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- Read Abstract

Five Tips for Managing Mobile Devices

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Here's how teachers can turn their low-tech classrooms into high-tech hubs—and keep distraction at bay.

A teacher recently told me that her school had adopted a campuswide policy of collecting and locking up student cell phones. Apparently, the school made this decision because many of the teachers believed that cell phones were "terribly distracting" and caused "behavior and discipline issues."

I walked away from this conversation dismayed. How could a school with little to no access to technology confiscate students' cell phones? What a waste of potentially valuable assets!

Locking up devices because we fear they'll distract from learning is the exact opposite direction I want to see education heading. Cell phones and mobile devices are lifelines that enable us to teach the life skills our students will need long after they leave our classrooms.

Welcomed, Not Banned

I encourage my 9th and 10th graders, whom I teach in a combined language arts class, to bring their own devices. I include a note on our syllabus that reads as follows:

> *Devices welcome! Cell phones, iPads, tablets, and laptops are increasingly important tools used for communication. Students are encouraged to bring their devices to class if they have them. We will use all of the devices that come through our classroom door to research, document, collaborate, and create during the year ahead.*

As a result, my students come to class with iPhones, Androids, tablets, iPod Touches, and the occasional laptop. The moment they enter the room, my low-tech classroom is instantly transformed into a buzzing technology hub.

It's easy to forget that I don't have any actual hardware in my classroom. I work in a traditional classroom with no technology, save the computer on my desk and a refurbished computer donated by our local computer recycling program. I requested this refurbished computer so that my students, especially those who don't have a computer or Internet access at home, would have a computer to use on campus. As a result, students frequently come by before school, during a break, at lunch, or after school to hop on the computer to finish assignments or work on projects.

Facing the Fear

Many teachers are concerned about the chaos they assume will accompany a bring-your-own-device (BYOD) approach. Yes, students *are* working on different devices, but they're working on *their* devices. There's something powerful about allowing students to use their own devices in the classroom. These are the tools they use to navigate

the world. These are also the tools students are most comfortable with. Those two factors translate into more meaningful, relevant, and engaged learning.

For teachers and administrators who are concerned that having devices in class will only distract students and compromise the learning environment, I caution you not to make decisions from a place of fear. I've found that allowing students to use their devices is absolutely transformative. It's made it possible for me to put my students at the center of the learning happening in the classroom. They're no longer passive consumers of information. Now they're researchers and content creators.

I'll never forget my first experiment with crowdsourcing using student devices. I replaced a short lecture about Shakespearean sonnets with a crowdsourcing activity. Instead of telling students everything I knew about Shakespeare's sonnets, I put students into small groups and asked them to research the topic and generate notes. While they researched on their devices and discussed the information they were finding, I passed out whiteboard markers and asked groups to add their notes to the board. Then I stood back and watched them fill the entire whiteboard with information about Shakespearean sonnets.

Everything I would have thought to tell them (and more!) was on the board. One group even noted that sonnet means "little song" in Italian. I was floored. At that moment, I realized that allowing students to use their devices shifted them from being passive consumers to becoming active generators of information. It was exponentially more rewarding for them to research, collaborate, and share. They—not me—were the owners of the information. I couldn't have accomplished that without leveraging their devices.

A Distraction No Longer

Although I'm an outspoken advocate for using mobile technology in the classroom, I also know how important it is to establish and maintain expectations for responsible use. Here are some strategies to ensure that devices enhance, not distract from, learning.

1. Establish new norms.

Most of my students don't regularly use their phones or other devices in their other classes, so they need to know how they can use them in our class. This requires us to establish and agree on new norms.

Teachers can create these norms—that is, identify behaviors around using devices that will be conducive to learning—but it's far more valuable to include students in the process. When students work together to create a set of agreements or a class contract governing the use of mobile devices in the classroom, they take ownership of the process.

In my class, we engage in a crowdsourcing activity to generate a list of accepted behaviors for using devices. Students point out how important it is to share because not every student has a device. They also say it's crucial to respect other people's property and take great care when using another person's device. They think it's rude to check text messages and social media accounts during collaborative group activities. Some students have even said they think notifications should be turned off during the school day so group work isn't constantly interrupted. They emphasize the importance of privacy and request that their peers not take photographs of them unless they're aware they're being photographed. I post these and other agreed-on rules on our wall for reference during the first six weeks of school.

When class begins, I remind students to turn the volume off on their devices and place them screen down in the corner of their desks. Placing screens down is key because students won't be distracted by text messages or notifications that light up their screens. When we're working on an assignment that requires their devices, I simply say "screens up," and they know they can use their devices.

You may be wondering whether all my students follow these rules. Yes, they actually do. They know that if they don't, they won't be allowed to use their devices, and they don't want to jeopardize that privilege. Students often thank me for trusting them enough to let them use their phones and other digital tools in class. They take the protocol seriously because they see how much more engaging the class is with devices.

If you treat your students' devices as learning tools, much like their pens and books, their perception of these devices in the classroom changes. Students begin to recognize the value of their devices for research, exploration, and creation. As a result, the devices shift from potential distractions to tools that engage.

2. Cultivate a culture of sharing.

Many teachers understandably worry about equity when it comes to mobile devices and a bring-your-own-device policy. Teachers always ask me, "What if some students don't have a device?" My answer? "That's OK! They can share."

On the first day of school, I ask my students to use their devices. They engage in a group icebreaker activity using Socrative, complete a student survey on Google Forms, and text my Google Voice phone number to tell me what they're passionate about.

When I ask them to get out their devices for the first time, most are surprised, and a few ask in disbelief, "We're allowed to use our phones in here?" I anticipate this response because many classrooms on my campus still have signs reading, "No cell phones allowed." Several students don't even bring their devices on that first day of school because they assume they won't be allowed to use them. So I bring every device I own and pass them out, including my cell phone. I realize this isn't something every teacher would be comfortable doing, but it sends a clear message: "I trust you, and we're going to share."

If you create a culture of sharing in your class, then using devices doesn't create a divide between the haves and have-nots, as many teachers fear. In fact, it encourages collaboration. I actually prefer the energy in the room when multiple students share a single device. They lean in, ask questions, and have conversations.

If teachers are working in classrooms with a small ratio of devices, it's important to design lessons that students can complete with several students sharing a single device. Learning stations are a great way to maximize a limited number of devices. Teachers can set up four to five stations around the classroom that consist of a device and a task, then students can rotate through each station working collaboratively.

For example, when we read John Steinbeck's *Of Mice and Men*, students work in small groups to research various topics, ranging from migrant workers, to California agriculture, to the Dust Bowl. In their groups, students create a Google document using the Google Drive app on one student's device and share that document with each group member. After researching their topic in class, they work asynchronously at home on a shared Google slide presentation, pulling together key facts, details, images, and graphs to create a multimedia presentation to teach their peers about their topic.

When we read William Shakespeare's *Romeo and Juliet*, I ask small groups to perform the prologue and capture their performances on video using one student's device. They leave the classroom and spread out in our school's outdoor quad area to tackle this assignment. Because they're not performing in front of the entire class with everyone staring, students take risks and have fun with the assignment. I've had groups rap, beatbox, choral read, and attempt English accents in their performances. Then they share their videos with me over Google Drive.

I encourage teachers to make an announcement at back to school night requesting donations of old devices—smartphones, iPads, laptops, and so on—for students to use in class. I've included a "parent plea" to that effect on my syllabus as well. You don't need a service plan on a smartphone to get online if your school has Wi-Fi.

3. Use devices to challenge and engage.

When I hear that devices are a distraction in a classroom, the first question that comes to mind is, How are students using the devices? It's hard for me to imagine that devices are a distraction if students are challenged and engaged.

My students use devices for a wide range of tasks: to document their work, review concepts, research topics, crowdsource information, capture interviews, communicate with classmates, record videos, and create digital stories. The work is almost always collaborative and requires that students work as a team to accomplish a task. This collaboration makes it hard for a student to be off task because the group relies on each member to contribute to the final product.

While reading Ray Bradbury's *Fahrenheit 451*, I asked students to track the changes that caused society to shift from reading books and valuing literature to burning books. They worked in small groups to identify the factors that contributed to this transition and created a flowchart. Then they worked as a team to create an RSA animation video to illustrate this transition.

Each group worked on a shared Google Document to write a script describing how society changed over time. One student, the artist for the group, visually depicted the change by drawing on a whiteboard. Another student filmed the artist as he or she drew. Another student completed a dramatic reading of the script. Once the film and audio were captured on devices, the students put the pieces together using iMovie. The dynamic videos they created clearly illustrated this complex societal shift.

These types of activities take learning to the next level. Instead of listening to me describe this transition from reading to burning books in Bradbury's futuristic society, students were challenged to think deeply about why society had changed. Then they had to work together to create a clear explanation of this transition using the tools we had on hand—devices, whiteboards, and dry-erase pens. I gave the students complete autonomy on how to execute the task, which also increased their excitement about the assignment.

Devices should drive engagement, pique curiosity, and encourage creativity. If teachers design the activity well, students will be too absorbed in what they're doing to be off task. To that end, it's important for teachers to articulate a clear product, define a realistic time frame, tap into students' interests, and encourage conversation and collaboration.

At the start of the school year, I designed a lesson focused on academic vocabulary that combined these elements. I explained what the words *explicit, implicit*, and *inference* meant. At the time, we were reading Harper Lee's *To Kill a Mockingbird*, which takes place in the 1930s. For students to review those academic terms and have an opportunity to practice using them, I put them into small groups and asked them to explore an issue of *Life* magazine from 1935. (Google Books has an online collection of magazines that students can look through for free.)

Once students were in their groups, I asked them to use one device to explore the magazine. I encouraged them to discuss the explicit and implicit information they found in it. Then using another device, they posted all the inferences they were able to make about the time period, gender roles, race relations, diet and health, and political issues. They posted their inferences to a shared Padlet wall so they could see one another's posts in real time.

This activity was successful for several reasons. First, my students love all things visual. They were fascinated by the pictures in *Life*. Obviously, life in 1935 was wildly different from their own experiences, a fact that also fascinated them. Second, the objective of the activity was clear; they knew they had to post their inferences to our shared Padlet wall. Finally, they had 20 minutes to complete the activity, which was enough time for them to accomplish the task without getting bored or wandering off task.

This more social and engaging approach to learning also enables teachers to capitalize on the collective intelligence in the room. Students have more opportunities to learn from one another, and they begin to value their peers as resources in the classroom.

4. Feel free to ask students to put their phones away.

Even though I welcome all devices, there are times when teachers want students to work without technology. For example, instead of worrying that devices will compromise a testing environment, I encourage teachers to have students store their phones in a phone cubby. I bought an ornament organizer box after the holidays and use it for that purpose. My students know they must put anything with a screen in the cubby during testing.

Particular activities benefit tremendously from the addition of technology, whereas others do not. For example, when I teach SAT vocabulary words, I start by having students complete an activity without the aid of technology. I give students a sheet of paper that has all the words we'll be studying that day used in context. I ask students to work in small groups to make a prediction about what each word means on the basis of how it's used in the sentence. The objective of this activity is to encourage students to use context clues to define unfamiliar vocabulary. During this exercise, students collaborate and discuss the sentences, but they don't use their devices to look up definitions. I want them to struggle a little to figure out what a word means. I love the conversations about language that happen during this activity. Devices would diminish its value.

5. Embrace the diversity of devices.

Teachers often want to simplify. Our jobs are demanding, and technology is always changing and evolving. Even though having all students on the same type of device or using the same tech tool to accomplish a task creates uniformity for a teacher, it may not be the best strategy for cultivating technology-savvy students. To be truly technology fluent, students must understand when to use a particular tool for a specific job, and they have to know why the tool they're using is the best tool for that job.

For example, if students want to document their work on a project that requires a substantial amount of time, they might opt for time-lapse technology using an app like iMotion HD instead of recording a 60- or 90-minute video. If students are working in groups on an assignment, they might choose to connect outside class using a Google+ community online if they have access to computers at home. If they only have access to smartphones, they might choose to connect using an app like Voxer, which enables them to record comments, share pictures, and send text messages. Understanding the when and why behind using technology is easier when students are exposed to different tech tools.

It's also another reason I encourage educators to celebrate the diversity that comes with a BYOD model. Yes, there will be questions you don't have the answers to and situations that need troubleshooting, but why not embrace those moments as learning opportunities and encourage students to help one another (and you) figure out how to use a particular device or tool?

One of my favorite moments as an educator happened two years ago when I decided to design an Instagram scavenger hunt activity for a field trip I was planning to Chinatown in San Francisco. At the time, I was a total Instagram neophyte. I didn't have an Instagram account, and I wasn't entirely sure how to use Instagram to successfully orchestrate a scavenger hunt. Undaunted, I explained to the students what I wanted to do and asked if someone could stay after class to walk me through Instagram.

In the space of about five minutes, a student helped me set up an account. She explained that I would need to create a hashtag for the activity. She also told me that my students didn't need to follow me on Instagram, but that they did need to tag me in their photos. In this short tutorial in which she was the teacher and I was the student, I could tell she was proud of her knowledge and impressed that I was willing to ask for help.

When it comes to technology, teachers are smart to tap into their students' expertise. When my students were creating digital stories, I gave them complete autonomy over the process. Some students wanted to create animated videos, whereas others wanted to make stop-motion films. To encourage them to learn from one another, I set aside time in class for troubleshooting sessions. This enabled students who were using similar apps and techniques to work together to identify issues and solve any problems they encountered.

If teachers and administrators can move past their fears about a BYOD model, the reward is vibrant classrooms in which students are engaged, empowered, and excited to drive their own learning.

It Makes Sense

My favorite part of the BYOD approach is how easy it is to shift the focus from me to my students. My goal is to create a student-centered classroom in which kids work together and use their devices to research and solve problems. I want to cultivate confident learners, which is easier to do if students believe they're capable of accessing and processing information.

BYOD also makes sense from a financial standpoint. Maintaining hardware in a school is a constant financial drain, and each year the number of students with devices increases. Instead of investing in putting a school-owned device in each student's hand, schools and districts might more wisely spend their money to improve infrastructure and purchase a smaller number of devices for use by students who don't have them.

Another question on my mind is this: How much of what students learn on a school-supplied device will translate to how they use their own devices? If a school goes one-to-one with iPads and uses a variety of apps that students don't have access to at home, how much of their technology literacy translates to the work they do on their computer or iPod Touch?

From Low-Tech Classroom to High-Tech Hub

The more we make learning a relevant and stimulating experience in which students are active generators of information using the various digital tools at their disposal, the more likely they are to leave our classrooms intellectually curious and armed with the skills they need to succeed in a rapidly changing world. Mobile devices offer teachers with limited access to hardware and technology an opportunity to transform learning in their classrooms.

A Student View: Gaming—The Driving Force

In IB French class, we often use Kahoot, a game-based blended learning response system that helps us prepare for quizzes. We log on to the site using our cell phones—students who don't have a phone share with someone else—and we select our game names for that round. Once the game begins, a question appears on the screen that you have approximately 15 seconds to answer.

For example, we recently read Saint-Exupery's *Le Petit Prince*, and one of the questions was, "Which of the following words means *prey*?" The less time it takes you to answer correctly, the more points you receive.

The typical round has 12 questions and once the round ends, the rankings are projected on the screen. Students are ranked on the basis of who has the most points. One key feature is that teachers have a record of who answered the questions correctly and incorrectly. If a student has missed a majority of the questions, the teacher will be able to see this and address it later on with the student. I think this is the most beneficial aspect of this approach.

This game may seem simple, but its implications are fundamental to the learning process. Students now have a sense of friendly competitiveness with their fellow classmates. They will study and strive to rise to the top. This is the perfect driving force to enable kids to succeed.

—*Naunihal Virk, 11th grade, South Lakes High School, Reston, Virginia*

Catlin Tucker teaches 9th and 10th grade English language arts at Windsor High School in Sonoma County, California, where she was named 2010 Teacher of the Year. She is the author of the forthcoming book, *Creatively Teach the Common Core Literacy Standards with Technology* (Corwin, 2015) and regularly leads professional development training on this topic. Follow her on Twitter @Catlin_Tucker.

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