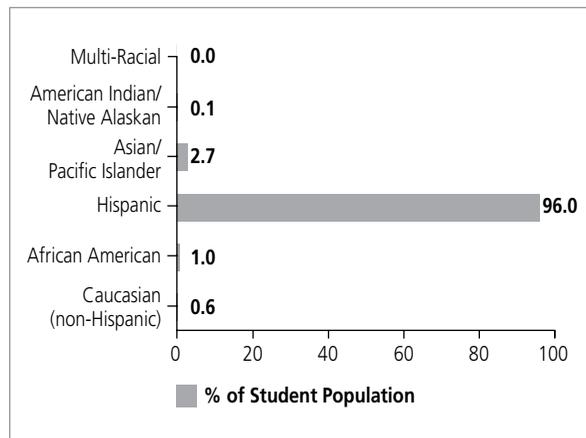
Economic Status

(from <http://schoolmatters.com>)



Enrollment by Race/Ethnicity

(from <http://schoolmatters.com>)



Project Examples

Pederson's first project used Poll Everywhere to check for students' comprehension during a lesson, or as a pre-quiz. Students also sent her questions and answers that they wanted her to use the next day. Next, Pederson set up student blogs with Blogger (www.blogger.com). She showed her students how to submit data to blog posts via their cell phones. Students then added pictures, videos, or even text message posts. One project required students to interview their parents. Several students used the video recorders on their cell phones to capture the interviews.

After the success with blogging, Pederson introduced her students to Twitter. Using Twitter, her students subscribed to a line-by-line Twitter production of *Romeo and Juliet*. The lines of the play were sent out every 15 minutes, and the play lasted a couple of months. Every day, those who were following the play would discuss which part of the play was being broadcast. It was a great way to isolate each line.

Beyond whole-class Twitter projects, some students elected to use Twitter in other creative ways. For example, one student published a line-by-line diary for a family member who was the subject of a research project. In addition to literary projects, Pederson has encouraged her students to use Twitter to gather information on other schools by engaging with educators around the globe. Besides classroom projects, Pederson also sent homework and study reminders using Twitter.

Pederson also allowed her students to use ChaCha (a free text messaging service where one can ask a question, and the answer will be sent to the student's cell phone; <http://chacha.com>). During collaborative group work, students were allowed to use ChaCha to gather additional information. The students had to write their own questions based on the lesson.

Pederson's students could also use text messaging to contact her outside of school. Students could text (or call) her any time until 9:00 p.m. to ask for clarification on an assignment.

Alternatives

Not all of Pederson's students owned a cell phone. Therefore, she often relied on groups or non-cell-phone options for assignments.

School Policies

Cell phones were allowed on campus and could be used during class only for instructional purposes. When Pederson began, her administrators did not know about the project. They are now supporting her use of student cell phones in her teaching.

Cell Phone Safety and Etiquette

Pederson did speak with her students about cell phone safety and etiquette before, during, and after the project. Pederson emphasized issues such as the public nature of text messaging and how students need to be mindful of every message they send. She developed rules that she expected her students to stick with: Phones need to be off and out of sight unless I explicitly state the phones can be in use. Phones are to be used for intended purposes only. Misuse of a phone during class would result in confiscation and possible banning of the phone in the future. Pederson believes the benefits of using cell phones outweigh the occurrences of one or two off-topic text messages (such as a quick text to a friend). In general, she found that her students were respectful with their cell phone use and did not abuse the privilege. She did not have to confiscate any cell phones.

Reactions

At first, being able to use their cell phones was instantly “cool” and grabbed students’ attention. After a while, cell phones became a very convenient tool, and students began generating their own ideas for how to use the phones for projects. Pederson has not heard from any parents concerning the use of cell phones.

Problems

Pederson had a few technical issues with cell phone plans in California (one phone plan in particular would not work with a few of the resources). She also found that students took time to catch on to how Twitter works and needed a lot of guidance to understand the purpose and learning potential of the environment.

Hints and Tips from Judy Pederson

- Start with one project.
- Do something that most students can do on their phones—perhaps start with text messaging.
- Include students in the planning—they know what their phones can do. Most students have cameras in their phones; that would be a good place to start, too.

Future Plans

Pederson definitely plans on using cell phones in her future teaching. “Absolutely. I have a new principal who is very supportive of 21st-century learning. When the faculty wanted to ban cell phones, I went in to tell her about my projects. On her desk was a copy of *Toys to Tools: Connecting Student Cell Phones to Education* (author Liz Kolb’s first ISTE book). Happily, we will not be banning cell phones. As more students have cell phones and as more cell phones have better and better apps, I intend to use this mini-computer more often.”

See Chapter 4, Lesson Plan 7, for a lesson plan on using ChaCha.

Case Study 13 ■ Jarrod Robinson

Boort Secondary College, Victoria, Australia



Level	High School
Subject	Physical Education
Cell Phone Use	Outside and inside the classroom
Cell Phone Activities	Taking photos, text messaging, and recording video
Web 2.0 Resources	Kaywa, SMSEXPRESS.net, Qik, Poll Everywhere, My MiaMia, Mobile Study

The Inspiration

Jarrod Robinson is a physical education and mathematics teacher in Victoria, Australia. Since the beginning of 2008, he has been using his students' mobile phones for mobile activities of polling, audio recording, and most recently QR codes in his physical education and mathematics classrooms. Robinson can be contacted at <http://thepegeek.com>.

The main reason Robinson chose to start utilizing mobile phones was based on his personal interest in using them in everyday life. "I acknowledged that it had a major role in the organisation of my life, from contacting people through to recording life's moments," he says, "This in itself was enough to have me consider the potential for their use within the classroom. If a mobile phone was important to me, then it sure would be just as important to my students. So why would I deny them the opportunity to use them?"

School Demographics

Social and Economic Data

149 students were enrolled in the school

According to Robinson, “The school population is generally from a low socio-economic background, which one would expect would impact on cell phone ownership. There is a 100% take-up rate among students older than 14.”

Project Example

In 2008, Robinson began using mobile phones with his physical education students. He created activities using QR codes with student mobile phones. QR codes (“quick response codes”) are “bar codes” for cell phones. They are small square images (like the one shown in Figure 2.1).



Figure 2.1 Sample QR code

On many cell phones you can download free QR code readers (such as at Kaywa) that allow you to use your cell phone camera to take a picture of the QR code, and then receive immediate information on your cell phone. For example, when you take a picture of a QR code, you could receive text, video, an image, an entire novel, a syllabus, a webpage, or a hyperlink with information.

One of the first projects that Robinson developed with QR codes was a GPS scavenger hunt. Robinson created QR code “clues” that students followed around the school. The following is a description of this activity from Robinson’s Blog (<http://thepegeek.com>):

Today, during lunch time, I helped my students setup QR code readers on their mobile phones in preparation for an activity they will be completing in the coming weeks within my Outdoor Education class. To study the safety aspects and risk taking factors that need to be considered before completing outdoor activities, the students will be completing an orienteering course using their bikes as a form of transportation. However, this is no ordinary course, here’s why:

The students will be working in pairs using their mobile phones and their QR code reading software. The course will start with a single QR code; each pair will receive a different code so that they start at a different part of the course.

Students will scan their codes which will then reveal the directions they need to dial into their compasses and a riddle that gives clues as to the location of the first marker and the next QR code.

Halfway throughout the course is a QR code with a difference: it contains a template for an SMS message that links directly to my mobile phone. Once scanned, the students will send a text message that basically asks for the next clue that will then be sent to them so they can complete the course. The final QR code links to a downloadable Microsoft Word document that details the questions they need to complete around the practical experience as related to the course.

The kids are already super excited about this activity and are looking forward to the challenge of not only deciphering the QR codes, but the riddles contained within them. To generate the QR codes I used the Google generator, then copied them into a word document that you can download [here](#).

However, this time I went around the school with a handheld GPS and marked 12 random locations. I then got 12 of the key questions the students are required to understand and entered them one by one into a QR code generator. Once this was completed, I placed them at the 12 different GPS locations. Now, with this completed, I was finally set up for the activity. The students were then given a blank answer sheet and the GPS location of the first QR code. When they managed to find the code they used their mobile phones to scan and reveal the question that then needed to be answered correctly in order for me to share the next GPS location. This process repeated until they reached the last QR code that included some further information about the assessment piece. The students were also encouraged to utilize their MP3 players to listen to their audio workbooks and podcasts of key content if they were unsure of an answer.

Beyond his physical education classes, Robinson now has started to integrate QR codes into his math worksheets. He creates a QR code that is loaded with extra information about what is on the worksheet (such as a YouTube video, an audio feed, a picture, or a helpful website). This allows his students to get extra help or extend the learning on a basic worksheet. Students scan the code with their cell phones (take a picture) and receive the relevant information on their phones.

Robinson also takes advantage of his students' interest in SMS text messaging by using text messaging to help his students prepare for exams and homework activities. In the days prior to the exam, he schedules text messages to be delivered to his students' cell phones at designated times. These messages ask the students to employ a series of higher-order thinking skills such as synthesis or evaluation. This allows his students to be more focused, helping them to synthesize a stronger answer from the information they are given.

Robinson also has developed quizzes for his students' mobile phones with an online resource called Mobile Study (<http://mobilestudy.org>). Mobile Study allows you to create quizzes online and then distribute them to cell phones, where students can take the quiz.

Alternatives

Robinson will often pair up students to work together, so not everyone has to own a phone. He has found that partnering students "puts no pressure on those students who don't have access. Another alternative is to make a call out for parents to donate old mobile phones that would usually be thrown out. This makes it possible to have a class set of phones."

School Policies

Robinson explains that currently, "Our school policy is supportive of mobile phones. Up until my introduction of mobile phones in the classroom, they were very much blacklisted. However, after staff training and pressure from the students, we are now supportive of their use within the classroom as long as it is under teacher direction and appropriate to the task at hand."

Hints and Tips from Jarrod Robinson

Robinson recommends to begin using cell phones “with an anonymous survey to obtain information about how many of your students have access to their own personal mobile phone. This survey could also help you work out what features students have on their phones and will assist you in planning for their inclusion in your curriculum. With this information, you can decide to move forward with the introduction. For example, if it turns out that only 5% of your students have access, then logic would tell you not to bother. It would also stop you from running an activity that required GPS access to work out that no students actually have a GPS-enabled phone. It pays to do your background homework.”

Reactions

Robinson has found increased motivation from both his students and parents as a result of using mobile phones in his classroom. He explains, “Students have embraced the use of the technologies they love within their learning. It has motivated them to complete assessments and homework that may or may not have been completed using traditional approaches. Parents have also enjoyed learning the new ways of communication at school and as such have participated in parent information nights focused on explaining the process and reasoning behind the push to use mobiles within the classroom.”

Problems

Robinson did not find any problems with the students using their phones inappropriately; rather, he had problems with the school’s policy on mobile phone use. He explains, “Initial problems were based on the fact that access wasn’t allowed at school so I had to get personal approval from the principal in order to allow me to utilise them within the classroom. Students also thought that it was some sort of trick when I asked them to bring and use their phones in class.”

The Domino Effect

According to Robinson, “A few teachers within my subject area have also got interested in utilizing mobile phones in their classes—starting simply with using them as one-to-one video cameras, MP3 players, and so on. They have also enjoyed communicating with their students in the after hours via bulk messaging.”

Future Plans

Robinson continues to use mobile phones often with his students. His plans include “more of a rollout into communication with parents’ phones, which would include things such as sending reporting information. I would also be interested in seeing all staff at my school utilizing the SMS bulk messaging service.”

Lesson Plan 3

Live Student Radio Station

Content Area	All
Type of Activity	Phone calling
Web 2.0 Resource	BlogTalkRadio

About BlogTalkRadio

BlogTalkRadio (<http://blogtalkradio.com>) is a free web-based resource that allows anyone to create their own live Internet radio show. BlogTalkRadio works in a similar fashion to a radio show—you can set up shows and get them started by calling in via cell phone, upload recorded audio, include live call-ins from listeners, conduct a live chat room, and all the shows are automatically archived on the site. BlogTalkRadio also includes an RSS feed and embedding widgets with every show.

Lesson Description

Students will participate in a yearlong weekly live podcast. The topic of the podcast can vary (by subject area), or it can be the student radio station for the whole school. The podcast could also consist of live broadcasting of sporting events.

Process

Inside School

1. Begin the project by discussing cell phone safety, etiquette, appropriate use, and agreed-on rules (see Chapter 5 for more information on digital footprints and safety). With the students watching, create an account in BlogTalkRadio that will become the class radio station. Log in to <http://blogtalkradio.com>.
2. Click on *Broadcast Now*. When you register, make sure that everyone agrees on a login and password (each student will be using the log in and password as they take turns moderating and hosting the show). Once you register and confirm your email, you will be able to create the Internet radio show.



The MyBlogTalkRadio main web page

3. Click on *Create my own free radio show*. Click on *Schedule Your First Show*.
4. Click on *My Account*, then select *Add new episode*. Now you and the students can add the first episode along with a description for the show. They must include keywords and a date/time for the show.

MyBTR > Episodes

Here you can create new segments, view or edit upcoming segments or shows from your archive.
Please note that it could take a minute or two before a scheduled segment can be viewed on the show page.

Add new episode |
 Upcoming episodes |
 Archived episodes |
 Recurring episodes

To create more than one segment, simply click multiple boxes (preferably the same day each week) in the calendar below and they will all be scheduled at the same time. You can schedule shows up to 30 days in advance. You can set up a recurring segment that will automatically add the shows for you as necessary.

* = Required

Title

Description

2000 characters remaining

IMPORTANT: Descriptions are a very important part of how listeners will find and decide to listen to your content, plus part of how we evaluate episodes to be featured. We recommend that you keep your description brief, while including pertinent details about guests and content. Don't forget to include keywords people might use to search for your content!

Tags or keywords

Please enter all 5 keywords that best describe this episode. Keywords can help organic search results and ultimately drive more traffic to your show. Think about words your target audience might search to find your content. Use words like guest names, topics, and details. Be specific!

The Episode Creation screen

5. After you hit *Submit*, the show is set up under *Upcoming Episodes*.

MyBTR > Episodes

Here you can create new segments, view or edit upcoming segments or shows from your archive. Please note that it could take a minute or two before a scheduled segment can be viewed on the show page.

[Add new episode](#)
[Upcoming episodes](#)
[Archived episodes](#)
[Recurring episodes](#)

Below is a list of all your scheduled segments yet to air. You can edit, preview or delete segments here. You can also navigate to segments scheduled for a particular day by clicking on the day in the right-hand column calendar. If you want to view a previous show, go to "Archived segments" in the section below.

Segment	Description	Keywords	Category Maturity	Date	Duration
[715671] Teacher Judith Pederson from Santa Ana Calif Cell Phones with 1st Generation Hispanic Students	Join us for a conversation with 9th grade teacher Judith Pederson from Valley High School in Santa Ana California. She will share her experiences of using student cell phones inside and outside of school learning. The majority of her students are first generation American of Hispanic descent. 65% of the students in her school are economically disadvantaged.	education, cell phones, learning, mobile, mobile learning	Education Everyone	1/13/2010 8:30 PM	45 Minutes
[840653] Educator Aidan McCarthy from Australia	Aidan McCarthy talks about using student cell phones in learning in Australia. http://www.brisbanetimes.com.au/technology/teachers-urged-to-rethink-mobile-phone-ban-20090623-cv80.html	education, cell phones, learning, classroom, mobile learning	Education Everyone	1/27/2010 8:30 PM	45 Minutes
[840650] Interview with Florida Spanish Teacher Ariana Leonard	Ariana Leonard talks about her experiences using student cell phones in her high school Spanish courses. http://www.levdepoches.blogspot.com/content/outsideas/2009/11/teachers-using-cell-phones-for-class-lessons-home.html	education, cell phones, mobile learning, Learning, phone	Education Everyone	2/10/2010 8:30 PM	45 Minutes

Browsing upcoming shows in MyBlogTalkRadio

- When it is time for the show to begin, the student or students in charge of the show log back into BlogTalkRadio (with the login and password that the teacher set up). Click on *My BlogTalkRadio*, then click on *My Account*. In *My Account*, click on *Switchboard*. The Switchboard will open and give the information for hosting the show. Students will first call in to the Host Number and follow the audio directions. They will click #2 to host their shows.
- If there are any cohosts or other participants (such as a guest for the show), they can call in to the Guest Call-In Number. On the Switchboard, the host will be able to let the other callers into the show and open the chat room. When the show is over, it will be archived automatically on the radio site, allowing other people to listen to and download the show.

Extensions

- Students could create their own radio podcasts on curricular topics of their interest (such as a podcast on exotic animals for biology class, or a podcast on future jobs for seniors who are beginning to explore the job market, or a podcast on music appreciation for the instrumental music class).

Liz Kolb is an adjunct assistant professor at Madonna University in Livonia, Michigan, and is a lecturer and research associate at the University of Michigan, where she received her PhD in learning technologies. She taught high school and middle school social studies in Cincinnati, Ohio and she spent four years as a high school technology coordinator and teacher in Columbus, Ohio. Kolb is the author of *Toys to Tools: Connecting Student Cell Phones to Education* (ISTE, 2008).

September 2011

216 pp. 7 x 9¼

Product code: CELUSE

978-1-56484-299-2

Order now by phone, fax, or online. Single copy price is \$34.95. ISTE member price is \$24.46. Special bulk pricing is available. Call 1.800.336.5191 (U.S. and Canada), 1.541.302.3777 (International), fax 1.541.302.3778, or go to www.iste.org/celuse.