

Six Scientifically Proven Practice Strategies that Promise Progress



The six practice strategies come directly from the cognitive psychological scientists at [Learning Scientists.org](https://learning-scientists.org)

Megan Smith and Yana Weinstein hold doctorate degrees and have applied their systematic research on the brain and how it learns to the classroom setting.

Let's take these learning strategies one step further and apply them specifically to **practicing an instrument!**

Much of following the paragraphs, edited and updated for Piano Practice by Leila Viss of 88PianoKeys, closely resemble their findings.



The main point of their research is how the brain remembers best. It's not through repetition nearly as much as through **retrieval of information.**

*"Every time you leave a little space,
you forget a bit of the information,
and then you kind of relearn it.
That forgetting actually helps you to strengthen the memory.
It's kind of counterintuitive,
but you need to forget a little bit
in order to then help yourself learn it by remembering again."*

- Weinstein from
[CultofPedagogy.com](https://cultofpedagogy.com)



SPACED PRACTICE - DRIVE BY

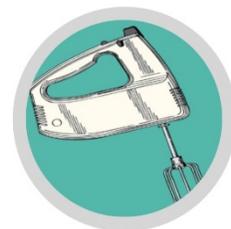
Space out practice over the day instead of in one block of time. Forgetting and then relearning a piece overtime strengthens your memory bank."

"DRIVE-BY" or stop and practice before dinner, then "drive-by" again after dinner. Run through a couple of assignments before school and see what is remembered after school.

INTERLEAVING - MIX IT UP

"While repetition is vital, research says we will actually learn that skill more effectively if we mix our practice of it with other skills. This is known as interleaving."

"MIX" up assignments. After practicing a scale a few times, play a piece, then go back to the scale. Switching between tasks will help students to think more critically and will encourage them to give more thought before playing. Or, practice a piece, do some homework and then play the same piece to test reliability and accuracy.



RETRIEVAL PRACTICE - DIG A RUT

"Practice bringing information to mind without the help of materials."

Repetition of a piece digs a "rut" in the memory bank. To dig the rut deeper, put the book away and see how much can be recalled without looking. Remembering the piece without reading the score helps students learn more effectively and permanently. Avoid binge practice and instead, put away the music before it's completely memorized. Later "drive by" and play it again and see if it can be played

error-free the first time it's played.

ELABORATION - UNDER THE HOOD

"Explain and describe ideas with many details."

Get under the hood of a piece and discuss all the elements: form, key, chord progressions, dynamics, mood changes and any other details. Analyzing the nuts and bolts will boost the understanding of concepts and lock in memory anchors when retrieving a piece or definition of a term from the memory bank.



DUAL CODING - LINK A WORD

"Encourage students to pay attention to visuals and link them to the text by explaining what they mean in their own words. Then, students can create their own visuals of the concepts they are learning. This process reinforces the concepts in the brain through two different paths, making it easier to retrieve later."

Connecting the word and image of an apple which has two syllables and yet is one word explains the concept of two 8th notes sharing one beat. Apple/Beat - Two

Syllables/Two 8th Notes.

CONCRETE EXAMPLES - CEMENT IT IN

"Use specific examples to understand abstract ideas. In addition, help students extend their understanding by coming up with examples of their own."

The D-Major chord uses a white key, then a black key and then a white key... just like this triple dip ice cream cone has a chocolate scoop in the middle of two scoops of vanilla. To extend their understanding, ask students to imagine the scoops of a C-Major triple dip ice cream cone...or a D-Flat Major ice-cream sandwich!

