

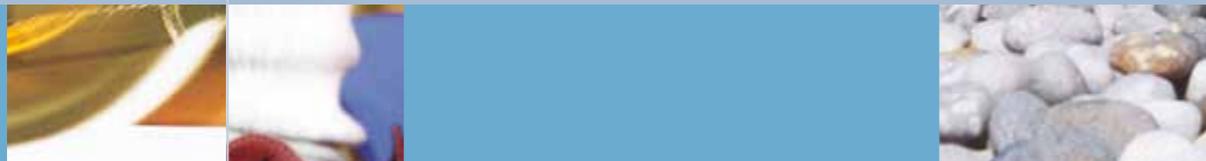
Building Learning Power

helping young people become better learners

Guy Claxton



TLO Limited
Bristol



Introduction



This book is about how teachers can help young people become better learners, both in school and out. It is about creating a climate or a culture in the classroom—and in the school more widely—that systematically cultivates habits and attitudes that enable young people to face difficulty and uncertainty calmly, confidently and creatively. *Building Learning Power* explains what this means and why it is a good idea, and introduces some of the small, do-able things that busy teachers can do to create such a climate.

Students who are more confident of their own learning ability learn faster and learn better. They concentrate more, think harder and find learning more enjoyable. They do better in their tests and external examinations. And they are easier and more satisfying to teach. Even a small investment in building learning power pays handsome dividends for a school. But it also prepares youngsters better for an uncertain future. Today's schools are educating not just for exam results but for lifelong learning. To thrive in the twenty-first century, it is not enough to leave school with a clutch of examination certificates. You have to have learnt how to be tenacious and resourceful, imaginative and logical, self-disciplined and self-aware, collaborative and inquisitive.

So *Building Learning Power* is for anyone who wants to know how to get better results and contribute to the development of real-life, lifelong learners—both at once. In other words, it is for teachers, advisers, teacher trainers, parents and anyone else involved in formal or informal education. It is particularly for people who want more than sound-bites and quick fixes. Some of the early approaches to 'learning to learn' were appealing but unsatisfying. They were built on shaky scientific foundations, and they did not lead to cumulative growth in students' real-life self-confidence or ingenuity. Building learning power—BLP—is firmly grounded in both solid science and practical experience; it takes root and develops over time, and its results are therefore all the more robust.

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ELLI: The Effective Lifelong Learning Inventory

Special mention must be made of the ELLI Project at the University of Bristol. In 2000, the Lifelong Learning Foundation funded Professor Patricia Broadfoot, Professor Guy Claxton and Dr Ruth Deakin Crick to undertake scientific research into the components of learning power and to develop ways of tracking, assessing and nurturing it in schools and colleges. This empirical research project has produced a tried and tested profile of the key dimensions of learning power and a flexible range of assessment tools—the Effective Learning Profile. These assess learners against those key dimensions, enabling teachers and lecturers to see the impact of their teaching on young people's effectiveness as learners: teachers can modify their teaching in response to individual student needs, and so foster the habits of lifelong learning. The research has also identified some of the important ways in which learning power can be nurtured in the classroom. This scientific enquiry into the concept of learning power refines and develops some of the ideas expressed in this book. TLO is looking forward to working with the University of Bristol and the Lifelong Learning Foundation to secure the successful dissemination of this valuable data, and to propagate the fruits of this research in future BLP publications.

And finally:

Our thanks are due to Dean Purnell, Andy Shaw and Brian Davies of TLO's publishing studio for their resilience and resourcefulness while working through many drafts of the text; and to Neil Mander of Fruit Design and Marketing Ltd, and once more to Dean and Andy, who together developed the design concept and artwork.



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Section 1a

Powerful learners and their learning minds

Meet Darren and Katie: powerful learners in the making

In this section you will meet Darren, an 11-year-old who already shows many of the habits, traits and attitudes of the effective learner; and Katie, a 17-year-old who is only just discovering how useful they are. We watch Darren as he prepares himself for his first day at his new comprehensive school, and Katie as she discovers and strengthens her ability to think and plan her studies independently. And we look back on their summer holidays, and see how they both tackled various learning challenges. Through these vignettes, you will get a feel for the kinds of things that learning power consists of, and what a difference it makes in real life.

imagining

being absorbed

researching

reflecting

stickability

noticing

questioning

resourcefulness

self knowledge

playfulness

reasoning

collaborating

listening

imitating



Meet Darren and Katie: powerful learners in the making

Darren has gone to bed but he is not asleep. He is imagining what tomorrow will be like—his first day at St Edmund Comprehensive School. It's a big day, and he feels a bit apprehensive. But he has prepared himself as well as he can. He has done lots of research on what St Edmund's is going to be like. Leon's sister Tania is in Year 9 and had Mr Andrews as her tutor too, and when Darren was round at Leon's he had pestered Tania with questions about what the school was like.

'What do you wish you had been told when you first arrived?' he had asked, and Tania told him and Leon all kind of useful things, from the best place to eat your lunch when it's wet, to which of the Year 11s to avoid, and who was the most entertaining maths teacher. He had badgered her to fish out for him some of her Year 7 workbooks, so he could see what kind of work to expect. He was surprised to see that some of it looked just like work that he had done with Mrs Rowe in Year 5. He felt both relieved, and disappointed.

Darren thinks back to his first day at Beckley Road Primary, and how he had felt then—pretty scared to begin with, but by the time he had been there a fortnight, he felt so at home that he wondered what all the fuss had been about. St Edmund's was definitely going to be a bigger challenge—but he knows that he is a much better learner now than when he was five. At Beckley Road all the teachers had talked a lot about learning, and how to become a better learner. They had had lots of discussions about what Mrs Rowe called 'knowing what to do when you don't know what to do', and they had had fun, as a class, making posters for the walls full of suggestions about what to do when you couldn't read a word, or figure out

where you had gone wrong in a sum, or had fallen out with someone and wanted to be friends again.

Every Friday afternoon they had had time to write in their 'learning diary'—what Ms Salbiah in Year 6 had called 'My Journey Into The Unknown'—about how their learning had gone during the week, what they had found hard, and what new learning methods they had discovered. Ms Salbiah had written all kinds of thoughtful comments and questions, and as he's thinking about the challenge of the new school, he can hear Ms Salbiah's voice in his head, suggesting that he write down a list of his 'hopes, fears and expectations' so he can compare these with what he actually found. He is so used to doing 'Predict—Observe—Explain' that he hardly needs the voice to remind him now. Darren switches the light back on, picks up the journal that he keeps by the bed, and writes for a few minutes. Having prepared himself as much as he can, he closes the book, turns out the light, and quickly falls asleep.

Katie is downstairs cleaning her kit and thinking about stress. Darren's big half-sister is seventeen, a fitness freak, and studying leisure management at the local college. She has an essay to write over the summer on stress and exercise for her Human Biology module, and she is feeling stressed all right: it has to be in by the end of the week and she's hardly started. She wishes she had paid more attention at school to the stuff on 'independent learning'. She could do with it now, but at the time thought it was a load of rubbish. Seeing how Darren has changed, she's not so sure. He seems so curious and confident these days—not like the

Meet Darren and Katie . . .

wobbly character that she had been at his age, skilfully hiding behind a veneer of 'cool'. If she had felt better equipped to learn, she wouldn't have had to put so much energy into pretending she didn't care. Oh well. It's never too late to learn to learn, Darren had said. Hope he's right.

Actually, Katie has already started to develop her 'learning muscles' (being a fitness fanatic, she likes the metaphor). She realises that 'No pain, no gain' applies just as much to learning as it does to running on the treadmill—so a bit of 'brain-stretching' doesn't mean she's thick, it just means she's learning. Even this realisation has enabled her to stick at things better. As she reminds herself of this, her panic about the essay begins to subside, and she starts thinking about it again. Of course she's supposed to write about the biological view of stress—it's what happens when you push a system to its limits—and about how exercise makes your system more 'elastic' so it can cope with more demands. But maybe if some people think that getting hot and sweaty means they're weaklings (just like she thought 'trying' meant she was stupid), that makes exercise itself stressful. Ha! she thinks, that's an angle that Rob George, her tutor, won't have thought of. And leaving her stuff to soak in the sink, she sits down to write a plan of what she might look up in the library tomorrow to develop her idea.

Over the summer the whole family—Katie and Darren, as well as Darren's dad Charlie, Katie's mum Miriam and their new baby brother Franklin—had been on holiday to one of the Greek islands. Darren had been into everything, and had had the time of his life. Charlie had remarked to

Miriam that Darren was indeed a different child from the five-year-old who wouldn't let go of his hand on his first day at Beckley Road. For a year or two after he and Darren's mum had separated, he had been very timid and withdrawn, but to see him snorkelling out of his depth, and chattering away with the two German girls in some strange hybrid language that the kids seemed to have invented, you would never have known it.

If Darren wanted to master something, there was no stopping him now. He had even joined in with the Greek dancing classes in the evening, quite unafraid of making a fool of himself, and dancing with strangers in the group apparently without a care in the world. Charlie had been particularly impressed by the quiet way he had stood and just watched people doing what he wanted to do for a while before trying it out. It was as if he drank their skill in through his eyes, and his brain had already half-learned it before he set foot on the dance floor himself. It was almost, thought Charlie, as if Darren had somehow recovered the natural learning flair that he—and, he supposed, nearly all children—had had as a toddler.

It was infectious too: even Katie had let go a bit. She had done her usual sulk all the way to the airport ('I don't know why I let you talk me into this stupid holiday. I'm an adult. I don't do holidays with parents!') But then there she was, practising her rather ungainly diving off the side of the boat, surrounded by a gaggle of boys half her age, with a most uncharacteristic mixture of enthusiasm, persistence and unselfconsciousness.

Not to mention daring to practise her rudimentary Greek in the taverna in the evenings.

Yes, Charlie was a little envious of their—what did Darren call it?—'learning power'. He even admitted ruefully to himself that he often played the fool and made cynical comments on training days, rather than risk making a mistake or asking a question that might seem silly. He would rather sneak off and read the manual in his hotel room overnight than join in with the group tasks they were set. (He remembered sheepishly having done the same thing with the Rubik cube that Darren had brought home, secretly studying the instructions rather than just messing about with it, as Darren had done.) Yet at work his life seemed more and more to involve project work, learning, and problem-solving together in teams of very disparate people. He admired both Katie and Darren's ability to create and develop playful projects with the other youngsters at the hotel, even when they did not speak each other's languages.

Of course even Darren still had his down times and disappointments. Learning for him wasn't all sweetness and light. He got frustrated and dispirited, confused and apprehensive, sometimes. But Charlie was amazed at how quickly he bounced back. Darren's old headteacher at Beckley Road had explained, one parents' evening, that they deliberately aimed to teach students how to deal with the emotional side of difficulties and upsets, so that they could be in charge of their own recovery. Charlie had thought at the time that it sounded rather touchy-feely, but he had to admit that it worked for Darren.

And now it's a bright September morning. Darren in his new school uniform and Katie in her designer sweat-suit are grabbing a bowl of cereal and getting their things together. Katie is off to the library to see what she can find on the relationship between self-esteem, body-image and attitudes to exercise—bit of a mouthful, but she's quite gripped by the idea. And Darren has to hurry to meet Leon for their walk to St Edmund's. 'OK, mate?' says Charlie to Darren as he flies out of the door. 'Bit wobbly, Dad' he calls back, 'but I'll be fine'. And Charlie thinks to himself 'Yes, you will.'



Section 1b

Powerful learners and their learning minds

Developing the mind to learn

This section explains how building learning power (BLP) differs from, and goes beyond, other 'learning to learn' approaches. It gives a systematic introduction to the mind of the effective learner, in terms of the four Rs of resilience, resourcefulness, reflectiveness and reciprocity. By the end of the section, you will have a clear all-round picture of the habits of mind that BLP aims to cultivate.

Key points

- Know what's worth learning
- Know what you're good at learning
- Know who can help
- Know how to face confusion
- Know the best learning tool for the job

Getting learning fit

Imagine a tennis player getting ready for a match. She practises specific shots and abilities—but she also works on her general stamina, strength and coordination, and she tries to develop her self-awareness and her ability to be strategic. She makes sure that her body and mind are as fit and sharp as can be. BLP is about helping young people develop this kind of general, all-round, learning fitness and readiness. It's not just about teaching them a narrow set of learning techniques.

To work on fitness, you don't spend all your time in the gym on one exercise or one piece of equipment. You follow a balanced, varied work-out regime that relies on proven knowledge about muscle groups and the cardiovascular system. Likewise, BLP uses our knowledge of learning and the mind to create a coherent picture of the kinds of mental agility and emotional stamina the good learner has, and to make sure that schools give all these aspects the work-outs they need in order to develop.

RESEARCH TELLS US . . .

High achievers are not necessarily good real-life learners

Resilience in the face of difficulty is one of the most basic ingredients of learning power. Yet apparently you can be successful in school without it. Carol Dweck of Columbia University gave a maths test to a mixed-ability group of 14-year-old girls. In the middle of the test booklet, for some of the girls, had been stapled, as if by accident, a page of problems that none of them knew how to do. On the (perfectly do-able) problems after the impossible ones, many of the high-achieving girls did very poorly. As a result of being temporarily flummoxed, they had gone to pieces. These successful students were woefully lacking in resilience, and so could not really be classed as good overall learners.

Developing the mind to learn

Darren and Katie are, of course, fictitious, and Darren in particular is something of an ideal. Nobody can be an exemplary learner all of the time. But everyone can learn to be a better learner, more of the time—not just in school but in the whole of life. Darren has learned to become a stronger, more confident and more competent learner, and Katie is on the way. We now know that 'learning to learn' is a real possibility. How well you learn is not a matter of how bright you are. It is a matter of experience, and good coaching. There is a lot of talk about learning at the moment, and the goal of enhancing students' learning is widely espoused. In practice, though, this can mean one of three rather different things. First, it can mean helping students to *learn more*, and thus raise their achievement. To do this, you might offer incentives, or cut the syllabus into small, bite-sized pieces that make it easier to ingest. Secondly, you can help students to *learn better*. That might mean helping them find out what is their preferred learning style, and taking that into account as you teach; or making sure that students are well fed and watered before lessons. Thirdly, you can try to help students to become *better learners*—not just in school but in real life as well. That might mean trying to help them develop the skills and attitudes to learn well whatever the conditions.

These three goals are not the same, and methods that work for one don't always suit the others. Spoon-feeding may improve results, but it doesn't develop chewing muscles. It is quite possible to help students learn more without helping them become better at learning. Indeed, some ways of raising achievement actually damage or undermine students' learning ability. And helping people learn better is also not the same thing as helping them become better learners.

You can help them learn better by providing lots of support and guidance—but when you take that guidance and support away, have they become more independent, or less?

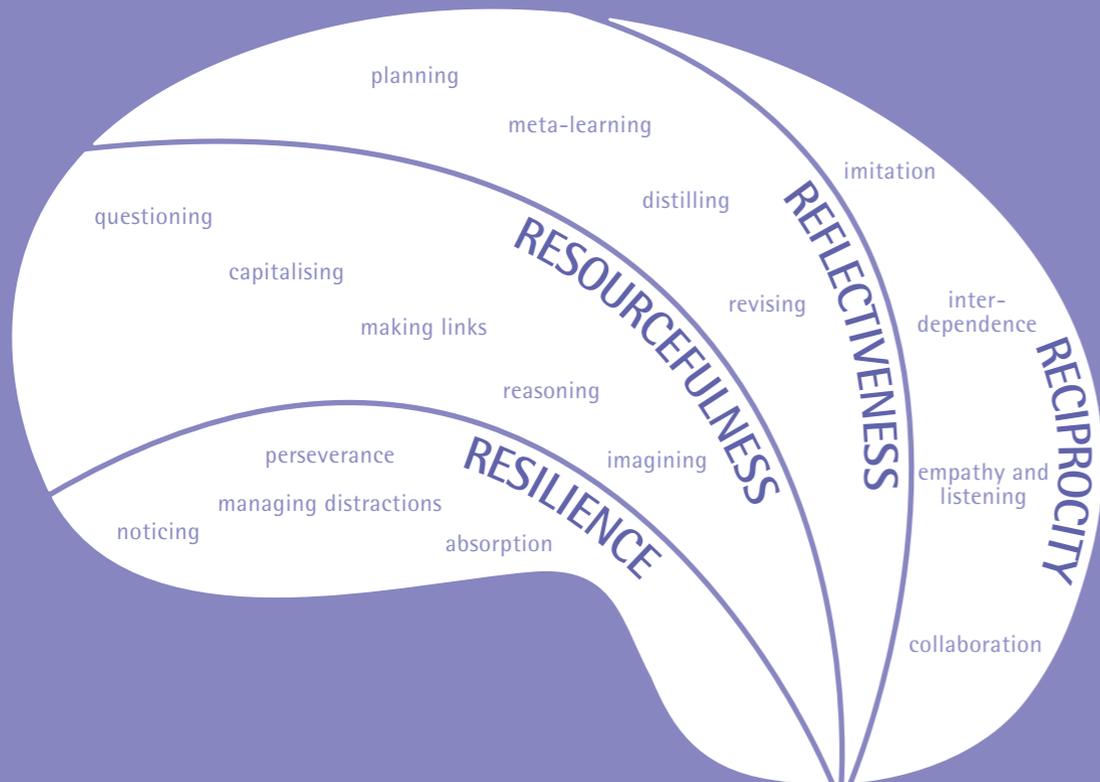
There is a great deal of information and advice around about how to help students learn more or learn better. This book is different. It is about how to develop students as learners—how to increase their portable learning power—and to raise standards by doing so. We call this *building learning power*, BLP. The evidence is: helping students learn more or better does not necessarily help them become better learners. But if you help students become better learners their achievement rises. And they will take away from school not just a few certificates, but greater confidence, competence and curiosity to face the uncertainties that life will surely throw at them. Give your car a good service and it will naturally go further and faster. Aim at levering up standards, and you may get better results, but at the cost of turning out young people who do not know how to think for themselves.

It is obvious from the vignettes that being a good learner is not just a matter of learning a few techniques like mind mapping or brain gym. It is about the whole person: their attitudes, values, self-image and relationships, as well as their skills and strategies. Being a good real-life learner means knowing what is worth learning; what you are good (and not so good) at learning; who can help; how to face confusion without getting upset; and what the best learning tool is for the job at hand. Just as being a reader involves much more than simply being able to read, so 'being a learner' means enjoying learning, and seeing yourself as a learner, seeking out learning as well as knowing how to go about it.



RESILIENCE
RESOURCEFULNESS
REFLECTIVENESS
RECIPROCITY

The learning-power mind



Developing the mind to learn . . .

Developing learning power means working on four aspects of students' learning. The first task is to help them become more **resilient**: able to lock on to learning and to resist distractions either from outside or within. The second is helping them become more **resourceful**: able to draw on a wide range of learning methods and strategies as appropriate. The third is building the ability to be **reflective**: to think profitably about learning and themselves as learners. And the fourth task is to make them capable of being **reciprocal**: making use of relationships in the most productive, enjoyable and responsible way.

THE FOUR Rs of LEARNING POWER

Resilience

- **being ready, willing and able to lock on to learning**
- Absorption
- flow; the pleasure of being rapt in learning
- Managing distractions
- recognising and reducing interruptions
- Noticing
- really sensing what's out there
- Perseverance
- stickability; tolerating the feelings of learning

Resourcefulness

- **being ready, willing and able to learn in different ways**
- Questioning
- getting below the surface; playing with situations
- Making links
- seeking coherence, relevance and meaning
- Imagining
- using the mind's eye as a learning theatre
- Reasoning
- thinking rigorously and methodically
- Capitalising
- making good use of resources

Reflectiveness

- **being ready, willing and able to become more strategic about learning**
- Planning
- working learning out in advance
- Revising
- monitoring and adapting along the way
- Distilling
- drawing out the lessons from experience
- Meta-learning
- understanding learning, and yourself as a learner

Reciprocity

- **being ready, willing and able to learn alone and with others**
- Interdependence
- balancing self-reliance and sociability
- Collaboration
- the skills of learning with others
- Empathy and listening
- getting inside others' minds
- Imitation
- picking up others' habits and values

Key points

Good learners –

- like a challenge
- know that learning is sometimes hard
- are not frightened of finding things difficult or making mistakes
- like the feel of learning



RESILIENCE

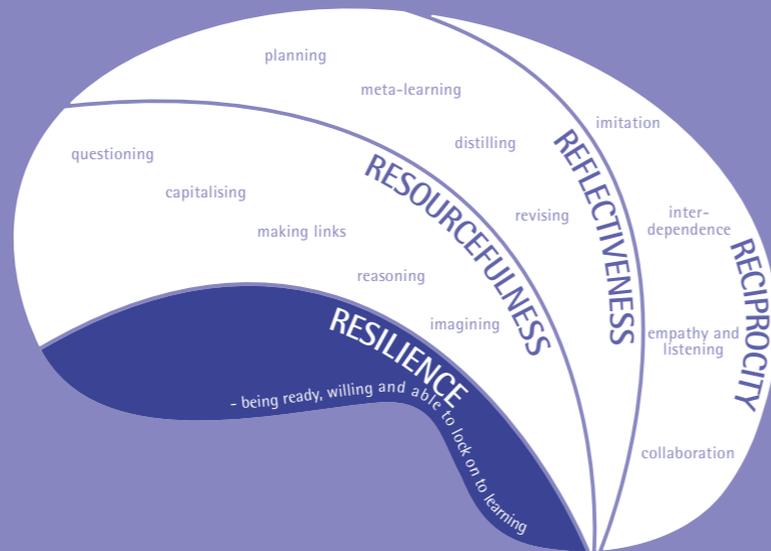
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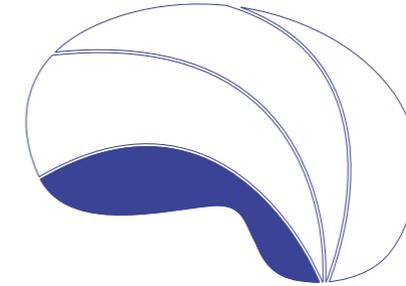
The learning-power mind

Resilience



- absorption** | flow, the pleasure of being rapt in learning
- managing distractions** | recognising and reducing interruptions
- noticing** | really sensing what's out there
- perseverance** | stickability, tolerating the feelings of learning

Resilient: ready, willing and able to lock onto learning



The first aspect of a supple learning-powered mind is the most basic. Resilience is about locking on to learning: being able to get absorbed, and to stay engaged despite external distractions (unless they are genuinely important, of course!); and despite the ebb and flow of the different feelings of learning, such as excitement, frustration or confusion. If good learners do get upset and break off, they are quicker to come back and try again. They are drawn to learning and they like a challenge. They are more likely to 'give it a go' even though the method and the outcome may be uncertain. They know that learning is sometimes hard—for everyone, no matter how 'bright'—and are not generally frightened of finding things difficult or making mistakes. They like the *feel* of learning, as well as the satisfaction of mastering a skill or solving a problem.

There are four aspects to resilience: **absorption**—being rapt in the flow of learning; **managing distractions**—recognising and reducing interruptions; **noticing**—seeing and sensing what's out there; **perseverance**—stickability, tolerating the feelings of learning.

Absorption

For learning to occur, the learner has first to be engaged with the object of learning. They have to be paying attention. But we can pay attention in different ways. Sometimes attention is very focused, deliberate and conscious. Sometimes it is more a kind of background awareness that may not be very conscious at all. This latter kind of attention is not to be underestimated. A lot of learning happens incidentally, out of the corner of your eye, as it were, while you are trying to get something else done. So paying attention does not necessarily mean effortful concentration. The best kind of attention depends on what kind of learning you are up to. But without engagement of some kind, no learning can happen.

If we were merely concerned with raising achievement, we would look for ways to induce the kinds of attention we want—by making lessons more entertaining, maybe, or by chiding students who aren't concentrating. But BLP asks: *How can we systematically help students to develop the habits and dispositions of 'good attending' for themselves, so that over time they become second nature?*

Developing learning power means strengthening the ability to pay attention to what is going on, and to maintain attention despite a variety of competing attractions. There are three important things to remember about attention. First, you can't make yourself attend. It's not a matter of talking to yourself, or fixing your eyes earnestly on the page, or furrowing your brow. We attend to what our brains find novel, interesting, important, enjoyable, perplexing, disturbing

Key points

Concentration –

- can't be forced
- isn't always useful
- develops with age
- is rewarding

Teaching resilience

‘It doesn't help a child to tackle a difficult task if they succeed consistently on an easy one. It doesn't teach them to persist in the face of obstacles if obstacles are always eliminated . . . What children learn best from are slightly difficult tasks which they have to struggle through. Knowing they can cope with difficulties is what makes children seek challenges and overcome further problems.’

Professor Carol Dweck, Columbia University, New York

RESEARCH TELLS US . . .

Flow and learning

Students' success in school depends on how rapt they are while they are studying. Jeanne Nakamura gave a group of high school students a small beeper that went off at random times during the day, and when it did, they had to write down what they were doing, and how absorbed or 'in flow' they were feeling. When they were studying, high achieving students reported they were in flow 40% of the time, while low achievers only reported flow 16% of the time. More often, the low achievers were bored or anxious. Comments Daniel Goleman: 'Sadly, the low achievers, by failing to hone the skills that would get them in flow, both forfeit the enjoyment of study, and run the risk of limiting the level of intellectual tasks that will be enjoyable to them in the future.'

Resilient . . .

or threatening. To get someone to lock on to learning, the object or activity has somehow to matter to them.

Secondly, distractibility is useful. Being totally immersed in something, however valuable, may mean that you miss whatever else is going on, whether it be a new opportunity or a looming threat. Our ancestors would have been vulnerable if they had not been continually checking for danger, and so, to some extent, are we. Children who have grown up in insecure or chaotic contexts are evolutionarily quite right to be hyper-alert to what is going on around them (constantly on the look-out for potential sources of reassurance, recognition, or further harm). Some students may be preoccupied with much more urgent calls on their attention than the classroom topic of the day.

Thirdly, the ability to maintain concentration on long-term goals, in the face of more immediate attractions, is not finally developed until adolescence. This kind of commitment to our deeper goals and values depends on the frontal lobes of the brain, and we know that these are the last areas of the brain to come fully on line.

For all these reasons we should have realistic expectations of younger or more anxious children. They can't be cajoled or bullied into locking on to learning.

However, having said that,

the ability to get lost in learning is vital, and one we should cultivate. That state of being absorbed, 'rapt', is inherently gratifying and rewarding.

Psychologist Mihaly Csikszentmihalyi says we are programmed to be learning animals partly because the feeling of being stretched by the 'risky edge' of our experience is so exhilarating. Some people get it from skiing or playing an instrument. Some people only get it from such intensely stimulating situations as clubbing or fighting. Others get it from a good book, a crossword puzzle, making models, or a really fast witty conversation (what the Irish call 'the craic'). Good learners like that feeling of absorption, when they're writing an essay just as much as when they're dancing. Teachers can encourage students to recognise and seek that pleasure in all kinds of learning.

Managing distractions

There are things, as we have said, that threaten to disrupt absorption, both from inside and out. If you are hungry, tired or anxious it is hard to concentrate. And so it is if there is too much going on around you, or if you are uncomfortable.

Good learners are aware of possible sources of distraction, and do what they can to diminish them.

Diminishing distractions is an individual matter: what works for one person may not work for another. Some people like to work with background music or sitting on a chair that is not too soft. Others like to lie in bed in the quiet. Good learners find out what their ideal conditions are. Of course, as we saw earlier, not all distractions can be managed so easily. But some can.

Key points

- Learn without thinking
- Contemplate
- Value 'stilling'
- Stick at learning
- Reject undermining false belief

The making of a poet

'My mother, the scientist, taught me to see. She taught me attention to the complexities of surface detail and also attention to what lies beneath those surfaces . . . In doing so, she made me a poet. My mother, the researcher . . . sat patiently at the microscope on the kitchen table, observing, noticing, discovering patterns, making sense. In that kitchen, I learned the patience of research. My mother made order of the raggedness of the living world, and I was paying attention. I didn't know at the time I was . . . Yet . . . on some level, in some hidden and inarticulate way, I must have been attending and recording extremely well . . .

'When I taught high school English and creative writing, I was always searching for ways to bring students into attention, the sort of deep attention that would elicit the capacity for poetry . . . In a homework assignment, I would ask them to "find a place where there's nothing going on. Sit there for ten minutes and record everything that happens."

Anne McCrary Sullivan, American poet

RESEARCH TELLS US . . .

Resilience and relationships

How resilient children become depends a lot on their relationships with parents and teachers. For example, children learn not only what is interesting, but how to be interested, and for how long, from the habits of the adults around them. Persistence rubs off from one generation to the next. And the reverse is also true. Doreen Arcus has found that timid and unadventurous children tend to have parents and teachers who are anxious on their behalf, and rescue them prematurely from difficulty. However she also found that the caretakers of timid children did not set them clear limits, so they were often unsure whether it was safe to be adventurous or not. Being gently overseen by a benign but firm supervisor enables youngsters to be less cautious or fearful on their own account, because they have faith that, within the limits, they will come to no great harm.

Resilient . . .

Noticing

Learning often relies on being able to pay attention to what you are interested in: not necessarily thinking about it, just really noticing how it looks, what it is made of, or how it behaves. Many professionals, from poets to scientists to business managers, rely on this quality of attentive noticing: being able to identify the significant detail, or to let an underlying pattern of connections emerge into their minds. Sometimes you have to be patient before the detail or the pattern will reveal itself to you, like looking for sea creatures in a rock pool. And this is a skill that can be strengthened with practice. We often pick up this skill from people around us. Babies very soon learn to work out what their mother is focusing on, and to 'share joint attention' with her. It helps to be around people who are demonstrating this ability to watch carefully and turn their observations into accurate descriptions. Getting a really clear sense of *what*, before starting to think about *how* or *why*, is very useful.

Perseverance

Attention can be broken when learning gets blocked, but good learners have learnt the knack of maintaining or quickly re-establishing their concentration when they get stuck or frustrated. The quality of stickability or perseverance is essential if you are going to get to the bottom of something that doesn't turn out as quickly or easily as you had thought, or hoped.

If you get upset and start to think there is something wrong with you as soon as you get stuck, you are not going to be able to maintain engagement.

Instead all your energy will go into trying to avoid the uncomfortable feeling, and this may mean drifting off into a daydream, creating a distraction, or blaming somebody else. A great deal of classroom misbehaviour starts this way. If students were better equipped to cope emotionally with the inevitable difficulty of learning, they would mess about less. There is a range of things that teachers can do to strengthen students' stickability.

Perseverance is often undermined by two common and erroneous beliefs. The first is that learning ought to be easy. If learners think that they will either understand something straight away, or not at all, then there is simply no point in persisting and struggling. The second is that bright people pick things up easily, so if you have to try it means you're not very bright. Clearly the idea that effort must be symptomatic of a lack of ability makes persevering an unpleasant experience. Good learners develop perseverance when their parents and teachers avoid conveying these messages, even unwittingly.