



# VIOLIN

## The Technology Invasion: Welcome to the 21<sup>st</sup> Century classroom.

(Sorry, folks, it's not going away.)

by Katie Gustafson

Consider this: Young children between the ages of 2 and 5 are twice as likely to be able to operate a smartphone as tie their shoelaces. Nearly half of all children own a cell phone by the time they are 11 years old. Many of your students are younger than Google, and nearly all of them are younger than the internet. They are what you might call “digital natives,” or “technology natives,” having never lived outside of the information age.

We, on the other hand, are technology aliens. New, unfamiliar gadgets keep showing up on the market, and with each one we must decide whether to embrace it or try to ignore it. But before long we find ourselves in a culture that has changed around us, and our children and students have changed with it. But besides the generation gap, string teachers have a higher mental hurdle to get past. We are heirs to a musical tradition that is more than 400 years old. We consider it to be timeless, so we continue to use instruments that are essentially unchanged since the year 1600, and we continue to use Bach minuets to teach three-four time. After all, the last few centuries have produced some of the greatest artistic minds the world has ever seen, and they gave us their body of work without the help of digital technology. One can understand why string teachers have not jumped on the bandwagon.

In spite of all of this, I am coming to find that modern technology has great educational potential, and I believe that it could be a strong ally in keeping music education afloat. I ask you to keep an open mind while I try to convince you of two things: if you make an effort to use technology in your teaching, you will find it useful, and your students will love it.

### Case Study #1: YouTube

Last year my 5<sup>th</sup> grade orchestra students were working on *Ode to Joy* for their winter concert, and every so often I would get excited about Beethoven and sing along in very bad, fake German. They thought I was crazy, until I got on YouTube, found

a recording of the finale of Beethoven's 9<sup>th</sup> symphony, and showed it to them. They loved it! I loved it too: YouTube had ushered the Berlin Philharmonic into my classroom! Since then, YouTube has been a regular guest in both my orchestra class and my private studio. Here are a few ways we have used it:

- 1) I constructed a YouTube unit that featured string instruments in many different countries. In addition to Beethoven, we witnessed hip-hop violin, a bluegrass band, and some classical North-Indian violin virtuosos. (Diversity in the classroom, anyone?) After each video, the students were asked to make thoughtful observations about what they saw, and compare it to previously viewed videos.
- 2) In the private studio, my more advanced students were introduced to 20<sup>th</sup> century violin greats like Jascha Heifetz and David Oistrakh. If I had a student working on the Bach *Concerto in A minor*, we would look up a video of a famous person playing it and analyze it together. Students could not only hear a great performance, but observe technical details like speed, bow distribution and shifting. Younger students doing simpler music might not find a recording of Joshua Bell, but they could easily find a good amateur recording and study it the same way.
- 3) Students from my orchestra class began sending me links to videos they had found of young, hip performers, begging me to show them in class. Lindsey Stirling became practically an orchestra vocabulary word. (Look her up—your preteen girls will love her.) They also would find sheet music from their favorite movies or artists, and if the music wasn't too hard they would learn the piece and play it for the class with YouTube video backup.

The list goes on, but the important

lesson here is student engagement. Never underestimate the psychology; kids need to find something about string playing that they can identify with, and YouTube might help.

### Case Study #2: iPads, Smart Phones & Webcams

Last month my family made a delightfully cheesy *Happy Birthday* video for a family member who is currently working abroad. We recorded ourselves with an iPhone, and had fun laughing over it and editing out the bits we didn't want. The best part was, to even my technologically impaired mind, it was quite easy. Our gadgets have made videotaping simpler.

When I was in music school, I was often encouraged to record myself while practicing so I could analyze the playback. This is a useful method of self-evaluation for students, but recording equipment was difficult to come by at the time. But today, basic recording software is standard issue with laptops and iPhones, and they are fairly simple to use. Once students have recorded themselves playing, the playback can be analyzed during lessons or sent to teachers mid-week to get feedback or questions answered.

Some school districts have invested in technology resources that allow students to use laptops or iPads in the classroom. If these are available in your district, they could be used to administer playing tests without taking up class time to do it. You could simply set up a couple of “testing stations” wherever space is available and have students record themselves playing. The recording could be saved on the device or uploaded to a data storage site for you to evaluate later.

### Case Study #3: SmartMusic

No technology discussion would be complete without mentioning SmartMusic. I am seeing it show up in more and more places, so you are probably aware of how it works. But for those of you who are not, a company called Make Music designed

software specifically to be a practice companion for students. It has a lengthy library of music and method books built into the program that allow students to read the music right off the computer. Interactive features include tuners, accompaniments to the songs, adjustable speed settings, and a recording microphone that will listen to what the student plays, and highlight notes on the screen that they played incorrectly. This last feature is especially nice, because students can then click on the incorrect notes to see a fingering chart that shows them how to play the correct note. Finally, students can also use it to send recordings to their teacher for evaluation. Many teachers are using this at school for assignments and assessments, and recommending it to parents as a useful practice tool.

### Some Cautions

At this point a few words of caution are probably in order. First, it is always good to keep in mind that the internet is not a safe place for children to be unsupervised. Schools typically have good firewalls against inappropriate material, but home computers often do not. To avoid leading young eyes astray, I often tell younger students to have their parents help them look up music on YouTube, or talk with the parents directly about what we did to keep them

in the loop.

Secondly, sometimes enthusiastic students will bring me sheet music they found online, and it is entirely too complicated and difficult for them to play. To avoid squashing their initiative, try offering to look online with them, so you can pick out appropriate pieces together.

### To the Loyal Opposition

To all the devil's advocates out there: I hear you already. You might be thinking, *"I hate learning new technology! In the time it takes me to figure these things out, I could have taught my students 10 new pieces!"* This might be true. However, you don't need to use every new gadget. Try one new thing that seems manageable and see how you like it.

You also might be thinking, *"These tools sound expensive. My students probably can't afford these."* This is where you work with what you do have. If my students have iPhones and are loaded up with technology, then I will use them. If they aren't, then I will simply use what I have myself, and work it into the lesson. However, most of them probably have access to a computer and internet. That's a good start for resources like YouTube.

And finally, my favorite: *"I've been teaching for a long time, and we have gotten along fine without these things. In fact, my students*

*play really well. Why do I need to change what I'm doing?"* Well, maybe you don't need to. I know many teachers who are awesome at what they do, and all they need is a kid and a violin to work their magic. However, when I think about my teaching role models, I remember them always advising me to keep my ears open for new things that might improve my teaching. Some of them have expressed that after 25 years of teaching, they still are learning new things to improve how they serve their students.

One final thought: with arts programs being cut more and more often in the schools, we as music educators are faced with the problem of defending our own existence in the education field. Being open to new teaching methods like these could be a simple way to demonstrate that music education is not a thing of the past. It is now, and always will be relevant. It can fold itself into the modern culture and continue to enrich peoples' lives. Our students must always know Mozart and Beethoven, but we can be creative about how we introduce them.

*Katie Gustafson teaches elementary orchestra in Eden Prairie district, and keeps a private studio on the side. kgustafson411@gmail.com. ‡*