



Leadership of Learning

Bruce Robertson

St Andrew's High School, 19th August 2025



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Aim

To develop your understanding of of **practical steps** you could take to make your teaching – and students' learning - *even better* than it is already.



Teaching

The **most important** job in the world...

...but also one of the most **challenging**.



WRONG DIRECTION

Strengths...



- You used digital technology.
- It seemed fun.
- The learning intention was written on the board.
- You smiled a lot.

Areas for improvement...



- You need to talk less.
- You need to differentiate more.
- Students should be allowed to lead their own learning.
- There wasn't enough higher-order thinking.
- There should be more group work.



Ideology

vs

**Cognitive science
& educational research**



Quality indicators	Evaluation
Leadership of change	unsatisfactory
Learning, teaching and assessment	weak
Raising attainment and achievement	weak
Ensuring wellbeing, equality and inclusion	weak
Descriptions of the evaluations are available from: How good is our school? (4th edition), Appendix 3: The six-point scale	

'Sense of direction' helps turn Berwickshire High School around

18 January



SCOTTISH BORDERS COUNCIL

Inspectors found significant improvements at the school after their critical 2019 report

A "clearer sense of direction" has helped a Borders secondary school make progress following a critical report.

Inspectors rated Berwickshire High School in Duns as "weak" in three quality indicators and "unsatisfactory" in the remaining category in 2019.

Education



Inspectors impressed

Page 3

School's 'culture of change'

From page one.

Fellow Mid-Berwickshire councillor Donald Moffat added: "I remember pre-Covid when myself and Councillor Greenwell were getting all sorts of complaints about behaviour in the school, all sorts of problems from different villages about the school and it's a night and day difference.

"The bullying that we used to get reports about, the bad behaviour, has just about evaporated. I've been a councillor for 26 years and I've never seen such an improvement in a school."

Headteacher Bruce Robertson said: "We are delighted that the progress our school has made over the past two and a half years is being recognised and celebrated.



Headteacher Bruce Robertson and his head team at the school in 2021.

"Berwickshire High School is a wonderful school which has a clear focus on ensuring the best possible learning experience for every

student. A huge well done to everyone in our school community for the part they have played in getting us to where we are today".



Berwickshire High School reputation has 'gone through the roof'

2nd March

'A' for efforts

Paul Kelly
Local Democracy Reporter

The reputation of Berwickshire High School has 'gone through the roof' as a result of a transformation programme, a meeting has heard.

When his Majesty's Inspectorate of Education (HMIE) issued a report on the school in March 2019 it noted significant concerns in a number

of areas, including leadership, safeguarding, learning and teaching, well-being and attainment.

A follow-up visit in November 2021 identified significant improvements and a further follow-up in November last year noted further progress made by the headteacher Bruce Robertson and his staff.

As a result of this progress members of Scottish Borders Council's Education Sub-Committee agreed to fully sign off the facility as no longer

a 'school of concern' following 'intensive periods of improvement'.

Mid-Berwickshire Councillor John Greenwell said: "Comparing pre-Covid with after Covid is actually amazing. When you walk into the school it feels like a school. It feels safe, it feels secure."

"There has definitely been a culture change in the school and you can virtually eat it when you walk through the door. There was a definite disconnect between various

bodies in the school and the Parent Council was not involved in the school as much as they should have been. That's gone away now and they are now actually part of what is happening in the school.

"At a meeting with Mr Robertson he told local members that he didn't want the school to be the best in the Borders - he wanted it to be the best in Scotland and I think you're getting there."

Continued on page 3

2021 re-inspection



“The **quality and consistency** of learning, teaching and assessment has improved considerably across the school, with teachers demonstrating increased confidence in classrooms.

Teachers now have a much-improved **shared understanding** of what high quality learning and teaching looks like. They also demonstrate **deeper understanding of how they can enhance their teaching**, for example, using a daily review, sharing the aim of the lesson, and sharing how young people can be successful in their learning.”



Attainment

S4: 5+ Level 5s

- 2018: 44%
- 2019: 45%
- **2023: 64%**

S5 5+ Level 6s

- 2018: 21%
- 2019: 29%
- **2024: 41%**

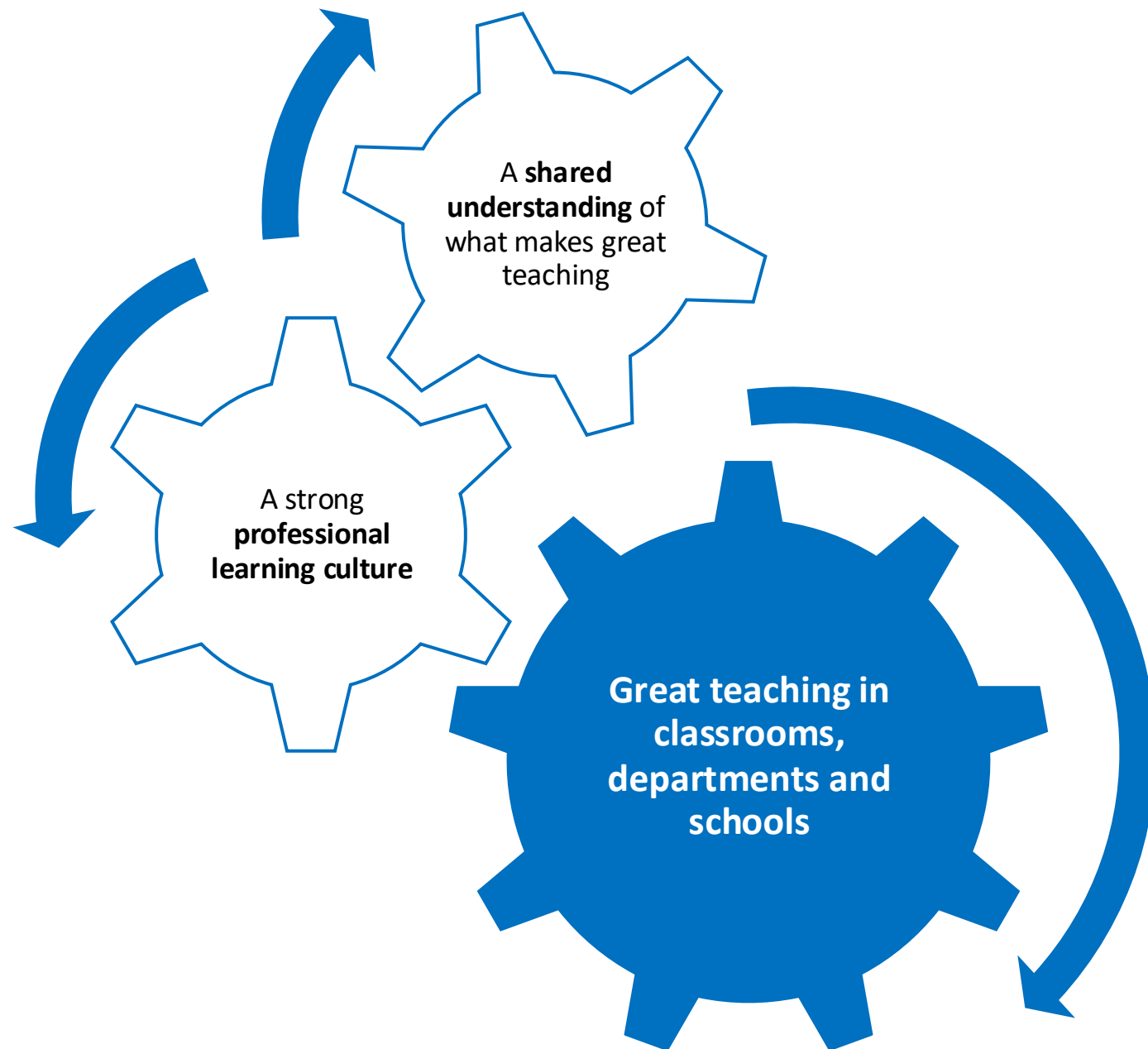
**POWER
UP**

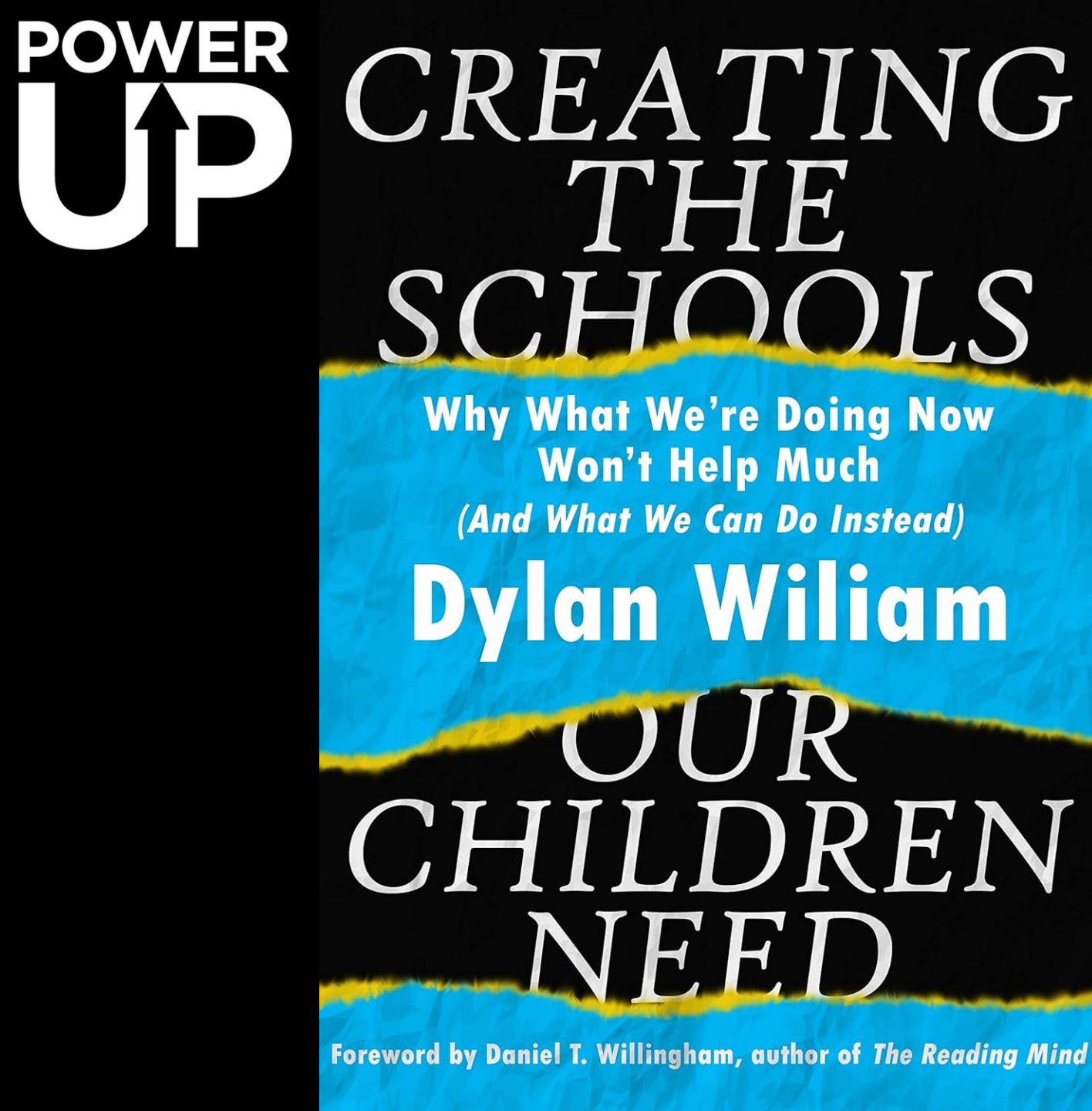
Bruce Robertson

THE TEACHING DELUSION

Why teaching in our
schools isn't good enough
(and how we can make it better)

 **JOHN CATT**
FROM HODDER EDUCATION





The **quality of our teaching** is the single most influential factor on student outcomes.

Professional development of teachers (and school leaders) is the best shot we have at improving student outcomes.

The collective mindset

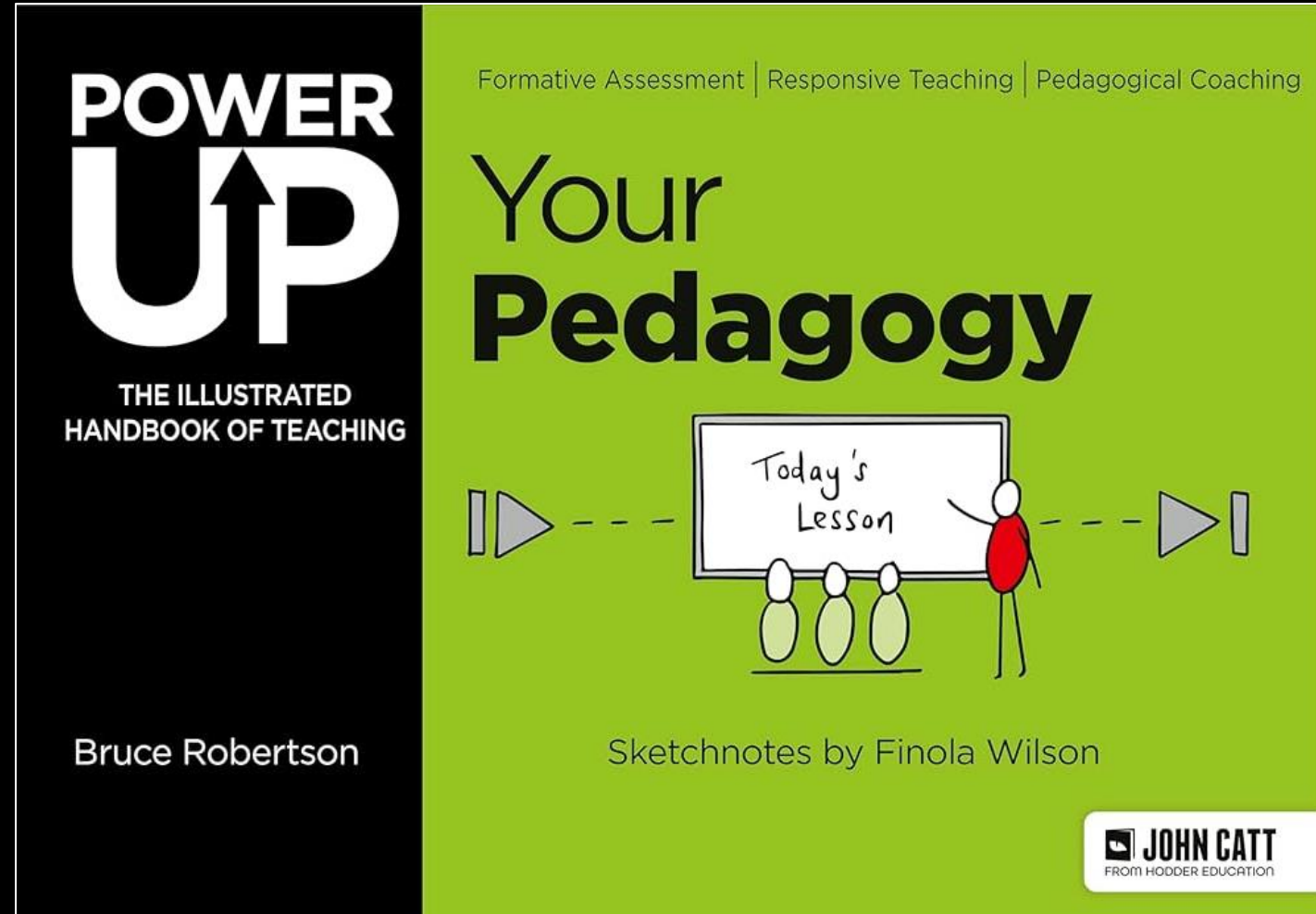
It doesn't matter how good our teaching is already – we need to keep making it **better and better**.

Saying 'we need to get better' is not criticism – it is about a **mindset of continuous improvement**.



Generic goals of lessons...

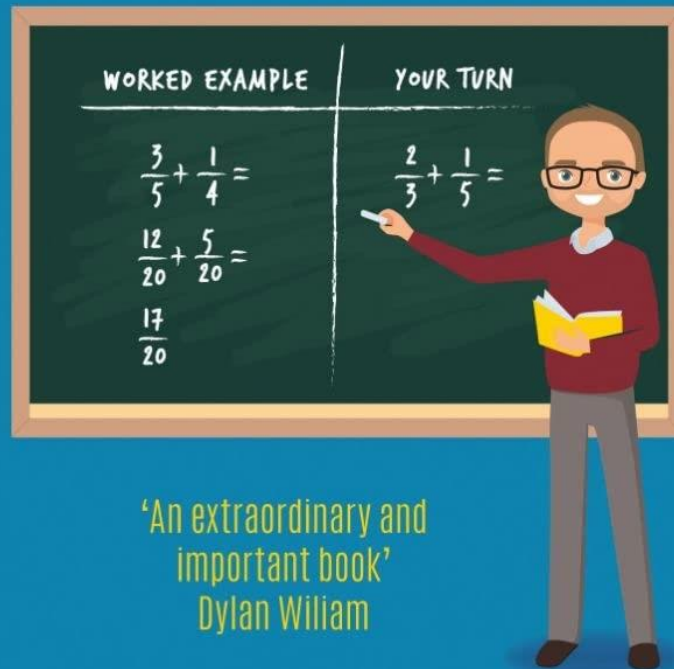
1. To develop *student learning*
2. To develop *our teaching*



Learning Lessons

—CRAIG BARTON— **HOW I WISH I'D TAUGHT MATHS**

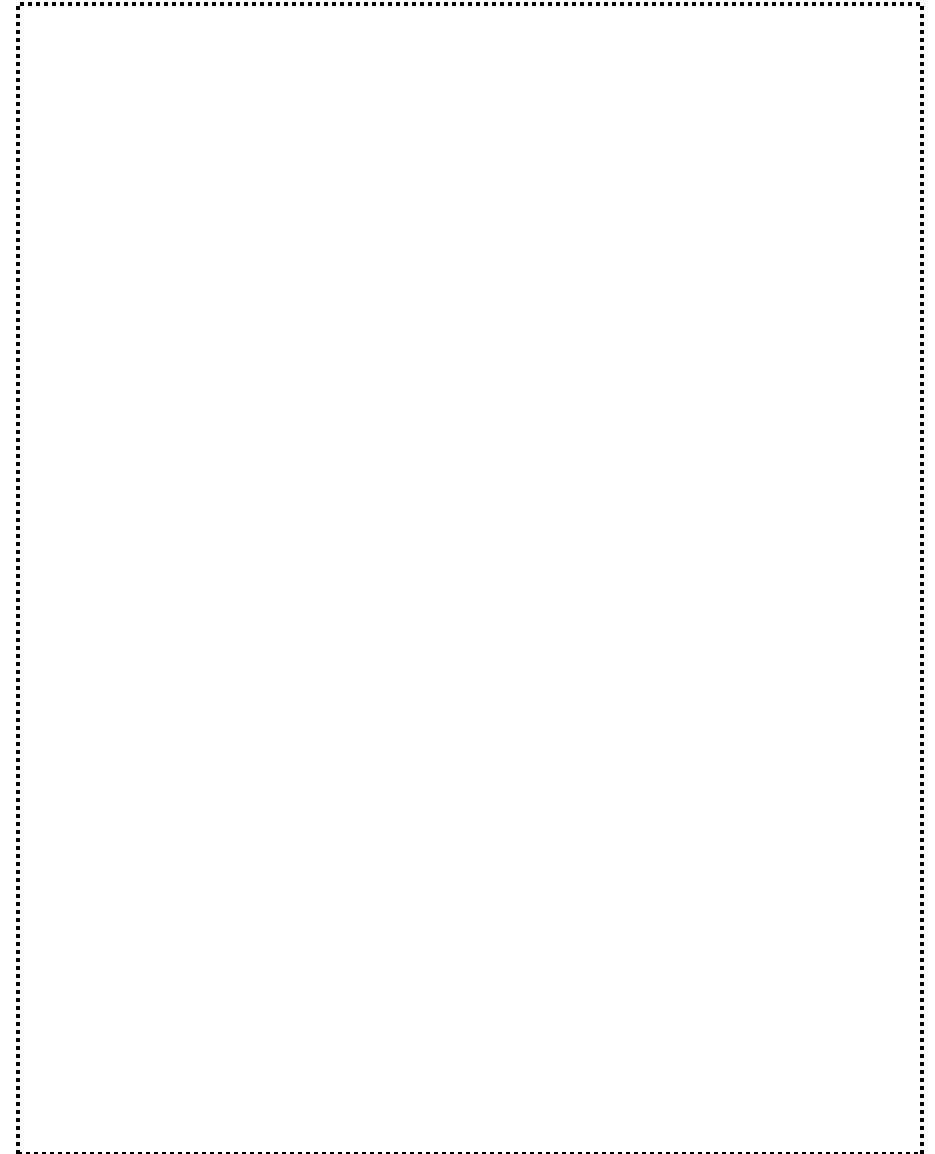
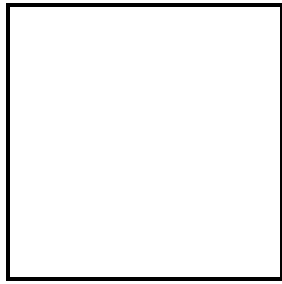
LESSONS LEARNED FROM RESEARCH, CONVERSATIONS
WITH EXPERTS, AND 12 YEARS OF MISTAKES



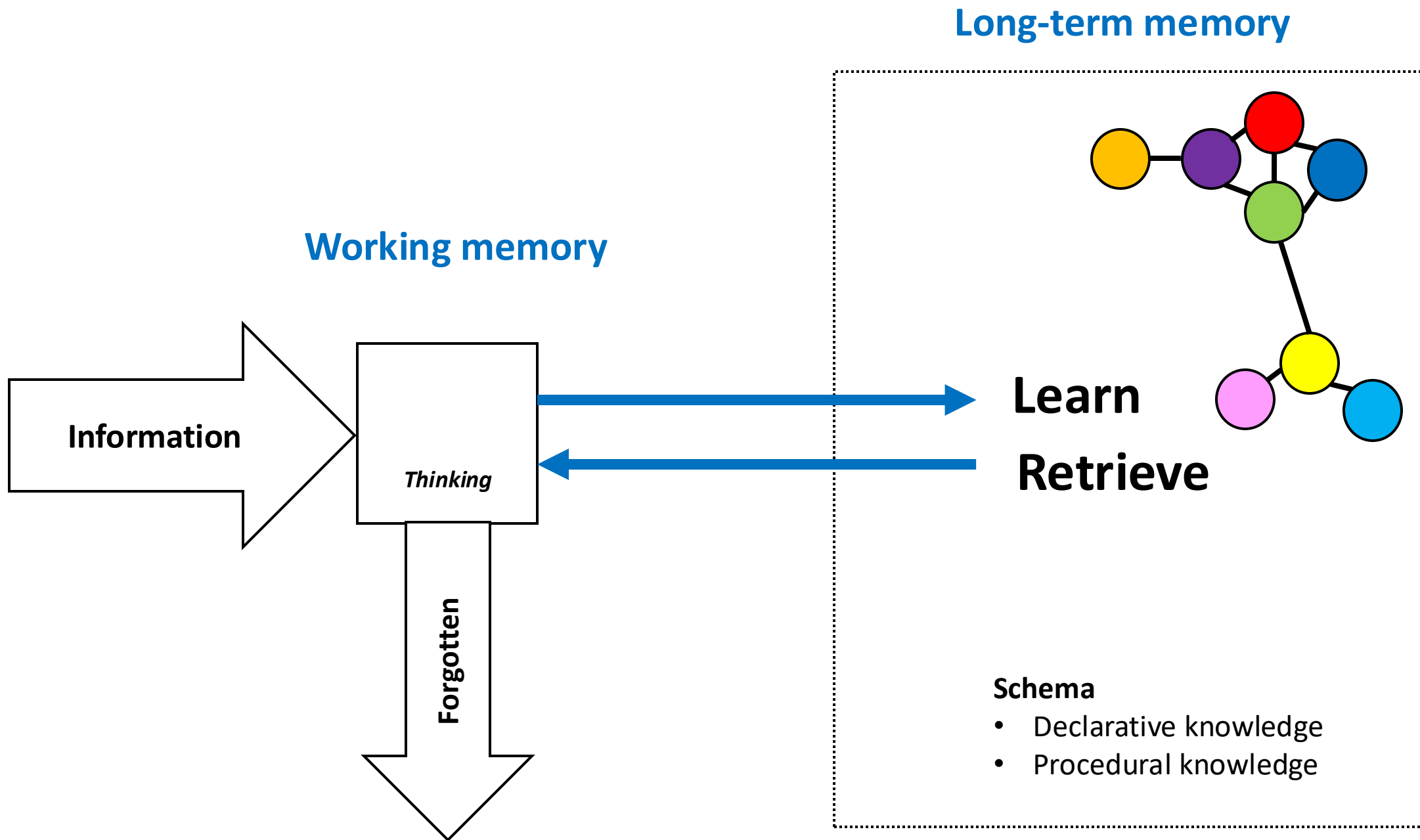
“A teacher not considering how their students think and learn is kind of like a doctor not being overly concerned about the workings of the body, or a baker taking only a casual interest in the best conditions for bread to rise.”



How does learning **happen**?



How does learning
happen?





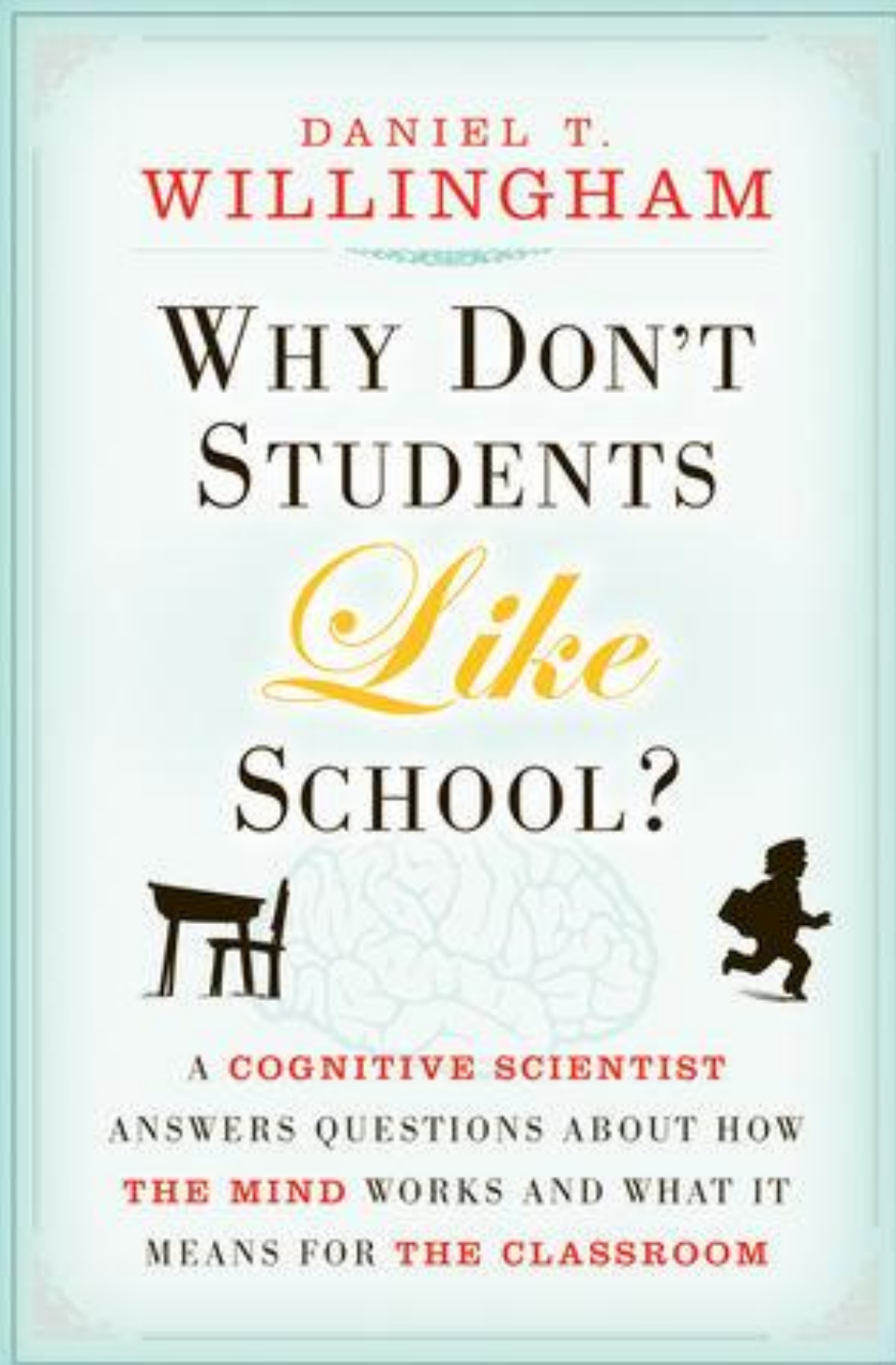
Learning Lesson 1

Learning is the development of **long-term memory**, through the accumulation of **knowledge**.

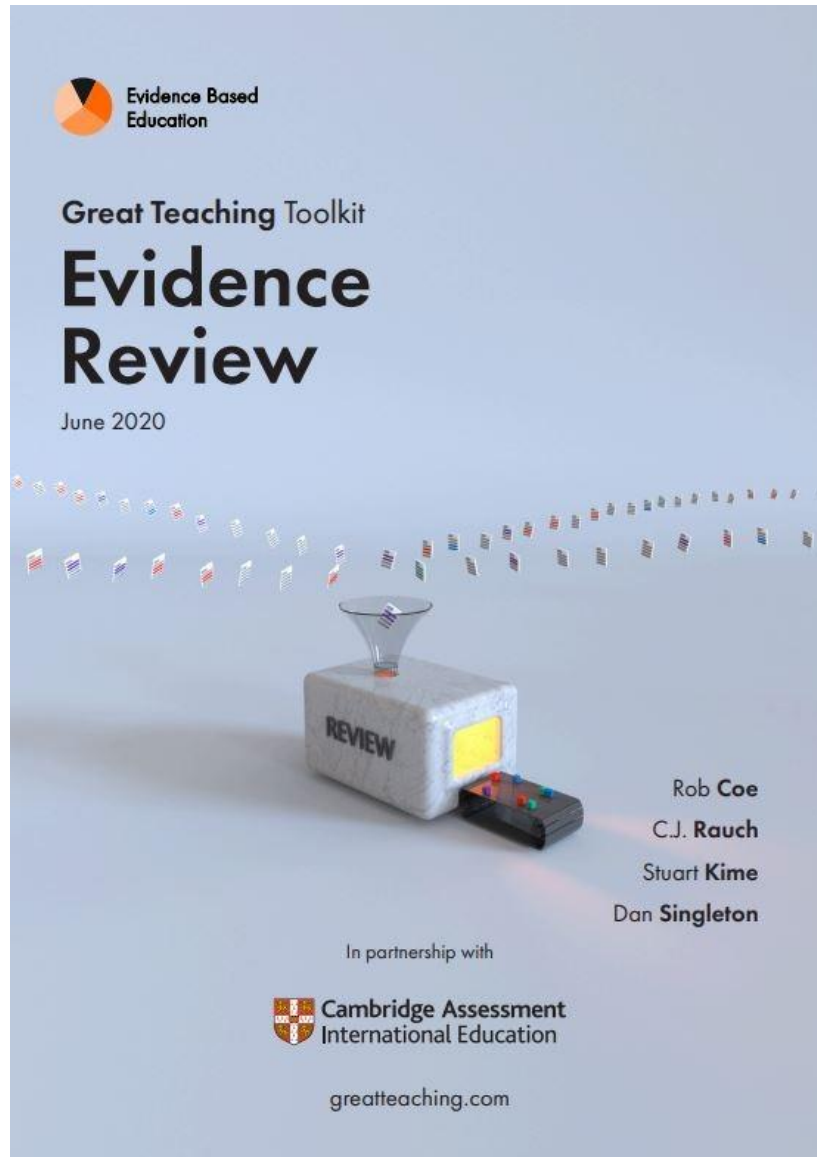
POWER
UP

Learning Lesson 2

We learn what we **think about**.

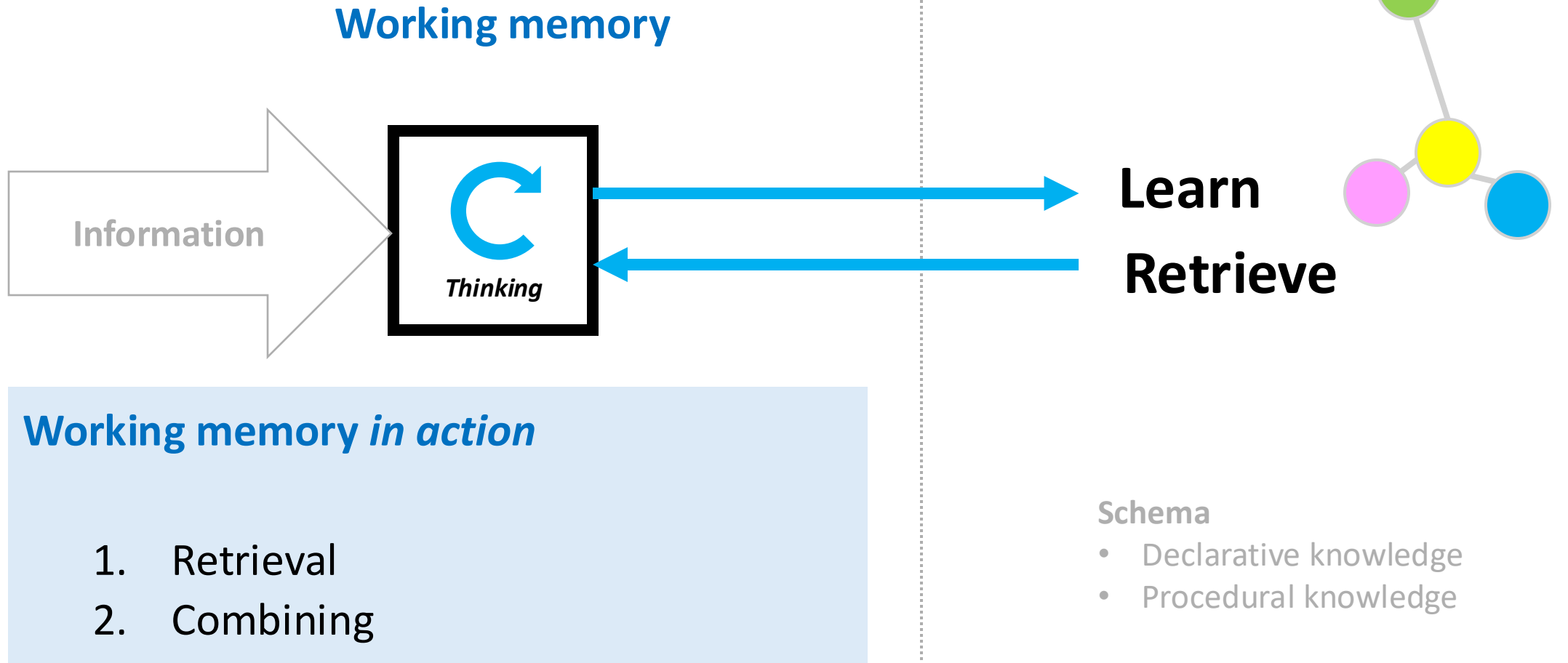


“Memory is the **residue of thought**”



Learning is most likely to happen
when students **th**

Long-term memory

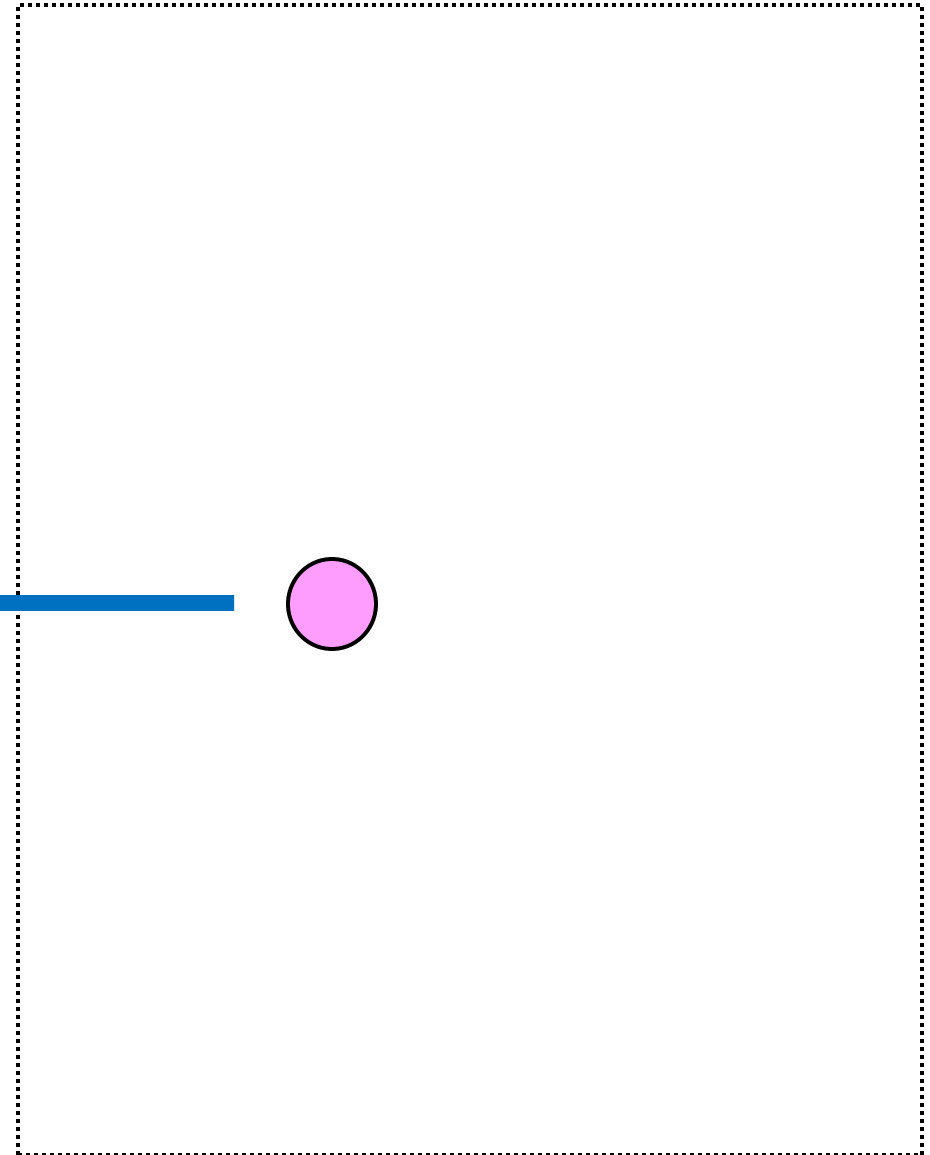
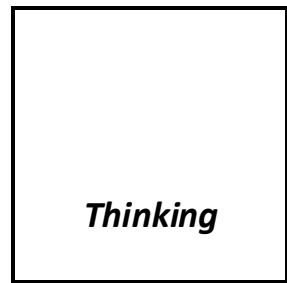


‘The Testing Effect’

Retrieval strengthens memory

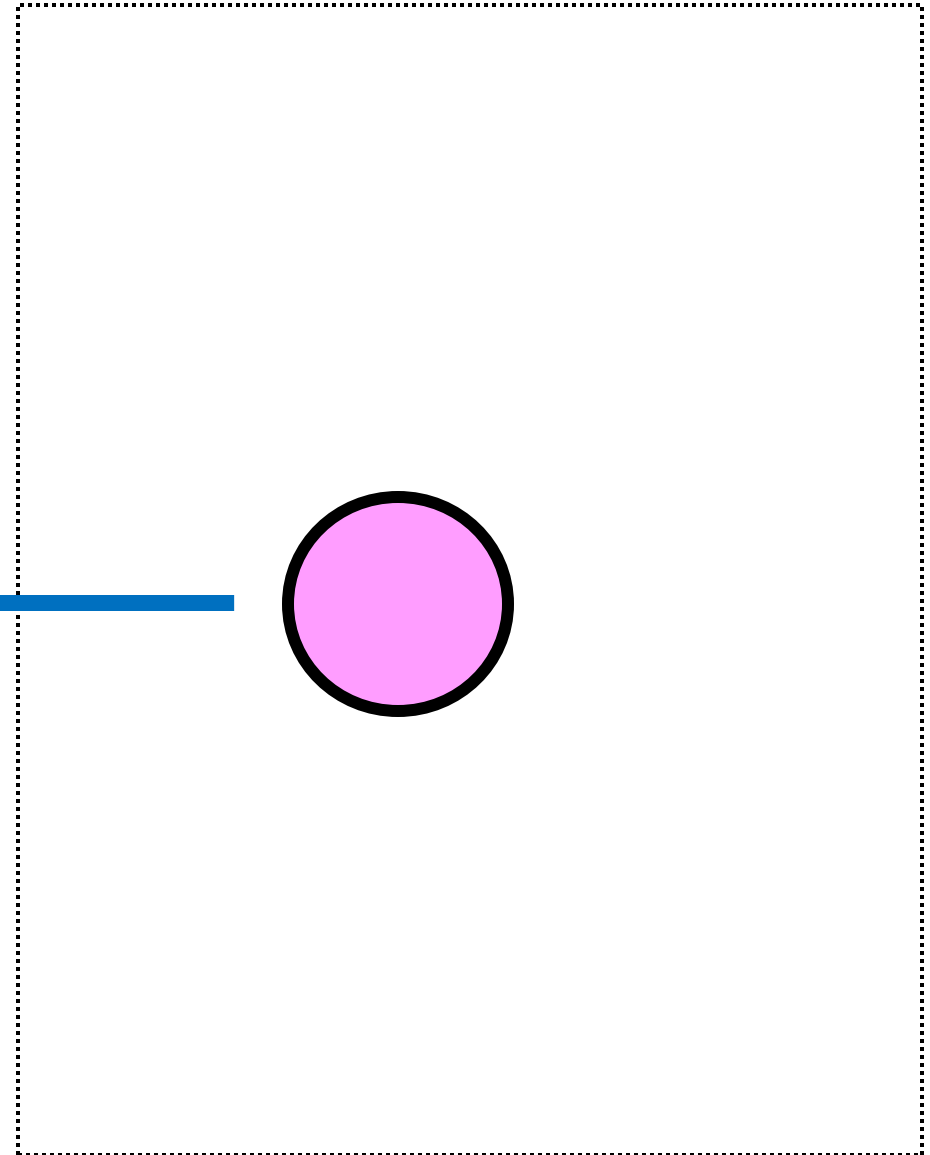
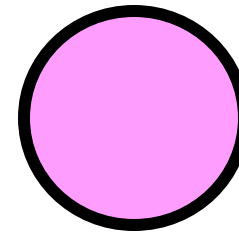
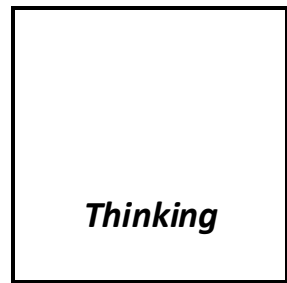
Long-term memory

Working memory



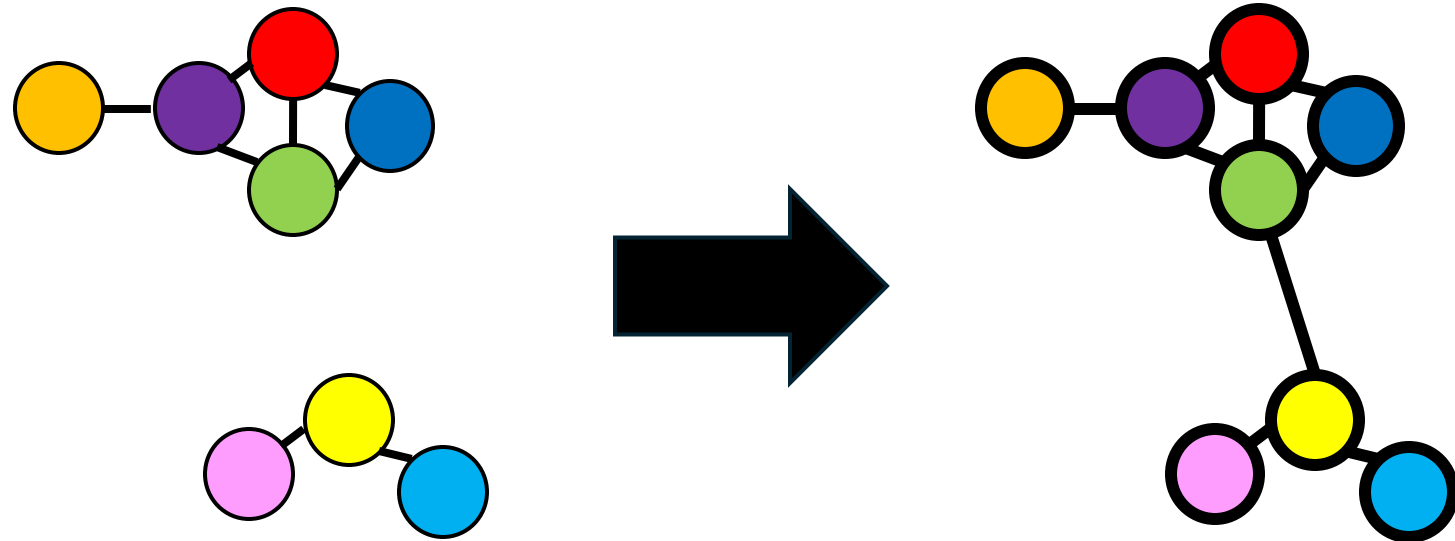
Long-term memory

Working memory



‘The Generation Effect’

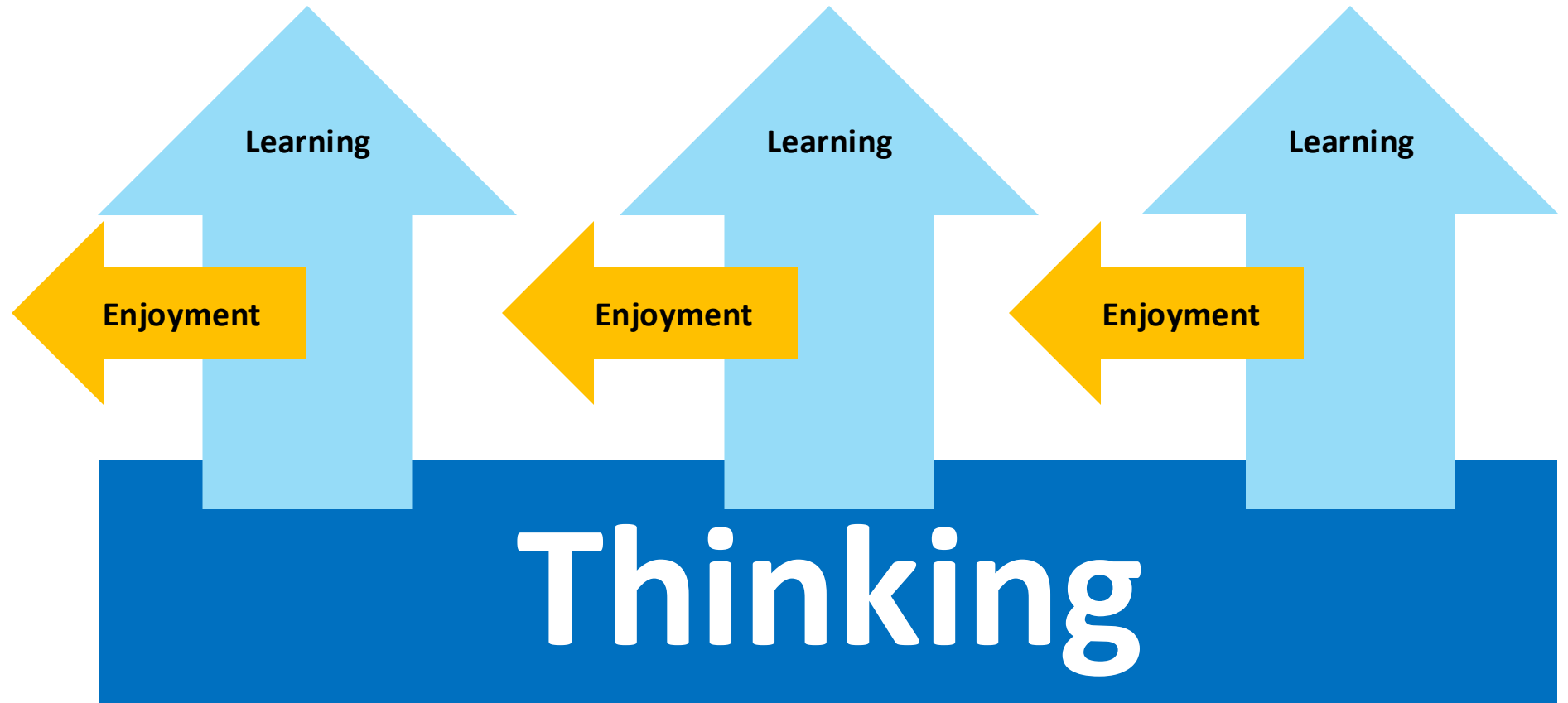
Using knowledge to create something new
strengthens memory.

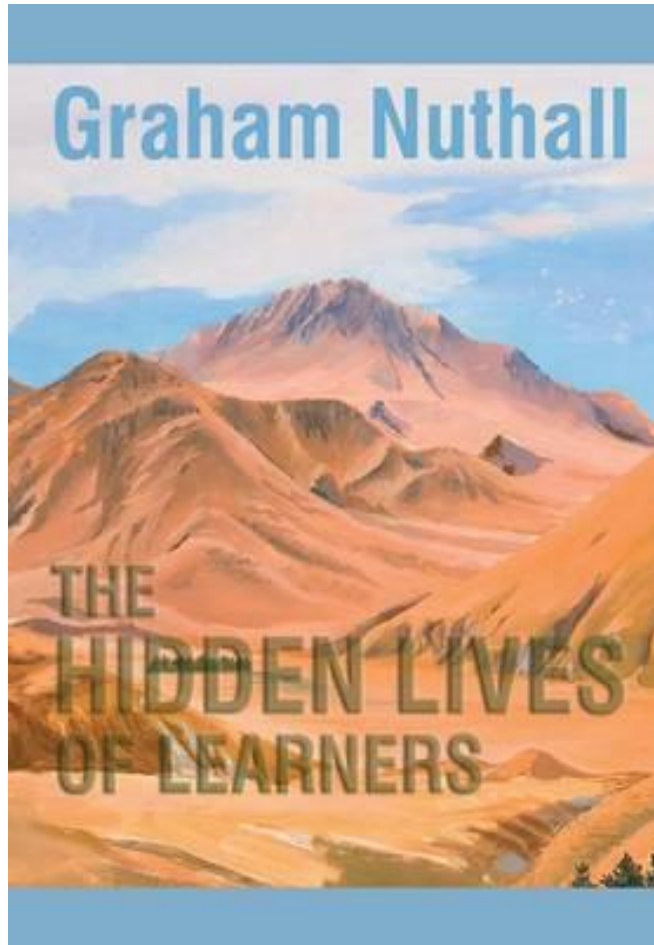


~~Activity-based | fun-orientated~~



Thinking-based | learning-orientated





3

Students need to think about ‘a concept’ on ***at least 3 separate occasions*** before it is likely to be learned.

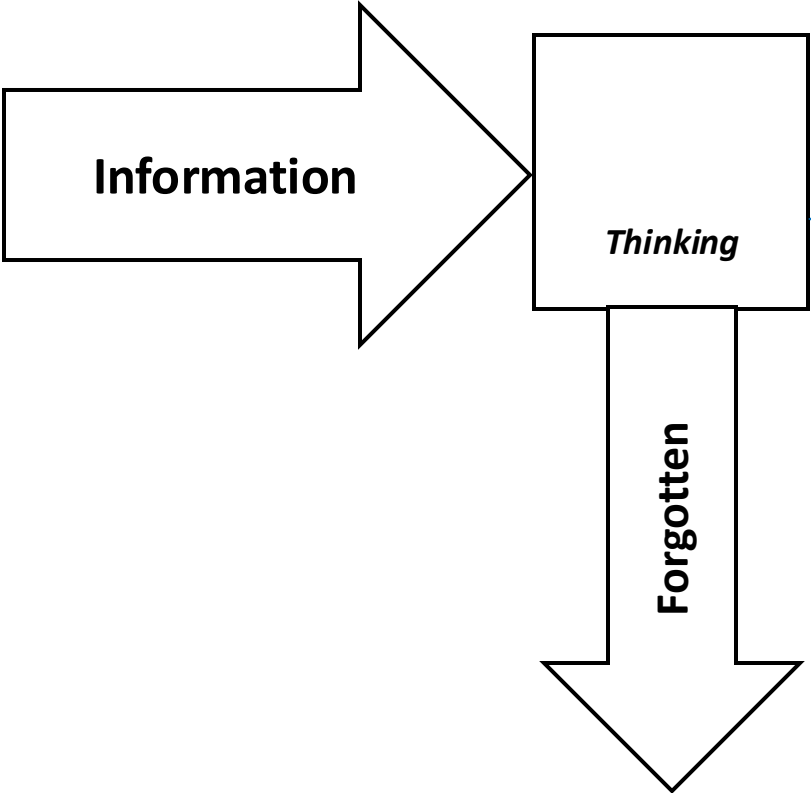
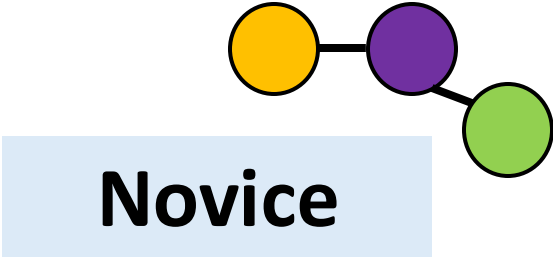


Learning Lesson 3

Novices and **experts** think and learn differently.

Long-term memory

Working memory

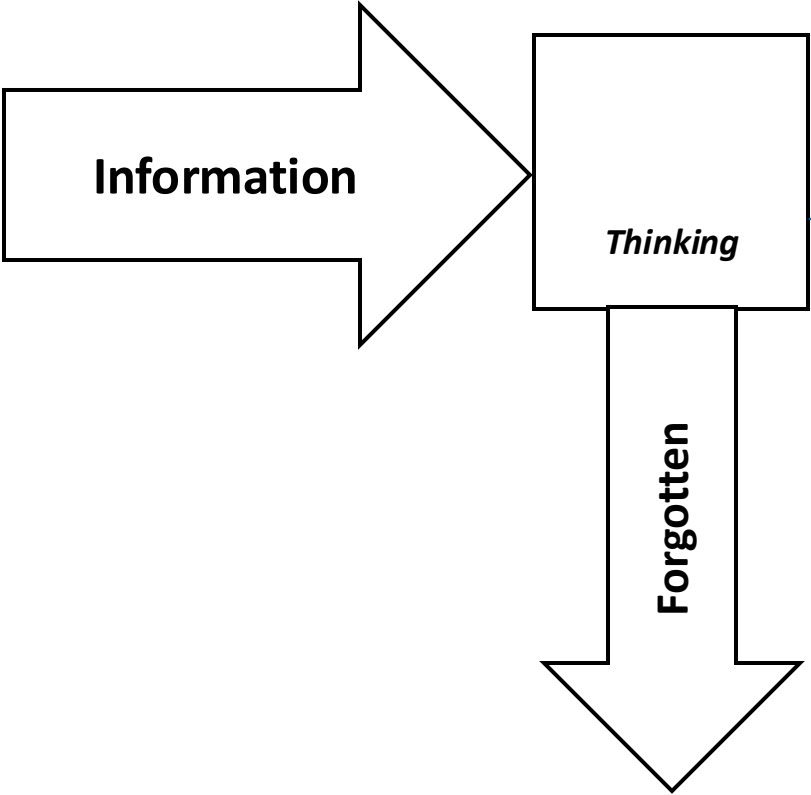
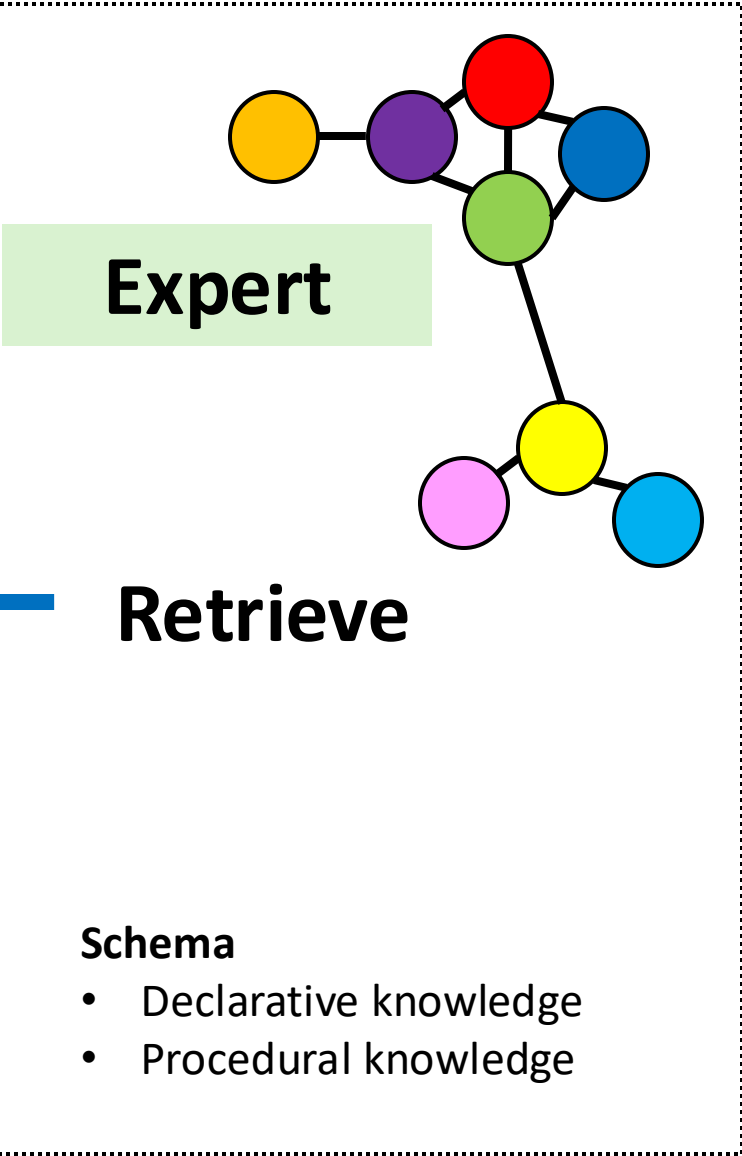


Retrieve

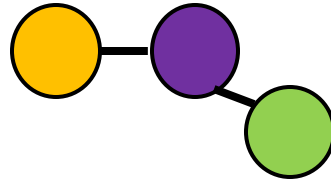
- Schema
- Declarative knowledge
 - Procedural knowledge

Long-term memory

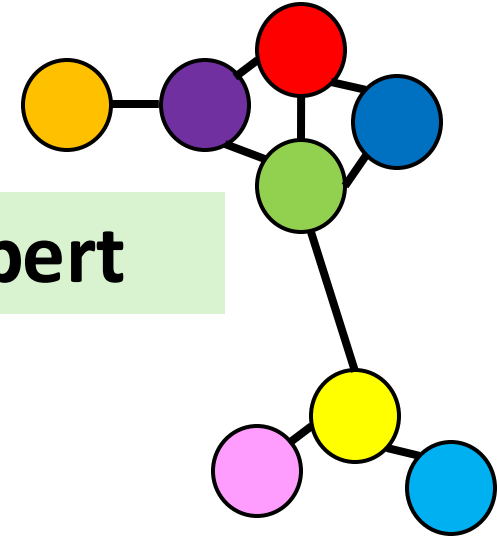
Working memory



Novice



Expert



Differences in schema...

→ Novices *think differently* to experts.

→ Novices should be *taught differently* to experts.

Specific Teaching

- Direct-interactive instruction
- Formative assessment

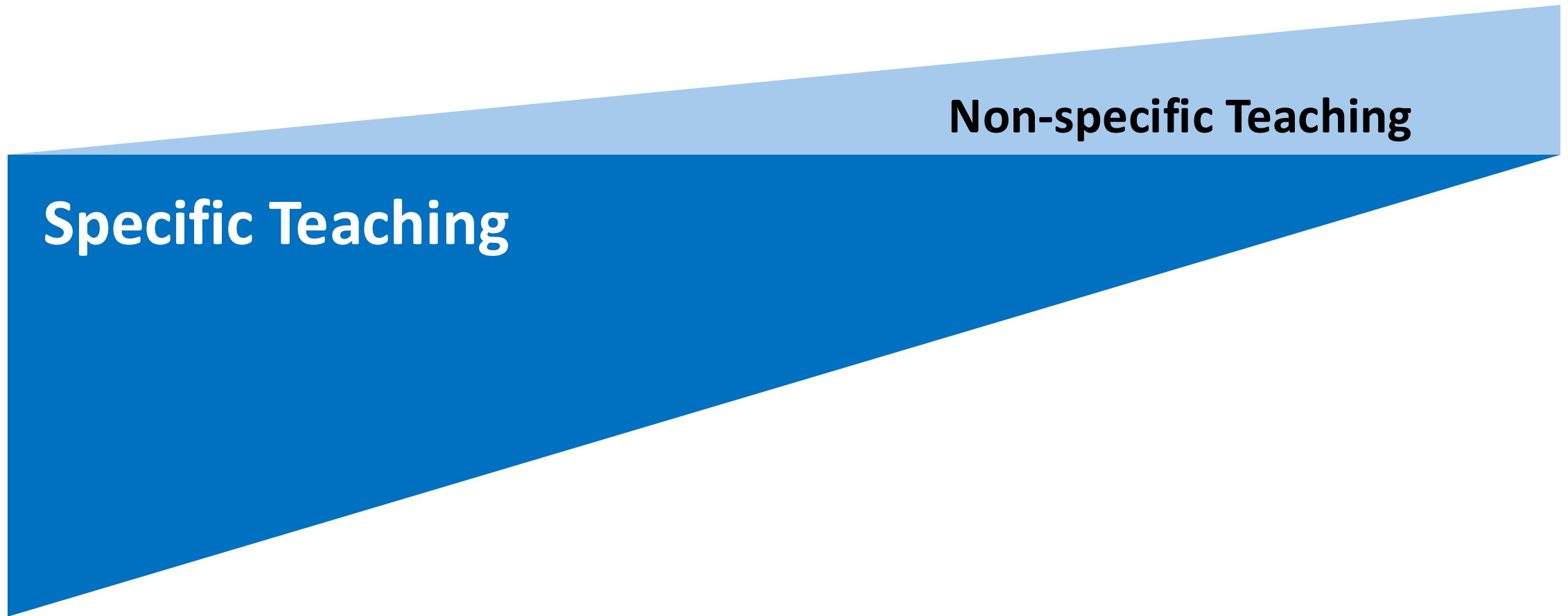
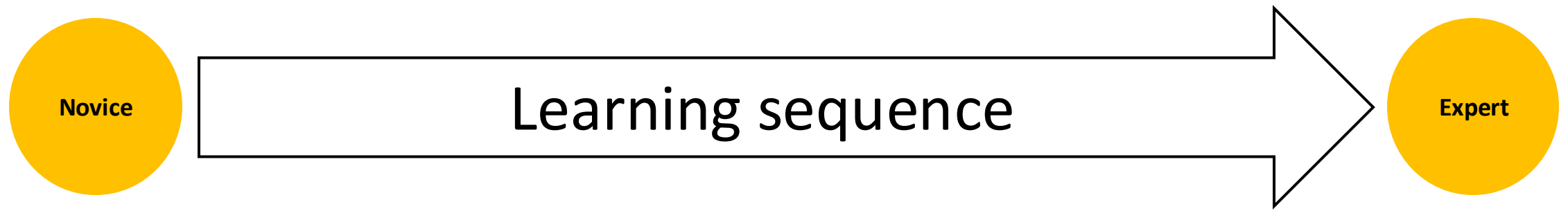
Non-specific Teaching

- Open-ended application and extension
- Choice

Bruce Robertson

THE TEACHING DELUSION

Why teaching in our
schools isn't good enough
(and how we can make it better)

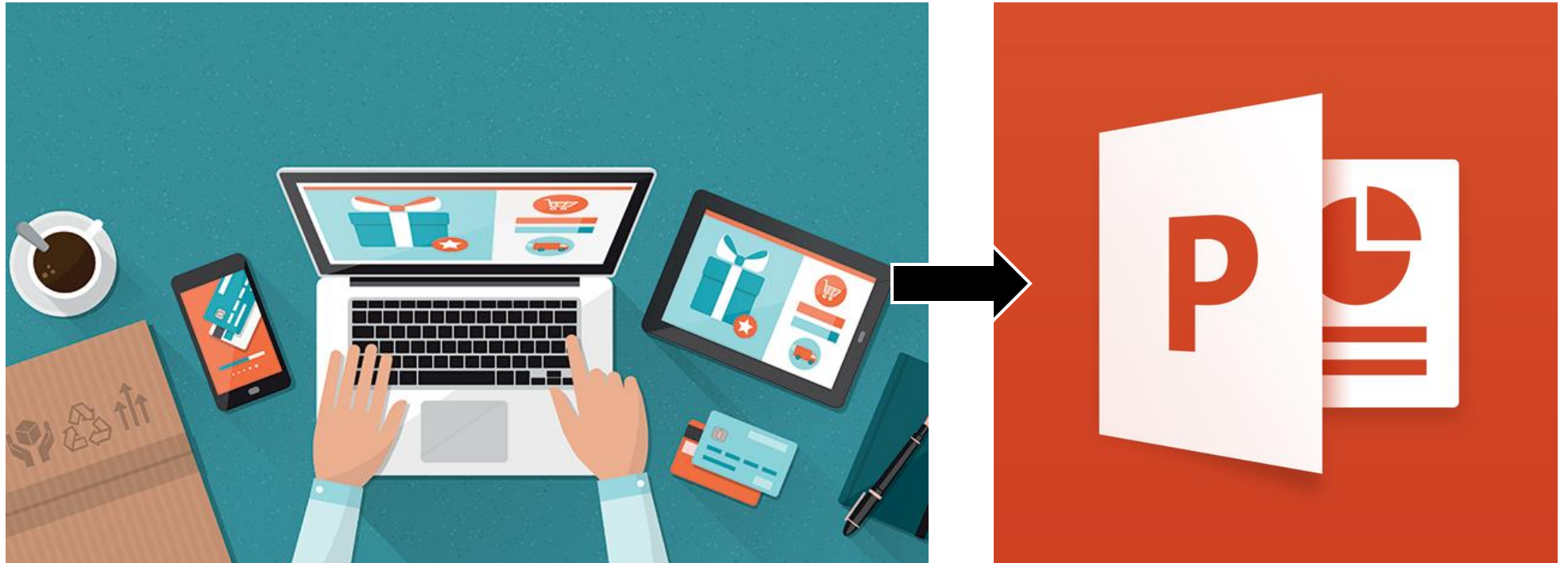


POWER
UP

Learning Lesson 4

Being busy and **learning** are not the same thing.

Example to avoid





Learning Lesson 5

Familiarity and **learning** are not the same thing.

**POWER
UP**







Prove it!



Learning Lesson 6

Spaced retrieval is the best way to prevent forgetting.

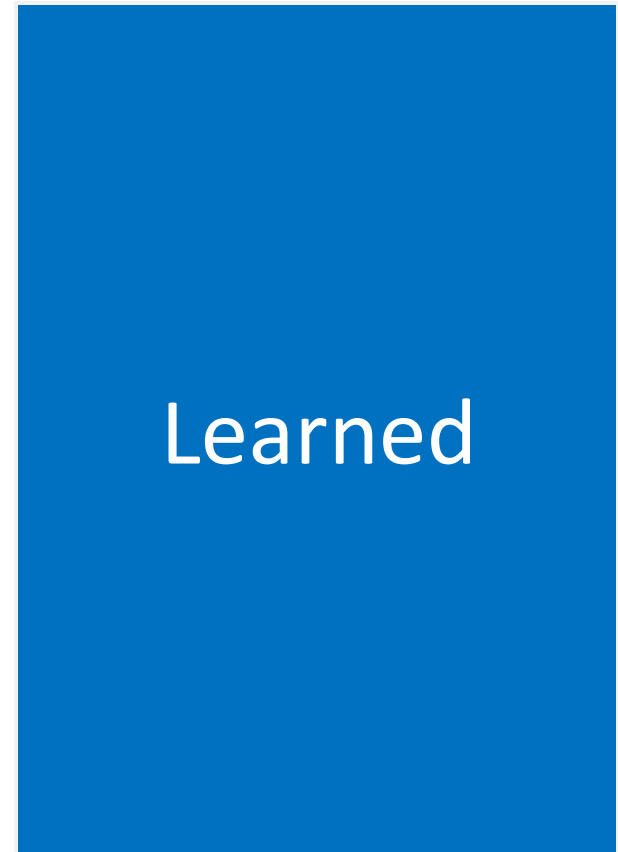
The Teaching-Learning Gap

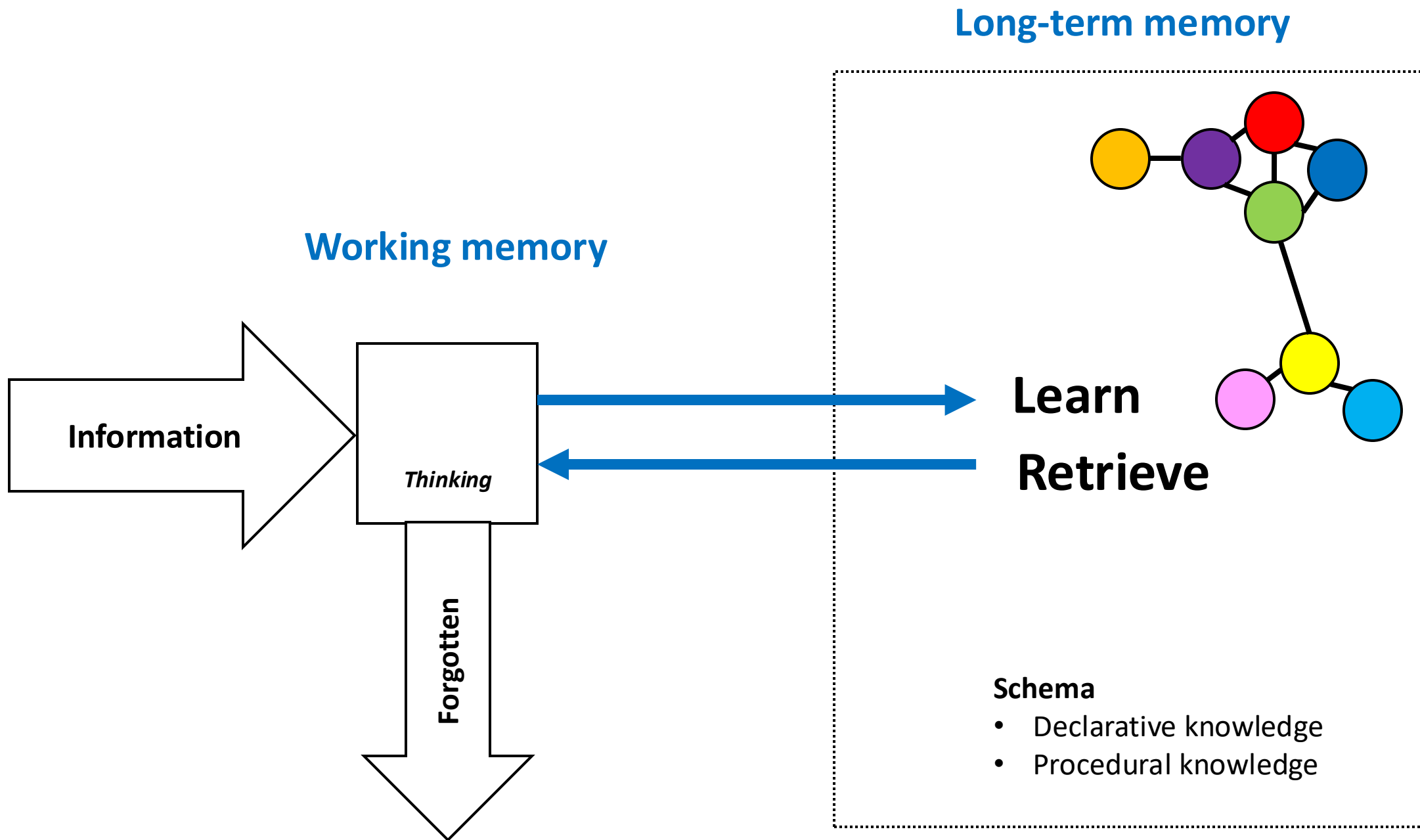


Paying attention

Understanding

Forgetting

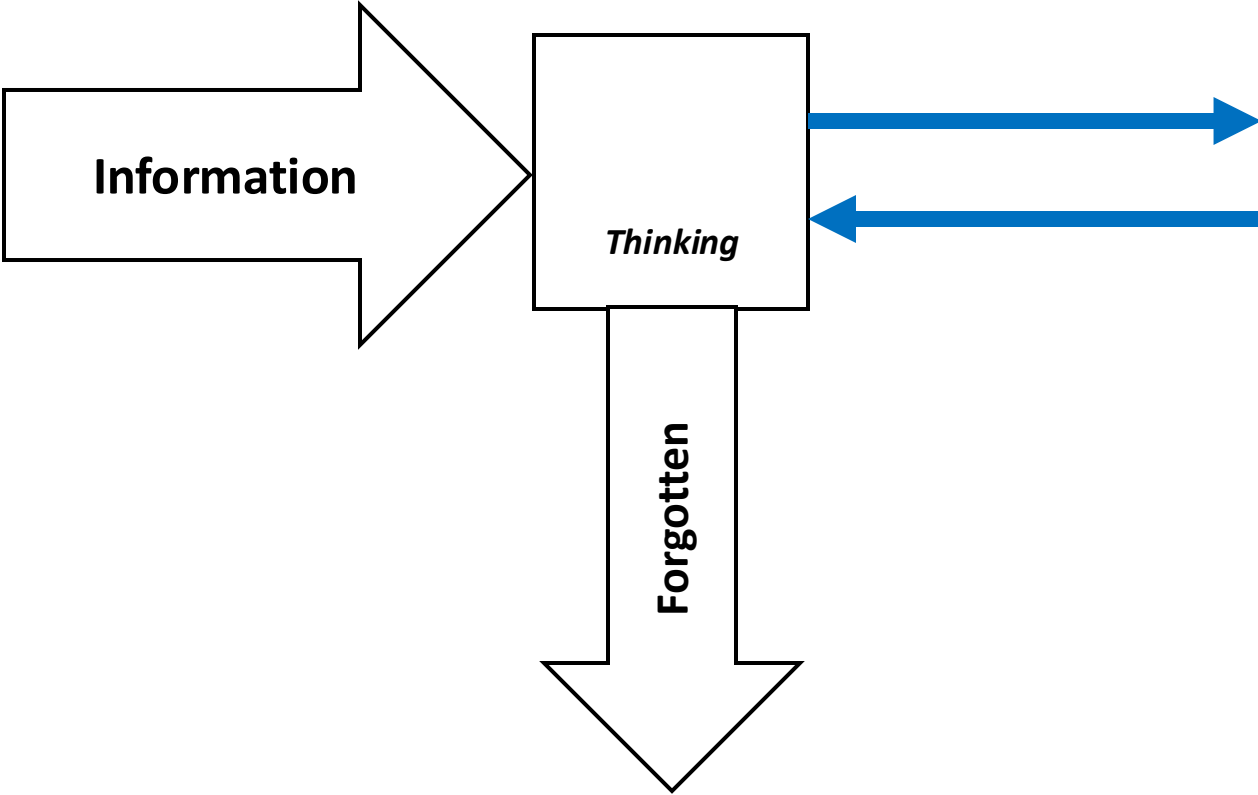




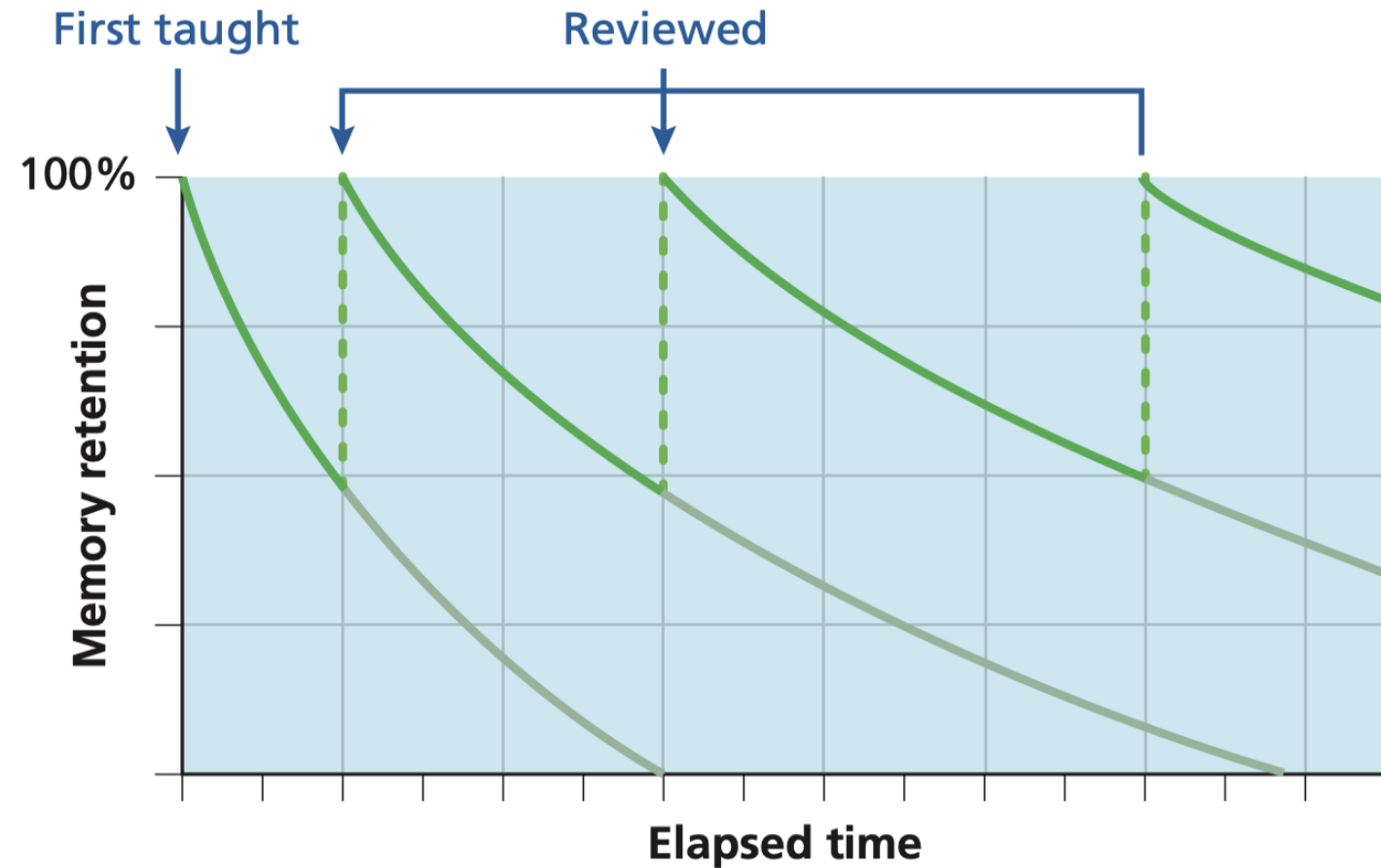
Long-term memory



Working memory



Ebbinghaus' Forgetting Curve





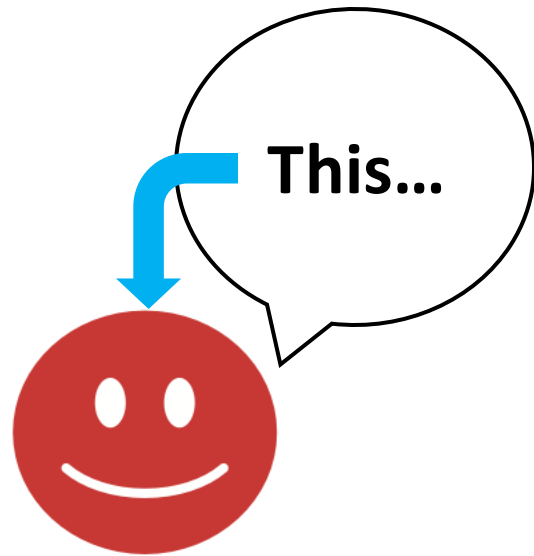
**Daily
Review**

**Weekly
Review**

**Monthly
Review**

TRUSTED TECHNIQUE

Self-Quizzing



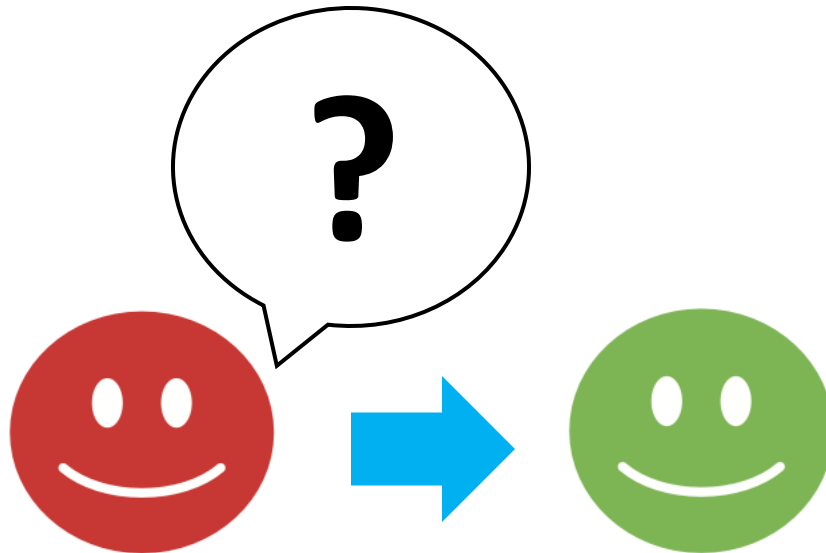
Students use resources such as their notes or Knowledge Organisers to **test themselves** on previously taught content, using **taught strategies**.

For example:

- Read – Cover – Write – Check – Correct
- Flash cards
- Creating test questions, such as fill-in-the-blanks

TRUSTED TECHNIQUE

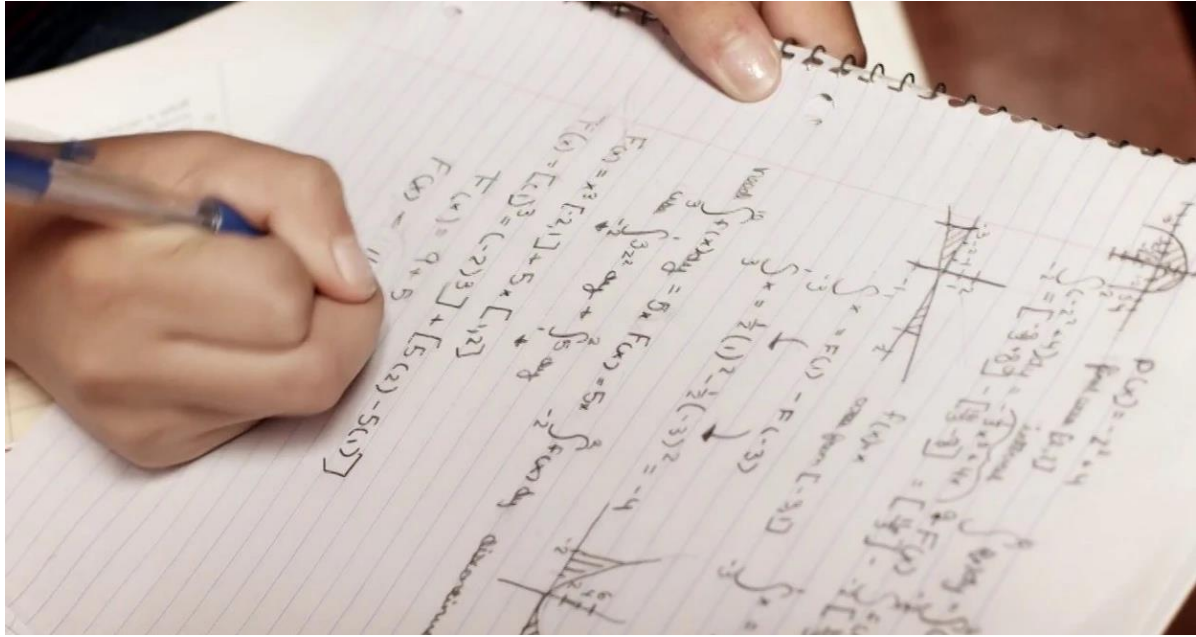
Peer Quizzing



Students use resources such as their notes or Knowledge Organisers to **test each other** on previously taught content, using **taught strategies**.

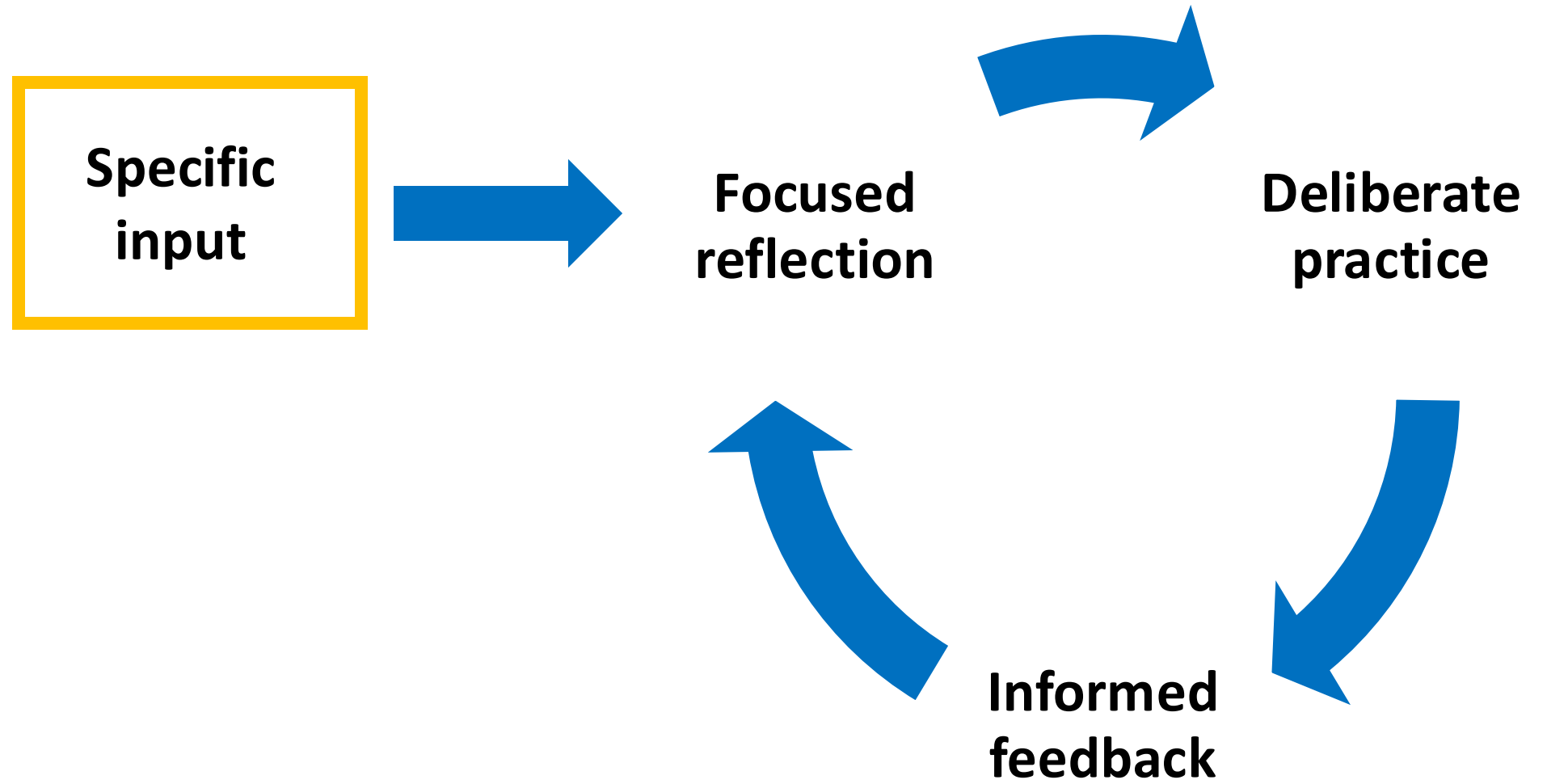
For example:

- Flash cards
- Creating test questions





In what way(s) has your teaching changed since our last session?





PROFESSIONAL READING



“The best thing that’s happened to me as a teacher is to start doing **professional reading**. My teaching is so much better as a result. I now can’t believe some the things I was doing – and not doing – previously.”

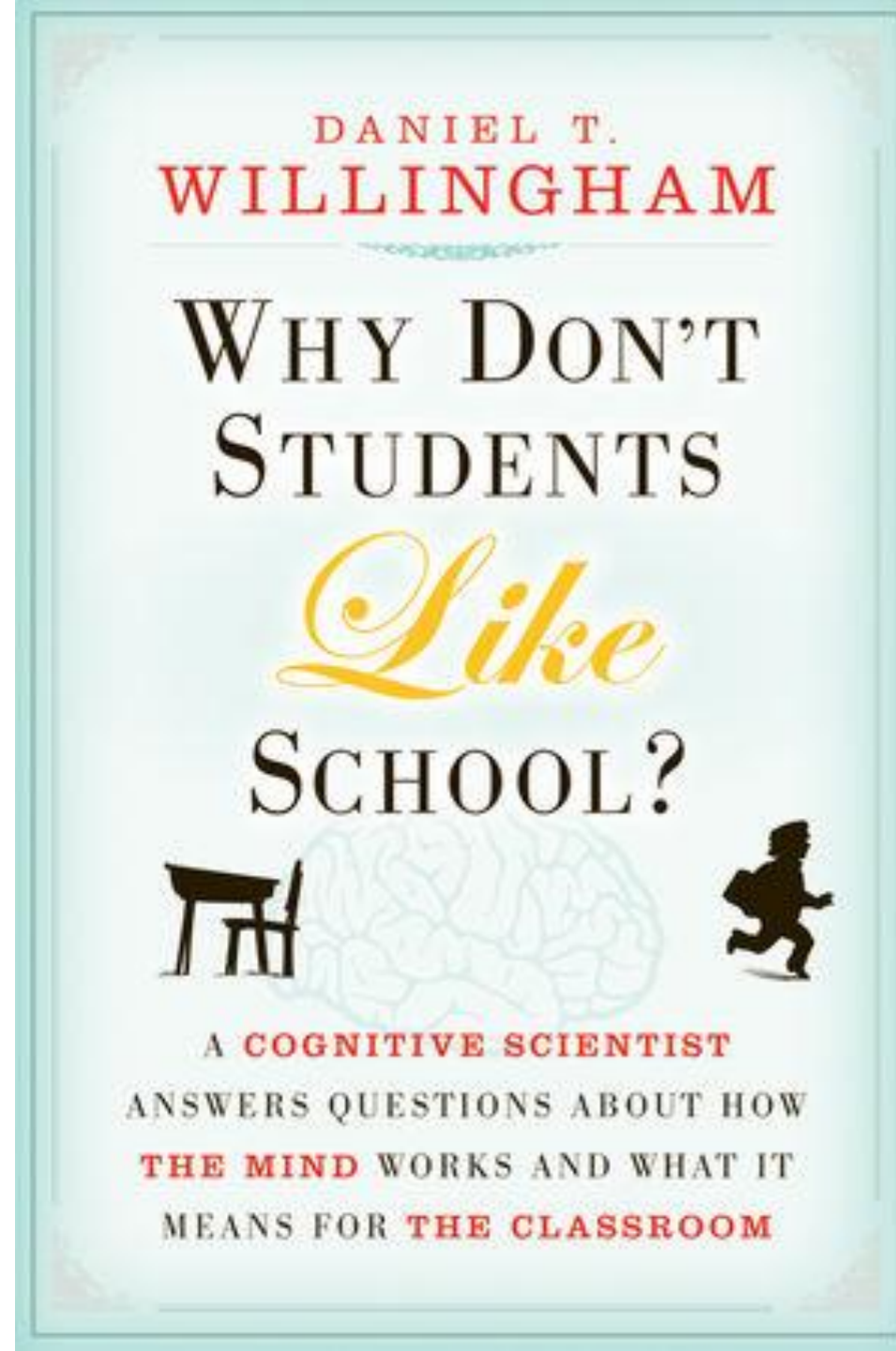


“I feel like I used to be a bit of an enthusiastic amateur, rather than a real professional.

Professional reading has been a game-changer for me. I now feel so much more confident about all the decisions I’m making. I have a much deeper understanding about ***why*** something is likely to work.”

Students' views on what makes a great teacher...

1. The teacher is a **nice person** (that they have positive interactions with their students)
2. The teacher is **well organised** (that they come across as knowing what they are talking about and doing)
3. The teacher **makes what they are teaching interesting**



What makes great teaching?

Robert Coe

31 October 2015

IB World Regional Conference (AEM), Den Haag NL

Poor Proxies for Learning

Check

Check

Check

Check

Check

Check

Check

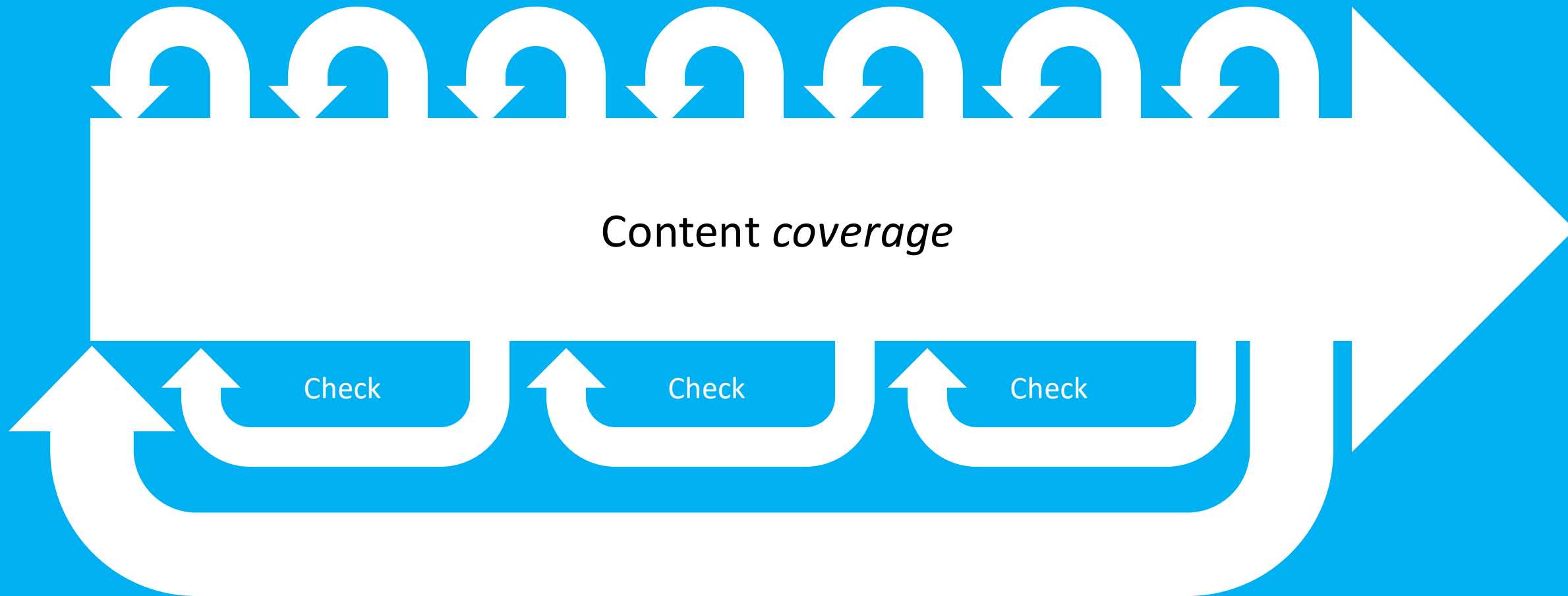
Content *coverage*

Check

Check

Check

Check



Teaching practices for which there is a **‘total lack’ of evidence** to support their use and that can actually be **barriers** to great teaching...

What makes great teaching?

Review of the underpinning research

Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major
October 2014

1. Using praise lavishly.

For low-attaining students, praise that is meant to be encouraging and protective can actually convey a message of low expectations. The evidence shows that children whose failure generates sympathy are more likely to attribute failure to lack of ability than those who are presented with rebuke.

What makes great teaching?

Review of the underpinning research

Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major
October 2014

2. Allowing learners to discover key ideas for themselves.

Enthusiasm for ‘discovery learning’ is not supported by research evidence, which broadly favours direct instruction.

What makes great teaching?

Review of the underpinning research

Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major
October 2014

3. Grouping students by ability.

Evidence on the effects of grouping by ability, by allocating students either to different classes or within-class groups, suggests that it makes very little difference to learning outcomes. It can result in teachers failing to accommodate different needs within an ability group and overplaying differences, going too fast with high-ability groups and too slow with low ones.

What makes great teaching?

Review of the underpinning research

Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major
October 2014

4. Encouraging re-reading and highlighting to memorise key ideas.

Testing yourself, trying to generate answers and deliberately creating intervals between study to allow forgetting are all more effective approaches to memorisation than re-reading or highlighting.

What makes great teaching?

Review of the underpinning research

Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major
October 2014

5. Addressing low confidence and aspirations before teaching content.

Attempts to enhance motivation prior to teaching content are unlikely to succeed – and even if they do, the impact on subsequent learning is close to zero. If the poor motivation of low-attaining students is a logical response to repeated failure, starting to get them to succeed through learning content will improve motivation and confidence.

What makes great teaching?

Review of the underpinning research

Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major
October 2014

6. Presenting information to students in their preferred learning style.

Despite a recent survey showing that over 90% of teachers believe individuals learn better when they receive information in their preferred learning style, the psychological evidence is clear that there are no benefits to this method.

What makes great teaching?

Review of the underpinning research

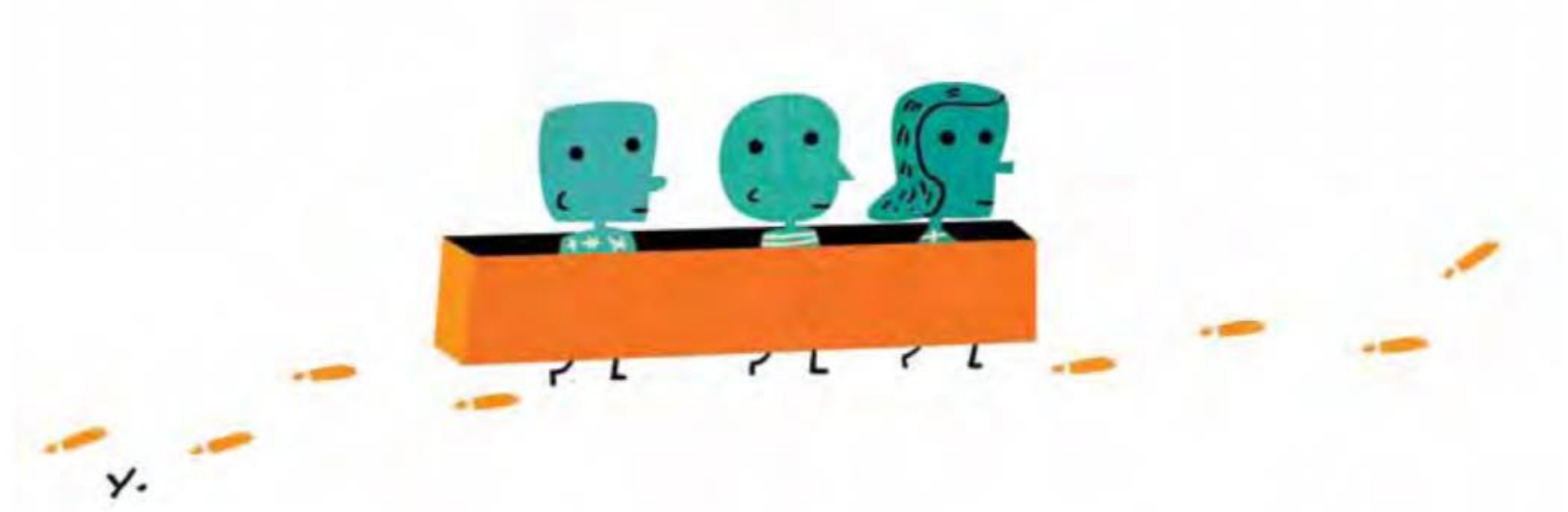
Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major
October 2014



Key take-away(s)?

Principles of Instruction

Research-Based Strategies That All Teachers Should Know



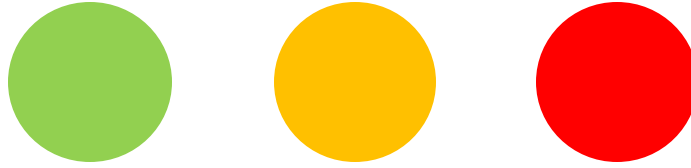
BY BARAK ROSENSHINE

This article presents 10 research-based principles of instruction, along with suggestions for classroom practice. These principles come from three sources: (a) research in cognitive science, (b) research on master teachers, and (c) research on cognitive supports. Each is briefly explained below.

A: Research in cognitive science: This research focuses on how our brains acquire and use information. This cognitive research also provides suggestions on how we might overcome the limitations of our working memory (i.e., the mental “space” in which

Even though these are three very different bodies of research, there is *no conflict at all* between the instructional suggestions that come from each of these three sources. In other words, these three sources supplement and complement each other. The fact that the instructional ideas from three different sources supplement and complement each other gives us faith in the validity of these findings.

Education involves helping a novice develop strong, readily accessible background knowledge. It’s important that background knowledge be readily accessible, and this occurs when knowledge is well rehearsed and tied to other knowledge. The most effective teachers ensured that their students efficiently acquired,



Principles of Instruction

Research-Based Strategies That All Teachers Should Know



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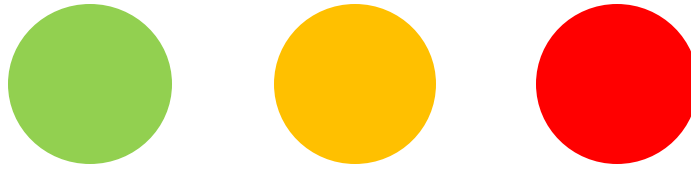
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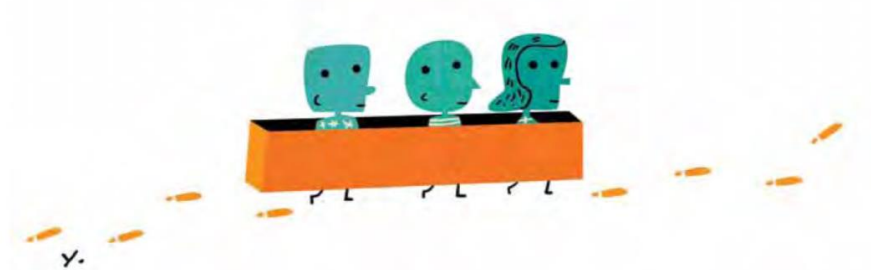
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1. Begin a lesson with a short review of previous learning.
2. Present new material in small steps with student practice after each step.
3. Limit the amount of material students receive at one time.
4. Give clear and detailed instructions and explanations.
5. Ask a large number of questions and check for understanding.
6. Provide a high level of active practice for all students.



Principles of Instruction

Research-Based Strategies That All Teachers Should Know



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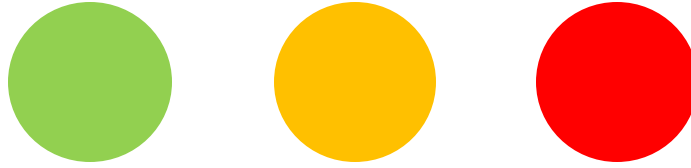
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7. Guide students as they begin to practise.
8. Think aloud and model steps.
9. Provide models of worked-out problems.
10. Ask students to explain what they have learned.
11. Check the responses of all students.
12. Provide systematic feedback and corrections.



Principles of Instruction

Research-Based Strategies That All Teachers Should Know



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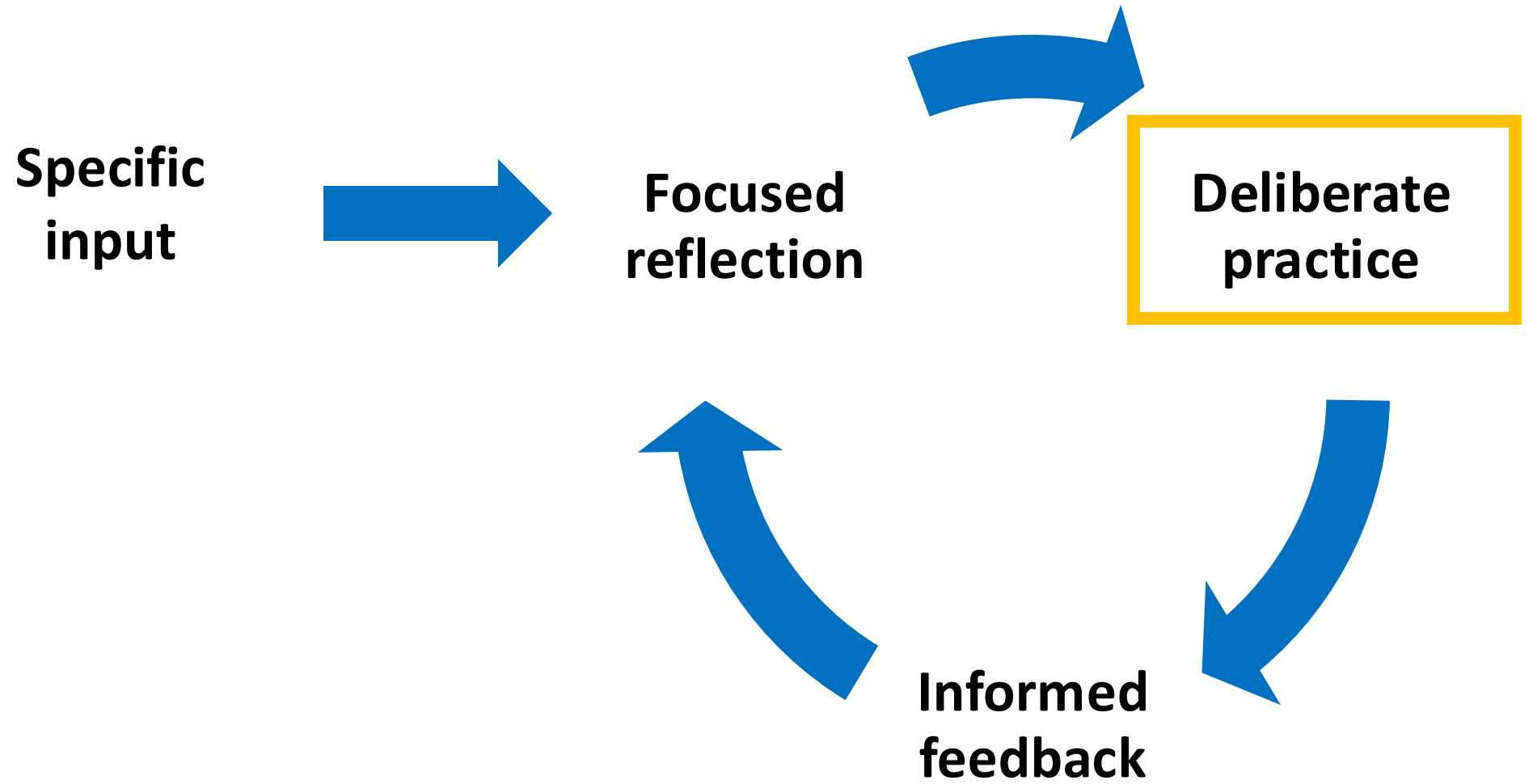
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13. Use more time to provide explanations.
14. Provide many examples.
15. Reteach material when necessary.
16. Prepare students for independent practice.
17. Monitor students when they begin independent practice.



Key take-away(s)?



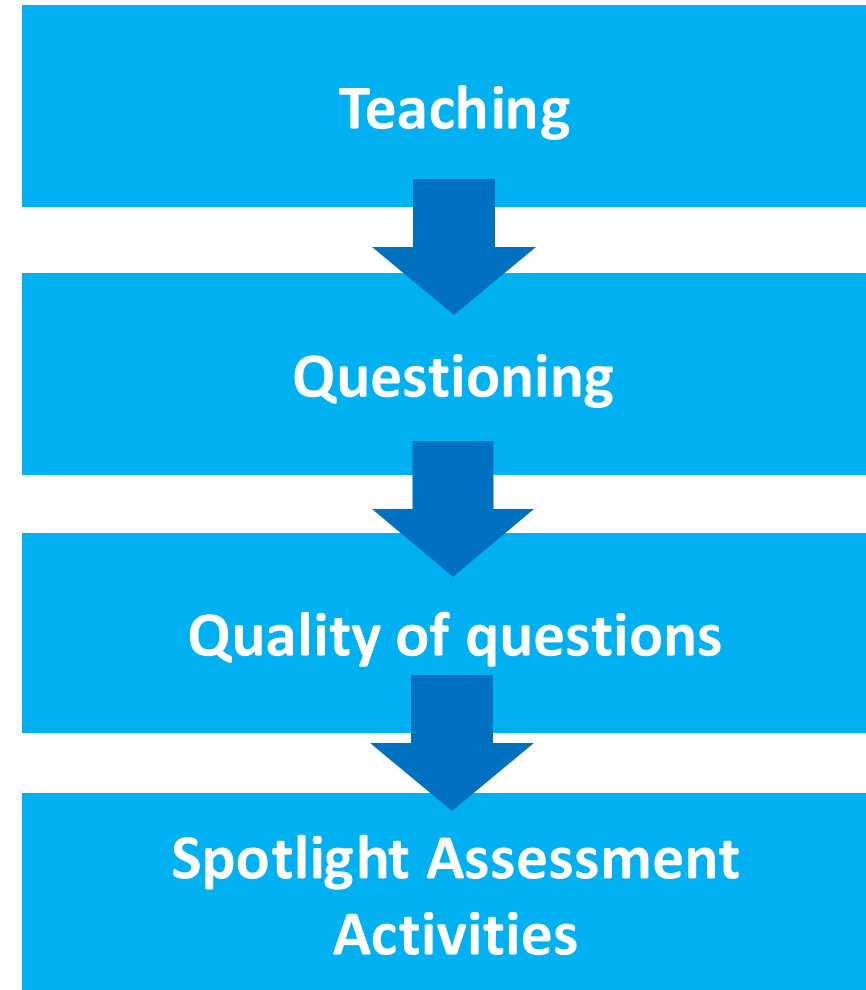


DELIBERATE PRACTICE

Common Pitfall

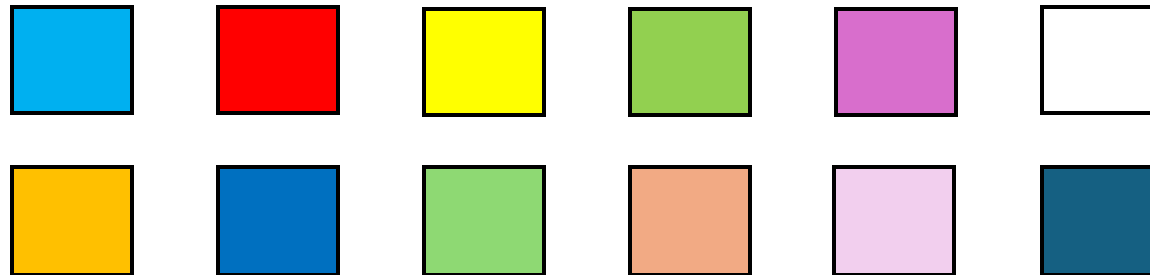
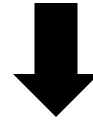
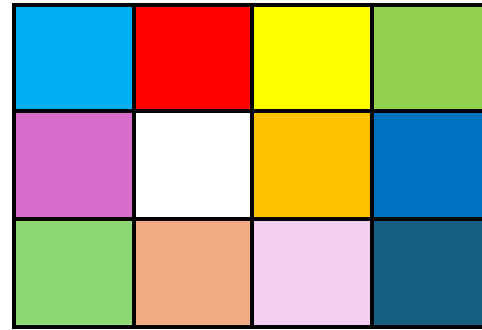


Focusing on things that are **too big** to improve or evaluate meaningfully.

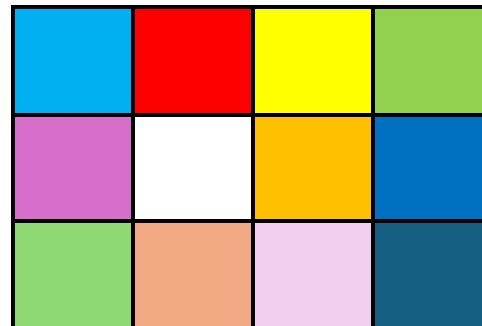
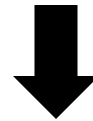
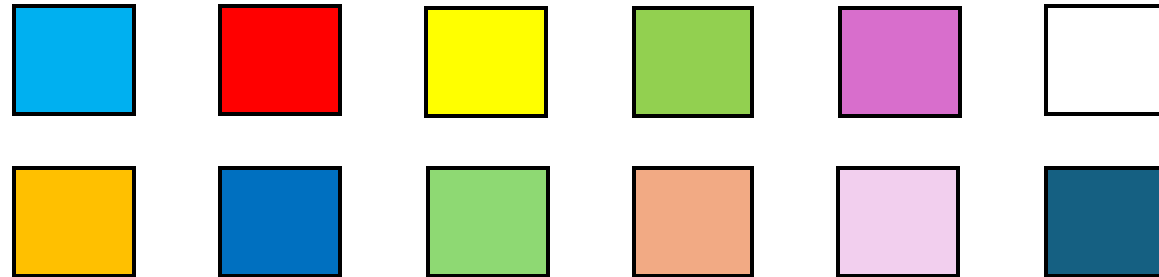


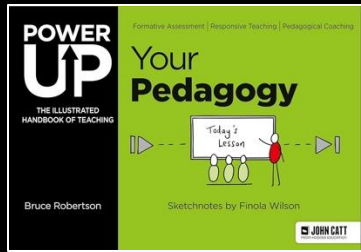
A group of runners competing in a marathon. In the foreground, a female runner with bib number 385 is smiling and waving. She is wearing a black and yellow patterned singlet and shorts. To her left, a male runner with bib number 1246 is running. To her right, a male runner with bib number 270 is running. The background features a large red banner with the word 'MONEY' in white, and a black banner with the Virgin Money logo and the text 'WOMEN'S WORLD MARATHON MAJORS'. There are also New Balance and TAG Heuer logos visible. The runners are wearing various athletic gear, including singlets, shorts, and running shoes. The scene is set on a paved road with a green field in the background.

Atomise your areas of focus...



...and *then* bring it all together





Elements of teaching practice

1. Daily Review
2. Learning Intentions
3. Success Criteria
4. Spotlight Assessment
5. Presenting Content
6. Practice
7. Differentiated Support & Challenge
8. Questioning
9. Discussion
10. Feedback
11. Plenary Review
12. Expectations, Behaviour & Relationships

8. Questioning

Prompts		Trusted Techniques
1	Teacher exposition is infused with frequent questioning .	More Questions, More Often Statements into Questions
2	The questions you ask target desirable thinking (not too easy; not too difficult).	Spotlight Assessment Activities Different Angles Difficulty Staircase
3	There is an appropriate blend of surface knowledge questions (recall) and deeper understanding questions (application).	
4	Every student is expected to <i>think</i> about every question asked.	Pause Patient Hands Cold Call On the Hook Show-Me Boards Chat To A Partner Choral Response
5	Through <i>careful listening</i> , you engage with students' answers, including the specific detail of these.	Drill Down Stick with You Homing In Push for Perfect



Pedagogy Development Plan

Specific aspects of teaching you would like to develop

Trusted Technique	Key features to focus on

Reflection on progress (every 4 – 6 weeks)

Specific aspects of teaching you would like to develop

Questioning. Specifically, getting more students to pay attention and think every time I ask a question.

Trusted Technique	Key features to focus on
Show-me Boards	Creating routines so that the first class of the day take these out and the last class put them away. Using these at least 3x a lesson with every class. Moving around the room more as students are writing to help take in more information and keep students on task.
Cold Call	Question, then name. Using Cold Call at least 10x a lesson.

Reflection on progress (every 4 – 6 weeks)

I feel that I have really improved my use of Show-me Boards. We use these in nearly every lesson, at least three times per lesson. It's now routine that these get taken out at the start of the day and left on desks for the rest of the day. This is really helping with organisation and management.

I want to continue to focus working on Cold Call, ensuring I am asking the question first, then naming a student to answer. Sometimes, I'm still falling into the trap of asking the first student who puts up their hand to answer. So, over the next month, I'm going to focus on the Patient Hands technique as well.



Key take-away(s)?



Aim

To develop your understanding of of **practical steps** you could take to make your teaching – and students' learning - *even better* than it is already.



Leadership of Learning

Bruce Robertson

St Andrew's High School, 19th August 2025



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