

Music In Skill Labs

Over the past several weeks, I have heard more music being played in our skill labs at both WVC and PC. As an avid country music listener myself, stop by my office any time and I likely have it playing, I recognize the calming feeling of playing music in the background. As such, I thought this would be a great time to provide some insights on when and why music would benefit the learning environment and when it would not.

Skill labs are objective based

Each lab and the techniques used in the lab are driven by objectives, measurable benchmarks of knowledge acquisition. You see these written on the lesson plans and the basis for the scripting of the skill videos. As such, playing music during the lab should be based in objectives as well. Often times we add sounds to a simulation to increase the complexity or add to the realism of the simulation. This would not be the case, for example if you were having students practice taking blood pressures. The sounds of classic rock playing over the speaker while a student is attempting one of their first blood pressures will likely lead to an increase in frustration by the learner. This is counter to the objective of starting simple and building to complex. Remember you are with students for the first 15 blood pressures they will ever take; they don't need to be and won't be a master by the time they leave your rotation; simply put that is not the objective.

As we look to add realism to the skill, similar to what students may experience in an ambulance while providing patient care, then the simulation should be designed around having the EMT take a set of vital signs while their partner completes the assessment. This is a realistic scenario that prepares the student for being an EMT. As we look to prepare students for life on the streets, we would much rather they recognize if they can't auscultate a blood pressure due to the environment, they switch to palpating a blood pressure rather than expecting competency while NSYNC is playing in the background.

Music should not increase cognitive load

Cognitive load can be thought of as the "spaces" in our short term or working memory for which we can remember something. Each of us has 5-7 spots to be filled. These spots are filled with things like, remember to pick up groceries, schedule a dentist appointment, include lung sounds while you are teaching vitals, or pay the parking meter on your dinner break. If we attempt to remember more things than our working memory can maintain, something will drop off. Just as this is true for the span of control in incident management, it is true of student's working memory in education. While it may not seem as though sensory input impacts cognitive load, think about the last time you were driving at night and looking for a street sign, did you instinctively turn the radio volume down?

Many of us likely traversed our educational careers being told listening to music was helpful for studying or taking exams. The research on this topic is immense and would

support this in *some* people; specifically, those with an open spot in their cognitive load. The individual can focus on the test or studying while the music takes up a different spot but nothing else is dropped off. In essence the music becomes background input that the brain can overlook but if asked to recall the last song or artist that played, is not likely to be stored. This also means music can be distracting to some while they are learning. Remember, our students have many of the spots in their working memory already full as they are trying to remember the advice you just shared with them, the lecture content they received, the reading they did the previous night, and the test they are taking the next day. Thus, Beyonce's *Run the World* is taking the place of the sager splint application steps. For the best environment, the music should be more like white noise or background noise; the student should not have to raise their voice to speak over it.

Music should be appropriate

Any music choice during the lab should be free of vulgar or obscene content. It should also be free of obscenities and use language free of offensive content. Remember, music sets a mood so if you are playing something very fast paced or with loud percussion, adrenaline is released into the body. We know during an increased sympathetic response, the parts of the brain that process high level thinking and cognitive function receive less blood flow. Thus, less knowledge acquisition may occur. You can use this to your advantage. If students appear tired, try a more upbeat song or vary your music selection with something more upbeat followed by something more calming. As the educator, you are in charge of picking the music and trying this, likewise you are an educator, not a DJ so please avoid having students select music choices.

Using music to your advantage

There are ways where you can use music in your lab to your advantage. For example, if music is playing during discrete skill practice, stop the music when you are ready to address the group. This pause in the music allows students to refocus their attention on you the instructor for guidance and advice. Attempting to shout over the music or try and talk through the music to the whole group will increase the likelihood you are not heard or ignored. If you are addressing an individual pair of students while others practice you can do so while the music is playing. Remember, the music should not be loud enough where you have to speak any louder to have a conversation.

The best opportunities for music are during discrete skill practice (i.e. oxygen administration, splinting, or BVM ventilations). This is because students are putting together the steps of a skill and your music selection can reduce the nervousness that comes with doing something unfamiliar. One of the best examples here is playing a song with a beat rate of 100 – 120 while CPR is being performed as it goes with the ideal rate of chest compressions. However, avoid playing music during the megacode lab as it does not have an objective and will likely add to the cognitive load of the students.

Opportunities where music is not valuable would be during patient assessment and simulation. When attempting to listen to lung sounds or communicate with a patient, we don't want students to have to talk or shout over music. This is still early in their learning and thus we know they are building competency; thus, less distraction will lead to faster knowledge acquisition. As the student progresses from imitation and manipulation to precision, they will do so faster and more accurately if we remove the barriers to their knowledge acquisition.

Music most certainly has its place in our lives and can have a place in our EMT skill labs. If you enjoy playing music in the lab, these items should help ensure it is used to the best advantage of our students. If you have never played music during your lab, similarly there is no obligation that you do so now. This guidance can help you continue enjoying the freedom of the lab while also ensuring educational best practices.