



Adaptive Expertise and the Spiral of Inquiry

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Adaptive Expertise

Educators who:

- **Are responsive to the needs of students**
- **Constantly seek new knowledge and understanding**
- **Actively explore alternative solutions**
- **Think evaluatively and check impact**
- **Welcome different perspectives**
- **Act transformatively**

Le Fevre, Timperley,
Twyford & Ell (forthcoming)

Routine to Adaptive Expertise

Routine Expertise

- Apply a set of skills with increasing fluency and efficiency
- Own beliefs are taken for granted and not open to discussion or scrutiny
- Based on notions of novice to expert – practice makes perfect

Adaptive Expertise

- Flexibly retrieve, organise and apply professional knowledge
- Aware of own beliefs underpinning practice and when they get in the way
- Recognise when old problems persist or new problems arise and seek expert knowledge

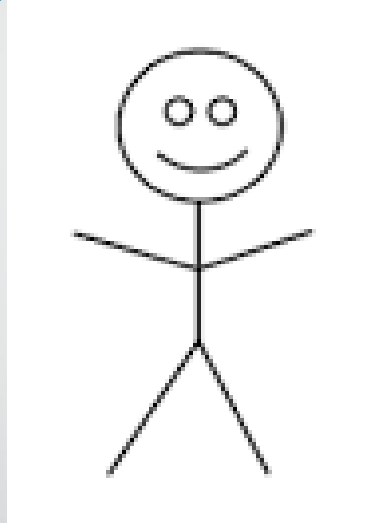
Routine
Expertise
response

Adaptive
Expertise
response

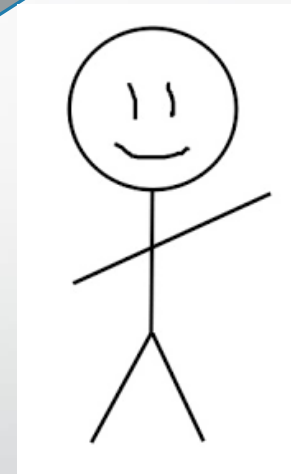


Two students are often off-task in maths. They do not appear to be motivated to even attempt the work.

Routine
Expertise
response



Adaptive
Expertise
response



These students from (*a non-English speaking background*) don't seem to be able to make inferences in their reading.

An example from assessment

Routine expertise

- Assessment and learning are sequential
- Assessment results reflect student capability
- Investigating the impact of teaching undermines professionalism

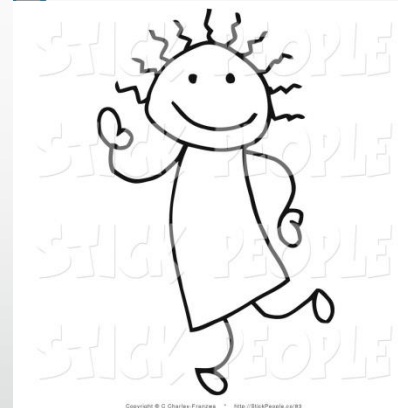
Adaptive expertise

- Assessment and learning are integrated
- Assessment results are about the effectiveness of teaching
- Investigating the impact of teaching is essential to improvement

Routine
Expertise
response

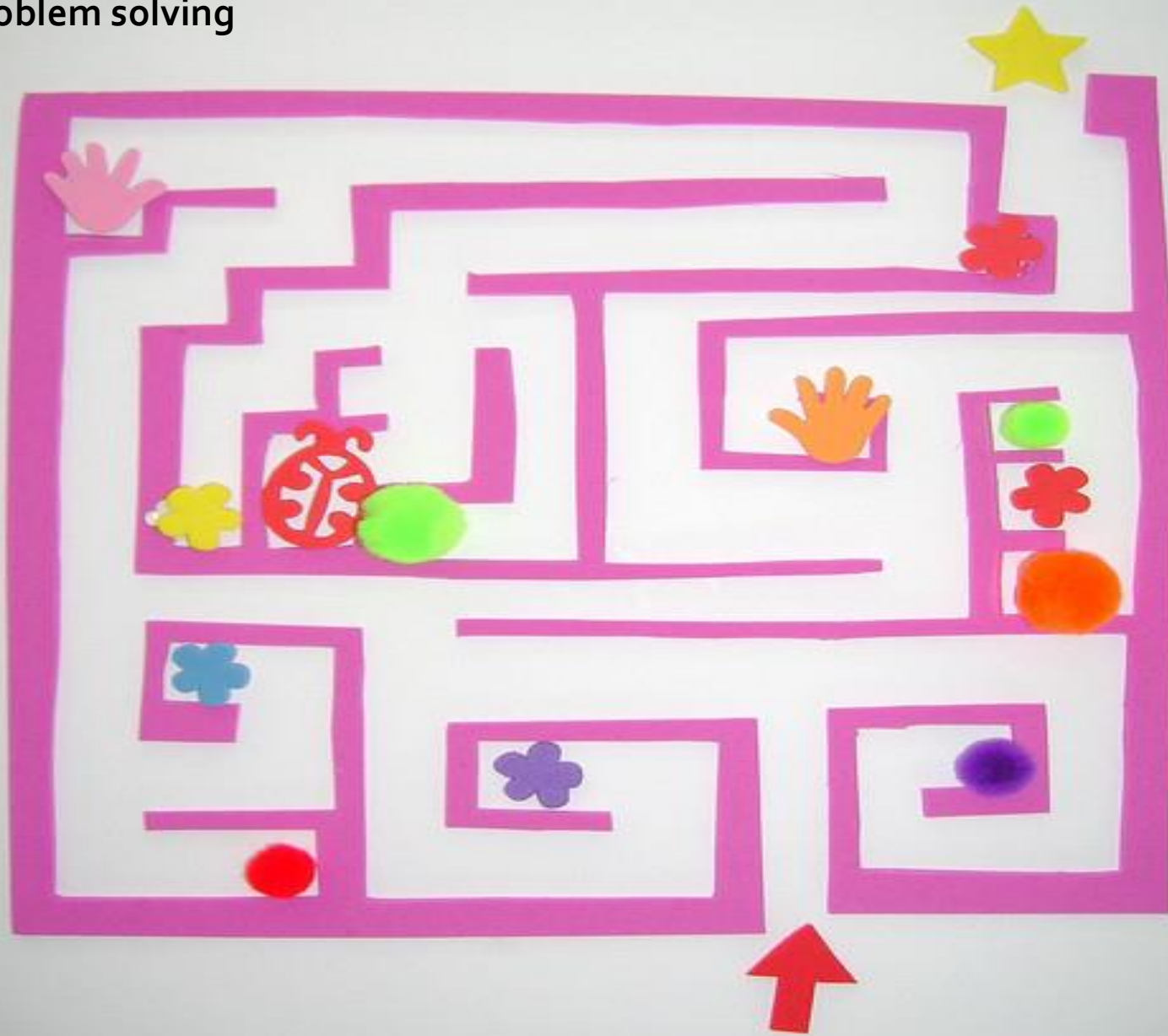


Adaptive
Expertise
response

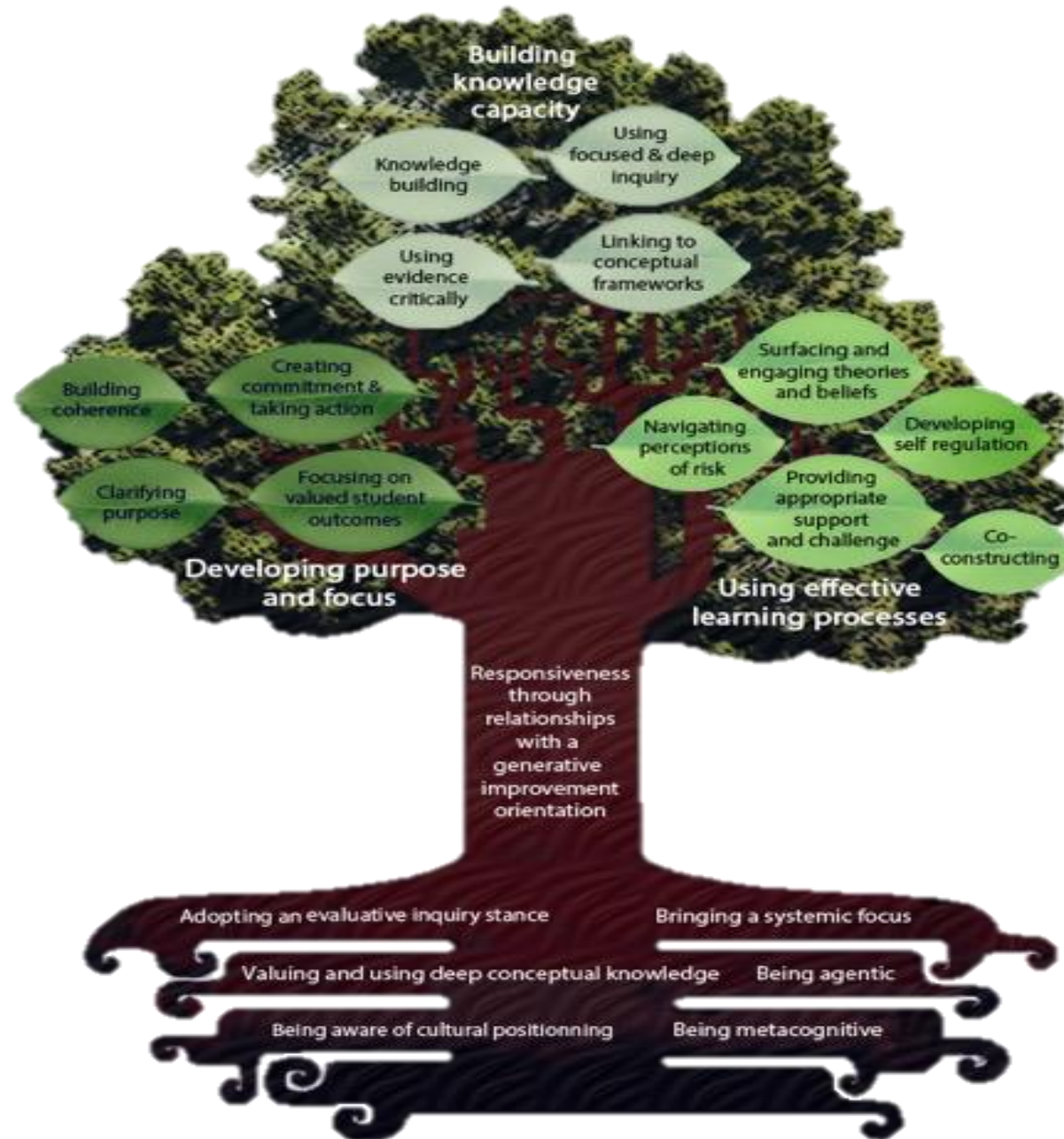


I can't believe that half the students flunked the test and it was so easy!

Different approaches to
problem solving



Leading Powerful Professional Learning: Addressing complexity with adaptive expertise
Le Fevre, Timperley, Twyford & Ell
(forthcoming)



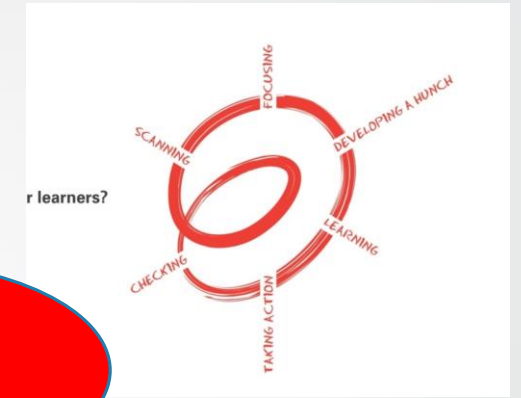
Why Worry?

- Routine expertise works in stable situations with some certainty
 - Standard teaching procedures get the job done well (efficient)
 - Still requires expertise to do so
- Adaptive expertise needed in a changing and unpredictable world
 - Difficult to codify practice
 - Diverse learners in complex settings interacting in unpredictable ways with an uncertain curriculum

Clearly defined problems with clear solutions



Difficult to define problems with less clear solutions



Typical educational problems




From Le Fevre, Timperley, Twyford & Ell, forthcoming

Apply to different types of problems

Technical problems	Adaptive Challenges
Can be solved with new information or a new skill-set	Have no predictable known solution
Are relatively easy to identify	Usually feel uncomfortable to identify and are easy to deny or resist
Have known solutions	Cannot be 'fixed', but can be navigated through
Solutions can be taught	Solutions usually require changes in how we think and act
Can look up the answer - usually a technical problem	Solutions require taking action – experimenting to make new discoveries

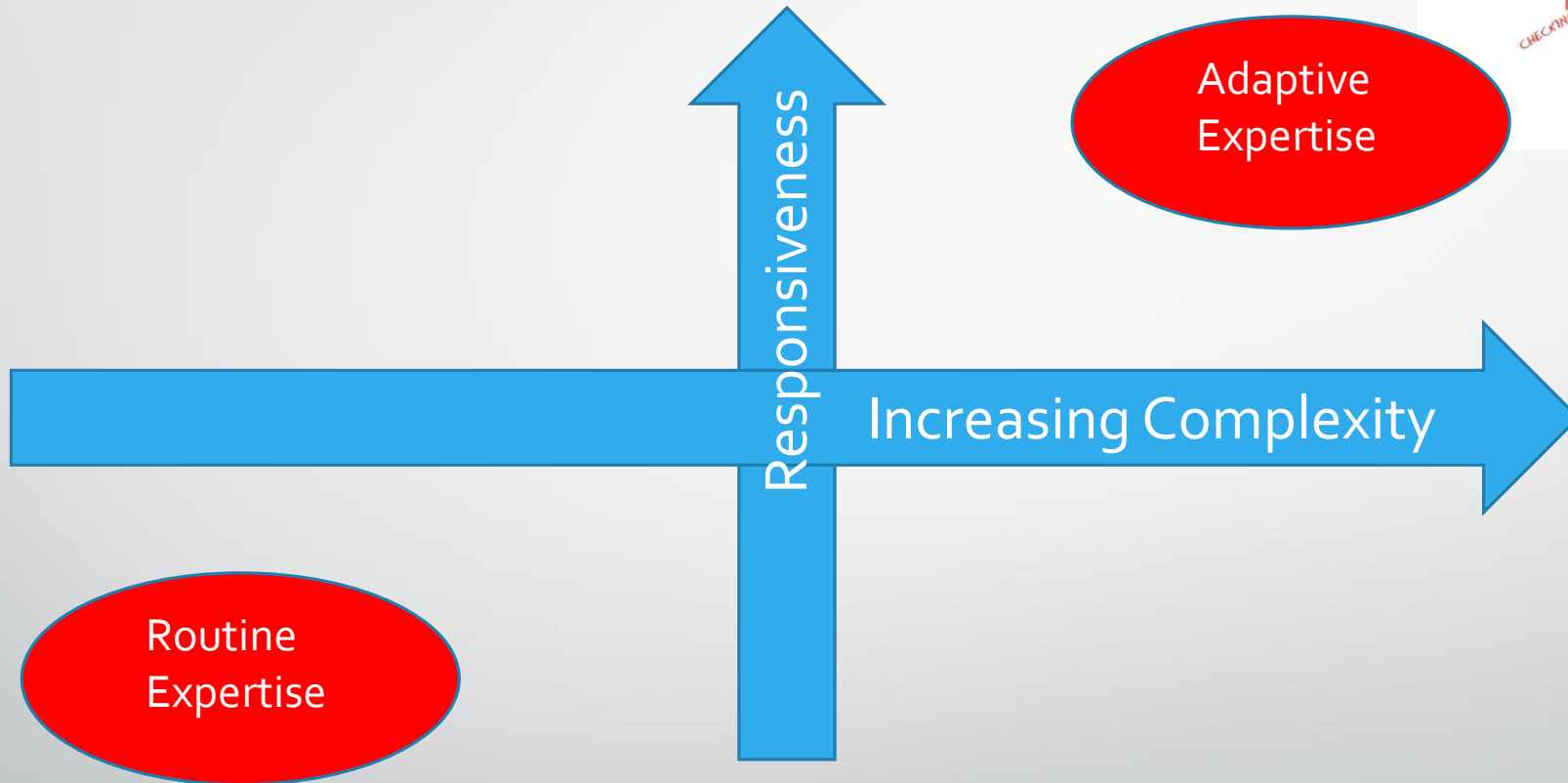
Adapted from Heifetz, R., Grashow, A., & Linsky, M. (2009) The Practice of Adaptive Leadership: Tools and Technics for Changing your Organization and the World. Harvard Business Press.



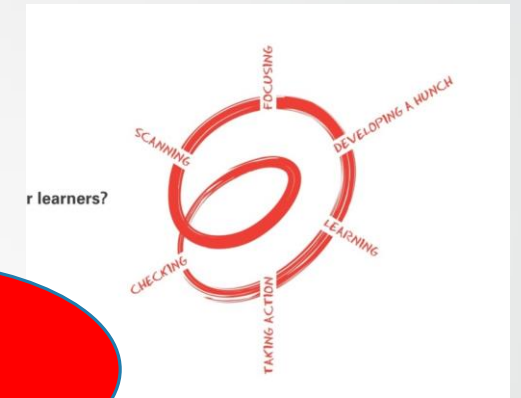
Identify the focus for your current (or recent) spiral of inquiry

- Do you think it is a technical problem or an adaptive complex challenge?

Clearly defined problems with established solutions

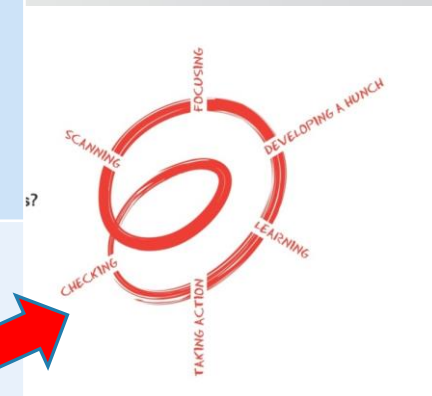


Difficult to define problems with less clear solutions



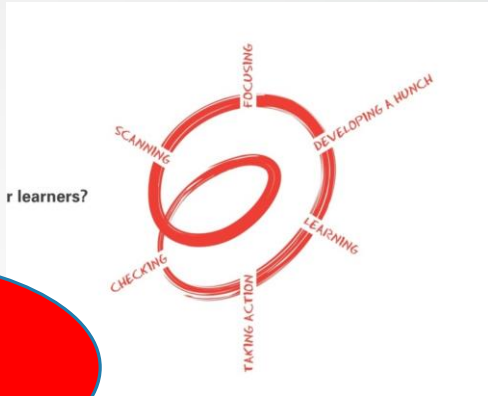
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Best supported by a teacher > learner relationship, where the teacher is the expert (may be PD provider > teachers; leader > teachers)	Best supported through collaborative inquiry



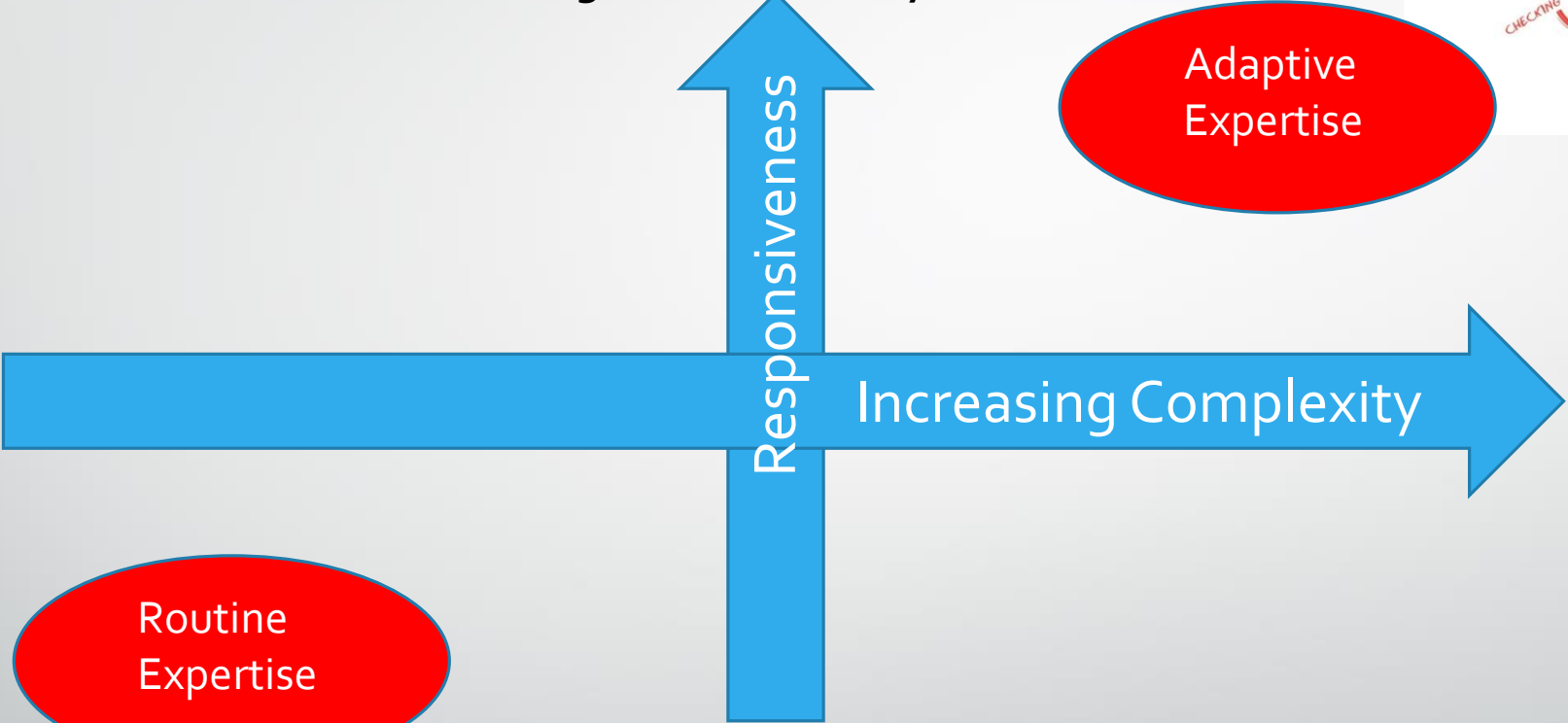
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- Seeking new knowledge and understanding
- Actively exploring alternative solutions
- Thinking evaluatively and checking effectiveness
- Acting transformatively



Clearly defined problems with clear solutions

Difficult to define problems with less clear solutions



- Receiving knowledge
- Working with known solutions
- Assuming effectiveness
- Avoiding different perspectives
- Acting incrementally

From Le Fevre, Timperley, Twyford & Ell, forthcoming

Applying complexity thinking

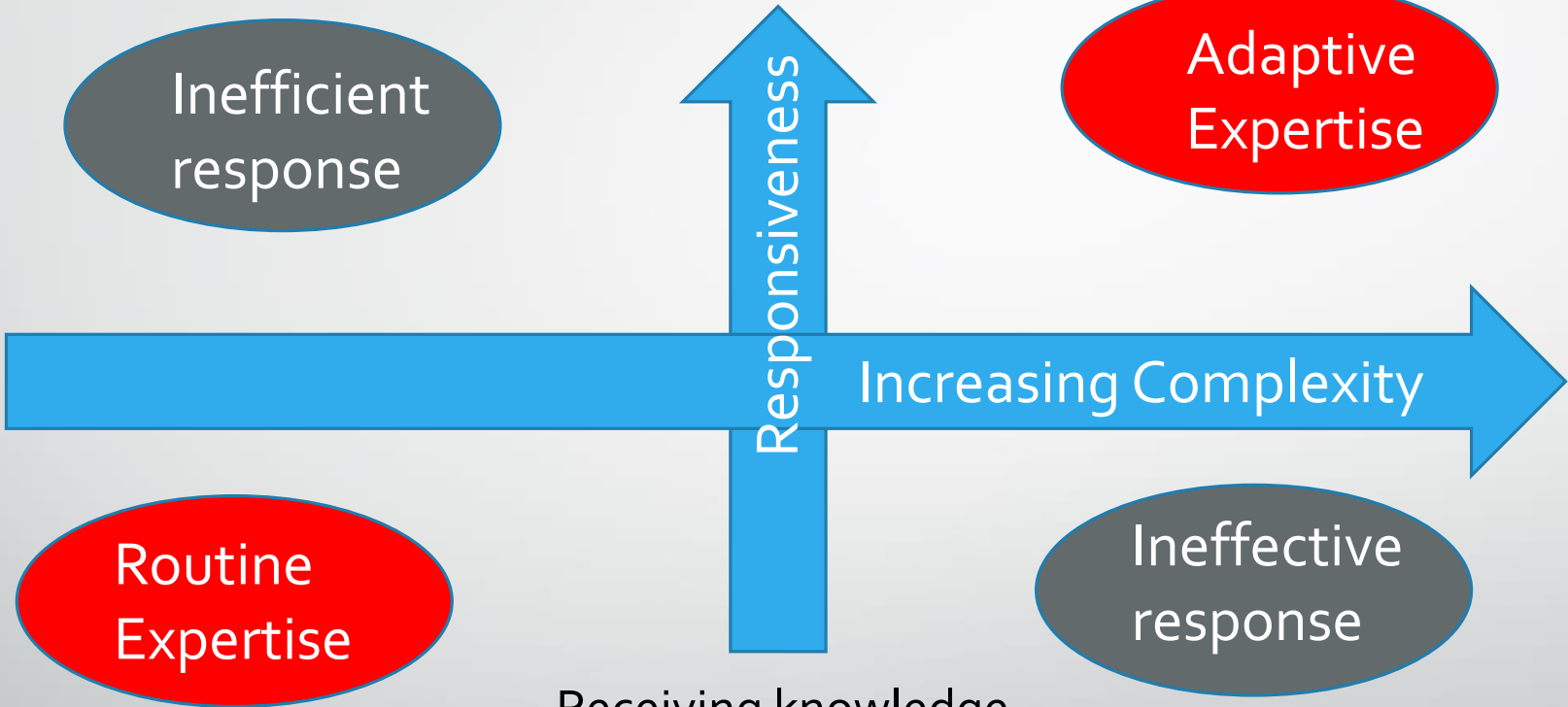
1. Practice, and change in practice, needs to be considered holistically
 - a product of teachers' or leaders' beliefs, values, experiences and knowledge.
 - Each aspect of practice is linked to all others, and to the teachers' identity and values.
 - Trying to change just one aspect of practice is difficult in these circumstances.
2. Context is very significant in shaping practice
 - Individual professionals and schools don't exist in isolation
 - Part of a web of fundamentally interconnected parts
3. Complex systems are dynamic, constantly changing entities and they change and evolve through interactions
 - Teacher professional learning needs to be approached as complex – Spiral of Inquiry

Seeking new knowledge and alternative solutions
Welcoming different perspectives
Acting transformatively
Thinking evaluatively

Inefficient response

Adaptive Expertise

Clearly defined problems with established solutions



Difficult to define problems with less clear solutions

Receiving knowledge
Avoiding different perspectives
Preferring predictable solutions
Adjusting incrementally
Assuming effectiveness

A Culture of Genuine or Pseudo Inquiry

Genuine Inquiry

- Searching for the right questions
- Open to unexpected answers

"I'm puzzled about the data showing this group of students is making much slower progress. I'm wondering why that might be the case. I'd like to explore possibilities with you. I have some in mind but they may off the mark."

Pseudo Inquiry

- Asking questions to which you believe you have the answer
- Ignoring the answers others give you

"Do you think this group of students is making slower progress than the others because our expectations for immigrant students is lower than others?"

Adaptive expertise requires a culture of genuine inquiry to make a difference to our vulnerable learners