The Habits of Improvers
And the learning needed to cultivate and sustain them

Prof Bill Lucas
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‘Healthcare will not realise its full potential unless change making becomes an intrinsic part of everyone’s job, every day, in all parts of the system.’

Batalden, P., and Davidoff, F. (2007) What is ‘quality improvement’ and how can it transform healthcare? *Quality and safety in healthcare* 16 (1) 2-3
Why is learning for improvement apparently so hard?

‘National bodies should develop a strategy for quality improvement and leadership development for the NHS in England to enable it to become a learning organisation.’

‘Foster whole-heartedly the growth and development of all staff, including their ability and support to improve the processes in which they work.’
Why now?

- The Health Foundation’s interests
- Growth of interest in science of improvement
- Expansion of ‘courses’ in ‘QI’
- NHS Five Year Forward View
- Lack of buy-in from health and social care
- Groups like CLAHRCs
- Joint Royal Colleges of Physicians Training Board Task and Finish Group
- Lack of compelling Theory of Change
Theory of Change

If:
- we clearly articulate the range of habits which improvers need to have, and
- the knowledge and skills which will help them improve care

Then:
- we can more precisely specify the learning required, and
- the kinds of methods which are most likely to be helpful, and
- when the best times for this learning to take place are

So that:
- learning to build improvement capability becomes more widespread, and
- more staff want to change their practices, and
- more staff want to and have time and support to undertake learning

So that:
- the NHS embraces an ethic of learning, and
- the experiences of all patients and service-users are improved, and
- considerable value is created for all those who create, deliver and use NHS services.
‘Improvement science is an emerging concept which focuses on exploring how to undertake quality improvement well. It inhabits the sphere between research and quality improvement by applying research methods to help understand what impacts on quality improvement.’

The Health Foundation

‘The primary goal of this scientific field is to determine which improvement strategies work as we strive to assure effective and safe patient care.’

Improvement Science Research Network
[The idea of Habits]
‘Intelligence is the habit of persistently trying to understand things and make them function better. Intelligence is working to figure things out, varying strategies until a workable solution is found… One’s intelligence is the sum of one’s habits of mind.’

### Figure 10 – Building Learning Power

<table>
<thead>
<tr>
<th>Resilience</th>
<th>Being ready, willing and able to lock on to learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Absorption</td>
<td>• Flow, the pleasure of being rapt in learning</td>
</tr>
<tr>
<td>• Managing distractions</td>
<td>• Recognising and reducing distractions</td>
</tr>
<tr>
<td>• Noticing</td>
<td>• Really sensing what’s out there</td>
</tr>
<tr>
<td>• Perseverance</td>
<td>• Stickability; tolerating the feelings of learning</td>
</tr>
<tr>
<td>Resourcefulness</td>
<td>Being ready, willing and able to learn in different ways</td>
</tr>
<tr>
<td>• Questioning</td>
<td>• Getting below the surface; playing with situations</td>
</tr>
<tr>
<td>• Making links</td>
<td>• Seeking coherence, relevance and meaning</td>
</tr>
<tr>
<td>• Imagining</td>
<td>• Using the mind’s eye as a learning theatre</td>
</tr>
<tr>
<td>• Reasoning</td>
<td>• Thinking rigorously and methodically</td>
</tr>
<tr>
<td>• Capitalising</td>
<td>• Making good use of resources</td>
</tr>
<tr>
<td>Reflectiveness</td>
<td>Being ready, willing and able to become more strategic about learning</td>
</tr>
<tr>
<td>• Planning</td>
<td>• Working learning out in advance</td>
</tr>
<tr>
<td>• Revising</td>
<td>• Monitoring and adapting along the way</td>
</tr>
<tr>
<td>• Distilling</td>
<td>• Drawing out the lessons from experience</td>
</tr>
<tr>
<td>• Meta-learning</td>
<td>• Understanding learning, and yourself as a learner</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Being ready, willing and able to learn alone and with others</td>
</tr>
<tr>
<td>• Interdependence</td>
<td>• Balancing self-reliance and sociability</td>
</tr>
<tr>
<td>• Collaboration</td>
<td>• The skills of learning with others</td>
</tr>
<tr>
<td>• Empathy and listening</td>
<td>• Getting inside others’ minds</td>
</tr>
<tr>
<td>• Imitation</td>
<td>• Picking up others’ habits and values</td>
</tr>
</tbody>
</table>

Adapted from Claxton, 2002[^43]
<table>
<thead>
<tr>
<th>Scientific habits of mind</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Open-mindedness</strong></td>
<td>Being receptive to new ideas, prepared to consider the possibility that something is true and willing to change ideas in the light of evidence</td>
</tr>
<tr>
<td><strong>Scepticism</strong></td>
<td>Using critical questioning, adopting a critical appraisal approach, only according provisional status to claims until proved otherwise</td>
</tr>
<tr>
<td><strong>Rationality</strong></td>
<td>Appealing to good reason and logical arguments as well as a need to revise arguments in the light of evidence and argument</td>
</tr>
<tr>
<td><strong>Objectivity</strong></td>
<td>Adhering to accepted modes of inquiry in different disciplines and recognising the need to reduce the idiosyncratic contributions of the investigator to a minimum and always looking for peer scrutiny and replication of findings</td>
</tr>
<tr>
<td><strong>Mistrust of arguments from authority</strong></td>
<td>Treating arguments sceptically irrespective of the status of the originator</td>
</tr>
<tr>
<td><strong>Suspension of belief</strong></td>
<td>Not making immediate judgements if evidence is insufficient</td>
</tr>
<tr>
<td><strong>Curiosity</strong></td>
<td>Demonstrating a desire to learn, inquisitiveness and a passion for discovery</td>
</tr>
</tbody>
</table>

Adapted from Calik and Coll (2012)42
Learning habits of mind

Curiosity
Open-mindedness

Engineering habits of mind

Improving
Systems thinking

Core engineering mind

Making 'things' that work and making 'things' work better

Visualising
Adapting

Creative problem solving
Problem-finding

Ethical consideration

Resilience

Reflection
Collaboration
Resourcefulness
The Habits of an Improver
Might a Habits of Mind perspective help us to:

1. Think more about the desired outcomes of learning?
2. Avoid simply adding more ‘stuff’ into the curriculum?
3. Provide a framework for formative conversations between curriculum developers and learners, academics and those in health and social care?
4. Act as spur for debate about how people actually think and act when they are improving services?
[The idea of signature pedagogies]
The challenge of converting knowledge and/or skill/competence into Habits of Mind/Dispositions

Aristotle’s idea of φρόνησις – phronesis (practical wisdom and situational awareness)

David Perkins and ‘sensitivity to occasion’
Our current learning methods are not up to the job

‘To the extent that quality and safety are addressed at all, they are taught using pedagogies with a narrow focus on content transmission, didactic sessions that are spatially and temporally distant from clinical work, and quality and safety projects segregated from the provision of actual patient care…’

There is interest beyond health…

‘Improvement science is explicitly designed to accelerate learning-by-doing. It's a more user-centered and problem-centered approach to improving teaching and learning.’

Carnegie Foundation for the Improvement of Teaching and Learning
The idea of ‘signature pedagogy’
What might it be for improving healthcare services?

Figure 13 - The engineering design process

Source - NASA\textsuperscript{142}
Planning, hypothesising, analysing, experimenting, reflecting, refining – developing a ‘growth mindset’

Deep exploration of the engineering problem-solving cycle

Games, computer modelling, complex simulations, role playing

Project-based learning, thinking routines

Modelling, mental rehearsal, infographics storyboarding

Reframing, analysing, practising in different contexts

Making ‘things’ that work and making ‘things’ work better

Core engineering mind

- Creative problem solving
- Problem-finding
- Adapting
- Resilience
- Tackling
- Improving
- Engaging, habits of mind

Visualising

Systems thinking
What are the signature learning methods for developing improvement capability?

1. Sustained opportunities to critically observe and be part of health and social care contexts
2. Coached projects/assignments
3. Peer learning and group critique
4. Mentoring
5. Enquiry-led processes such as action research...

How best to determine the balance of theory and practice?

Which knowledge domains/systems and skill areas?
The mere exposure effect

www.winchester.ac.uk/realworldlearning
www.health.org.uk
www.expansiveeducation.net
www.educatingruby.org

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