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SECTION 1

The Agile Learner

Change and the 21st-Century Learner

You don't have to go far today before someone starts talking to you about the need to prepare our children for the future. Children in our schools will change not only jobs, but careers, multiple times. They will be using technologies that haven't been invented to solve problems that don't yet exist.

Exactly what that future will look like is anyone's guess. Predicting the future is notoriously difficult, and all we can really be sure of is that the world is changing more rapidly now than at any other time in the past. The world is becoming more complex, more uncertain and more changeable than it has ever been before.

In the business world, people talk about these changes as “disruptions”: problems that interrupt the current way of working. Today, it's business as usual: systems are in place, people know their roles and all is going well. But then something happens: a new technology emerges, a start-up company doesn't play by “the rules”, the political climate changes. Put simply, something occurs that was not expected and, as a result, the business becomes unstable and must either adapt or perish.

In response to these disruptions, many businesses have adopted “agile systems”: systems that are responsive and flexible, so that the business can respond to disruptions as they arise. The hope is that if the business is agile enough, it can respond quickly enough to take advantage of opportunities, deal with threats and, ultimately, become more successful. Basically, businesses are trying to ensure that they are increasingly responsive and adaptable in what has become an increasingly changing and challenging environment.

Of course, as educators, it is our job to prepare our young people for this world – a world of change and disruption – and we have been grappling with this challenge for some time. We are aware of the need to develop “21st-century learners”, and we know that it is no longer enough to teach children what they need to know for life in a predictable world.

So, preparing students for a world of change and disruption means we must teach them what to do when they don't know what to do.

In response to this, there has been a shift away from teaching the “hard facts” to teaching the “soft skills”. Rather than teaching children what to think, we have been asked to teach students *how* to think. This is not at the expense of content. Rather, we use the content in ways that provide opportunities to help students become better thinkers. The theory is that if we can teach students to be better thinkers, they will be able to respond to challenges and thrive in the 21st century.

There have been many attempts to identify which skills an “effective thinker” possesses. In terms of teaching creativity, Edward de Bono has done great work. The Visible Thinking learning routines from Harvard University likewise provide a set of specific skills that are very useful. David Hyerle and others have produced graphic organisers to help structure student thinking. And there have been many more skills, tools and strategies described that aim to help students become better thinkers.

In my view, the strongest and most complete description of the thinking necessary to succeed in the 21st century is Art Costa and Bena Kallick's Habits of Mind (2008). These sixteen Habits of Mind are the dispositions Costa and Kallick identified as being skilfully and mindfully employed by characteristically successful people when they encounter challenges or disruptions. They are the way successful people

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behave when the solution to a problem is not immediately apparent. The Habits of Mind capture many of the thinking skills described above, but take them beyond discrete tools to wider-ranging behaviours and dispositions.

However, in my opinion our attempts to teach students “thinking skills” have not been as successful as we had hoped they might be. It is not that these skills aren’t necessary – they are. Nor is it that they have been poorly defined. It is simply that being a skilful thinker, although essential, isn’t enough to thrive in the 21st century. Also, even though we tried to teach these thinking skills, many students weren’t becoming the skilful thinkers we had hoped they would become simply by being taught thinking skills.

An important insight into this problem was provided by Professor Carol Dweck, through her work on Mindsets. In an elegant experiment, Dweck (2006) showed that teaching “study skills” to students had the greatest impact *after* they were first taught about the brain’s plasticity. Teaching students how their brain changed in response to learning contributed to the development of a Growth Mindset – an understanding that you can change your most basic characteristics including your talents, intelligence and abilities.

Part of the reason why the thinking skills movement failed to live up to expectations was because we hadn’t first considered the importance of developing a Growth Mindset in our students.

Some students simply weren’t getting as much out of our efforts to teach them thinking skills because they had a relatively fixed view of their intelligence and abilities.

Had the importance of Dweck's work come to light before Costa and Kallick published their Habits of Mind, we may well be in a different situation than we are today. But that is not the case, and so we must move forward understanding that developing a Growth Mindset is fundamental to any attempt to teach students to be better thinkers.

Combining a Growth Mindset with the Habits of Mind is a potent combination. Dweck's work highlights the importance of understanding that we are *capable* of developing our most basic characteristics such as our intelligence. Costa and Kallick describe the behaviours and dispositions students must develop in order to actually achieve this more intelligent behaviour. As students apply their Greatness Gap to the Habits of Mind they learn how to behave more intelligently. This results in the development of Learning Power – a capacity to succeed at increasingly difficult tasks.

If the 21st century was simply throwing up more difficult problems for the next generation to solve, developing Learning Power might be enough, but it's not that straightforward. The issue for the next generation is not simply that the problems they face are more difficult, it is that they are occurring in an unpredictable, changing and often volatile environment. We don't just need people who can solve more difficult problems; we need learners who can respond to new, novel problems in a disruptive world. We don't just need powerful thinkers, we need agile ones.

This is where the critical work of Anders Ericsson (1996) comes into play. Ericsson is a world leader in the field of Acquisition of Excellence, and has spent his career describing the process by which peak performers acquire and develop their talents. In short, Ericsson describes the best way to *practice* to increase talents and abilities.

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In his most recent book, *Peak: Secrets from the New Science of Expertise* (Houghton Mifflin Harcourt, 2016), Ericsson documents several decades worth of research that captures the essence of the process required to respond effectively when encountering a disruption or challenge. Drawing on wider-ranging studies from doctors to fighter pilots, chess players to classical violin players, he demonstrates the common type of practice top performers engage in as they increase their talents and abilities. This sort of practice involves extending yourself just beyond your “Comfort Zone” into your “Learning Zone”. Perhaps most importantly, as we will explore later in this book, this sort of practice results in building new abilities by changing the way your brain is wired.

Ericsson describes this practice as Deliberate or Purposeful Practice. This does not mean we are deliberately practicing – although we are. It means we are deliberately, or purposefully, practicing in a way that is specifically designed to extend our abilities. Unfortunately, many people do not practice this way, and as a result do not extend their abilities. Throughout this book, I refer to Deliberate and Purposeful Practice together as Virtuous Practice, as they have the virtue of leading to further growth.

The most successful people in the 21st century will be those who are the most responsive: the ones who can adapt in the face of disruption. These people will be able to constantly build new skills and abilities in the face of change.

That is what this book is about: how we, as educators, develop in our students the capacity to become *increasingly effective learners* in a world that is consistently disrupted. For success in the 21st century, we can't just build agile workplaces, we must build Agile Learners.

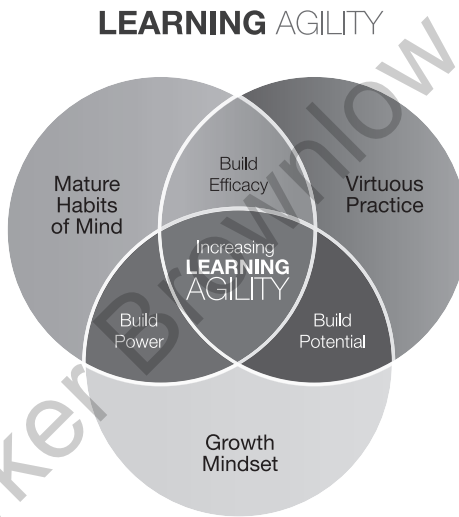
The Agile Learner

To develop Agile Learners, we need to bring together the three powerful and complementary understandings that I have introduced above:

1. Professor Carol Dweck's work on Growth Mindset.
2. Professor Art Costa and Dr Bena Kallick's work on the Habits of Mind.
3. Professor Anders Ericsson's work on practice.

The Agile Learner

Graphically, our concept of Learning Agility looks like this:



None of the three elements on their own is enough. It is not until we combine Mindset with Habits of Mind and Practice that we develop the Agile Learner.

The Agile Learner is someone who recognises that they live in an unpredictable, changeable and disruptive world. The Agile Learner understands that because of this, they can't and don't currently have

the capacity to solve every problem they are likely to encounter. Their education has neither equipped them with all the answers, nor the full set of skills they need in order to thrive in the 21st century.

However, the Agile Learner understands that they are capable of changing themselves. They understand that they can develop their Habits of Mind and learn to behave more intelligently. This allows them to engage more effectively in Virtuous Practice and, in doing so, successfully address increasingly difficult problems.

The remainder of this book will unpack what it means to develop Agile Learners, but before we do this, we need to explore one of the experiences many people have when trying to learn something new: the Performance Plateau.

The Performance Plateau

For many people, learning looks like this: they start learning something new and find that progress initially comes easily. New things aren't always hard. We find the right entry point, and our standards improve quickly.

Take, for example, my own experience learning to play golf. I had seen the game played often enough, so I had a vague idea of what was required. I had also played other sports, so I wasn't entirely uncoordinated. I then got a few pointers from friends and went out to play a game of golf. It wasn't a great game, but I managed to hit the ball most of the time.

Occasionally I hit it straight-ish and, when I eventually got to the green, I could tap it around until it fell into the hole. In an effort to improve, I started playing more. I got a few professional lessons, and eliminated the worst of my errors. I improved, for a while. Then the rate of improvement started to decline. I kept playing. I kept doing what I

called practice, but I didn't see much improvement. I eventually got to the point where I could accurately tell you how many strokes it was going to take for me to get around the course, give or take a few, but couldn't seem to reduce that number. I'd reached my Performance Plateau.

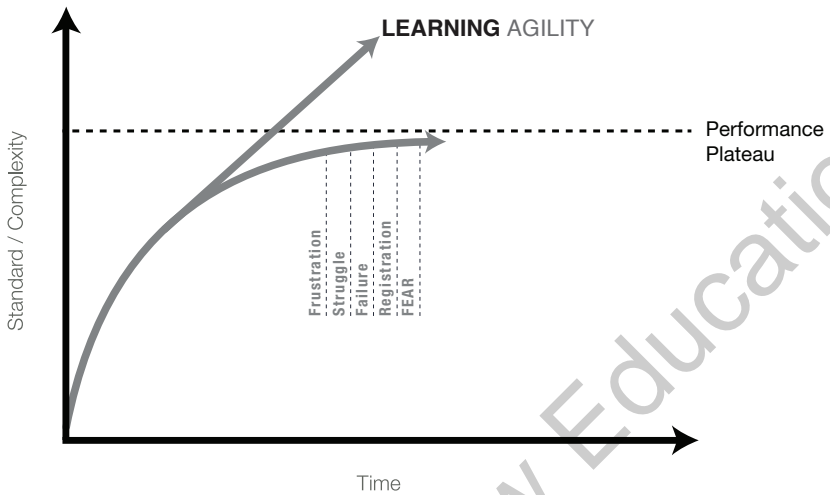
For many people, the Performance Plateau marks the limit of their abilities; the point at which they have discovered how good they are at something. In terms of golf, something I'm not interested in getting much better at, that's not a problem. I don't play golf to be good at it, I play it to spend an afternoon with mates. It's the 19th hole that's my favourite.

But what if you do want to get better at something? What if you hit the Performance Plateau and can't get any better at something that's important to you? What if it was your job? What if you wanted to solve a problem in your relationship? The Performance Plateau becomes a real problem.

Consider the emotional response to the Performance Plateau for something you want or need to get better at. The early progress is fine, but when things slow down we experience a cascade of emotions. We might feel frustration, as something that was initially easy becomes hard. We struggle as we try to progress and see little result, despite increasing the time and energy we put into the task. Eventually, we experience feelings of failure, then the resignation that this just isn't "us". It's not something we can do, not something we're cut out for.

If we are then placed in a situation where we are asked to do this thing we've found difficult, this thing we "know" we can't do, our feelings might turn to fear. Fear of being put in a position where we know we'll fail. Fear of having our limitations laid bare for the world to see. As a result, we avoid these situations.

THE NEGATIVE EMOTIONAL CASCADE OF THE PERFORMANCE PLATEAU



When we experience the Performance Plateau frequently enough, we come to believe that it is the reality of our life. That there are limits to our abilities.

Those limits might be higher in some areas than others, but there is always a limit. More importantly, people have different limits. Some people appear to have their learning plateau set higher than others. What I might find hard, another person finds easy.

Someone with Learning Agility doesn't experience the Performance Plateau. They understand that while the early phase of learning something new might be easy, eventually progress will become difficult. At that point, they must then develop the abilities and engage in the process that will allow them to grow and succeed. Any limit they encounter is temporary.