

Arthur Costa argues
for Habits of Mind as
the engines of
effective thinking

Learnings that last

A critical characteristic of *intelligent* human beings is that they not only have information, they also know how to act on it. They know how to perform effectively under those challenging conditions that demand strategic reasoning, insightfulness, perseverance, creativity and craftsmanship to resolve complex problems. While they may be deemed 'smart' because they possess many answers, they also know how to behave intelligently when they *don't* know answers. As educators, therefore, we should focus on teaching students how to produce knowledge rather than merely how to reproduce knowledge.

By definition, a problem is any stimulus, question, task, phenomenon or discrepancy, the explanation for which is not immediately known. What behaviours are indicative of the efficient, effective problem solver? What do human beings do when they approach and resolve problems intelligently? A considerable body of research by Ames (1997), Briggs (1999), Ennis (2001), Feuerstein (1980), Glatthorn and Baron (1985), Goleman (1995), Perkins (1985) and Sternberg (1985) indicates that there are some identifiable characteristics of effective thinkers, who are not necessarily 'geniuses' or members of any privileged elite. The characteristics have been identified in successful artists, physicians, engineers, auto mechanics, teachers, entrepreneurs, salespeople, and parents – people in all walks of life.

We call these characteristics 'Habits of Mind'. They are patterns of thinking and behaving in intelligent ways and are displayed when confronted with life's complexities and ambiguities.

Describing Habits of Mind

To learn new habits is everything, for it is to reach the substance of life. Life is but a tissue of habits.

Henri Fredric Amiel

A Habit of Mind means having a disposition to behave intelligently when confronted with problems. When we experience dichotomies, are confused by dilemmas, or come face to face with uncertainties – our most effective actions require drawing forth certain patterns of



intellectual behaviour. When we draw upon these intellectual resources, the results that are produced are more powerful, of higher quality and of greater significance than if we fail to employ them.

Employing Habits of Mind requires a composite of many skills, attitudes, cues and past experiences. Being in the habit of using one or more of these patterns means:

Valuing it: choosing to employ a pattern of intellectual behaviours rather than other, less productive patterns. It means that we value one pattern of thinking over another, which therefore implies conscious choice-making about which pattern should be employed at a given time.

Being inclined to use it: feeling the need or desire to employ a pattern of intellectual behaviours. Greater satisfaction and feelings of efficacy, power and control are enjoyed when the behaviours are employed.

Remaining alert to situations: being sensitive to and perceiving opportunities for, and appropriateness of employing the pattern of behaviour. There is an alertness to the contextual cues that signal this as an appropriate time and circumstance in which the employment of this pattern would be useful.

Applying capabilities: possessing the basic skills and capacities to carry through with the behaviours. A level of skillfulness is required to employ and execute the behaviours effectively over time.

Making a commitment: constantly striving to reflect on and improve performance of the pattern of intellectual behaviour. As a result of each experience in which these behaviours are employed, the effects of their use are reflected upon, evaluated, modified and carried forth to future applications.

Sixteen Habits of Mind

One's intelligence is the sum of one's habits of mind.

Lauren B. Resnick

Following is a list of 16 Habits of Mind. This list is a compilation of investigations and descriptions of what efficacious human beings do when they behave intelligently. It is not meant to be complete but rather serves as a starting point for further elaboration and description.

1. Persisting: persevering on a task through to completion; remaining focused. *Stick to it!*

2. Managing impulsivity: thinking before acting; remaining calm thoughtful and deliberative. *Take your Time!*

3. Listening with understanding and empathy: devoting mental energy to another person's thoughts and ideas; holding in abeyance one's own thoughts in order to perceive another's point of view and emotions. *Understand Others!*

4. Thinking flexibly: being able to change perspectives, generate alternatives, consider options. *Look at it another way!*

5. Thinking about your thinking (Metacognition): being aware of one's own thoughts, strategies, feelings and actions and their effects on others. *Know your knowing!*

6. Striving for accuracy and precision: having a desire for exactness, fidelity and craftsmanship. *Check it again!*

7. Questioning and problem posing: having a questioning attitude; knowing what data are needed and developing questioning strategies to produce those data. Finding problems to solve. *How do you know?*

8. Applying past knowledge to novel situations:

accessing prior knowledge; transferring knowledge beyond the situation in which it was learned. *Use what you learn!*

9. Thinking and communicating with clarity and precision: striving for accurate communication in both written and oral form; avoiding over generalisations, distortions and deletions. *Be clear!*

10. Gathering data through all senses: gathering data through all the sensory pathways – gustatory, olfactory, tactile, kinesthetic, auditory and visual. *Use your natural pathways!*

11. Creating, imagining, and innovating: Generating new and novel ideas, fluency, originality. *Try a different way!*

12. Responding with wonderment and awe: finding the world awesome, mysterious and being intrigued with phenomena and beauty. *Have fun figuring it out!*

13. Taking responsible risks: being adventuresome; living on the edge of one's competence. *Venture out!*

14. Finding humour: finding the whimsical, incongruous and unexpected. Being able to laugh at oneself. *Laugh a little!*

15. Thinking interdependently: being able to work in and learn from others in reciprocal situations. *Work/learn together!*

16. Remaining open to continuous learning: having humility and pride when admitting we don't know; resisting complacency. *Learn from experiences!*

These habits are seldom performed in isolation. Rather, clusters of such habits are drawn forth and employed in various situations. When listening intently, for example, one employs flexibility, metacognition, precise language and perhaps questioning.

Why teach toward Habits of Mind?

Numerous schools throughout the world have adopted the Habits of Mind with beneficial results. School leaders report an increase in student achievement, decreases in discipline problems, greater self-awareness, self-control and self-confidence, a more unified and coherent approach to curriculum, greater parent involvement and a more focused school culture. Some of the reasons for these achievements are thought to be as follows:

Shared vision

Senge (1990) suggests that a culture is people thinking together. As individuals share meaning, they negotiate and build a culture. As groups become more skillful in employing the Habits of Mind, the habits begin to pervade the value system resulting in the changing of the practices and beliefs of the entire organisation. By employing the Habits of Mind, the group-mind illuminates issues, solves problems and accommodates differences. By using the Habits of Mind, the group builds an atmosphere of trust in human relationships, trust in the processes of interaction, and trust throughout the organisation. The Habits of Mind facilitate the creation of a shared vision.

Transdisciplinary

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

Horace Mann, American Educator

A shared vision transcends grade levels and subject areas. The Habits of Mind apply to all grade levels and disciplines. All teachers can agree on these desirable qualities. Persistence is as valued in social sciences as it is in music, and physical education. Creative thinking is as basic to science as it is to literature and the arts. Striving for accuracy and precision is as important to vocational education as it is to mathematics. Students are more likely to achieve and habituate because they are reinforced, transferred and revisited throughout the school, at home and in the community.

Working together, instructional teams in schools decide which Habits of Mind they wish students to develop and employ. The teams will ask questions such as: What will we do to assist their development? How might we work collaboratively to determine if students are becoming more habituated over time? What will we see or hear in student behaviours as evidence of their growth? How might we practise and assess our own growth toward these Habits of Mind through our work together?

As good for adults as they are for children

If there is anything that we wish to change in the child, we should first examine it and see whether it is not something that could better be changed in ourselves. Carl Jung

Furthermore, the dispositions are as applicable to developing adult capacities for effective problem solvers and continuous learners as they are to students. All members of the learning organisation continue to become more thoughtful. The outcomes for students and the work culture of the school become congruent and synonymous.

No one ever 'achieves mastery' of the Habits of Mind. All of us can continue to perfect our performance, to develop our capacities, to be more alert to opportunities for their use and to more deliberately employ the Habits of Mind throughout our lifetime. What makes the Habits of Mind 'value added' is that they are as suitable for the adults in the school and community as they are for students. All of us can become continual learners.

Essential and enduring learnings

Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit.
Aristotle

Modern society recognises a growing need for informed, skilled and compassionate citizens who value truth, openness, creativity, interdependence, balance and love in their lives.

As professional educators, we may be pressured for immediate, measurable results on standardised performances. This assumes that, if teachers taught academic subjects and if students were to learn and be evaluated on how well they learn the minute sub-skills in each content area, they would somehow become the kind of people we want them to be (Seiger-Eherenberg, 1991 p 6). Our desire is to make learning and instruction more reflective, more complex and more relevant to society's and students' diverse needs and interests, now and in their future.

We want our children to develop those habits that lead them to become lifelong learners, effective problem solvers and decision makers, able to communicate with a diverse range of people and to understand how to live successfully in a rapidly changing, high-tech world.

In summary

Drawn from research on human effectiveness, descriptions of virtuoso performers and analyses of the characteristics of remarkable people, sixteen Habits of Mind have been identified. These Habits of Mind may serve as mental disciplines. When confronted with problematic situations, students, parents and teachers might habitually employ one or more of these Habits of Mind by asking themselves, 'What is the most *intelligent thing* I can do right now?'

- How can I learn from this experience? What are my resources? How can I draw on my past successes with problems like this? What do I already know about the problem? What resources do I have available or need to generate?
- How can I approach this problem? How might I look at the situation in another way? How can I draw upon my repertoire of problem solving strategies? How can I look at this problem from a fresh perspective?
- How can I illuminate this problem to make it clearer and more precise? Do I need to check out my data sources? How might I break this problem down into its component parts and develop a strategy for understanding and accomplishing each step?
- What do I know or not know? What questions do I need to ask? What strategies are in my mind now? What am I aware of in terms of my own beliefs, values and goals with this problem? What feelings or emotions am I aware of which might be blocking or enhancing my progress?
- To whom might I turn for help? How does this problem affect others? How can we solve it together and what can I learn from others that would help me become a better problem solver?

These Habits of Mind transcend all subject matters commonly taught in school. They are characteristic of peak performers, whether they be in homes, schools, athletic fields, organisations, the military, governments, churches or corporations. They are what make marriages successful, learning continual, workplaces productive and democracies enduring.

The goal of education, therefore, should be to support others and ourselves in liberating, developing and habituating these Habits of Mind more fully. Taken together, they are a force directing us toward increasingly authentic, congruent, ethical behaviour – the touchstones of integrity. They are the tools of disciplined choice making. They are the ‘right stuff’ that makes human beings efficacious.

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- Book 1: Discovering and Exploring Habits of Mind
- Book II: Activating and Engaging Habits of Mind
- Book III: Assessing and Reporting on Habits of Mind,
- Book IV: Integrating and Sustaining Habits of Mind.

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