

## How to play music faster: ideal practice methods for adult musicians

By Dick Hensold © 2011

*This article was originally a talk given at the Piper's Gathering in Burlington, Vermont, in August 2011, which is why the article includes comments from the floor. It has a lot of generalizations about practicing, because I intended to demonstrate specifics at the end of the talk, drawing from examples of practice problems given by the participants. Unfortunately, we ran out of time, and didn't get to any specific examples! A future talk will include examples which illustrate the general principles articulated in this article.*

It takes a long time, and a lot of careful practice, to get really good at playing music (in case you haven't noticed). So it's important to be as efficient as possible with your practice time. Even though there are no shortcuts, there are plenty of possibilities for wasting time! This talk is about making the best use of scarce practice time. I'll focus primarily on developing technique rather than musicianship, because musicianship can take so many different forms, and developing technique is probably a universal neurological phenomenon. (Musicianship is very important, of course, and we must always try to integrate our musical sense into whatever passages we are struggling with technically.)

I go into great detail here, because I find that it helps to understand the learning process. If we understand the process, we can trust it, and can apply ourselves consistently and patiently, knowing that results will come with time. It's an irony that the more patient we are, the faster we progress. Hence attitude is extremely important, and in several ways. Efficient practicing requires very good concentration, and a temperament which is patient-but-enthusiastic, alert-but-relaxed, and inquisitive is ideal for fostering good concentration. Trusting the process rather than questioning yourself allows you to focus on the job at hand, and not distract yourself with second-guessing, whether of yourself or of the learning process.

Some of the best musicians I know have the same sort of attitude toward practicing as many have toward doing puzzles: they regard it as a fun, problem-solving exercise. If something isn't working, they slow it down and analyze the problem until they figure out how to fix it, and then drill the solution until it becomes second nature. Attitude is important—and attitude, along with concentration, *also* develops with practice.

Some of the concepts in this article can be applied on your own, and some are better applied with the help of a teacher. As I see it, there are three qualities needed to learn music without a teacher. First, you need to have a good ear, so you can really hear what's going on in the musical examples you are trying to emulate and can tell whether you are succeeding in copying them. You learn more quickly if there is a short feedback loop. Having a keen ear for imperfections, which allows you to fix them right away, is much more efficient than waiting until your weekly lesson and having a teacher point

those imperfections out to you. The more quickly you catch things on your own, the faster you'll learn, and the better you'll be at getting along without a teacher. (And the ear also develops with practice!)

Second, you need to be able to analyze your own technique, so you can figure out the most efficient ways of getting the desired musical effects. This almost never works as well as having a teacher show you solutions to technical problems that are a result of generations of experience, but sometimes you still have to figure things out for yourself, because every combination of body, temperament, and musical taste is a little different. Your teacher can show you stuff, but can't determine what you want to do with music. You set your own goals, so ultimately you have to figure out how to reach them. The ideal is to have BOTH a good teacher and an ability to analyze your own technique.

Third, you need to understand your own learning style, and what works for you. While I will be talking about things that are pretty universal, the way we apply how we learn is individual.

In this talk, I also want to address the differences between older music practicers and younger ones. The main differences between older practicers and younger ones can be understood in terms of three: strength, muscle coordination, and memory. (Memory includes both muscle memory, which is related to coordination, and memory of musical ideas.) These 3 issues require different practice strategies for optimal development. For instance, strength issues are best dealt with like any muscle-building program—you exercise 3 times/week to build strength, and exercising more often doesn't do any good. Muscle coordination issues, on the other hand, are best developed by frequent repetition, alternating with rest periods. Daily practice is ideal for practice issues that are primarily muscle coordination. Memory issues are best worked on very frequently, reviewing something again and again, even several times a day, until it is thoroughly learned, and then coming back to it at gradually increasing time intervals.

The two biggest differences between older practicers and younger ones are: 1) older people's bodies recover much more slowly from vigorous exercise, and 2) memorization is slower and more difficult for older musicians. The young can practice strength issues every day and still improve without wearing down their bodies, and often don't require special strategies to aid in memory—it all comes more naturally. For older musicians, however, it's helpful to analyze musical problems in terms of strength issues, coordination issues, and memory issues, and to devise practice strategies that accommodate the optimal practice frequency of each. For example, most technique issues that involve the little finger are either strength issues, or coordination issues limited by strength issues. For strength issues, you would ideally design an exercise that you would practice at the end of a practice session (or practice segment), every other day or 3 times per week, just as you would lift weights. If the issue also had a coordination element, then you could practice that element more frequently, but more slowly, and with fewer or more widely spaced repetitions, in order to avoid fatiguing the muscles. An example of a practice strategy for issues involving memory would be to work on the memory component away from the instrument, so that memorization is engaged as frequently as possible while allowing the muscles to rest and rebuild.

So ideal practice regimens probably differ between age groups—I certainly know I have had to change my approach over the years. Younger players seem to improve quickly if you can keep them interested and focused, without much attention to practice method. College-age musicians are usually pretty focused but can err on the side of not having enough balance prudence in their practice, hence the high incidence of overuse injuries among college musicians. Something seems to change in the way we learn after age 30 or 35, and our old practicing methods become less and less effective.

As people enter middle age, they must be extremely conscious of stamina issues, and of the speed their bodies rebuild. I, for instance, didn't overhaul my practice method until my 40's, when, after a shoulder injury, I learned to practice again with the help of a physical therapist. After the overhaul, I made good progress in developing instrumental technique by practicing for several hours *every other day*, with many breaks. I have experimented with numerous departures from and alternatives to this schedule, to accommodate coordination and memory issues, but it continues to seem like a good basic plan. I quit playing four-hour contradances when I was 28 years old, because I would be extremely sore after playing bellows-pipes for such a long time, but now, at age 52, I'm back to playing four-hour dances. My stamina is now better than it was at age 28, and the reason is that I built up to it slowly, practicing every other day.

Who has had the experience of preparing for a competition or big performance, doing a somewhat disappointing job, putting the instrument away for a week, and then pulling it out and playing the piece perfectly? (Many hands go up.) What you were probably missing was the rest period. We need to manage our rest periods, in other words, scheduling both our practice and rest so that they work together, and making the whole process more efficient.

Before I get to my main point, I want to talk about multitasking. Music is multitasking: music is doing a lot of things at once. You have to blow and finger at the same time, listen and play, listen to yourself and listen to others, listen to yourself and read music. We have to train ourselves to do seemingly dozens of things simultaneously. You need an efficient method to learn to integrate lots of activities into one activity, and then you will learn everything more quickly. As teachers, we often see students trying to add another element too soon, and then everything falls apart.

But while our bodies are multitasking, our attention can really only be in one place at a time. What happens is that we learn to shift our attention from one thing to another so quickly that we think we're thinking about several things at once. It's helpful to understand how this process works, because then we can devise exercises to develop it much more efficiently.

The classic example is playing the piano. You learn to play with two hands at once by first learning a part for one hand, then for the other, and then very slowly putting them together. There are a lot of situations in the instrumental music world that benefit from this basic approach. Playing a difficult technique in a musical context is a lot like doing two things at once, because your mind has to pay attention to both the technique and the musical idea. A difficult technical passage often throws us off musically, because we don't integrate the two slowly enough.

Reading music is a great example. How many people have noticed that their intonation and technique suffer when they are reading music? It divides your attention, and the other aspects of music performance suffer if you don't work on consciously paying attention to each aspect of performance, and gradually integrate them into a seamless whole. And speaking of intonation: Wind players typically warm up playing long tones, and string players play scales in double stops, both in part to practice playing in tune outside of a musical context. They then have to integrate this in-tune playing, paying attention to it as they begin to pay attention to other musical aspects.

What we must do in these situations is to slow down and be conscious of all the musical elements we're trying to coordinate, consciously shifting our attention from one to the other, until doing so gets easier. Also, it helps to isolate different elements, only adding one element at a time, and to keep it slow until it's well integrated.

So now we get to the main point I want to make, the real secret of making decent technical progress in a limited amount of practice time. The secret is this: the speed of your technique will increase on its own, on its own time, if it's properly cultivated. I use the word "cultivate" deliberately, because you have to understand that the effects of practicing correctly will not be apparent in the current practice session, but will show up sometime in the near future. The rest period is part of the process. (20%–30% of the audience noticed this was true.)

So what is "proper cultivation?" In short: accurate, consistent repetition, while maintaining perfect technique. In long: see below!

When practicing to increase the speed of a given technique or piece of music, practice a short selection *slowly*, but not so slowly that it changes the entire character of the tune, simultaneously paying VERY close attention to:

- 1) maintaining *perfect technique* (defined below);
- 2) *accuracy* (defined below) ...all while striving for
- 3) *consistency* in performance (defined below).

Repeat the short selection, concentrating on all the factors above. Do not speed up, and, if necessary, use a metronome to keep your tempo down. It doesn't take enormous amounts of repetition (Perhaps 20 repetitions? Maybe two minutes of repetitions?) to cultivate the expected improvement if your concentration is good. In other words, we must be very careful to integrate all the factors above. (This is where we come back to efficiency—we are saving practice time by not spending too much time on any given problem on any given day.) Repeat every couple of days, and there should be noticeable progress in a few practice sessions. Trust that the improvement will come in the *rest period* between practice sessions, not on the day of the practice itself. The good news: your technique will speed up on its own, on its own time. The bad news: if you don't start early enough, you may not get your music learned in time. Thus, people are always tempted by shortcuts, which both slow the process down and lead to sloppy playing.

Many of the terms I use above need more explanation:

a **short selection** can be anywhere from a few notes to eight measures. Vary the length of the selection in your practice regime. Shorter (three notes—half a measure) is perhaps more efficient, because it allows more repetitions of the trouble spot per minute. It also allows you to closely compare subsequent repetitions of a difficult spot, without a lot of distractions in between, and get those repetitions as consistent as possible. But we must integrate this very short bit into the rest of the phrase, so if we spend, say, two-thirds of a short practice period on a short bit, we might spend the remaining third on longer segments that include the short segment, in order to integrate it into the rest of the phrase.

**Perfect technique** is usually what the best teachers say it is. (Generally, this involves having the body in as neutral a position as possible while still holding the instrument, and moving with a minimum amount of force. But that will vary for different instruments, and this is a general talk.) But if you practice this method for 2-3 months and don't see a significant improvement in speed, you're probably doing something wrong technically and should start experimenting with different technical approaches. Bad technique will limit speed all by itself, without regard to practice method. Also, you absolutely do not want too much tension. Tension slows you down.

**Accuracy**, in this context, is primarily rhythmic accuracy, but the music shouldn't be mechanical. "Accuracy" also includes good articulation and intonation; basically it means playing the music exactly the way you want to hear it. In other words: correct interpretation for the intended tempo. If you can't get it to sound good slow, it won't sound good when it speeds up. So it should be accurate in every detail—and your ear must be the arbiter.

**Consistency in performance** means integrating all of the above with as few imperfections as possible and a declining number of imperfections with each repetition. For a given series of repetitions, try to get the performance of each repetition exactly the same as the others. For subsequent series of repetitions, it's a good idea to vary the tempo or interpretation while continuing to strive for consistency *within that series of repetitions*. Practicing consistency in this way gives you *control*, not unmusicality. If the number of imperfections doesn't decline quickly as you repeat the passage, you are practicing the passage at too fast a tempo and need to slow it down.

One writer puts it this way: "NEVER DO IT WRONG." I get the point of this, but I think that trying to avoid making any mistakes psychs you out in an unproductive way. I say rather, "If the number of mistakes doesn't quickly decline as you repeat the passage, you are practicing the passage at too fast a tempo." A rule of thumb might be: don't miss more than two consecutive repetitions without either slowing down or stopping and figuring out what you're doing wrong.

[Question from the floor:] If you experience doing it right half a dozen times and then it all goes to h\*\*\*, what do you do then? Stop?

DH: Slow it down.

It doesn't really help to pick a practice tempo and stick to it. What helps is to pick a practice tempo and do a bunch of repetitions, and then pick another tempo, and do a bunch more repetitions. Different tempos, either on different days or on the same day, depending on what you have time for. Ideally, for a passage that you have been working on a while, warm up slowly, then practice a series of repetitions at your fastest comfortable speed. Then put the metronome on, slow it down a little (maybe one click), and do another series of repetitions, then down another click and do another series of repetitions. Please notice that you slow down as you continue to add repetitions, not speed up. I don't know why this works, but it really smoothes things out, as well as giving you all the speed and accuracy you need.

Another thing that is very helpful to understand is that there is an optimal amount of time to spend on any given tune or technical problem *per practice session*. You learn something more thoroughly by coming back to it on many different days, so you want to give yourself plenty of lead time and divide your practice session into small segments, enabling you to touch on many different practice issues. This requires planning and organization but is totally worth it in results. You need sufficient time with each practice issue to become thoroughly familiarize with it, to warm up to it, and to develop sufficient repetition, so your segments can't be too short. I will usually spend a 5-10 minute practice segment on a 16-measure tune—more if it has lots of hard parts, or if I'm just beginning to work on it. The bulk of this time would be spent on repetitions of the hard parts, with perhaps only 20%–30% of the time spent on integrating the hard parts into their surrounding phrases.

If a hard part is actually two tricky bits very close together, work on the two bits separately, and then work on them together *in the same practice segment*. Then integrate them into the rest of the phrase. This is essentially a multitasking problem, and will require a slightly longer practice segment. (I'm assuming you're able to analyze exactly where a given technical problem is, so you can isolate it, work it out, and then practice it repetitively in a short phrase.)

Once a passage is learned and brought up to speed, it's helpful to continue repetitions for a little while longer (and usually at a click or two slower than performance speed), because the consistency you develop will then last longer and carry over better into performance. Try to resist the temptation to always practice something faster once it has come up to speed. The rule of thumb is, if you find a practice method that works in efficiently bringing music up to speed, don't abandon that method as soon as the passage is up to speed—continue doing more of what works. The truth is that even a well-learned technique or tune is apt to drift over time, and we need to keep coming back to it to keep it perfected. We will not need as much time to re-perfect it on each occasion we come back to it as we did to learn it initially, and the amount of time it takes when we come back to re-perfect it will gradually diminish.

For example, it might take ten five-minute-per-day practice segments to thoroughly master a given tune. If you practice every other day, this process would be spread over 20 days. If you then let the tune “rest” for a couple of months, you would come back to it and find that you seemingly had to start all over again. But if you repeat relearning the tune slowly in similar, five-minute practice segments, you'll find it only takes 6–8 such

segments to re-perfect the tune. Let it rest another couple months, re-perfect it yet again, and this time it will only take 4–5 segments. If you continue to take a few months off, and then come back to the tune and re-perfect it, eventually it will only take a short warm-up (on a good day, not even that) to have the tune ready for performance on a permanent basis. Obviously, the numbers of practice segments given above are estimates, but they are based on written records I have kept of my practice segments for various tunes, so the overall pattern is fairly accurate and predictable.

The key point here is that you can't assume that once something is learned, it will *stay* learned. Over time, you'll have to go back and re-perfect pieces. But stick with it, and eventually the music *will* stay learned, with only minor maintenance. I recommend the foregoing procedure to any performing musician as a way to build a permanent, core repertoire that is always ready for performance. Obviously, nobody has enough practice time to work on every piece with such rigor, so you need to choose a small body of repertoire that you want always to have ready.

[Question from the floor:] Will you explain to me why the rest period is so useful?

DH: I don't know, but I think it's muscle development.

Dr. Elmar Schmeisser: No, it's RNA synthesis in the brain. And that takes time. (I'm a neurophysiologist.) To lay down memory, you have to impress a pattern into the hippocampus, which is a structure in the brain. In order to transfer that pattern from short-term memory (which contains something you remember for five minutes and then forget) into long-term memory, you have to synthesize RNA. You have to synthesize molecules, which takes time. You make these molecules generally when you sleep, and that's why you have to sleep on something to remember it. You've got to synthesize RNA to lay this stuff down. You cannot hurry it. Another process also takes time: for you to learn a pattern, you actually have to change the synaptic pattern that you have on your neurons. The neurons in the brain, which actually are doing the co-ordination, which set down the motor commands—to get these to fire in a particular sequence and strength, you need x number of synapses doing that. It takes a while to recruit and grow those. You actually have to build new connections. And that takes protein synthesis and hours, if not days.

DH: So you're talking about cultivation here?

Dr. Schmeisser: It is *literally* growing brain, or growing little pieces of brain.

DH: Thank you for your comments. That reminds me of another point about attitude: I think it helps with practicing to understand (or even visualize), that skill is not in your fingers, it's in your brain. I sometimes hear pipers say that another piper "has great fingers." I want to tell them (though I never have) that their fingers are no different than the piper they admire so much, and that their fingers might be just as great, or greater, if they would focus on solving the appropriate problem.

## OTHER PRACTICE TIPS

**Metronome use:** You'll find that a metronome is crucial through this process. Some of the best musicians I know practice regularly with a metronome. Its most important use is this: When a passage (or technique) speeds up in the rest period, it usually doesn't speed up in accurate metrical proportions. In other words, the relationship between, say, quarter notes and eighth notes will not necessarily be correct at the faster tempo. Practice with the metronome will restore that relationship to its correct proportions. I call this process "re-calibration." This proportional drifting happens not only in the rest periods between practice sessions but also when a previously learned piece is put aside for a period of months. In both cases, the solution is the same: practice with a metronome to recalibrate the proportions between rhythmic values. ("De-calibration" is in fact one of the principal rhythmic problems musicians have; faster note values are typically rushed in relation to slower ones.)

A metronome is also useful for measuring your progress in bringing a passage up to speed and for controlling your tempo to ensure that you're practicing a passage at a *variety* of tempos. This is important: NEVER use a metronome to force yourself to speed a piece of music up. It just develops bad habits that make the music sound bad. It's actually best to do a series of repetitions first without a metronome, and only then to turn the metronome on and find the first click *slower* than the tempo at which you've just been practicing. The reason for this is the multitasking problem mentioned above: to add a metronome is to add one more element to what you're trying to do, and coordinate, and be aware of, so it must be integrated slowly and carefully. Speeding up *and* listening to a metronome is changing *two* things at once, and you'll learn faster if you only change one thing at a time. Possibly the most important reason for using a metronome is that teaches you to keep a beat in relation to an outside beat. This allows you to play in ensemble. If you can't play with a metronome (and play *musically* with a metronome), you can't play with other musicians.

**Dotting both ways:** One limitation to practicing difficult passages slowly is that fast movements *feel* different than slow ones, so it's sometimes hard to get slow practice to translate into fast playing. One really effective way around this is to "dot the passage both ways." For example, change the rhythm of a difficult passage of straight 8<sup>th</sup>-notes to a series of dotted 8<sup>th</sup> + 16<sup>th</sup> notes, and get that rhythm as accurate as possible (as well as paying attention to articulation, technique, execution, and everything else). Then play the same passage with the dotting reversed, to a 16<sup>th</sup> note + dotted 8<sup>th</sup> pattern, and again practice to get that rhythm as accurate as possible (etc.). It seems best to spend an equivalent amount of time on each rhythm, and to work on both rhythms in the same practice session. This technique makes bringing passages up to speed much quicker. It also gives you more rhythmic control in general. But it seems to work much better on material that is relatively new, and seems less effective for re-polishing "old" music.

**Bad days:** It's really helpful to have a solid plan for handling a bad practice day. Sometimes when you're tired, or can't concentrate, or your fingers are just klutzy, you can be tempted to skip your practice session. While this is always an option, a skillful attitude adjustment can help you make the most of a bad practice day. You notice on a bad day that everything is harder, slower, and just not as good. When I have a day like

this, I find that just to accept this fact and consciously be very patient with myself allows me to continue productive practice. I slow things down even further than before, simplify the practice issues to a point where I can deal with them, and continue to do accurate, consistent repetition with perfect technique at whatever tempo I can manage. I usually find that the next time I come back to my instrument, the passages I worked on are better than they had ever been! So it *can* be very helpful to persevere on a bad day. I also find, although this may be due to years of practice, that patient concentration *by itself* usually improves my mental state enough to make a noticeable improvement in my playing. As stated above, both concentration and attitude are key components of successful practice, and both tend themselves to improve with practice. In this respect, bad days are a valuable laboratory!

**Long-term planning:** If you are working on a particularly difficult passage or technique, it seems best to take a break from it every so often, perhaps for a few weeks. In other words, when you practice the same thing for months on end, you definitely see diminishing returns from your practice time. You have to be methodical without being too obsessive. Mix it up, and vary your practice routine enough to prevent getting into a rut.

I find it helpful to think of my practice time in terms of some larger time period, like a “season” or a “semester.” This helps me quantify what I’m accomplishing in the practice room, and aids in repertoire planning. It also serves as a reminder that practicing is not a life sentence but a series of finite tasks, each of which builds on the others.

Have you heard this one? “Practice does not make perfect, practice makes permanent.” Basically, we are creatures of habit—we must simply make it a habit to get it right.

### **Suggested books for further reading:**

Bruser, Madeline. *The Art of Practicing: A Guide to Making Music from the Heart*. New York: Bell Tower, 1997.

MacGillivray, James. *Rhythmic Fingerwork: Instruction in Technique for the Highland Bagpipe*. Aurora, Ontario: self-published, 1998.

### **And on the web:**

Kageyama, Noa. “The Bulletproof Musician Blog.”  
<http://www.bulletproofmusician.com/>

Schuring, Martin. “Thoughts on Practicing,” ©1999 Martin Schuring.  
<http://www.public.asu.edu/~schuring/Oboe/practice.html>