

Habits of mind and expansive dispositions

'Habits of mind' (HoM) as an approach to teaching and learning is the specific creation of Art Costa and Bena Kallick¹ who suggest that there are sixteen habits of mind which define what humans do when they behave intelligently.

Costa and Kallick's Habits of Mind	
1. Persisting	9. Thinking about thinking (metacognition)
2. Thinking and communicating with clarity and precision	10. Taking responsible risks
3. Managing impulsivity	11. Striving for accuracy
4. Gathering data through all senses	12. Finding humour
5. Listening with understanding and empathy	13. Questioning and posing problems
6. Creating, imagining, innovating	14. Thinking interdependently
7. Thinking flexibly	15. Applying past knowledge to new situations
8. Responding with wonderment and awe	16. Remaining open to continuous learning

At the same time, parallel thinking in the UK widely in use among primary and secondary educators is Guy Claxton's Building Learning Power² with its 17 HoM.

Building Learning Power	
<i>Resilience - Being ready, willing and able to lock on to learning</i> 1. Absorption 2. Managing distractions 3. Noticing 4. Perseverance	<i>Reflectiveness - Being ready, willing and able to become more strategic about learning</i> 10. Planning 11. Revising 12. Distilling 13. Meta-learning
<i>Resourcefulness - Being ready, willing and able to learn in different ways</i> 5. Questioning 6. Making links 7. Imagining 8. Reasoning 9. Capitalising	<i>Reciprocity - Being ready, willing and able to learn alone and with others</i> 14. Interdependence 15. Collaboration 16. Empathy and listening 17. Imitation

In general education the phrase 'habits of mind' and associated phrases such as 'dispositions for learning' and 'learning attributes' have also been associated strongly with the work of Project Zero at Harvard University³.

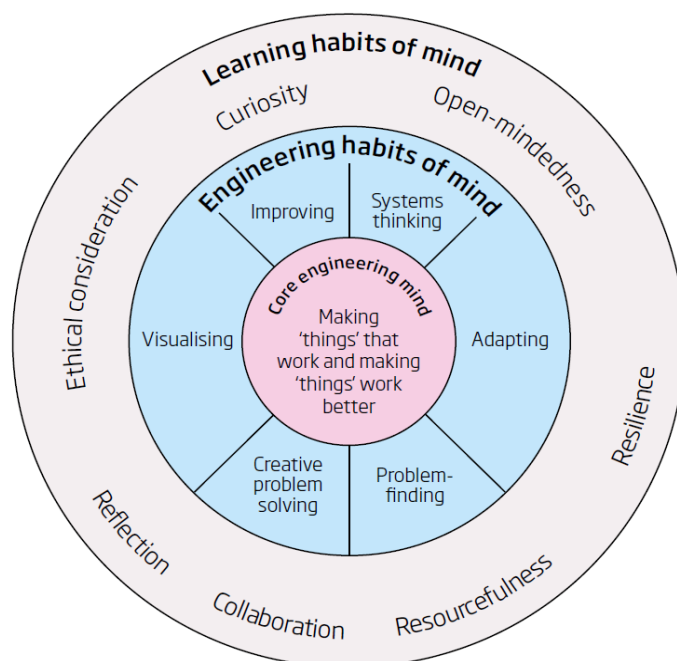
¹ Costa, A. and Kallick, B. (2002) *Discovering and Exploring Habits of Mind*. Alexandria, Virginia: Association for Supervision and Curriculum Development.

² Claxton, G. (2002) *Building Learning Power*. Bristol: TLO Ltd.

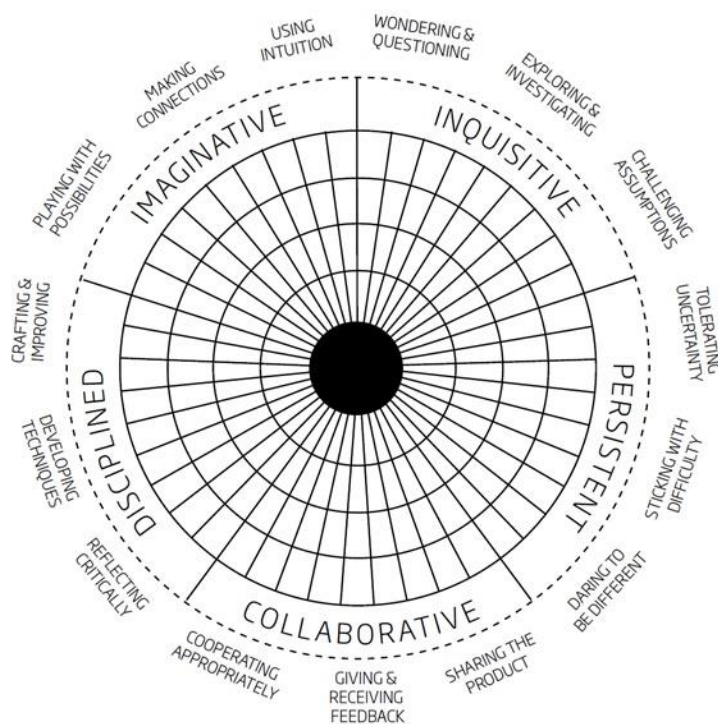
³ See for example <http://learnweb.harvard.edu/alps/thinking/docs/habits.pdf> which explores mathematics and science.

The Centre for Real-World Learning has developed a number of models for expansive habits of mind.

Centre for Real-World Learning's habits of an engineer⁴



Centre for Real-World Learning's Creative habits of mind^{5 6}

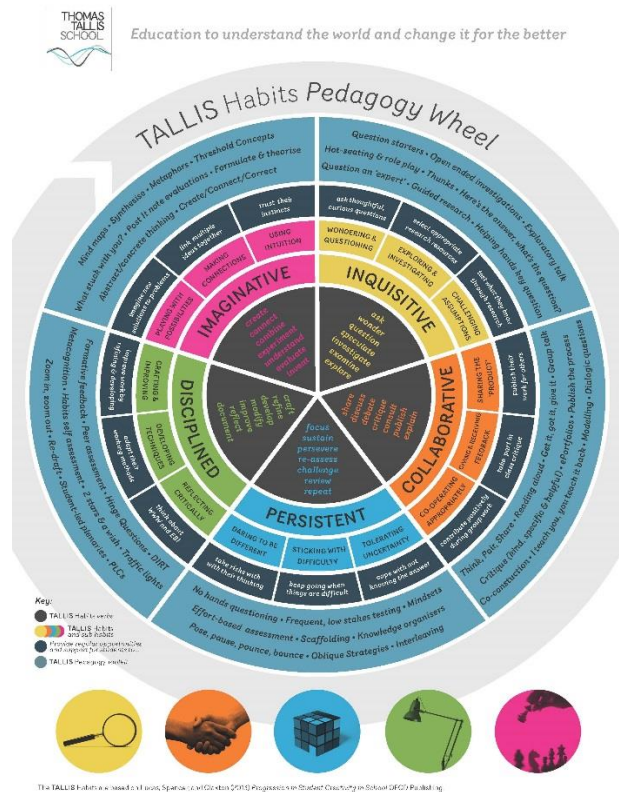
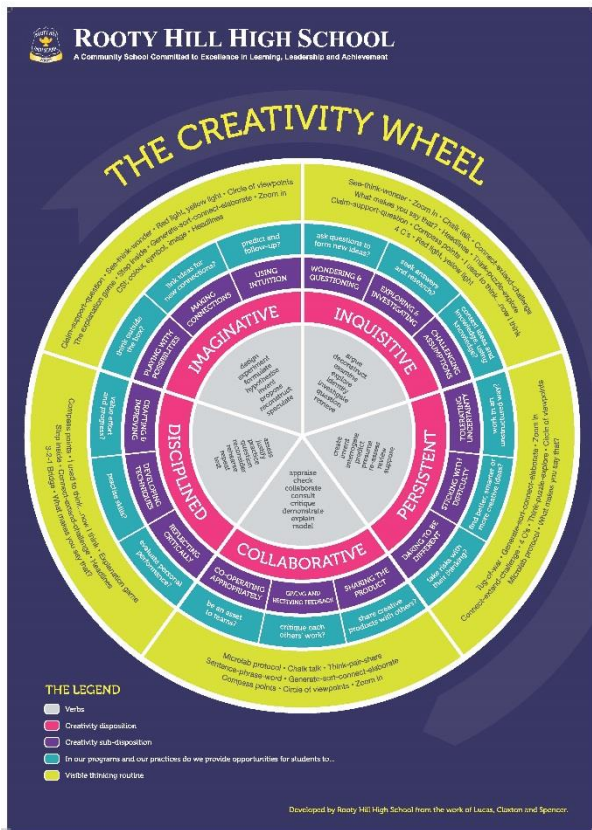


⁴ Lucas, B., Hanson, J., and Claxton, G. (2014) *Thinking like an engineer*. London: Royal Academy of Engineering. Available: www.raeng.org.uk/thinkinglikeanengineer.

⁵ Lucas, B., and E. Spencer (2017) *Teaching Creative Thinking: Developing learners who generate ideas and can think critically*. Carmarthen: Crown Publishing

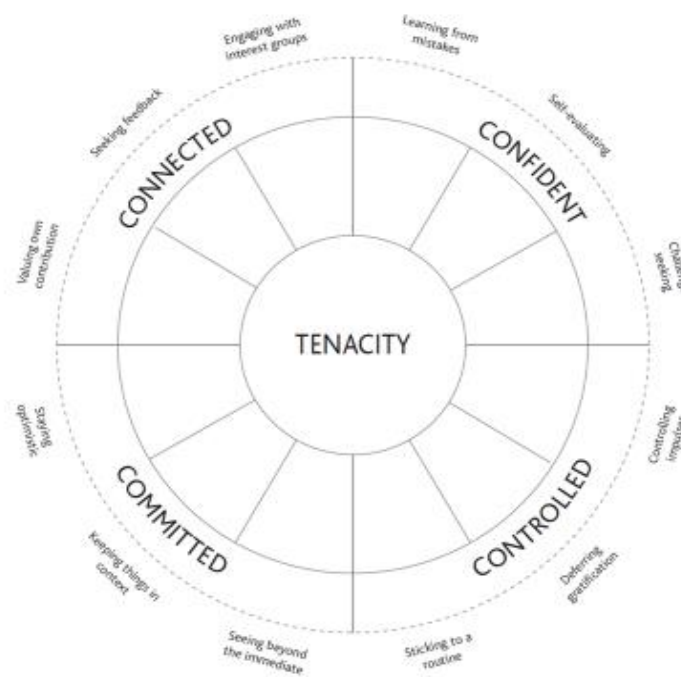
⁶ Lucas, B., Claxton, G. and E. Spencer (2013) 'Progression in Student Creativity in School: First Steps Towards New Forms of Formative Assessments', *OECD Education*. Working Papers, No. 86, OECD Publishing. <http://dx.doi.org/10.1787/5k4dp59msdwk-en>

Here are two examples of schools which have developed these ideas:



Recently CRL has developed a model of tenacity with four HofM:

Centre for Real-World Learning's model of tenacity⁷



⁷ Lucas, B, and E. Spencer (2018) *Developing Tenacity: Teaching learners how to persevere in the face of difficulty*. Carmarthen: Crown Publishing