Almost daily it seems that we learn about a new development in technology—an advancement that improves on a tool we already have or a completely new way of doing something. In recent years, some of these advances have affected us significantly in our personal and professional lives. As music educators, we are faced with increasing opportunities (and demands) to incorporate technology in our instruction and administration of our programs. With the ever-expanding variety in software and hardware choices alone, deciding how to utilize technology can be overwhelming.

When considering this question of when to utilize technology in our classrooms or with our ensembles, the answer is straightforward: Educators should utilize available technologies when appropriate. Of course, determining when and what is appropriate can be quite exasperating even for seasoned teachers. Music teachers are being asked to incorporate technology into their existing courses with little thought as to the best practices to accomplish the integration or whether the technology itself is effective in the context of the course goals. Adding to the technological integration impetus is an increased sense of urgency for technology inclusion, due in part to national curricular initiatives such as the “Common Core State Standards” and others.

Choosing appropriate implementations of technology will allow teachers to better educate and inspire their students and will help students learn and grow in the best possible ways.

Most people today tend to think of “classroom technology” as limited to electronic technologies such as a desktop computer, LCD projector, interactive whiteboard, or iPad. Additionally, a number of music teachers still view “electronic music technology” as only tools that aid instruction; however, various materializations of it can easily be used in the collaborative, compositional, production, and music-making processes. Regardless of the types of technology being referenced or how they are being used, wise decisions must be made concerning whether to adopt them into the classroom environment.

Often the success of any new technology integrated into a curriculum is directly related to the teacher’s level of mastery with the technology itself. Teachers must become fluent with the technology they are trying to incorporate to obtain the greatest benefit from its usage. Having only a surface understanding of the technology in question will likely result in a tremendous amount of personal grief for the teacher, and any potential benefit the students might have obtained will likely be compromised. Before deciding to use any particular technology (electronic or not) in the classroom, serious thought should be given to how it will be
implemented and to the positive efficacy of its application for the students, teachers, and the school in general.

The following are some questions to answer when considering whether to incorporate technology in the music classroom:

**Does the technology allow the accomplishment of any given task to be easier?**

Using technology does not always simplify complex tasks. In fact, it is quite possible for a relatively simple task to be made more complex by the addition of a new technology. Do not employ technology just for its own sake—it must offer a clear benefit before you consider its incorporation. For example, utilizing a system that supports the many administrative tasks involved in your job can help maximize your efficiency in that area. Being able to store and access information quickly and in a way that reduces the redundancy of work can make many of your administrative tasks simpler. In this case, you might find the initial setup of this system to be more complex and time consuming than choosing to stick with your current paper methods, but in the long run, you will realize a great return on that investment.

**Does the technology allow teachers to be more effective in reaching their course or ensemble outcomes?**

If the technology allows a teacher (or director) to more effectively communicate their classroom goals or provides opportunities for the students to better meet the goals of the lesson, then there is good reason to incorporate the technology. For example, while using a traditional whiteboard can work, incorporating an interactive whiteboard into your instruction can increase student engagement and accommodate all abilities and learning styles (visual, auditory, tactile/kinesthetic). It can also be an effective tool for students with special needs.

**Does the technology provide efficiency benefits?**

If the technology allows any given task to be properly completed in less time without compromising any level of quality, there is a good reason to incorporate the technology. When evaluating the technology solution, ask these questions: Are the students able to successfully learn a concept faster? Does the technology cut down on the time to administer a task? Does the technology provide a more succinct or better way to present a topic? For example, interactive music software can help with lesson presentation, individual practice, and in student assessment. Incorporating this type of software can not only increase the effectiveness and efficiency in your group instruction but also can streamline making student assignments and help individual student progress and accountability.

**Does the technology allow you to offer something that would be impossible without it?**

If you can add to the opportunities available to students by offering additional experiences through a particular technological product, there is good reason to incorporate the technology. For example, you could use Skype to bring an outside expert into the classroom, or you could...
have students use software that allows them some of the creative benefits of composing without having to know how to write traditional notation, etc.

**Is the technology going to take too much time to learn?**

Given the significant time constraints all teachers face and the large variance of technological aptitude, this might appear to be a hard question to answer at first. The reality is, however, that both hardware and software have become substantially easier to use and quite a bit more intuitive over the last ten years. It is not uncommon to see a two- or three-year-old show proficiency with an app or to observe a twelve-year-old with mastery in the various manifestations of technology!

Regardless of one’s age, the ease of usability in new technologies, coupled with the learning resources available through the Internet, creates a great equalizer in who can develop technological aptitude. There are overviews, tutorials, PowerPoint presentations, forums, social media groups, eBooks, podcasts, and a host of other resources available for anyone wanting to learn, and these resources are available at any time. A can-do attitude might be all that’s needed.

**Is the technology too costly?**

This could be considered the “million-dollar question.” Yet the shrinking costs of computer-related technology, the proliferation of affordable broadband connections, and the wide availability of computer labs in most schools allow music teachers to capitalize on course-specific classroom software and technology.

With a school’s general computer lab, outfitted with low-cost USB music keyboards, music teachers can enjoy endless teaching opportunities. This lower-cost option can make a full-blown (and full-priced) MIDI computer lab no longer necessary. Hundreds of low- to no-cost software titles are also available via the Internet, and many of the higher priced music software programs of yesterday are drastically lower in price today or are available at deeply discounted academic or group discounts.

**What variation of any given technology is best?**

The advent of social media sites such as Facebook, LinkedIn, and Twitter have made finding expert opinions easy. In addition, there are hundreds of music technology-related websites and articles written by music educators, software and hardware experts, organizations, and group forums. Having access to these types of product reviews, with both expert and collaborative opinions, makes it much easier to decide what will work in any given circumstance, as well as to easily discern what constitutes good and useful technology for use in the music classroom.

Music educators are privileged and entrusted with teaching one of the most creative and useful academic subjects which is also arguably the most effective means for students to acquire the desired 21st-century skill set. Choosing appropriate implementations of technology, whether as tools to use with traditional music instruction or as vehicles for new approaches to music creation and instruction, will allow teachers to better educate and inspire their students and will help students learn and grow in the best possible ways.

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**TI:ME Music Technology Preconference**

**WHAT IS IT?**

As part of the National TI:ME Music Technology Conference being held in conjunction with the TMEA Clinic/Convention, this one-day event features a concentration of 29 sessions on music technology. Attend this preconference and discover ways to reach your students more effectively by incorporating technology in your instruction!

**HOW TO REGISTER ON-SITE**

If you did not preregister for this Wednesday preconference, you can still attend. Go to the foyer of CC 201–204 Wednesday starting at 8 a.m. to register on-site. At only $50, this special concentration of technology clinics is an incredible value. If you did preregister for the preconference, go to the foyer of CC 201–204 to pick up this badge (Wednesday 8 a.m.–5 p.m.).