

# *Practice... using your brain!*

Utilising the latest in Neuroscience & Performance Psychology to turbocharge your practice, ensuring maximum benefit in minimum time.

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# Welcome!

My clients are surprised that I've written a guide on practising as we don't often discuss practice strategies in our sessions. I figured, why waste time talking about these things, if I can give them to you here for free?! I'd much prefer to spend time working on all the other *mental strategies that are essential for peak performance: like managing stress, nerves and performance anxiety, developing increased focus and concentration, increasing resilience, self-confidence and courage, learning to reliably get into your zone for peak performance, learning how to bounce back from mistakes or sub-optimal performances, or setting the right goals to lead you to success...*

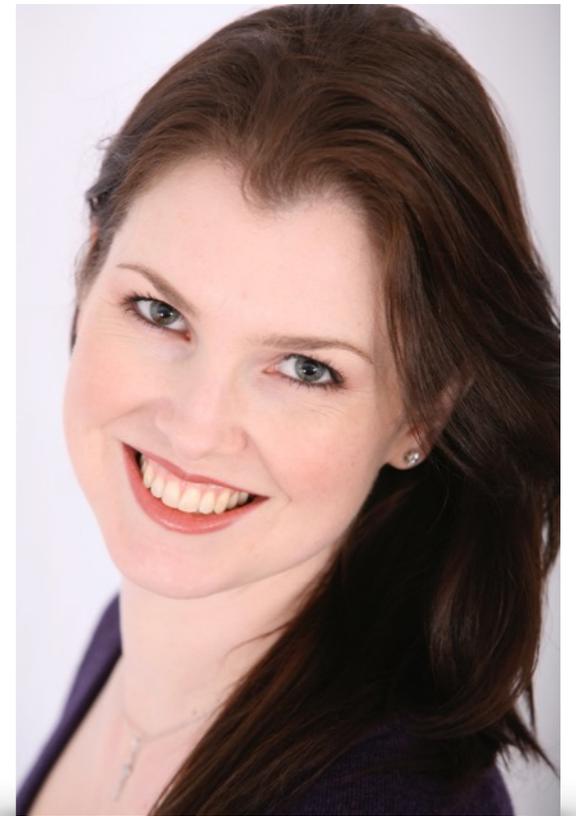
*This is my gift to you, so that we can start to tackle the harder questions together!*

You can find all my official details [here](#). I have over 15 years of experience as an Opera Singer, a degree in Psychology and I've dedicated my career to ensuring that performers are equipped with the necessary mental skills to complement their training and sustain a fulfilling, enjoyable and successful career.

**But here's what I really want you to know:**

1. The human brain is evolutionarily wired for three things that performance continuously challenges - safety, stability and social approval!
2. Managing the constant exposure, pressure, vulnerability, judgement and comparisons of a career as a performer requires a mental strength, focus, dedication and mindset *beyond the norm*.
3. When you can learn to understand your brain's powers and limitations, you can learn to manage them to your advantage. When you manage your mind instead of your mind managing you, you can perform with positive excitement without the handicaps of worry, anxiety, uncertainty or mental chatter.
4. *Most performers train their instrument, but forget to train what is really controlling their performance: their brain!*

*So let's get started!*



*Forget  
about  
'talent!'*



What sets the elite apart from the rest? Talent or Practice? Choose talent, and you can excuse your weaknesses as 'something I'm no good at'. Choose practice, and you have to accept that you are only as good as the work you put in... Take Mozart for example, was he just a natural talent? It's easy to forget that he started an intense training regime at the age of three! By his sixth birthday, he had done around 3,500 hours of practice, he had a live-in teacher (his father!) and he didn't compose his first 'masterpiece' until he was 21 - a bit of a late bloomer really!

*Talent is not innate, it is the learnt result of mindful practice.*

Neuroscience has found no evidence of **talent** in the brain, beyond the tangible differences in neural pathways built through purposeful repetition. I.e. Talent is not something you are born with, but something you develop. Take a look at my blog post ["What you need to know about your brain that will transform your performance"](#) for a full explanation of how skill really develops in our brain.

*"Excellence is an art won by training and habituation..."*

*We are what we repeatedly do.  
Excellence, then, is not an act but a habit."  
Aristotle*

# Ask 'how?' before 'how long?'



No doubt you have heard of Ericsson's 10,000 hours rule: it takes 10,000 hours to master a skill. While this may be true, just mindlessly repeating your music over and over again isn't going to cut it. **Our brains are designed to pay attention to change, not repetition.** FMRI's show us that our brain progressively shows less activation over time when presented with the same stimuli: a process known as habituation. So, what is the alternative?

**Deliberate practice** is active and mindful practice. Deliberate practice is solution focused, goal directed, problem solving practice. It's about asking 'how?' not 'how long?'. It's stretching the limits of your capacity - taking time to analyse your mistakes - what went wrong, why it went wrong and how you can fix it. It's slow and repetitive, focusing on what's not working and how to improve it rather than running through everything that already sounds great and giving yourself a pat on the back. It involves a lot of precise questions, deep concentration and sustained effort on tasks that are just beyond your current ability, whilst knowing what needs to be done to bridge the gap. **It's working smarter, not harder.**

# Push your limits



Have you ever wasted an entire practice session running through the things you are already good at because it feels satisfying, or because you know passersby can hear you? It's great to celebrate our strengths, and we wouldn't want to always be focusing on our weaknesses, but if we are always doing this, we lose valuable opportunities to push ourselves beyond our current limits, and this is where real learning occurs! If you read my blog that I mentioned earlier: ["What you need to know about your brain that will transform your performance"](#), then you know how important Myelin is for learning a new skill! But here's the catch: Myelin doesn't grow by practicing the same old exercises over and over again - it needs you to be pushing boundaries, getting out of your comfort zone and challenging yourself. *Try and spend the majority of your practice time working at that sweet spot between what you can already do and what still seems impossible*: not too far out of your reach (that's just demoralising!) but also not too comfortable! This is where real (neural!) change occurs.

*Make lots of mistakes!*



We tend to focus on our mistakes as shortcomings or failings, and yet mistakes are essential to the learning process.

*In order to create new pathways in the brain it is essential to push your limits, but how do we figure out where our limits are - we make mistakes! - By continuously striving for what is just out of reach, beyond our current limitations, falling over again and again. By firing a circuit, attending to errors, and firing over and over again, excellence is built.*

Use your mistakes as guideposts - opportunities to progress - rather than confirmation of your shortcomings.

*Interestingly, studies indicate that it is not the number of times one practices something that leads to the biggest improvement, but the way one handles mistakes. The best performers still make lots of mistakes, but they quickly attend to and correct them.*

# Pay attention



Another essential feature of deliberate practice is paying attention. Attention is essential for creating new connections in the brain; without it, we start to habituate (get bored and tune out) and no longer learn. Not only does attention help to progress the learning curve, it also makes for a much more compelling performance, and usually a more accurate portrayal, as it is difficult to be true to your intentions and the written material when you are not paying sufficient attention to notice that you have strayed from them.

*Unfortunately, focused attention is like a muscle - it fatigues with exertion, so make sure you check out the 'How long and when' tips towards the end for strategies to help you manage your attention-span efficiently.*

# Know what skill you're practising



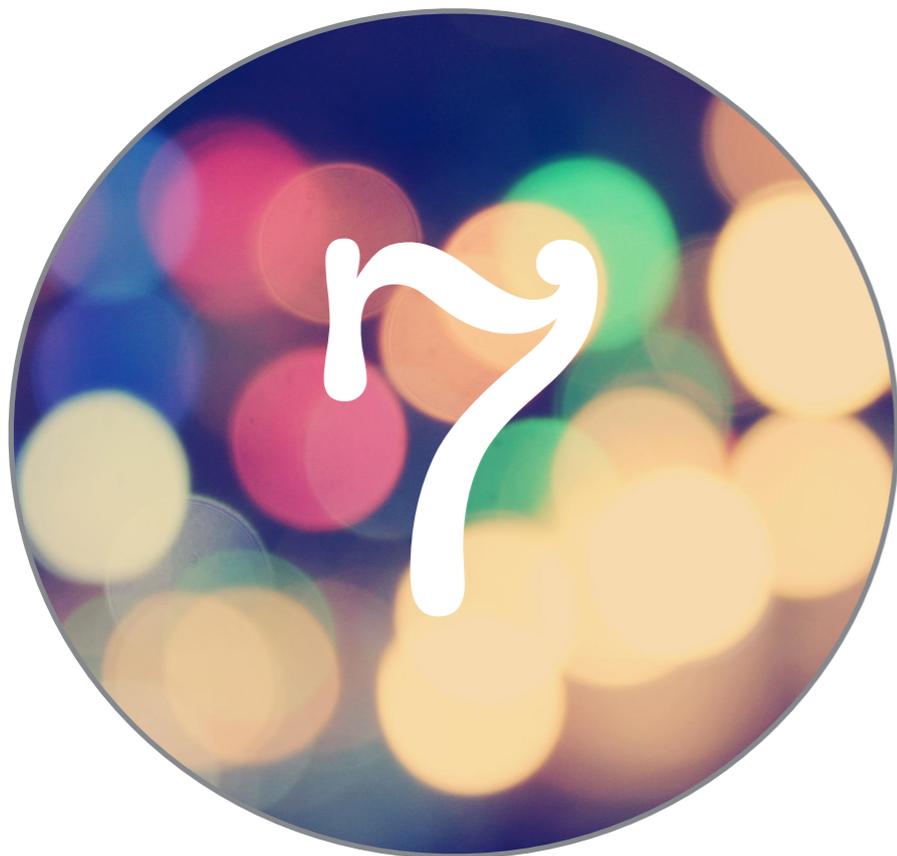
All the skills you need to know to perform well can be divided into two categories: *hard and soft skills*.

*Hard skills* refer to those skills that need to be performed as accurately and consistently as possible each time. The goal is to connect the same wires every time, so it is best to be methodical, take your time and pay attention to errors.

*Soft skills* on the other hand, have many paths to a successful result. These are skills such as interpretation of the music, reacting to an ensemble or adjusting to a conductor's baton. They are not so much about precision, but agility and flexibility. Rather than focusing on error correction, they require an inquisitive approach and the presence to react quickly, explore and be creative. To develop soft skills, practice performing and exploring inside a varied and regularly changing environment. What happens when the tempo is slower? When you can't see the baton, or hear your entry cue? What adjustments are needed when you haven't warmed up? Learn to be reactive rather than rigid and precise, because you will rarely be faced with a perfect environment!

*Both these skills utilise different areas of the brain and require different practice methods*, so before you do anything else, ask yourself, what exactly is it that you are wanting to practice at this moment in time?

# Write it down



Use a practice notebook to keep track of your goals and what you have discovered and achieved within the practice session.

It may seem overly simple or unnecessary, but there's extensive research in support of taking the time to write down your thoughts and goals. *Writing down what you want to achieve and what you have achieved helps to promote satisfaction and clarity of where you are and where you need to get to.*

Decide in advance what you would like to focus on in the session. *What will give you the greatest return on your investment?* When you know exactly how you want a particular phrase to sound, or what you'd like to highlight, you are more likely to get into the zone, *and* you're more likely to be firing those neurons as you will be paying attention to exactly what you are wanting to achieve.

# Slow it down



It's all fine and dandy to say you are going to pay attention to your mistakes, but how?

The trick is to slow it down - right before the spot with the mistake - giving you the time to process what is required, and start playing those notes correctly sooner, rather than continuing to play them incorrectly and automating the error (and building Myelin where you don't want it).

Slowing down is like using a magnifying glass: it gives you sufficient time to hear and feel where things go wrong and figure out what you need to do to fix them, instead of repeating the same mistakes over and over again.

*"I hear and I forget; I see and I  
remember; I do and I understand."  
Confucius*

# Experiment

When a scientist begins a study they have a problem that they'd like to solve but don't know for sure what the outcome will be. They gather evidence, then develop a hypothesis to test.

## **Treat your practice like an experiment...**

Next time a phrase or note doesn't seem quite right, define the problem first:

How would you like it to sound?

What is the gap between this and where you are right now?

Consider what the potential solutions to this problem are, then try them out to see which one works best. Once you have determined the most useful solution, you can try it out for a while, and see if it continues to get the results you desire!

This is a much more useful strategy than simply going over the same phrase time and time again wondering why it isn't getting better!



# Break it down



When there is a lot to be learnt, it can be really overwhelming, and hard to know where to start - the temptation is to just run through the entire piece in one go, but this is not the way our brains learn best.

**Chunking** is a retrieval method used, for example, when learning a telephone number, swinging a tennis racket or memorise a sentence. Rather than having to memorise every note, number, word or muscle movement separately, we can 'chunk' them together. For example, 0403-934-030 is much easier to remember than 0403934030! Fortunately we can also use this strategy when learning music...

Break your music down into small chunks, and look to master each one, then start to join them together into larger chunks. Set a daily task to hone one more chunk; in this way the task is always within your reach, and the overwhelming nature of having so much learning to do is thwarted.

*Word to the wise: once you have mastered your 'chunk' - don't attempt to break it down again when performing - this will only lead to paralysis-by-analysis - check out ["What riding a bike and peak performance have in common"](#) to understand why!*

# Mix it up



In order to counteract the urge to habituate, it is necessary to mix things up a bit. We all like to think that we learn in a continuous, linear manner over time, but the reality is that we tend to learn in short bursts, followed by apparent plateaus, where nothing seems to be improving and you think you either don't have what it takes, or you are getting it all wrong!

Plateaus occur when you're no longer pushing your limits; when you are just cruising along in your comfort zone.

Fortunately, studies show that learning continues even during these plateaus, but one of the best methods to get off a plateau is to mix it up a bit, change your practice so that your brain has to switch on again and actively engage, instead of running on autopilot.

*"Do not wait to strike till the iron is hot; but make it hot by striking."  
William B. Sprague*

# Block vs. Random practice



There are two common and distinctly different methods of practice: Blocked practice, where all repetitions of one skill or excerpt are completed before moving on to the next, or Random practice, where each of the skills requiring practice are interleaved with each other, effectively AABBBCC (Blocked) vs. ABCBCA (Random).

Whilst Blocked practice has been proven effective within a rehearsal (ie. improved performance in the moment), *random practice shows consistently more improvement in subsequent days, better overall retention, and is a better representation of real life, or performance efficacy.*

So instead of working on the same bit over and over again, choose a few smaller passages, and swap from one to another every few minutes. In this way, the brain is more active (won't habituate!) and greater learning occurs.

# How long and when?



One or two hours of mindful practice takes great concentration and uses a lot of energy, but it is far more effective than four hours of mindless practice. If you are fatigued, and no longer able to concentrate, then you can guarantee you won't be learning anything new, so, whilst length of time is not the be all and end all, there are some useful guidelines to consider:

Note the times of day when you have the most energy and schedule your practice for this time.

Challenge yourself to complete your practice in a set time frame. Having extra time to practice doesn't necessarily mean you get more done, you usually just take longer to do the same amount of work!

Most studies suggest that benefits of practice tend to decline after 2 hours and anything over 4 hours is of little additional benefit. Also, a short daily practice is better than a larger session every few days, as the brain grows incrementally.

Studies indicate that having periods of rest and incubation between practice sessions (and between repetitions within the practice session) leads to more fruitful practice. It is best to practice in short intervals (no more than 45mins) with breaks in between. Try three repetitions followed by 10 minutes rest. This method was discovered to create the strongest connections in the brain.

*Make it  
fun!*



And finally, *our brains do their best learning when we are feeling motivated* - and you will always be more motivated to have fun than to be bored! So, rather than doing boring drills, make up little games so you can play and challenge yourself in a fun way! How many times can you get it right before you make a mistake? Make a bet with yourself, be silly, try new ideas, challenge the status quo, create your own unique mark on the piece and bring the music to life.

*"Enthusiasm is the mother of effort,  
and without it nothing great was ever  
achieved."*

*Ralph Waldo Emerson*

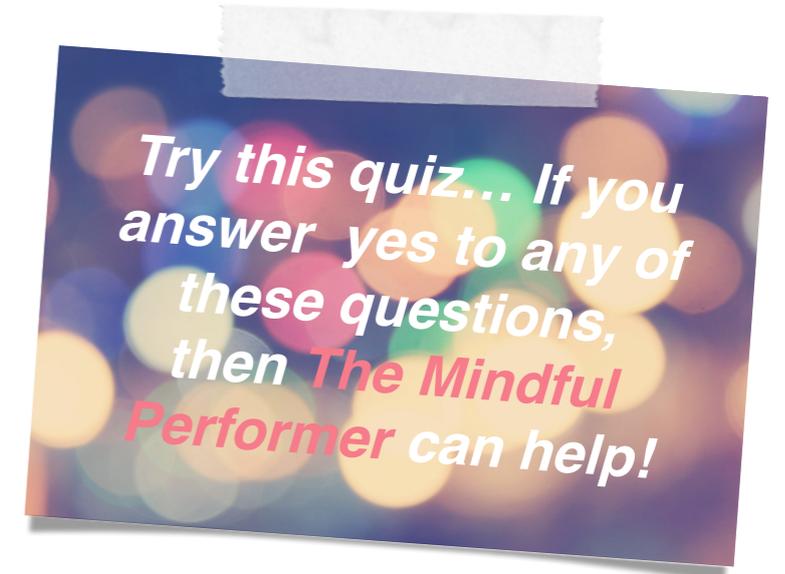


# Practice Checklist

- ✓ Forget about 'talent'!
- ✓ Ask 'how?' before 'how long?'
- ✓ Push your limits
- ✓ Make lots of mistakes
- ✓ Pay attention
- ✓ Know what skills you're practising
- ✓ Write it down
- ✓ Slow it down
- ✓ Experiment
- ✓ Break it down
- ✓ Mix it up
- ✓ Block vs. random practice
- ✓ How long and when?
- ✓ Make it fun!

# Is performance coaching for you?

- I struggle with low self confidence.
- I find it hard to trust my skills under pressure.
- I am scared I will fail and this affects my performing.
- I lack clarity on my goals and how to achieve them.
- I find it hard to focus and concentrate when performing.
- I perform better in practice than in performances or competitions.
- I am usually disappointed in my performance and would love to improve.
- I fixate on my mistakes and technique before, during and after performing.
- I have a very strong physical reaction to nerves that I don't know how to manage.
- I am usually very nervous, worried and negative before during or after performing.
- I am often preoccupied by what others think of my performance, and don't want to let anyone down.
- I want to be the best performer I can be, but I realise all these things are making it too hard to perform.



I hope you enjoyed reading this practice guide and are excited to put these techniques to good use!

I'd love to hear your thoughts: what you liked, didn't like and any other topics you would like covered in future editions.

Feel free to email me: [amy@themindfulperformer.com.au](mailto:amy@themindfulperformer.com.au)

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