

GOLF PRACTICE

HOW TO PRACTICE
GOLF & TAKE
YOUR RANGE
GAME TO THE
COURSE

VSPACING
VARIABILITY
CHALLENGE



GAMELIKETRAINING

How to practice golf & Take Your Range Game to The Course.

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Thanks to Dr Tim Lee, Dr Anders Ericsson and Len Hill PHD for their inspiration and guidance on the science of learning and human performance

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Welcome to the GLT Tribe

Simply by holding this book in your hands, you have joined an adventure that began in 2010 at Cookridge Hall golf club in Leeds, England. Based on their formal education and observations of how golf was being coached, Iain Highfield and Matthew Cooke embarked on a mission to help educate and inspire the golfing world to do two pretty important things. **Think Differently** and **Train Differently**.

As you read this book, a ridiculous amount of fellow golfers all over the world are engaging in **sum zero training** (which is basically training that doesn't actually help anyone learn to play better golf). And, those same golfers are also probably pondering the oldest (and, weirdly, most easily answerable) question in golf:

‘Why, why, why, why, why (etc.)
can't I take my range game to the golf course?’

The answer to this question (admittedly one that the **Game Like Training** team has spent a decade trying to solve) is a framework that helps coaches and players think and practice in a way that will lead to the **retention and transfer** of golfing skill.

We've accumulated thousands of hours coaching golf at all levels, studying sports psychology, the learning sciences and – most importantly – spending time with some of the greatest minds in, not only professional golf, but also many other fields of human performance. And what that has given us (apart from significantly less hair than we used to) is a distillation of this vast bank of knowledge that makes it practical (and digestible) for you to become a better golfer where, and when, it matters most.

‘Rather than reasoning by analogy you boil things down to the most fundamental truths you can imagine, and you reason up from there. This will help you figure out if something really makes sense.’ Elon Musk

Following in the footsteps of old Musky, our decade of investigating, learning and investigating some more has led us to our fundamental golfing truth:

‘learning happens via **cognitive stress’**

So, again with a little inspiration from the Musketeer, we “reasoned up from this truth. In other words, we asked what actually creates that fundamental state of cognitive stress. The answer...

spacing, variability and challenge

The spacing effect

To forget is to remember.

Now, even though this may seem like the kind of empty, pseudo-zen nonsense you'll see written over pictures of sunsets – it's a central pillar of human learning.

By incorporating the spacing effect to your training, you are effectively increasing the time you take between each rep.

This creates cognitive stress as your brain – or more specifically, your working memory – is challenged to recall previous successful reps (more so than if there is little or no time between shots). So, rather than simply machine-gunning balls down the range, you are actively teaching your brain to induce a deeper degree of learning,

A very basic example of this could be instead of hitting the same shot 20 times in a row as fast as you can, limiting yourself to hitting 1 ball a minute for 20 minutes – which, admittedly, may sound like a nightmare to range ragers.

The variability effect

Some significant neurobiological research from Stanford University has provided a bit of bad news for the way most people practice golf - namely, the evidence that suggests our brains crave variety.

In other, more golfy, terms – learning through repetition is, in most scenarios, ineffective.

Instead, constantly changing the nature and application of tasks is vital for successfully learning and mastering any new movement – such as a golf swing – as this conscious variance is far better when it comes to engaging memory recall and creating cognitive stress.

So, rather than hitting 20 balls with the same club to the same target, the variability effect demands that you mix things up – changing your club and target regularly and repeatedly.

The optimal challenge point

Increasing the spacing and variability in your practice will in turn increase the challenge point it presents. So, the more space and variability your training contains the higher the challenge point – and the more purposeful and rewarding that practice session has become.

Setting outcome goals is another way to elevate your own challenge point – with more complex and testing self-targeting representing a higher challenge point.

If we combine some of the scenarios from our spacing and variability effects, and embellish it with outcome goals we have already created the conditions of cognitive stress.

So, for example...

If we hit 20 balls in 20 minutes

AND we change our club and our target every two balls

AND we award ourselves with a point every time the ball is struck from the center of the club face

AND if we set ourselves a target to achieve 14 points within those 20 balls

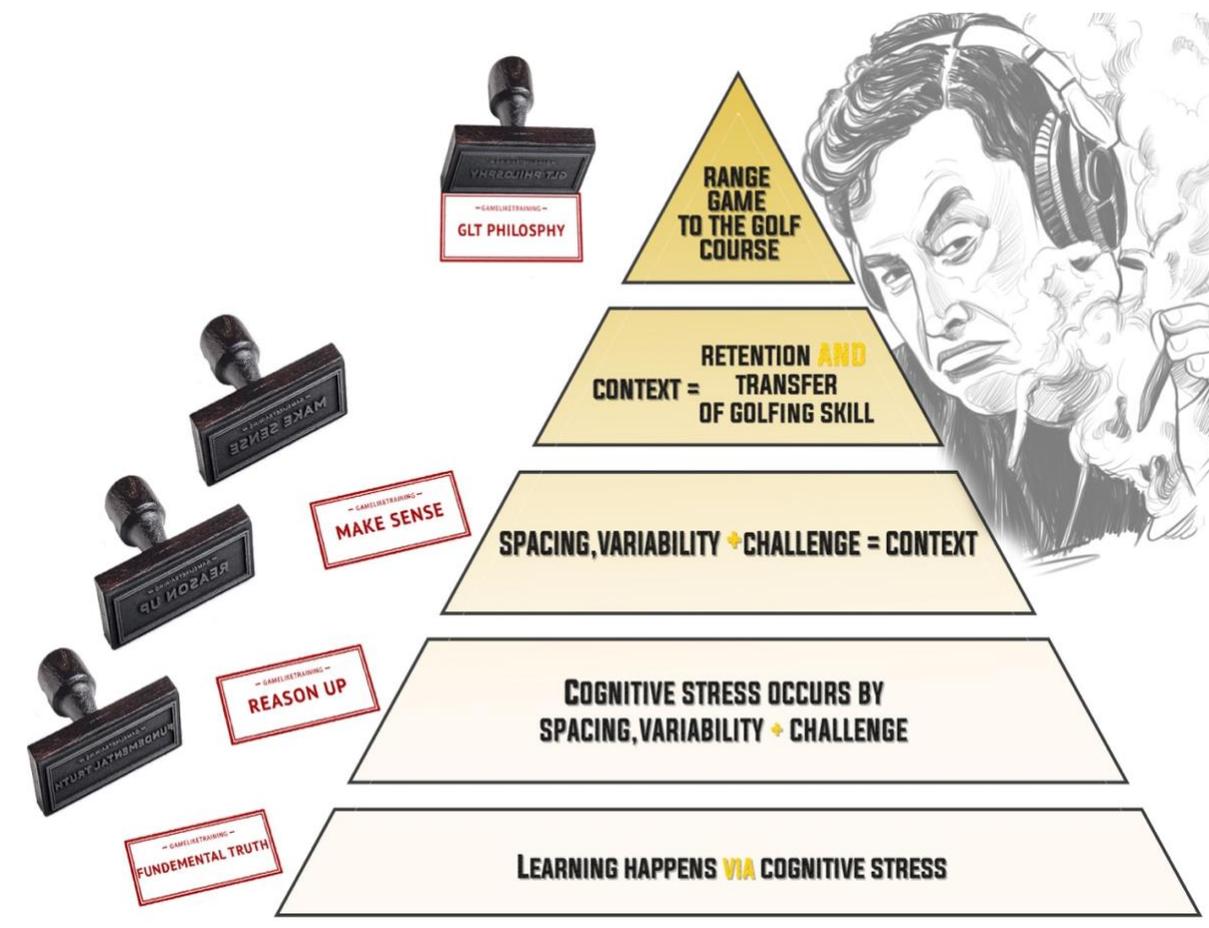
THEN we are in the state of cognitive stress and therefore, a state of learning

Make sense?

The next stage in the Elon Musk method is to recognize if the fundamental truth we are exploring makes sense.

For us, it absolutely did largely because it creates what is known in the learning sciences as **context**.

And if you want to retain and transfer golfing skill (something that most golfers fail to do hence the *'I can't take my range game to the course'* complaint) then you need context to build the mental representations that help you adapt to the most demanding golfing environments.



Who are we talking to

If you are a club golfer who wants to lower your handicap, a junior golfer that wants to gain representative honors, a mini tour player that wants to step up a league or even if you are already at the elite level but are striving for more... this book will help you.

Our aim is pretty simple. In fact, we only really want to show you two things...

What

type of interaction has to happen between the brain, body and the environment for golfers to acquire new skills.

And (probably more importantly)

How

you can practice at home, on the range or the course in a way that will bring you closer to achieving your golfing goals.

And, in return, we only need you to do one thing (although, we do need you to do it quite a bit): **practice.**

What we talk about when we talk about practice

We believe the only kind of practice that actually deserves to be called practice is **deliberate practice**.

In golf this can only really be measured in the amount of **game-like** repetitions a player performs during practice. (Spoiler alert, that's why we called our company **Game Like Training**.)

So, with deliberate, game-like practice in our hearts and on our business cards, you won't be surprised to hear that the aim for this book is to a.) help you practice more effectively but also b.) help you walk away from the habits and dogma that holds players back from improving their game.

We won't lie, this book is a little sciency – but only in the sense that we have taken all the most relevant contemporary research and theories and applied them to every kind of golfer, playing at every level under every type of professional or personal restrictions.

In other words, whether you're able to practice 2 hours a week or 40 hours a week we have structured this book in a way that it can be adapted to your lifestyle and ability level.

There is value in these pages, and the path to a better game, for anyone who is willing to practice and (more importantly) willing to step outside their comfort zone and practice golf the GLT way.

So, every time we tell you about a training strategy that can induce deeper learning, we will also give you specific, practical training tasks with different levels depending on your own ability and experience.

Now's the time to say goodbye to the comfort zone and see how the GLT team can help you train differently and think about your game in a way you never have before.

GLT x

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Training to Learn

When a golfer turns up to practice they should ask themselves one vital question:

‘Am I training to learn or am I training to perform?’

For the purpose of this book we will class **training to learn** as stimulating the connections in the brain that help you learn to move the club in a desired motion. Scientists may call this synaptogenesis.

Training to perform, in these pages at least, is about finding ways to adapt to the environmental demands and psychological stresses of the golf course and competition. Performance experts would suggest players who can do this can access a state of ‘flow’.

So, as we embark on a mission to enhance your ability to learn golfing movements and flow in competition, let’s start by trampling over one of golf’s many unhelpful training myths.

Myth...

“Repetition leads to better swings and better scores”.

If this news has unsettled you (we know plenty of golfers and coaches who would sooner burn their bag than listen to this sort of heresy) let’s think about it in another way.

Imagine being in school and the teacher asking you the following sequence of questions, **5+5=? and 5+5=? and 5+5=? and 5+5=? and 5+5=? and 5+5=?** Even as a child you would suspect this type of math test will not lead to learning.

We’ve already touched on the limitations of mere repetition – namely the absence of spacing, variability, challenge and, of course, cognitive stress.

Simply put, it’s too easy, yet this is precisely what many golfers are habitually, even ritually, doing as ‘practice’.

Blocked practice

Blocked practice is basically when you repeat the same task over and over in the same manner, under the same stresses and conditions.

It can actually be a really useful tool for beginners, as they learn the unfamiliar movements and interactions of posture, grip and even just getting a golf ball into the air.

But as soon as you are hoping to learn and develop anything approaching an advanced skill, blocked practice is actually a barrier to that learning.

The GLT definition of a truly learned golf skill is this: *“Golfing skill can only be classed as learnt when it is retained over time and transferred into multiple environments.”*



Skills acquired through blocked practice are not typically retained for any significant period of time and rarely transfer easily.

So, for a player to 'learn' golfing skill in line with the GLT definition, those skills need to be developed through practice structured in what's called an **interleaved** manner.

Interleaved practice

While blocked practice involves only one task being completed thoroughly before moving to another, interleaving is a process where students mix, or interleave, multiple tasks while they practice in order to improve their learning.

It's designed to challenge golfers to access and complete **motor processes**, the commands by which humans use their brain to activate and coordinate the muscles and limbs involved in the performance of a **motor** skill, such as a golf swing.

So, by stopping you from simply repeating the same task for a short-term performance gain, interleaved practice creates a cognitive and physical relationship with what you are practicing.

To better illustrate its effect, think back again to school and cramming for an exam. How many of those last-minute facts about Thomas Jefferson or cumulus clouds can you recall now?

Unless you're currently a golfing historian or meteorologist, we'd imagine not a lot, probably because the way you attempted to develop that retention was too blocked, and therefore not robust enough to last.

By forcing golfers to self-diagnose and complete motor processes, interleaved practice makes us our own best coach, as solutions to the total problem of hitting a golf shot are self-discovered.

Through interleaved practice, players not only retain what they learn much longer, they increase the chance of those learnings to transfer onto the golf course.

<https://www.gltgolfstore.com/p/golf-books/glt-gp001.html> - To purchase your copy of this book and learn how to take your range game to the course click the link.