

3 Fabulous Tools for Using Music to Enhance Learning

The Brighter Brain Bulletin

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In nearly EVERY training I have done in the past 25 years, multiple teachers have asked me about the music I used throughout the session. Why do they ask?

Because they experienced the impact of music on their own learning that day, and they want to replicate it for their own students. If you've ever wondered about the DOs and (absolute) DON'Ts of music in the classroom, you are in for a feast. Plus, there's a music starter kit "bonus" at the end you can download for FREE. Time to get your facts and strategies straight on music.

The Research

Many types of sounds contribute to the classroom experience. Some are productive and others compete with quality learning. Before we dive into the topic of music, a quick note on some of the most disruptive sounds to learning.

Disruptive Sounds

Extraneous sounds can significantly disrupt a student's ability to process and store language. This effect has been repeatedly shown in studies of schools near airports, train stations, and other sources of intermittent loud noises (Klatte, Meis, Sukowski, & Schick, 2007).

If your school is adjacent to a loud source of extraneous noise (airport, highway, etc.), work to minimize the sound by keeping the windows and doors closed. Loud air conditioning units, the humming from the motor of a computer, overhead projector, or other electronics can also be distracting and negatively impact learning.

Why? It is likely due to the impact the volume has on the student's central nervous system – it provides too much stimulus to the point of becoming a mild stressor that impairs cognition (Xiong et al., 2018). Leave yourself little notes as reminders to turn off any machine you are not using.

With the main sources of distracting sounds mitigated, here is what the evidence says about the potential for positive uses of music in learning.

The Science of Music

Music is a powerful medium. When listening to your favorite music, dopamine levels rise in your nucleus accumbens, a region of the brain for pleasure and reward sensations (Mavridis, 2015).

But what about music's impact on learning, not just for pleasure? Chances are you've heard about the "Mozart Effect" – the landmark study that claimed that listening to music in the background improves learning (Rauscher, Shaw, & Ky, 1993). Is that really true?

The researchers claimed that it had a cognitive impact. The problem is that the study has never been successfully replicated (the gold standard in science). Critics claimed that the study was only showing the effects of state-dependent influence, and they turned out to be right.

Years later, most researchers agree that listening to music influences your state or mood. In short, students in a positive state learn better. Therefore, listening to music that positively influences your emotional, physical, and mental state has been shown to improve learning (Lehmann & Seufert, 2017).

Here we introduce the three (of many) factors in music to be aware of: **tempo**, and the presence of **lyrics**, and **familiarity**. Let's start with lyrics.

Lyrics: Whether it is appropriate to use songs with lyrics or not is a matter of context. The evidence shows that music with lyrics disturbs learners more than non-lyrical music (Perham & Currie, 2015). Lyrical music is best reserved for activities that do not involve memory formation (cleaning up the classroom, finding a partner, passing in papers, during time when you are greeting students at the door, celebrating mastery of a concept, moving into group seating arrangements, etc.).

When students are engaged in an activity that requires more executive function (writing, reading, problem solving, group discussion, assessment, etc.) non-lyrical music is best at a low volume. The lyrics of music, even in the background, can interfere with processing and contribute to cognitive load (Lehmann & Seufert, 2017).

EXCEPTION: *I use music with lyrics for affirmation AFTER A TASK. As an example, after the audience/students have engaged in a discussion on optimism, I will say "Turn to your partner and say, 'Stay positive' (cue song with same lyrics) and head back to your seat."*

Tempo: With regard to tempo, there is a synchronicity that happens between the music you listen to and your heart and respiratory rate (Koelsch & Jäncke, 2015). In short, the faster the music, the faster the pulse. It is the tempo that is credited for facilitating the positive state that is attributed to better learning (Husain, Thompson, & Schellenberg, 2002). The appropriate tempo can help facilitate the ideal state for a learning activity.

The tempo of music playing can influence the speed in which you move your body. As an example, the faster the tempo, the more likely you are to walk faster (Levitin, Grahn, & London, 2018; Leman et al., 2013). And, you also are more likely to move more quickly to songs you are familiar with and like (Leow, Rinchon, & Grahn, 2015; Leow, Parrott, & Grahn, 2014).

Familiarity: Familiar music can bring people together. Learning a new language with familiar music playing can enhance learning (Fonseca-Mora, & Machancoses, 2016). Common musical themes in your groups can enhance participation, trust, and bonding. We see this effect in pop concerts where complete strangers can feel "in sync" with each other when dancing or repeating lyrics of songs they know.

In the classroom, research confirms the synchronized harmony effect when students hear or make familiar music via singing, chanting, clapping, dancing, or marching (Novembre, Mitsopoulos, & Keller, 2019). In other words, be sure your classroom playlist is school appropriate AND "student approved".

Recent evidence confirms that this familiarity can also enhance cognition (Mogan, Fischer, & Bulbulia, 2017). Remember, to initiate learning, our brain requires getting in a state of readiness, and *music can accelerate that process* with minimal effort (and often much joy). How does all this research translate into making your life easier in the classroom and improving student learning and behavior? Here is what it all means for you and your students.

For ideas on the Practical Application of Using Music, access the full article using the QR code to access

