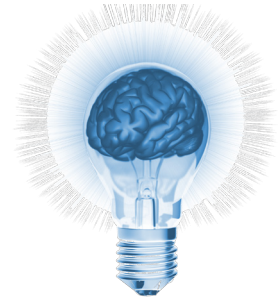


# Practical Ways to Play Better Now, Right Now, C'mon, Go Do It!

by Gregg Goodhart, The Learning Coach



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## How Good Can You Be?

If you take a close look at the notion of talent, you've likely found there is not much there. It really seems to boil down to where discipline meets desire meets dedication meets determination.

I highly recommend the book, "Talent is Overrated," by Geoff Colvin for an overview of this.

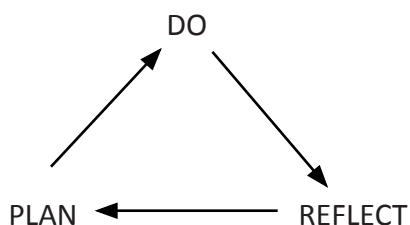
## So, Then What Do I Do?

Interestingly the first answer to that has little to do with practicing scales, etudes, concerti, whatever, it has to do with self-control. How are you going to practice for 30 minutes a day if you can't even sit down and start? Start building positive habits little by little. There is more info in the, "My Dog Ate My Talent," PDF on my site. I also recommend the book, "The Power of Habit," by Charles Duhigg.

## OK, Then When I Do It, What Should I Do?

However much you may be practicing, and however much practice you will build, how you do it is the key difference between you and, you know, that "really talented person" in your music program who just seems to perform everything so well.

The process of learning something, which has been around since the dawn of humanity, has been given the name "deliberate practice" by cognitive researchers (Ericsson). Here is a nice synopsis of that process that I took from the Royal Conservatory iSCORE website.



Repetition, with thought between each repetition to, at the very least, ensure that it was done correctly is not an optional mindset. If you do it you will improve, if you do not you will not get very good. The choice is yours. Just don't be surprised at the results either way.

Let's be clear, this is difficult to do. Focus, concentration, whatever you may call it is built like a muscle a little bit at a time. If you have not been practicing this way do not be surprised if you can only do 10 minutes without having to stop whereas before, doing it the other way, you could do 30.

Don't worry; those 10 minutes are far better than the other 30 you were doing. (Ask you teacher which she would rather have you do!) The 10 minutes will grow over time as you exercise it.

## Why Is It So Uncomfortable?

Research has shown that learning occurs in the area of problem solving. This is not fun and requires creating a state of confusion, solution, confusion, solution. That is what learning is. I call it the burn of learning or the Blearn.

Turns out a couple of researchers at UCLA noticed the same thing and gave it a real name; Desirable Difficulty (Bjork and Bjork). Be willing to make mistakes, figure it out, and make more mistakes. We teachers have a



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word for that – *learning*.

## That seems weird. How does it work?

Your motor skills are physically represented by neural communication networks that you build in your brain. You build these networks through desirable difficulty, then you must strengthen them through repetition.

That it is why it is so crucial to do repetitions slowly and accurately. Each time you do something it initiates a process called myelination which strengthens and speeds neural communications.

Doing something wrong, even slightly, strengthens the neural representation for that mistake. Do it right and activate the right neural network.

Speed does not come from trying to play fast, but from building accurate and efficient neural networks over time. (Of course, you will also need patience).

## Fine. I Mean Specifically, What Should I Do Mr. Smarty Pants?

Well, my pants don't feel any smarter. OK, let's get to work.

What follows is a group of *strategy changes* that create desirable difficulty allowing you to learn things more quickly. Dotted rhythms (see page 4) are a good place to start. I think a relatively easy way to apply this would be 10-15 minutes/day for 5 days.

If it works the way I say it does then a whole new world will open up to you. If it does not then you've wasted 75 minutes trying to get better. But if you focus and do it right I already know what will happen.

On the next page you will find some no-fail instructions. Follow these for five days, then feel free to continue on page 4 for even more cool strategy changes.

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## AM I TALENTED ENOUGH? DON'T BELIEVE THE SIGNS

*There are many ways that we talk ourselves off of the road to success. Don't buy it!*

The way Mother Nature has set up skill acquisition is far different than what most people believe it should be. She puts up signs on our road to improvement that seem to indicate a lack of "talent."

Learning a new skill is hard for everyone. When you hear of someone who learned something particularly easily, you can be sure there's a good reason ... but it may not be obvious from the outside. Likely they've had some previous exposure to the skill — which they themselves may not even realize — or they are practicing more, or more effectively.

It is not, to be sure, because of some magic pixie dust called *talent*.

This false sign says, "You are slower in learning than your talented friend, so don't bother working hard, 'cuz it's not going to do any good."

Even someone who learns fast at the beginning will eventually experience some difficulty. That leads us to another false sign: "You play some things well. Stay with your strengths and don't jeopardize everyone thinking you are great." Of course, avoiding challenges will ensure you always stay at the level you're at.

We hear of pro players who learn difficult works in short periods of time and think we could never do that. Conversely we see players younger than us who are much better and we become discouraged. But these are gross mis-comparisons.

How many hours of deliberate practice do you have under your belt? A few hundred? A thousand? The pro player has tens of thousands of hours. Comparing by age is just as inaccurate. When you see someone younger than

you play better it is because that person has more practice hours. It has nothing to do with age.

Finally, you will experience what I call the "long arc of skill development." Learning any complex skill is a long process of mastering thousands of smaller skills and constantly refining and polishing them for mastery.

This sign says something like, "You've been doing the work just like that Goodhart idiot told you. You've put in well over 500 hours over many months and, while you've enjoyed significant improvement, you are not even close to being a virtuoso. Don't be a fool. Any reasonable person can see that you should be farther along than you are. You do not have what it takes. Make the responsible decision and give up."

Nope. Not true, don't fall for it. Don't give up!

## DAY ONE

1. Pick something that you just can't seem to get perfect at tempo no matter what you do.
2. Learn it AS SLOWLY AS NECESSARY to play it completely perfectly. It does not matter how slow you go, as you are creating a neural network; so make sure it is accurate.
3. Repeat that 10 times.
4. Learn to play it with a dotted rhythm (see page 4). You will experience some desirable difficulty. This is good. Slowly work through it.

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## DAY TWO

1. Do TEN repetitions of the passage as slowly as necessary for perfection.
2. In each rep, notice any imperfections you can correct or any improvements you can make for the next rep. *No detail is too small.*
3. Review your dotted rhythms. This may require some re-learning. That's perfectly normal, and you'll be able to get it together much more quickly this time.
4. Do 3–10 perfect dotted reps (depending upon how much time you have).

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## DAY THREE

1. 10 reps at perfection, 10 reps with dots. If you need to review dotted rhythms, then no problem.
2. Begin learning reverse dotted rhythms .
3. Warning: Reverse dots are harder than dots and will be very frustrating. How grateful we are to have this device to get us into that intense state of desirable difficulty! Feel the Blearn!
4. You may not finish perfecting this today; just do your best. It will be there for you tomorrow when you get back to it.

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## DAY FOUR

1. I think I just made up a new word — RAP (Rep At Perfection). Okay, so start with 10 RAPs in regular rhythm and 10 RAPs in a dotted rhythm.
2. Continue learning reverse dots. If you keep Feeling the Blearn you should be able to get this down today.

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## DAY FIVE

1. 10–25 (the more the better, just stay focused) RAPs regular, 10–25 RAPs dotted, 10–25 RAPs reverse dotted, 10–25 RAPs regular.
2. See what happens in your next practice. Let me know what you think — good or bad.

## Cool, Now What?

Well, the best part is that you have learned the process of incorporating varied repetition. Keep using dotted rhythms for everything. Now go to the next level by applying the strategy changes below as you have already done with dotted rhythms. Implementing new strategy changes will be easier now that you have begun to use them.

Some of these will be very hard. Do not be discouraged if you can't get them in a day or even days. Keep doing deliberate practice and you will get them; then the benefit will kick in.

Varied repetition produces *strategy shifts*, a term used in cognitive psychology to refer to a skill developing from a slower multi-step process to one automatic step. When you use varied repetition it creates a strategy shift in the learning process (Delaney *et al.*). This resets something known as the *power law of learning* (Newell and Rosenbloom) and increases progress.

Thanks for reading, now go get good! What are you waiting for?!

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## Here are the strategy changes. Now, go get good!

### ***Dots and Reverse Dots***

Take a passage you are having trouble with and once you can execute it perfectly, no matter how slowly you need to play it, learn it with the following rhythms:

*Dotted rhythm:* Play all of the notes as the first being a dotted quarter note (♩.) and the second an eighth note (♩). Another way to do this is to count. Hold the first note for 1-2-3 and play the second on 4, and continue that pattern (ONE two three, FOUR, ONE two three, FOUR).

## FEEL THE BLEARN!

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*Reverse dotted:* These are the opposite of the dotted rhythm we are used to — the shorter (eighth) note (♩) comes first, followed by the dotted quarter (♩.). That would be one count for the first note and three for the second (ONE, TWO-three-four; ONE, TWO-three-four).

Someone pointed out to me that this rhythm is the Scotch snap. I should have paid more attention when studying Lully overtures in grad school!

Practice these rhythms first without a metronome, then add the metronome.

### ***Note Grouping***

Play a fixed number of notes, and hold the final note for at least twice the value of the previous notes. Continue this pattern throughout the passage. Practice groupings of 3 up to as many as 7.

For an added challenge, start your repetition with a partial group, so that the pattern begins on the second or third note of the passage. Now the gaps will be in different places.

### ***Continuous Grouping***

Take a passage containing even rhythmic values (e.g. sixteenth notes) that can be played as an ostinato (repeated without pause). You can also take a passage with uneven rhythmic values and simply play all the notes equal in length.

As you continually repeat the passage you will find that with some groupings the long note falls in different places. For instance if we apply a group of three to a 16-note passage the long note will fall on every third note. On the next repetition the long note will fall on the second note of the measure. In this way we vary the location of the long note and challenge our brain.

Wait until you try fours, fives, sevens, and eight hundred sixty-one thousand four hundred twenty-

nines! You can also use a group length that matches the natural grouping of the passage, but starting on the second or third note.

All of these exercises challenge and focus the brain; once you complete them, you will know the intricacies of every string crossing and finger twist!

### ***Pausing Before String Crossings***

Sometimes this is exactly where the issue is and everything else is fine. In this case, simply isolating the precise moment will remedy the problem.

### ***Add A Note***

This tool is powerful but underused! Play the first note, then the first two, then 1-2-3, 1-2-3-4, 1-2-3-4-5, etc. Since the repetitions are built in, count one time through as equal to 10 repetitions (for a passage of medium length).

### ***Sequences***

You can construct sequences of any number of notes and use it to transform a passage of your choice. Here is an example using a three-note sequence.

Play the first three notes, then *without pausing* play three notes starting on the second note, three starting on the third, etc. ( 1-2-3 | 2-3-4 | 3-4-5 | 4-5-6 ...).

If you really want to mix it up do sequences in different patterns. One example using a FOUR-note sequence would be playing the passage in groups of four starting on the first note then the third, then second, then fourth, etc. You are only limited by your imagination.

Start with a three note sequence if you've never done this before. It will be hard enough just to do that right now. It may even take a couple of days of practice.

### ***Right Hand Only***

Separating the hands requires considerable mental effort, since it departs from the muscle memory upon which your right hand usually relies. For bowed strings this means bowing the open strings in the appropriate pattern, without the left hand.

**NOTE:** it is as important to understand *how* to do this work, as it is *how much* you do. If you do not do that, then you should not wonder why you don't improve.

### ***Planting***

Playing staccato, quickly move the right hand finger to the next note and plant it on the string. When crossing strings, don't worry about stopping the previous string; just get the next finger on the string as quickly as possible.

This trains the fingers to return to the string as quickly as possible. For arpeggios, plant all fingers at once and "snap" them back as you play the notes.

For bowed string players, move the bow and finger rapidly to the next note, but insert a pause before playing it.

### ***Make up Rhythms***

Make up your own rhythms — whether shorter rhythms, or rhythms more than a measure long. Try all sorts of things like triplets to sixteenth notes to a double dotted rhythm.

Write down some random rhythms and try them. You can also use examples from rhythm teaching texts. Each time you have to navigate something new the brain focuses and learns.

### ***Duple in triple / Triple in duple***

With the metronome turned on, turn sixteenth notes into triplets (groupings of 3), or turn triplet rhythms (including 6/8) into four notes per beat.

### ***Groups of 4 and 8 forward and backward***

Play the first 4 notes of a passage you are trying to master forward and backward. Do this at least 2 times. Now do the same with the next four.

Next, do groups of 8 notes forward and backward. Continue through the passage in this manner.

Variation: Do the same thing, but starting with second note, third note, etc. Keep the fingering or bowing as printed, both forward and backward.

### ***Adding Accents***

Add accents deliberately to whatever passage you are trying to master. Really emphasize the accent. Do it on the odd note, the even notes, every third, fourth, or whatever note.

Try alternating every third then fourth. This is harder than you may think and really forces concentration.

### ***Opposite Right Hand Fingering (Bowling)***

For guitarists, use the opposite right-hand fingering (for example, if a passage usually starts on “i,” start instead on “m”). For bowed players, start a down-bow passage on up-bow, or vice versa.

Use this sparingly to avoid learning the new fingering / bowing better than the old one!

### ***Super Slow***

This is obvious, but rarely used. It takes great self-control to play something that you’ve got at a much higher tempo, painstakingly slowly. To stay with that for many repetitions can be mentally taxing.

This exercise allows one to put the passage “under the microscope” and magnify small details that may be overlooked in other types of practice.

### ***Position shifting***

The goal here is to systematically decrease the time between the note preceding and following a shift.

Play the isolated position shift as slowly as necessary to play each note or chord perfectly (let’s say, quarter

notes). Do not worry about having a large gap between notes; the accuracy of the shift is what matters (i.e. accurate neural representation).

After many repetitions (ideally around 25, but no fewer than 10) play the first note / chord at the same exact tempo, but play it *twice* (as eighth notes).

Again, do not worry about any gap in sound when you shift. As long as you play the rhythms correctly, use as much time as necessary to get to the next position perfectly.

Now play the first chord in triplets, then sixteenths, then quintuplets, then sextuplets. Your shifting time will gradually be reduced.

For guitarists and pianists it will become too technically difficult to play repeated fingers (such as in block chords) at the smaller note values. You may use arpeggios in the desired rhythm; the same outcome will be achieved.

### ***Visualization***

This refers to the ability to see, in your mind’s eye, away from the instrument, what your left, right, or both hands (depending on the situation) are supposed to do.

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## **RECOMMENDED READING**

These are the jumping off point for everything you need to know and research.

### ***Talent is Overrated: What Really Separates World-Class Performers from Everybody Else***

by Geoff Colvin

For my money the single best reference on the nuanced overarching idea of talent, how we wrongly perceive it, and how these implications inform teaching and learning.

Unlike some other good books on the subject, like *Outliers* by Malcolm Gladwell, Colvin describes the things that you need to do to be successful. He also points to research you can

review on your own. It is scholarly, but also it is an entertaining read.

### ***Willpower: Rediscovering the Greatest Human Strength***

by Roy F. Baumeister and John Tierney

These researchers have done some amazing work on what happens in the brain with regard to self control and how it is been trained. They also cite other relevant research and weave together a compelling take on how discipline is learned. Another scholarly entertaining read.

### ***Mindset: The New Psychology of Success***

by Carol Dweck

Professor Dweck has spent over three decades researching the psychology of learning. Things like failure and mistakes often seem to indicate a lack of ability to people unfamiliar with how learning works. You might be surprised to find what the research shows about the difference in achievement between students who are told they are talented, and students who are told they did a great job because they worked hard and applied themselves.

Take a passage you have been repping and visualize in your mind — as if you are seeing it with your eyes — what your left hand is doing.

If you need to use your music for the first stage that is fine. You will have to go very slowly in order to get every visualized movement perfect.

When you can do it from memory begin doing reps in your mind. Do at least 10. Whenever you have time do reps wherever you are.

You will notice you have to concentrate pretty hard whenever you do this. Feel the bleat! Experience shows, and the research does as well, that this type of work yields benefits.

Taking it to the next level — learn to visualize entire pieces of music. This is the most powerful way I've found to get rid of performance anxiety. If you can see in your mind's eye what is coming next before you do it while on stage it provides an almost unparalleled confidence in real time.

There are also some performers who learn entire pieces away from the instrument. Then, when they go to practice that piece, it is just a matter of a few days of minor adjustments and extra repping.

### ***Eyes Closed Practice***

Keeping your eyes closed sharpens your sense of proprioception — the brain's sense of where your limbs are oriented in space.

You may be surprised at how well you can do it the first time. Over time you may discover you play better with your eyes closed; besides sharpening your body awareness, it eliminates visual distractions (including your fingers).

### ***Three Times Ten***

In *The Little Book of Talent*, Daniel Coyle references research by Dr. Douglas Fields at the National

Institutes of Health. Namely, our brains make stronger connections when they're stimulated three times with a rest period of ten minutes between.

Work on something, do something else for ten minutes, work on it again and repeat.

### ***Interleaving***

When learning multiple pieces of music work on one, then go to another, back to the first, then to another, back to the first, etc. During your practice sessions, work on something, then go to something completely different.

Also apply interleaving to the larger practice structure. Work on something, then go to something completely different — for instance, moving from learning a piece of music to answering emails for a while — then return to the original task. Continue in this manner several times over the course of the day.

### ***Sandwich Technique***

Do something the right way, then the wrong way, then the right way again.

### ***And Yes, 100 Reps, Controlled and Accurately, as Written***

Some days it is just good to rep as written — slowly enough to be entirely accurate. It works for myelination and can be a welcome change from all of the other strategy changes.

### ***... And We're Just Getting Started***

This list is not comprehensive. Design your own strategies, ask your teacher for suggestions, and look for tips at masterclasses and workshops!

**“Today I will do what others won't so tomorrow I can accomplish what others can't.”**

**—Jerry Rice**

*Four-time Super Bowl Champion renowned for his work ethic; holds all major records for wide receivers in the history of the NFL.*

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*Thank you to Elise Winters-Huete for editing and design support, and Victor Li for suggestions and feedback.*