



THINKING AND LEARNING DISPOSITIONS



at
Northwood College



This booklet contains 20 descriptions of the sort of 'thinking dispositions' that frequently characterise successful people. The ideas are drawn predominantly from Art Costa's 'Habits of Mind' but other sources have also contributed.

These articles appeared in the weekly Bulletin between September 2005 and January 2008. We hope that you will find it useful to have a copy of these 'secrets of success'.

"Habit is a cable; we weave a thread of it each day, and at last we cannot break it."

Horace Mann

"The sum of one's intelligence is the sum of one's habits of mind."

Lauren Resnick

For further details of A. Costa's work, visit www.habits-of-mind.net

Bulletin articles by C J Simister, drawing on the paper 'Describing 16 Habits of Mind' by A Costa and B Kallick

THINKING DISPOSITION no. 1

Persistence

Stick to it!



This is all about persevering at a task right through to its completion and not giving up. Keeping a focus and staying 'on task' is sometimes hard and may mean finding ways of managing distractions when they arise.

Another important aspect of persistence is being willing to struggle when things are hard – when answers and solutions aren't immediately obvious. The secret lies in looking for ways to reach your goal when you are stuck - basically, 'knowing what to do when you don't know what to do'!

"It's not that I'm so smart, it's just that I stay with problems longer." Albert Einstein

"Age wrinkles the body. Quitting wrinkles the soul." Douglas MacArthur

"Persistence is what makes the impossible possible, the possible likely, and the likely definite." Robert Half

THINKING DISPOSITION no. 2

Responding with Awe

Be passionate about learning!



The world is extraordinary. There is a vast amount to discover and understand – most of which is as yet unknown. To be successful in a particular area often means to be *intrigued* by it - to be eager to explore its mysteries and overcome its challenges, as much for the joy of discovery as for the rewards of achievement.

A great example of someone who demonstrates this thinking habit is Dr. Fiona Wood, the 2005 Australian of the Year, whose absolute fascination with her field led to the pioneering use of 'spray-on skin' for burns victims from the Bali bombing.

"Be anchored to some ideal, philosophy or cause that keeps you too excited to sleep." Brian Koslow

"We live in a wonderful world that is full of beauty, charm and adventure. There is no end to the adventures that we can have if only we seek them with our eyes open." Jawaharlal Nehru

THINKING DISPOSITION no. 3

Questioning and Posing Problems

Be curious!



From the practical ("Effective management always means asking the right question" – Robert Heller) to the ideological ("Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning" – Albert Einstein), successful people seem united on the importance of developing effective questioning habits.

Asking questions lies at the heart of good thinking. Why is it that...? What if...? What alternatives are there to...? What might be the reasons for...? What do I already know? What don't I know? How do I know what I do and don't know?!

Having a questioning attitude means that one is constantly seeking more knowledge and better understanding. It involves checking to find out what information is still needed and developing questioning strategies to uncover that information. Asking questions is vital for true creativity: to come up with great ideas, you first need to be able to identify problems or areas for improvement. By being curious about the world around you and refusing to accept things as they are, you place yourself in a position to ask, 'How can I make things better?'

"Millions saw the apple fall, but Newton asked why." Bernard Baruch

THINKING DISPOSITION no. 4

Gathering Information through all the Senses

Tune in!



We pay attention to a tiny proportion of the information that our brain receives – mostly for good reason, as if we didn't, we would rapidly suffer data overload! However, this means that it is easy to stop noticing things that might in fact prove interesting or useful.

Try shutting your eyes and noting how many different sounds you can hear. Or smells you can smell! Or looking around you in a familiar place and identifying ten things you've never noticed before.

We need to challenge our senses and learn to make the very best use of the extraordinary range of information that they are able to receive. Successful thinkers gather information all the time, knowing that even the most unlikely observations may form the basis for future ideas.

"You must understand the whole of life, not just one little part of it. That is why you must read, that is why you must look at the skies, that is why you must sing and dance, and write poems, and suffer, and understand, for all that is life." J. Krishnamurti

THINKING DISPOSITION no. 5

Taking responsible risks

Be adventurous!



If just two or three of these fortnightly 'thinking habits' could be illuminated with bright lights and hung in the sky, this would be one of them. And unfortunately – though probably not surprisingly - it is likely to be one of the hardest characteristics to develop.

So what do we mean by 'being adventurous'? Surely taking risks is dangerous, 'a bad thing' and therefore not something we should be encouraging in our daughters and students?

The good news is that, within the context of thinking habits, we are not talking about risking life and limb in the pursuit of dangerous sports. Or taking the corner just a little faster than normal, because you're in a rush and it will probably be alright. Or going out late and hoping the teacher won't notice that your homework hasn't been done properly.

What is at issue here is 'taking *responsible* risks' and this is something which lies at the heart of the development of a truly successful thinker. Taking responsible risks is all about living at the edge of one's competence, saying yes when offered the chance to try new things, embracing new challenges, 'having a go' and not worrying too much when you don't get it right immediately. The most effective learning takes place when we are pushed to the very edge of what we can do.

Furthermore, risk-taking is vital for creative thinking, problem solving and decision making. Situations are changing. The problems that are going to be faced within homes, workplaces and countries will require new solutions – not repeats of what we have tried already. We need people who are prepared to risk trying out unusual and perhaps controversial ideas if we are to find innovative ways forward.

As the business guru, Tom Peters, said, "It is better to seek forgiveness than ask permission".

The problem is that it is generally true that most people are happier within their 'comfort zone': doing what they know they can do, developing speciality skills, avoiding what appears new and possibly intimidating. And research has shown that this is particularly true for bright girls, who tend to select less challenging tasks and options to ensure that they maintain the high grades and praise that they have come to need.

The danger is that if our girls don't take risks at school or at home, they (a) won't engage in the most effective learning experiences; and (b) will never have the opportunity to learn how to deal with fear and with failure – with the repercussion that, when failure comes along (as it will), they will find it a terrible shock and may not be equipped to deal with it.

So what can we do to nurture a 'risk-taking' outlook, while obviously keeping our daughters and pupils personally safe? It won't always be easy. The traditional education system encourages playing it safe: churning out standard essays, offering accepted ideas and gaining safe marks. At Northwood College, we will be doing our bit to redress the balance, by urging our girls to try new approaches, to take on more challenging options and by supporting them when they find these difficult or frustrating. Indeed, we genuinely believe that, to gain the very top grades, to gain the most respect when facing university interviews, our pupils need to have learnt to push themselves *beyond* what is comfortable.

At home, it will help enormously if you can look for opportunities to encourage your children to take on new challenges. Steer them away from the 'playing it safe' route every now and again, nudge them out of their comfort zone. They may not want to and you may need to be firmly encouraging, but remember, as Erica Jong beautifully put it:

"The trouble is if you don't risk anything you risk even more."

THINKING DISPOSITION no. 6

Creating, imagining and innovating

Be original!



Creativity is not just about the arts. It is about ideas. Ideas which may sometimes be turned into extraordinary paintings, poems and plays, but which equally could result in scientific breakthroughs, imaginative products, improved methods and procedures, innovative management styles, groundbreaking policies and laws, previously undiscovered solutions to complex problems... Progress basically.

As John Maynard Keynes put it: "Ideas shape the course of history."

To be creative, we need to be willing to:

1. Generate and experiment with as many new and novel ideas as possible, regardless of how they sound and how we look.

The best way to get a good idea is to get a lot of ideas - Linus Pauling

No idea is so outlandish that it should not be considered with a searching but at the same time steady eye - Winston Churchill

It is better to have enough ideas for some of them to be wrong, than to be always right by having no ideas at all - Edward de Bono

2. Never settle for the first seemingly 'right answer' that comes along.

Nothing is more dangerous than an idea, when it is the only one we have - Emile Chartier

3. Challenge existing views, opinions and perceptions.

Every act of creation is first of all an act of destruction - Picasso

4. Look at things in a different way (Edward de Bono coined the phrase 'lateral thinking' for this).

Discovery consists of looking at the same thing as everyone else and thinking something different - Albert Szent-Gyorgyi

To raise new questions, new possibilities, to regard old problems from a new angle requires a creative imagination and marks the real advances in science - Albert Einstein

5. Be prepared to defend your ideas, knowing that they may not always be immediately popular or successful.

Who the hell wants to hear actors talk? - Harry Warner, president of Warner Brothers Pictures, 1927

THINKING DISPOSITION no. 7

Think Interdependently

Work together!



Sometimes two heads really are better than one. As Art Costa, Emeritus Professor of Education at California State University and Co-Director of the Institute for Intelligent Behaviour, explains...

“Cooperative humans realise that all of us together are more powerful intellectually and/or physically than any one individual. In the post industrial society...problem solving has become so complex that no one person can go it alone. No one has access to all the data needed to make critical decisions; no one person can consider as many alternatives as several people can.”

Working in teams obliges us to justify our ideas, thus testing their feasibility, and it allows us to build on each others' suggestions. By learning to identify what is valuable in the contributions of others, we open ourselves up to the possibility of developing far more creative and innovative solutions than we would alone.

“Snowflakes are one of nature’s most fragile things, but just look what they can do when they stick together.” Vista M. Kelly

THINKING DISPOSITION no. 8

Thinking Critically

Don't be gullible!



Ideas, proposals, arguments, recommendations, opinions...we are constantly bombarded by such things – in the newspapers, on the television, in advertisements. A valuable indication of a free and vibrant society on the one hand, but a little overwhelming sometimes on the other! Indeed, it can sometimes be easier to allow ourselves to be carried along by a persuasive suggestion than it is to stop and take the time out of our busy lives to assess it logically.

Thinking critically is not all about being negative. A critical thinker is someone who assesses the value of what they hear and read, who weighs up different points of view, who checks the quality of the reasoning that is used and seeks an objective response. Basically, someone who uses - rather than bypasses - that ‘judgement’ centre of their brain, the prefrontal cortex.

**“To read without reflecting is like eating without digesting.”
Edmund Burke**

THINKING DISPOSITION no. 9

Resilience

Deal positively with failure!



At some point or other, we all get things wrong. And even when we get things more or less right, they can often be improved. The secret is knowing how to respond to what feels like failure. Will you stay down or will you pick yourself up? Will you hide away, feeling hurt, or will you try to come up with a better idea or a more ingenious solution? Will you learn from your mistakes or keep making the same ones over and over again?

Too often, instead of facing up to the inevitability of occasional failure, we do our very best to avoid situations where it might happen. Perhaps surprisingly, it has been found that avoiding challenge in this way is particularly common among bright, highly achieving girls. Girls who are so afraid of letting other people down by not always being perfect that they let themselves down by failing to achieve their true potential.

Several great quotes help us remember how important it is to be resilient - to laugh and learn when we make a mistake, rather than fearing that the world is going to end!

“The only bad mistake you can make is the one that you learn nothing from.” R. T. Kiyosaki

“The only people who never fail are those who never try.” Ilka Chase

THINKING DISPOSITION no. 10

Finding Humour

Laugh a little - especially at yourself!



“One of the unique attributes of human beings is our sense of humour. Its positive effects on psychological functions include a drop in the pulse rate, the secretion of endorphins and an increased level of oxygen in the blood. It has been found to liberate creativity and provoke such higher level thinking skills as anticipation, finding novel relationships, visual imagery, and making analogies. (With humour, we) have the ability to perceive situations from an original and often interesting vantage point. (We) thrive on finding incongruity and perceiving absurdities, ironies and satire.

(In order) to acquire the characteristics of creative problem solvers, (we need to learn to) distinguish between situations of human frailty and fallibility which are in need of compassion and those which are truly funny.”

Extract from ‘Habits of Mind’ - Art Costa and Bena Callick

THINKING DISPOSITION no. 11

Striving for Accuracy

Check it again!



Accuracy rarely comes naturally. It's far easier to give things our partial attention: to complete tasks while listening to the radio or to move eagerly on to something else the moment we finish a piece of work. And yet, would we want to be treated by a doctor who dished out a less than perfectly accurate diagnosis? Or employ an architect who designed us a shoddy home? And what would we think of a dentist who pulled out the wrong tooth?!

We sometimes forget just how important it is to practise the habit of accuracy. In so many ways, the world depends upon it. We need to set ourselves high standards, to be self confident yet self critical and to do our best to ensure that our errors don't let us or other people down.

If this means checking and even double-checking our work, then it's worth it if the result is that we can be proud of what we do.

"The difference between failure and success is doing a thing nearly right and doing a thing exactly right." Edward Simmons

THINKING DISPOSITION no. 12

Thinking Flexibly

Look at it another way!



It's important to make up your mind very carefully – to consider all the evidence, generate lots of possibilities and avoid jumping to conclusions. However, even then, you won't always get it right!

If someone else puts forward a better idea or if you discover something new that you didn't know before, be prepared to change your mind. Don't stick to your original viewpoint simply because you had it first. Being able to consider alternatives, change perspectives and look at things another way is a sign of intellectual strength, not weakness.

"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change." Charles Darwin

"Faced with the choice between changing one's mind and proving that there is no need to do so, almost everybody gets busy on the proof." John Kenneth Galbraith

THINKING DISPOSITION no. 13

Managing Impulsivity

Take time to think!



Being impulsive is often portrayed as a positive quality. We think of an impulsive person as someone who is willing to take a chance, go out on a limb, live for the moment...

Yet impulsivity needs to be watched carefully. If what it means is doing or saying something without thinking it through, then it often causes no end of problems. Far more powerful is the person who remains calm, thoughtful and deliberative when a decision needs to be made. Who stops and thinks before acting.

That's not to say we should never take a risk. Deciding to take a risk is sometimes exactly what is needed if we're to avoid paralysis and make progress. The decision can only be made, however, when the pros and the cons have been considered.

"Take time to deliberate; but when the time for action arrives, stop thinking and go in." Andrew Jackson

"I can give you a six word formula for success: Think things through - then follow through." Eddie Rickenbacker

THINKING DISPOSITION no. 14

Showing Initiative

Set your own direction!



Successful people learn from the past but look to the future. They take responsibility for determining their own direction – for managing their time, setting their own goals and demonstrating the self discipline that is needed to achieve them.

The saying that 'life is what you make it' is worth remembering. Opportunities rarely fall into our laps – and even when they do, it often takes an enterprising person to recognise what's happened and act upon it. As you look ahead to entering a new school year in the Autumn, why not make it your aim to be more resourceful, to show greater initiative and to start guiding your own future?

"The future is not just some place we are going but one we are creating. The paths to it are not found but made and the activity of making them changes both the maker and the destination."
John Schaar

THINKING DISPOSITION no. 15

Communicating with Clarity and Precision

Be clear!



Language and thinking are closely entwined. It is often said that when you hear fuzzy language, it's a sure sign of fuzzy thinking. And even when it isn't - when there are careful and perceptive thoughts underpinning the jumble of confused words - few will stop to give the speaker the benefit of the doubt!

A successful person will strive to communicate accurately and articulately in both written and oral form. He or she will choose words thoughtfully, taking care to use precise language that avoids overgeneralizations, deletions, distortions and exaggerations.

Language is an art. It takes practice to perfect it.

"Wise men talk because they have something to say; fools, because they have to say something." Plato

"All my life I wanted to be somebody. But I see now I should have been more specific." Jane Wagner

THINKING DISPOSITION no. 16

Listening with Empathy and Understanding

Understand others!



We spend about 55% of our lives listening, which is possibly why so many of us assume we're naturally good at it. And yet people often say they're listening when in fact they are:

- Daydreaming and only giving half their attention
- Jumping to conclusions about what the other person is meaning
- Rehearsing in their heads what they will say when it's their turn to speak

To listen genuinely to another person requires us to notice and set aside these bad habits. It involves concentration to stay focused, empathy to hear and feel the other point of view, and respect to give it the attention it deserves.

We can learn a great deal from other people - but we need to learn to listen first!

"The simple act of paying attention can take you a long way." Keanu Reeves

THINKING DISPOSITION no. 17

Applying past knowledge

Use what you learn!



When confronted with a new and perplexing problem, the most successful people seek connections with what they already know - saying things like, "This reminds me of...." or "This is just like the time when I..."

Too often, however, we begin each new task as if it were being approached for the very first time! Instead of recalling how we solved a similar problem previously, we take the lazy option and treat each experience as a completely separate entity. This slows down learning and gets in the way of progress.

We need to try to make links between what we discover each day and what we've learnt in the past; building upon what we know and transferring prior knowledge and skills beyond the situations in which they were originally learned.

"If I have seen further it is by standing on the shoulders of giants." Isaac Newton

"Life must be understood backwards. But it must be lived forward." Soren Kierkegaard

THINKING DISPOSITION no. 18

Making the most of your potential

Believe in yourself!



Everyone's brain is unique and this, combined with our widely varying experiences, means that we each have particular strengths and opportunities to excel. What is more, our brains have an extraordinary capacity to develop new connections and pathways, so that, if we want to, we can learn all manner of new skills and dispositions to add to the ones we've already got.

Often it's simply a matter of confidence - having a positive attitude. To make the most of your potential, you need to believe that it is possible to succeed. Add some clear goals and a good dose of persistence and you have a winning formula.

There really is no excuse for sitting back and allowing our brains to vegetate. Who knows what you could do if you put your mind to it!

"The greatest unexplored territory in the world is the space between our ears." Bill O'Brien

"Don't limit yourself. Most people limit themselves to what they think they can do. You can go as far as your mind lets you." Mary Kay Ash

THINKING DISPOSITION no. 19

Remaining Open to Learning

Keep your mind active and open!



"Intelligent people are in a continuous learning mode. Their confidence, in combination with their inquisitiveness, allows them to constantly search for new and better ways. People with this Habit of Mind are always striving for improvement, always growing, always learning, always modifying and improving themselves. They seize problems, situations, tensions, conflicts and circumstances as valuable opportunities to learn.

A great mystery about humans is that we confront learning opportunities with fear rather than mystery and wonder. We seem to feel better when we *know* rather than when we *learn*. We defend our biases, beliefs, and storehouses of knowledge rather than inviting the unknown, the creative and the inspirational. Being certain and closed gives us comfort while being doubtful and open gives us fear.

...(And yet), paradoxically, unless you start off with humility, you will never get anywhere. As the first step, you have to have already what will eventually be the crowning glory of all learning: the humility to know - and admit - that you don't know and are not afraid to find out."

Quoted from <http://www.habits-of-mind.net/pdf/16HOM2.pdf>

"Insanity is continuing to do the same thing over and over and expecting different results."
Albert Einstein

"Every person you meet - and everything you do in life - is an opportunity to learn something."
Tom Clancy

THINKING DISPOSITION no. 20

Thinking about your Thinking

Reflect!



Thinking about your thinking' – sometimes given the rather fancy title 'metacognition' – is arguably one of the most powerful mystery ingredients in the 'successful thinker' package.

It involves becoming aware of the *way you think* - of the particular patterns you tend to follow and the strategies that do and don't work for you. It means coming to recognise situations where these skills and methods are going to be valuable and situations where they won't.

Our students are learning to identify their thinking strengths and weaknesses. Some are beginning to recognise that they are incredible lateral thinkers, full of quirky and original ideas; others have identified a talent for thinking logically, for recognising when a conclusion does and doesn't follow from the given evidence; some are great at asking insightful, probing questions – perhaps the type that gets right to the heart of an issue or those that encourage us to think about something in a totally new way.

Developing this sort of self-awareness not only gives our students greater confidence in their own unique abilities but also means that they have a much greater chance of taking the next steps forward.

"He who knows others is wise. He who knows himself is enlightened." Lao-Tzu

"I know of no more encouraging fact than the unquestionable ability of man to elevate his life by conscious endeavour." Henry David Thoreau