



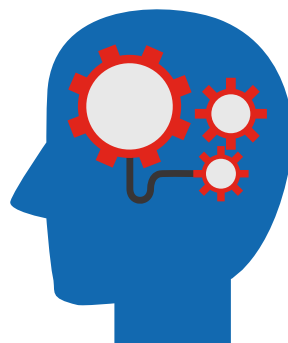
DR. HEATHER NELSON, VOCOLOGIST

CRAFTING NEURO-FRIENDLY VOICE LESSONS

**Three elements needed for
long-term learning:**

**TIME
REPETITION
SLEEP**

Let's look at how using these elements purposefully can help your students learn in a way that works with their brains' natural tendencies.



TIME

This one should be a no-brainer, pardon the pun.

When learning new skills, the brain is building new pathways by creating new synapses, linking brain cells together that will create the action network. It's not always a smooth process, however.

The brain isn't like a computer, where you can input the correct program and it will execute in the same way each time. You might think of it more like the old time telephone banks where operators plug in different wires to different connections to make phone calls happen. Except the operators might not know which connection is the best one. So they try one wire, then another, then another. Over time, there are lots of possible connections that could work. Those synapses, or brain connections, can be messy and chaotic at first. Over time, the brain will analyze which synapses are best and cull the rest. Leon Thurman calls this "target practice." Over time, the brain gets closer and closer to the bullseye and it happens faster and faster.

In the studio this means that we need to plan to allow our students enough time for their brains to play around with the synapses it is building and decide on the best pathways. We have to allow enough time both in individual lessons and over time for that target practice to take place.

There are no short cuts to good, brain-based learning!



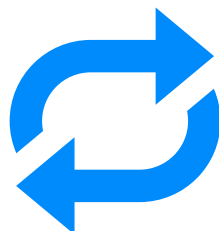
REPETITION

This one pairs right along with time, but it is a bit different.

Over time, the brain decides which neural pathways will be the most useful. Once those pathways are decided, they are still rather weak and less reliable and fast. Repetition strengthens those pathways, making them faster and more consistent.

This is somewhat akin to building muscle memory. When pathways are strong enough and reliable enough, we can just feel the right thing instead of having to think it through every time. Repetition leads us to the ability to sing with our technique on autopilot.

In the studio, we use time to experiment and allow for synapses to form. It's a messier process. Repetition is intentional and can be singing a passage or exercise multiple times in a row, repeating a song or a complete recital in private rehearsals, and doing the same thing in multiple places and scenarios in order for those neural pathways to grow stronger.

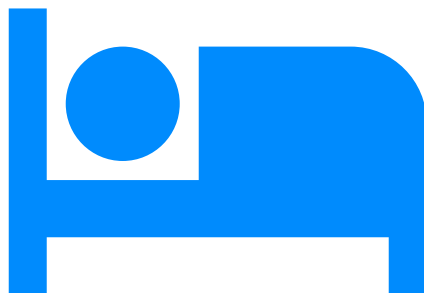


SLEEP

This is the element that we'll have the least control over in our students, but we can demonstrate it with our own good habits and by talking about it in lessons.

While we are learning new skills, most of what we are learning is held in short term memory for awhile. It's not well understood yet, but during sleep, the hippocampus moves things from short term memory into long term memory. Some neuroscientists think that our dreams are a part of the brain's process of synthesizing short term memories into long term storage. This is also why cramming the night before a test rarely works well. Good sleep is essential for making things stick.

We cannot control how much or how little our students sleep, but we can demonstrate it in our own lives by talking about it with them and making sleep a priority. Sleep is a rare topic in most voice studios until we're talking about audition prep or performances, but good sleep habits over a lifetime are best for our long term learning. Naps can help, too!



Try crafting this week's lesson plans with these three elements in mind, and see how they work for you. If you'd like more ideas, follow my socials or send me a message. I'd be happy to help you out!

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