



THE 4 CORE COMPONENTS OF MEMORIZATION

YOUR GUIDE TO LEARNING &
PERFORMING MUSIC SECURELY

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Table of Contents

Introduction 01

The Goal of Memorization 02

Does memorization allow you to play better? 02

Is memorization always necessary? 03

The 4 Core Components of Memorization 04

Develop the 4 Components 06

Utilizing Practice Tempos 08

Conclusion 10



Introduction

Hello! My name is Dominic Cheli, and I am a Content Lead at tonebase and a professional musician.

Memorization is always a popular topic on tonebase, whether it be in community discussions or our weekly livestreams. Given my experiences as a performing musician and an instructor, a few things are clear to me:

- Memorization is not an absolute science
- We ALL feel certain levels of anxiety when playing from memory
- While playing from memory can be liberating for some people, the opposite can be true for others!
- Many people are curious about tips/advice to build their memorization skills
- We all want to play our pieces at the best of our ability

I hope this guide will help you understand when (and when not) it's advantageous to memorize music, as well as how to make your memory secure using my **4 Core Components of Memorization**.



The Goal of Memorization

From my own personal experience AND speaking with top performers across the world, the consensus is quite clear:

The goal is not to have NO memory slips (we are all fallible, it happens to the best of us!) but rather the goal is to have the confidence and ability to get right back on track without missing a beat!

That way, instead of being fearful about what a memory slip might do to a performance, the mindset is that if a memory slip DOES happen, it is just a blip in the road, and things will get back on track, with the audience none the wiser.

Does memorization allow you to play better?

The answer is “yes, and no.”

Examples of “Yes:”

- Depending on the conditions, it may allow you to enter a flow state easier
- It can make technical passages playable or easier because eyes can focus on the task at hand
 - *Important to note:* Reading music and playing music are two slightly different tasks! Reading music involves the eyes moving back and forth from the score to the hands/instrument. Playing music without the score allows the eyes to focus completely on one task.

Examples of “No:”

- Memorization can add anxiety and disrupt your focus
- Some people can become more stiff and less musical because of nerves
- Memorization can limit the number of pieces you play because time must be spent on retaining memorization
 - Most people have a limited number of minutes of music that they can fit into their brain!

Is memorization always necessary?

Now that we know memorizing music doesn't always make us play better, I want to say this:

Memorization is NOT required for a great performance.

Plenty of great performers use scores, iPads, etc. and give sensational concerts. But, it should be noted that while full memorization of a piece is not required, "section-based memorization" is a super-tool that we can use to maximize performance potential, overcome technical challenges, and much more.

Section-based memorization is where a person uses the score for most of the performance, but memorizes specific sections for optimal technical and musical results.

What are some examples of where a person might use section-based memorization?

- Technical passages that are very difficult and require the eyes to look at the hands/instrument
- Musical moments that require a visual connection with another musician (*ex. watching someone for a cue*)

If you decide to utilize section-based memorization, make sure that you plan the sections to play from memory! That way you can train yourself to practice the way you will perform.

- Also, quick pro tip – if playing a section from memory, make sure to have a marker in your score so that when you look back at the music, your eyes immediately find the right place!

Now that you know when it's best to memorize music, let's get into strategies for doing so – starting with

The 4 Core Components of Memorization!

The 4 Core Components of Memorization

Have you ever memorized a piece, and had the following experience?

- Felt confident in memory, but when getting on stage you suddenly have “memory blanks”
- A piece that you once had in memory securely, is slowly deteriorating and memory slips are creeping in for no apparent reason
- You just can't seem to memorize a passage or piece no matter how hard you try.
- You can perform a piece without memory slips, your teacher congratulates you on its success...but you still feel like it isn't securely memorized!

If any of these scenarios sound familiar and you want to start memorizing/learning music with greater security, start working on **The 4 Core Components of Memorization**. They are...

1. **Auditory Recognition**
2. **Visual Mapping**
3. **Muscle/Kinetic Memory**
4. **Analytical Awareness**

I like to use the analogy of “driving a car” when it comes to memorizing or learning a piece securely. For a piece to solidly travel from beginning to end, there have to be 4 passengers in the imaginary car. (*You guessed it: Auditory, Visual, Muscle, and Analytical characters*) Let's keep this image in our minds for the following section!

All 4 passengers contribute to a safe, secure and comfortable ride. If you are feeling insecure in a piece, it is quite possible that one of these “characters” isn't in the car providing information to you!

Let's take a very common example:

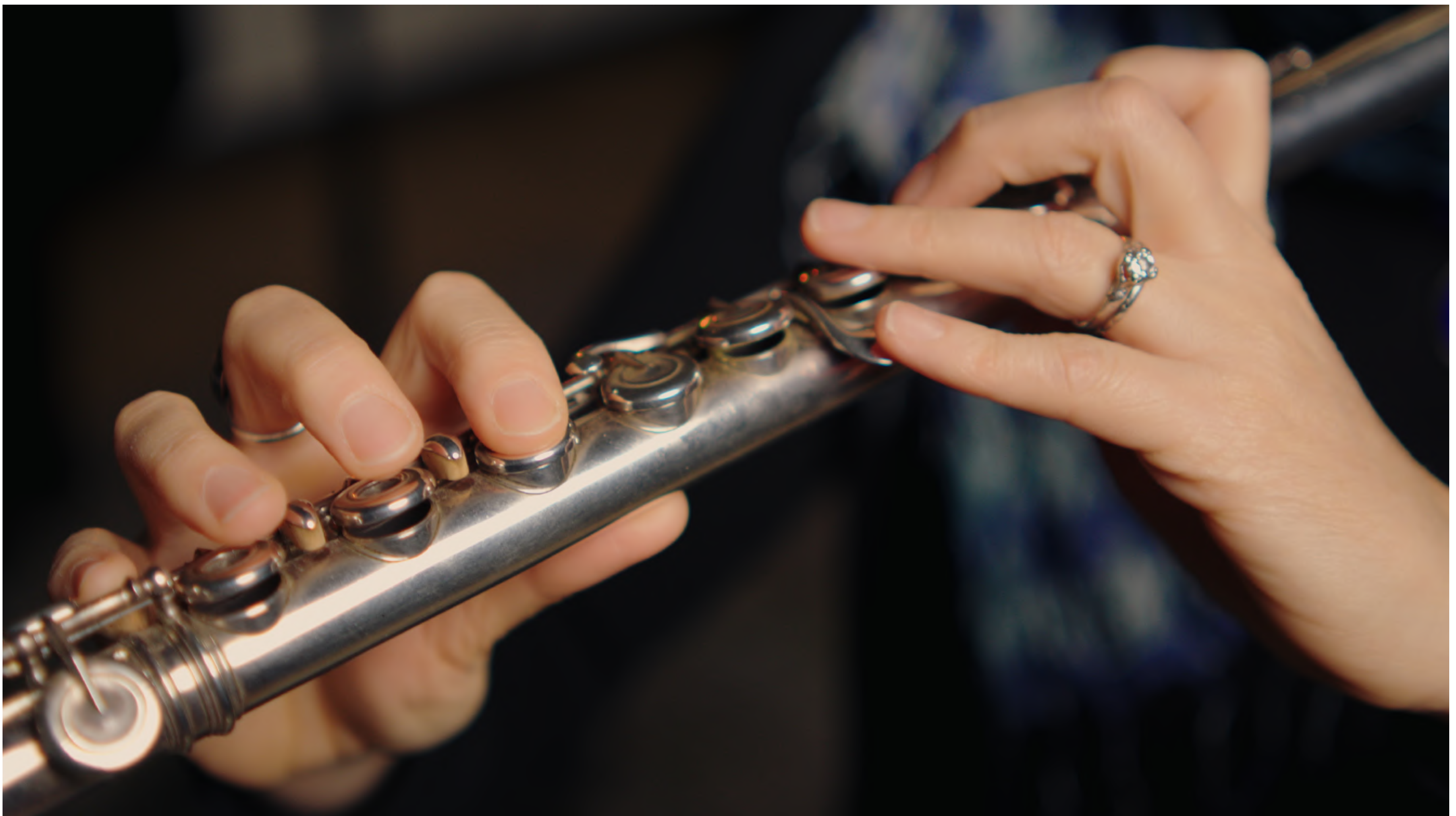
A student practices their piece over and over until it is memorized. They feel great, go to the stage, and sit down to perform. A moment of dread comes over them as they realize that they can't remember the notes! They put their hands on the instrument and try to “will” the hands to play the music. Sometimes the results of this can be good, but even if they are, this is NOT a comfortable or sustainable experience to have!

What just happened?

The student obviously nurtured their “muscle memory” by playing (in the practice room) the piece over and over again. And also Auditory Recognition (hearing the piece over and over again). So we have at least 2 passengers in the car: Muscle memory and Auditory Recognition!

But we see that the student’s “muscle memory” is doubting the “route” of our musical journey (i.e the notes of the piece) so “Auditory Recognition” tries to help. It is possible, however, that these two components can't figure things out. Wouldn't it be great if we had 2 more characters who might know the correct path?

This is where ideally, in our practice, **we are nurturing and working on all 4 components of memorization** so that whenever we perform, each aspect is in the “car” and ready to contribute to the journey and help get things on track whenever a hazard pops up on the road.



Developing the 4 Components

How do we practice each Component? Here are some examples:

Auditory Recognition (*You understand and remember how the piece sounds*)

- Practice the piece at appropriate tempo (if too slow, the music doesn't really sound familiar so you improve this aspect less).
- Listen to your music in the car or during transit
- Sing the piece to yourself

Visual Mapping (*Your eyes understand and “see” the physical map of playing a piece*)

- This is not “seeing the score” in your brain (although for some people this can be helpful)
- This references “seeing your physical actions” and where your body/hands need to move.
 - Pro Tip: Often it is great to “look ahead” so that you can see what is coming and better prepare your body to execute!
- Work on visualization (away from instrument)
 - Visualization is the act of imagining oneself playing the instrument.
 - This is from your own point of view (what your eyes look at while you play). Not trying to imagine how the score looks.
 - Start off small, imagining yourself playing a C-major scale, and you can develop that and “practice” music in your mind until you can visualize a whole piece!
 - Try to imagine how it looks, feels and sounds, when you play a piece of music.
 - Great for making good use of time when you don't have an instrument available to practice!
- Pay attention to what your eyes are doing/looking at during practice
- Plan general eye movement for passages

Muscle/Kinetic Memory

- Practicing at the instrument helps this skill the most
- Visualization can help (but physically playing is still the best)
 - Interesting Scenario: Some musicians have claimed that Visualizing their music for hours at a time actually results in sore muscles!

Muscle/Kinetic Memory (cont.)

- Consider different situations of practice
 - Muscle memory is crucial to entering a “flow state” but also the least reliable component to memorization.
 - Muscle memory can be greatly affected by practicing at different times of day or places
 - Muscle memory is the most highly sensitive component to anxiety or nerves, as these aspects can create many uncomfortable physical sensations: cold hands, shaking feet, tight muscles, dry lips, and much more.
 - As a result, most people that rely heavily on muscle memory can struggle whenever they get a little nervous
 - Typically, the Brain (Analytical Awareness) will be the comforter to provide security to a nervous muscular system (see below for the 4th component)
 - When playing from memory, consider the act of “closing the music” and putting it to the side. By having nothing in front of you, you have created a slightly more “stressful” situation to practice and improve in!

Analytical Awareness (*The Brain understands the structure, harmony, interplay of the hands and general + detailed aspects of a piece of music*)

- Perhaps the most important tool at our disposal.
- Work on this away from your instrument (write-in the harmonic progressions and chords in your score)
- Important to “activate brain” during practice
 - As you are playing, think about the patterns, how the chords modulate to one another, bass line, identifiable scales, etc...
- If you are practicing and have a memory slip, analyze why you went “the wrong way” and figure out a “reason” for the “correct way”
 - For example if you play a series of scales and mess up the pattern, notice that they may be chromatically related, or have a third relationship. There are countless ways to notice relationships between the notes on the page. The more you do this the faster you will be at seeing the patterns and architecture of the score (and others) in the future!

Utilizing Practice Tempos

To take things a step further, let's take a look at different tempo practices a person might do, and the Components that are most benefited by each selection. The three general tempos that you can choose to practice a piece at are: "Slow, Moderate, and Fast."

For Slow pieces:

Slow: (even slower than tempo)

- Analytical (your brain has time to process all the harmonies and patterns)
- Visual (you can "look ahead" and see where your hands need to go before the music happens)

Moderate: (at tempo)

- Analytical (your brain has time to process all the harmonies and patterns)
- Visual (you can "look ahead" and see where your hands need to go before the music happens)
- Aural (The music sounds familiar and similar to how you will perform)
- Muscle Memory (The muscles get used to moving at the appropriate speeds)

Fast: (yes, faster than the tempo and faster than you may want to perform.)

- Playing a slow piece "faster than desired" actually forces your brain and fingers to be sharp and fast thinking! It can also show the piece in a different light, illuminating structure, macro harmonies, and phrase lengths.
- Analytical (your brain is being forced to quickly process all the harmonies and patterns)
- Visual (your eyes are getting trained to quickly move around in efficient ways).

For Fast Pieces:

Slow (much slower than tempo)

- Analytical (your brain has time to process all the harmonies and patterns)
- Visual (you can "look ahead" and see where your hands need to go before the music happens)

Moderate (A comfortable tempo)

- Ideal because it allows access to the most Components
- Analytical (You are playing faster than “slow” but your brain has time to process all the harmonies and patterns)
- Visual (You are playing faster but you can “look ahead” and see where your hands need to go before the music happens)
- Aural (Music sounds similar to how it will be performed)
- Muscle Memory (The muscles are moving approximately at the correct tempo and therefore are building pattern recognition)

Fast (At tempo, or faster)

- Muscle Memory (Helps build the muscle memory needed to perform the piece)
- Aural (The ears are trained to recognize the music at performance tempo)
- Visual (The eyes are trained to follow hands or music at appropriate speeds)
- Building Confidence (If you can play a piece faster than the intended tempo for performance, you can build a lot of confidence!)
- Because you are playing fast or faster even, Analytical Awareness isn't always benefited as much.
 - We don't want to think about “more” things when trying to play a fast piece with ease. For example we don't want to think about each finger, each harmony, each note of a scale. This information overload will prevent you from playing with virtuosity and ease.
 - In fact it is actually ideal to think about less things and create automatic actions (through nurturing the components in the aforementioned tempo selections)
 - If you notice that your brain is struggling to keep up with your fingers and you can't keep things in order at top tempos – don't worry! This is a perfect example of why you should drop the tempo, work on Analytical Awareness and then build your tempo up again!

Conclusion

So, let's review. Why should you memorize a piece?

- You can play the piece anywhere with no music – freedom!
- Sometimes solves Technical problems
- Can be freeing mentally (no reading a score – just feeling the music)
- Allows you to focus on the music and storytelling more!

Why should you NOT memorize a piece (and consider applying “section based memorization”)?

- You can learn more pieces since you don't have to worry about retaining your memory
 - Less Anxiety – more security, and you can feel better on stage!
 - By having a score in front of you, you can always find new things in the music!
 - Allows you to focus on the music more
 - Wait, above didn't I just say that memorizing lets you focus on the music more? Well, they both do!
- And everyone has a different experience with their music.

Pro Tip: I know I have said this many times but: Apply section-based memorization in any piece you play!

Happy Practicing!

– Dominic Cheli

