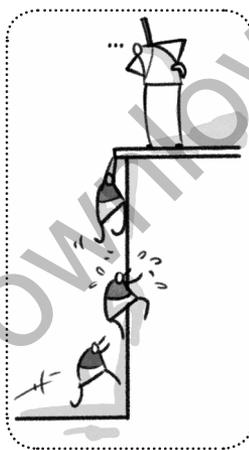


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Introduction

One Easter, Shaun and his wife, Lianne, were clearing out their loft when they happened upon Lianne's dog-eared school books hidden away in a dark corner. They were from her fourth year (Year 10) chemistry lessons when she was taught by Mr Clarke, a teacher she remembers vividly to this day. They started to flick through. Her books were full of detailed, well-presented notes. Even thirty years later, Mr Clarke's teaching approach shone brightly from those dusty pages.



Chemistry was hugely challenging in Mr Clarke's lessons. In her second year, Lianne was learning about valency; in her fourth year, empirical formulae. As one of his students, it was your duty to raise your standards to meet his demands – he would never come down to meet you. Woe betide anybody whose efforts did not make the grade; Mr Clarke might publish your name on his infamous “dirty dozen list”! You were always expected to respond to Mr Clarke's marking. He would write “corrections” and you would be expected to repeat your incorrect answers until they were right. Mr Clarke did not worry about whether the work was intrinsically interesting. He cared that you learnt what you needed to know. Every

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student in Lianne’s chemistry class achieved a grade C or above. And it was a mixed-ability group too.

Did Mr Clarke’s lessons engage and motivate his students? You bet they did. He regularly won the school’s “teacher of the year” award and is still a local hero in Porthcawl, South Wales, despite having retired some years ago. Lianne is now a successful science teacher.

As a profession we have become confused. After many years of educational research, nobody can put a definitive finger on what successful classroom practice really looks like. Yet teachers across centuries and millennia seemed to have managed perfectly well. Mr Clarke certainly did. Of course, successful teaching is more than a case of simply mimicking those we admire. We have to find something that works for us individually – in our classrooms, in our schools. But might it be that in recent years the profession has so overcomplicated definitions of “good practice” that it has blinded itself from some simple truths?

The Office for Standards in Education, Children’s Services and Skills (Ofsted), who in the past have favoured and prescribed a preferred style of teaching, last year stepped back from grading individual lessons – instead letting schools define how successful teaching should look for themselves. In classrooms up and down Britain, teachers now have more freedom than they have had for a decade to develop and hone strategies that suit their preferred teaching style and the needs of their students. This is a welcome but daunting change. It also poses a question. If we are to make every lesson count, what simple and manageable actions have the greatest impact on learning?

We should categorically state from the outset that we do not believe in silver bullets. This book does not pretend to gift you with solid answers to every dilemma you will face. Instead, we offer a coherent ethos and six evidence-informed pedagogical principles that cut to the core of successful teaching: challenge, explanation, modelling, practice, feedback and questioning. We hope that the ideas we share will

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be useful to new and experienced teachers alike, as you look to further your understanding of how a rich climate for learning can be forged from the small details of practice.

Two values provide the bedrock for everything that follows in this book: *excellence* and *growth*. After reading Massachusetts middle-school teacher Ron Berger's wonderful book, *An Ethic of Excellence*,¹ we realised that in our headlong pursuit of fashionable pedagogical ideas – such as pace, rapid progress and independent learning – we had long neglected an eternal truth. That it is our fundamental responsibility to give children the chance to be excellent. Berger writes about how he immerses students in high standard exemplar work and models, allows them to redraft their work multiple times and builds up a culture of collegiate pride. The result is a culture of craftsmanship. All children, Berger argues, are apprentice craftsmen. They should be encouraged to hone and refine their work with pride and diligence until it reaches excellence.

But excellence is hard to come by. To achieve it, a child must work hard and be prepared to face the setbacks they will inevitably meet on the journey. This is where Stanford University psychologist Carol Dweck's ideas about mindset take centre stage. Dweck has found that human beings fall roughly into one of two broad categories: those who adopt a *fixed mindset* and those who adopt a *growth mindset*. Those who think in a fixed way believe that their ability is innate and cannot be changed: I was born clever – or stupid – and that way I will remain. But those alive to the possibility of growth will attribute success or failure not to an unchangeable lack of ability, but to whether they have worked hard or not. Put simply, if a child fails an exam there are two possible attributions they might make: place the blame on their natural ability and see no need to increase their effort next time around, or seek to learn from their mistakes with the aim to do better next time.

¹ Ron Berger, *An Ethic of Excellence: Building a Culture of Craftsmanship with Students* (Portsmouth, NH: Heinemann, 2003).

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Of course, it is the growth mindset that we must seek to encourage. Teachers and children need to realise, in Dweck's words, that "working harder makes you smarter" and that it is old-fashioned effort that unlocks improvement, not a gift granted at birth. Dweck's research demonstrates that through the language we use with young people, adults can have a huge influence on the mindset a child adopts. How we frame success and failure, and the way we promote "struggle" as a positive state, are hugely important. Viewed from another angle, Dweck's findings point at another principle behind this book: exemplary teachers are not born great, they *become* great.

Underpinning this book, then, are the notions gleaned from Dweck and Berger that expert teachers must be uncompromising in their quest to foster pride and hard work. Nevertheless, excellence and growth are soulless, vacuous aims without good teaching to bolster them. It means very little to ask a child to adopt this philosophy if we have not furnished them with the tools that make it possible. Indeed, Muijs and Reynolds conclude that research tends to show that "the effect of achievement on self-concept is stronger than the effect of self-concept on achievement".² In other words, teach students well and they will achieve; and if they achieve, they will begin to see themselves as successful learners. A school ethos of excellence and growth, then, can only truly be created through great teaching that leads to genuine learning.

An extensive report from the Sutton Trust entitled *What Makes Great Teaching?* argues that research evidence proves that many popular teaching practices are ineffective in improving student attainment.³ The authors name the following strategies as being myths that have little impact on

² Daniel Muijs and David Reynolds, *Effective Teaching: Evidence and Practice*, 3rd edn (London: Sage, 2011), p. 188.

³ Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major, *What Makes Great Teaching? Review of the Underpinning Research* (London: Sutton Trust, 2014). Available at: <http://www.suttontrust.com/wp-content/uploads/2014/10/What-makes-great-teaching-FINAL-4.11.14.pdf>.

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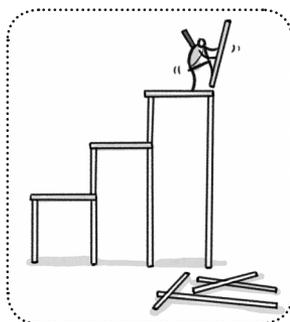
learning: lavishing low achieving students with praise; encouraging students to discover ideas for themselves; grouping by ability; rereading as a revision tool; attempting to improve motivation before teaching content; teaching to “learning style”; and the idea that active learning helps you remember.

But the two factors linked with the strongest student outcomes are:

- ◆ **Content knowledge.** Teachers with strong knowledge and understanding of their subject make a greater impact on students’ learning. It is also important for teachers to understand how students think about content and be able to identify common misconceptions on a topic.



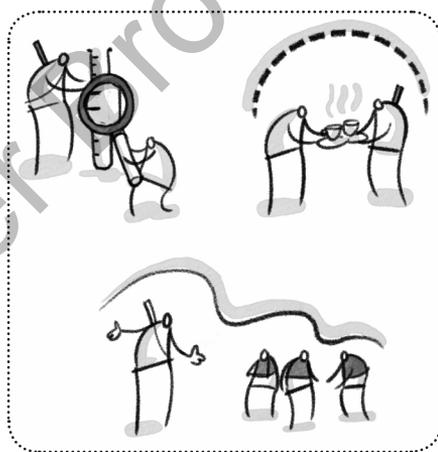
- ◆ **Quality of instruction.** This includes effective questioning and the use of assessment by teachers. Specific practices, like reviewing previous learning, providing model responses for students, giving adequate time for practice to embed skills securely and progressively introducing new learning (scaffolding) are also found to improve attainment.



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It would be a mistake to adopt the broad brushstrokes of such findings crudely or uncritically. Our joint experiences have demonstrated again and again that schools should never underestimate the practical wisdom of the classroom teacher. Careful day-to-day decision-making, informed by years of thinking and practice, is vital. Situational factors have a huge influence too. Great teaching is not a single entity; it varies enormously from school to school, from subject to subject and from classroom to classroom. What makes you an exemplary practitioner in your environment might not make us exemplary teachers in ours – and vice versa. Needless to say, it would also be a grave mistake to dismiss the findings highlighted in the Sutton Trust report, and so the ideas shared in this book do lean on this and other sources of evidence, such as cognitive psychology.

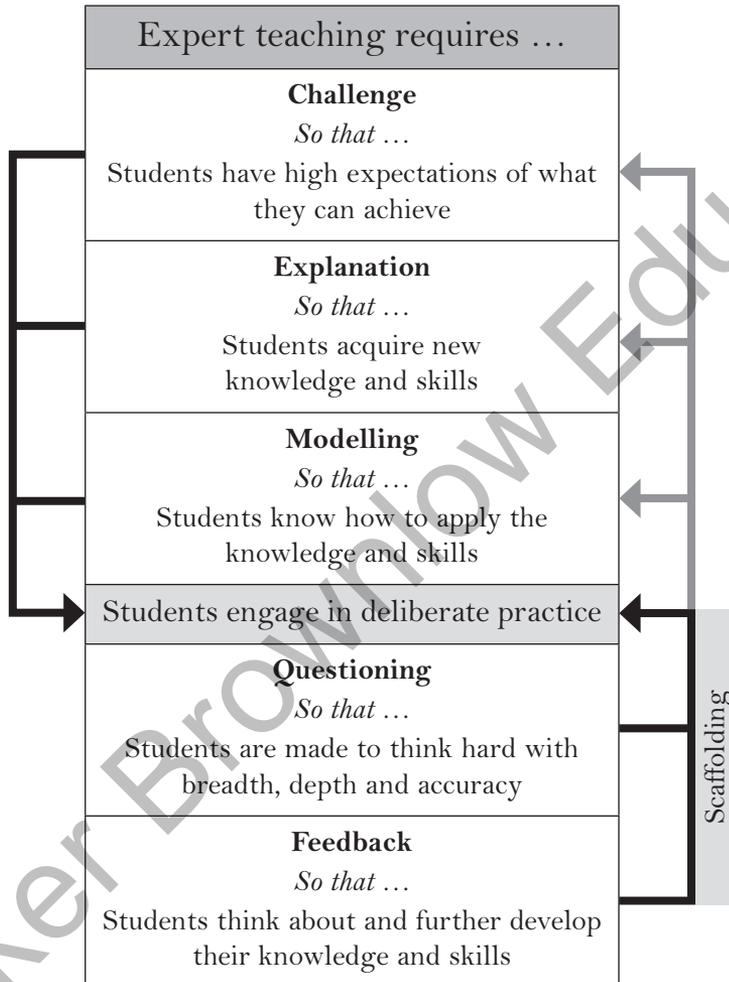
It follows, then, that this book will combine three aspects when coming to a definition of effective teaching: what the research evidence suggests; what we have learnt from inspirational teaching colleagues at our school and in the burgeoning online education community; and, most of all, what we continue to learn from our day-to-day experiences as classroom teachers.



We have targeted six interrelated pedagogical principles. Inspired by the legendary rock band Led Zeppelin, ours is a “tight but loose” approach. We have highlighted a few essentials to great teaching but leave you free to implement them and connect them as you see fit.

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The principles work as follows:



The first principle, *challenge*, is the driving force of teaching. Only by giving our students work that makes them struggle, and having the highest possible expectations of them, will we be able to move them beyond what they know and can do now. This will be the focus of Chapter 1.

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Challenge informs teacher *explanation*, which is the skill of conveying new concepts and ideas. The trick is to make abstract, complex ideas clear and concrete in students' minds. It is deceptively hard to do well, and so we delve into the art and science of teacher talk in Chapter 2.

In Chapter 3 we move on to *modelling*. This involves “walking” students through problems and procedures so that we can demonstrate the procedures and thought processes they will soon apply themselves. It also involves the use of exemplar work.

Without *practice* student learning will be patchy and insecure. They need to do it, and they need to do it many times as they move towards independence. In Chapter 4, we take heed of the findings from cognitive science research. It goes without saying that practice is the fulcrum around which the other five strategies turn. This is because it develops something that is fundamental to learning – memory.

Students need to know where they are going and how they are going to get there. Without *feedback*, our fifth principle and the subject of Chapter 5, practice becomes little more than “task completion”. We give students feedback to guide them on the right path, and we receive feedback from students to modify our future practice. And so the cycle continues ...

Chapter 6 leads us to our last principle – *questioning*. Like explanation, questioning is a skilful art. It has a range of purposes: it allows us to keep students on track by testing for misconceptions and it promotes deeper thought about subject content.

Finally, in Chapter 7, we consider how school leaders can put structures and systems in place that will allow a climate of excellence and growth to take root and flourish. We include a number of case studies, including from some of the most influential school leaders in the UK.

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Through the application of these six principles, the ultimate goal is to lead students towards independence. The idea of “independent learning” is often misunderstood. Independence is a desirable outcome of teaching, not a teaching strategy in its own right. Our job is to teach children, rather than to cross our fingers in the hope they will learn on their own. Classroom management and relationships are of great importance too, yet they are not the subject of this book. Without a strong classroom climate in place, it is unlikely that the above principles will have much effect. Even so, research shows that sometimes, even if a child is working hard and engaged, new learning might not be taking place.⁴

So, how do these six principles relate to one another? Well, to be clear, this is not a neat cycle to be adhered to in every lesson. Learning is highly complex. It ebbs and flows through lessons, across schemes of work and over years. In fact, the hackneyed “three-part” lesson of starter, main and plenary is hopelessly simplistic. Some learning cycles are simple, quick and over in minutes. Others are much longer loops covering two, three or more lessons. Others still are choppy and messy, returning back to teacher explanation and modelling repeatedly as students struggle to refine new knowledge and skill through lots of practice and focused feedback. Some sequences will prove so simple and quick that all six principles will be unnecessary. Others will require them all.

To explain to a child how to spell “accommodation” might take a matter of minutes – “Two cots need two mattresses in any accommodation!” – plus a bit of practice using the word in context. But to teach the same child how to write a speech will require a more comprehensive sequence. You will set the level of challenge high by introducing students to seminal historical speeches – those by Elizabeth I, Winston Churchill and Martin Luther King, perhaps. These will act as exemplars to inspire their own writing, but you will also need to

⁴ Graham Nuthall, *The Hidden Lives of Learners* (Wellington: New Zealand Council for Educational Research Press, 2007), p. 24.