Clinic - Music Technology and Orchestra: What's the Point?

by Chris Russell

I had the privilege to present a session on technology at the fall meeting of MNSOTA. I would like to thank MNSOTA for inviting me to present, and special thanks to Deb Sittko for reaching out and inviting me. The topic of technology in music education is a broad topic, and while I hold licensure that would allow me to teach band, choir, orchestra or general music, I am not an orchestra teacher. While my primary employment for the past twenty years has been in the choral field, and as I have developed my own use of technology in the choral setting, I have tried to give back to the entire profession of music education by writing about technology that music teachers of all kinds can use in the classroom or studio.

For the MNSOTA session, I asked MNSOTA members to request topics that they wanted discussed. My plan was to create a presentation that covered some basics about technology integration and then to answer specific questions from MNSOTA members. Three topics were brought to my attention: 1) a request of what has been successful for me; 2) How to integrate Schoology into Orchestra; 3) To review recording procedures for the upcoming middle level auditions. With such broad topics, I had far too much content for an hour and a half session.

I consider such broad sessions to be "Shock and Awe Sessions," that cover a wide variety of topics at a fast pace. Such sessions can be overwhelming to a technology "newbie," but the intent is to show participants what is possible with technology and music education. The goal is to provide everyone with something new that they can take with them and apply immediately, even if they are an experienced technology user. I also offer slower-paced sessions or professional development opportunities that focus on a specific app or skill.

We began the session discussing recording procedures, as a fall recording deadline was around the corner. While I am not familiar with the submission system used by MNSOTA, I have had to submit recordings to ACDA, MMEA and NAfME. The key part of the process is to record the student and to end with an anonymous audio file (usually a mp3 file) that can be uploaded to the submission system.

There are several options for recording students. The easiest solution is to purchase a handheld mp3 recorder. These recorders have embedded microphones and can be mounted on a tripod. While there are a number of these products on the market, I have had very good experiences with the Zoom series by Samson. The Zoom H2 series is very easy to operate and use; the Zoom H4 series gives you more options and is more complex. Both record data on a SD card that can be plugged into your computer (you may need an adapter). The data can then be edited by an audio program. The added benefit of this approach is that with such a recorder on hand you can use it to easily record rehearsals and/or concerts.

The second solution is to use your cell phone or tablet as an audio recorder. There are hundreds of audio recording apps on the various app stores, and it is important to find options that allow you to export a file (via e-mail, Google Drive, or Dropbox) in the mp3 format. There are a few free options (see Hokusai Audio Editor, for example), but it might be worth paying for the app Twisted Wave. One benefit of these two specific apps is that you can trim your audio file on your device before sending it to your computer for submission. For further recommendations, check with your colleagues as to what apps work for them. If you record audio on a phone or tablet, make sure you know where the microphone is on the device so that you can aim it properly at the musician!

The third solution is to record audio directly on your computer. Believe it or not, this is not the ideal solution, as a computer was not designed for field recording. A fan on a computer can impact a recording. That said, there are several ways you can make your computer work as a recorder. One option is to record with the computer's own microphone using an audio editing program like Audacity. Additionally, if you want to use a "pro" microphone, you can purchase a USB audio interface, such as the PreSonus AudioBox USB (this is just one example of many; prices range from $30 to thousands of dollars). These devices allow you to record audio to your computer using an XLR microphone (3 prong mic cable) to an audio editor or digital audio workstation (DAW). At a session at this year's NAfME conference, a (former) PreSonus employee suggested purchasing PreSonus' Music Creation Suite ($210, refurbished from PreSonus) that comes with Studio One (music production software), Notion (music creation and composition software), a small MIDI keyboard, a Microphone, and Headphones. If you want to make a mini recording studio, this is an incredible package for less than the cost of a single copy of Finale or Sibelius.

While I have recommended Audacity as a free audio editor in the past (available for Mac, Windows, and Linux), PreSonus also offers Studio One Prime, a free audio editor (it does not offer any tech support) that allows you to use PreSonus' "Capture Duo" app (iPad) to record, and then to edit recordings on a computer using the free Studio One Prime.

I do not suggest recording auditions using GarageBand or a traditional Digital Audio Workstation program (e.g. Logic Pro, Pro Tools). These programs are generally meant to record audio over specific time/meter. While they can be used for such recordings, generally you want to be able to quickly record the audio (or import it), edit it, and save it. Audio editors like Audacity and Studio One are better suited for this type of use.

It is worth mentioning that one participant at the session mentioned that they had used SmartMusic to record an audition and then exported a recorded audio file out of SmartMusic for submission to the audition system. Incidentally, SmartMusic is working on becoming a web-based program, and will do so by the fall of 2016. Keep looking for a lot of news from MakeMusic in the months to come.

As you record, try to do so in a "drier" audio room, as a larger room with an echo may result in recordings where it sounds as if reverb was applied to the recording. Most music organizations and screeners of recordings ask for a "plain," unaltered recording (trimming audio is fine) that does not identify the student or teacher in any way. Attempts to alter a recording can result (and have resulted) in disqualification.

That discussion of recording represented only the first five minutes of the hour and a half session. From that point, we discussed the different kinds of approaches to technol-

ogy integration using the pencil metaphor (what kind of technology user are you?), SAMR,* and the challenges of the actual physical device chosen by your school (in particular, the challenges of using Chromebooks which are becoming ubiquitous in education). I also discussed my own background with technology and how I have used technology in situations where it was "teacher only," in small groups, and in my current 1:1 situation. My primary device is the iPad, which I have used in the classroom from the day they were released in 2010. I love the iPad because of its form factor, the apps that are available, the accessories for music, and for reliable and functional wireless mirroring.

As time ran out, we discussed School-

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* The SAMR model is a way for teachers to evaluate how they are incorporating technology into their instructional practice. Through:
  • Substitution (using new technology tools to replace old ones)
  • Augmentation (using new technology with added functionalities to replace old tools)
  • Modification (using technology to redesign new parts of the task and transform students learning), or
  • Redefinition (meaning that students use technology to create imperceptibly [sic] new tasks)

From: http://www.educatorstechnology.com/2013/06/samr-model-explained-for-teachers.html

ogy (which is a course management system or a learning management system which is similar to a number of other similar systems such as Edmodo or Moodle) and some ways that you can (easily) use it in orchestra. Specifically, you can take advantage of Schoology for announcements, as well as to create assignments (e.g. concert dates, dates to turn in practice records) that show up on the student's calendar, which helps to keep them organized. Schoology can also be used to give tests/quizzes, and many other things can be embedded in Schoology (e.g. YouTube videos and Google Forms) to make Schoology a one-stop-shop for your students so they can find everything they need for your class in one spot. Schoology has a very functional free version, and they also have a paid version.

These last two paragraphs are an incredibly brief summary of an hour and twenty minute presentation and discussion on technology in orchestra—and these paragraphs do not give justice to the full extent of what was discussed. If you are further interested in these topics, I would direct you to my blog (free) at techinmusiced.com, and if you have an iPod, iPad, iPhone or Mac and would like to read more about technology in music education, I have three books available on the iBookstore (*Practical Technology for Music Education*, *iPads in Music Education*, and *Chromebooks in Music Education*). The *Chromebook* book is also available on the Amazon Kindle store.

With all sincerity, if you ever have a question, e-mail me at techinmusiced.com. My professional goal is to support other music educators as they attempt to integrate music education into their classrooms. As I mentioned in my session, we wouldn't go to a hospital that looked (and was run) the same as it did fifty years ago; it is a frightening situation if we go into music classrooms that look the same today (other than the copyright date printed on the music) as they did fifty years ago. Recently, I saw a tweet (on Twitter) that said, "A twenty-year old recipe is usually pretty awesome. A twenty-year old lesson plan is usually pretty awful." I hope we can make progress in embracing the best technology solutions and using them in music education.

Christopher J. Russell, Ph.D., is the author of the Technology in Music Education Blog *and several books. He was featured for his work in the area of technology integration in music education in the October 2014 issue of* Choral Director Magazine. *He has presented over fifty sessions on technology at professional conferences across the United States and his articles have appeared in the* Interval, *the journal of the MMEA, the* Finale Blog, *and the* Loop Magazine. ⚘