The current school curriculum and a fast-changing world

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Point of departure: statement Minister Motshekga on 22 July 2020.

"Our vision of the post-COVID-19 basic education is anchored on the immediate implementation of a curriculum with skills and competencies for a changing world."

Also:

It is indisputable that the exponential pace of technology developments will result in a future that is volatile, uncertain, complex, and ambiguous, referred to by the acronym VUCA.

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And:

Andreas Schleicher: Organisation for Economic Co-operation and Development (OECD)

“Put simply, the world no longer rewards people just for what they know—search engines know everything—but for what they can do with what they know, how they behave in the world, and how they adapt. Because that is the main differentiator today, education is becoming more about creativity, critical thinking, communication, and collaboration; about modern knowledge, including the capacity to recognize and exploit the potential of new technologies; and, last but not least, about the character qualities that help fulfilled people live and work together and build a sustainable humanity”.

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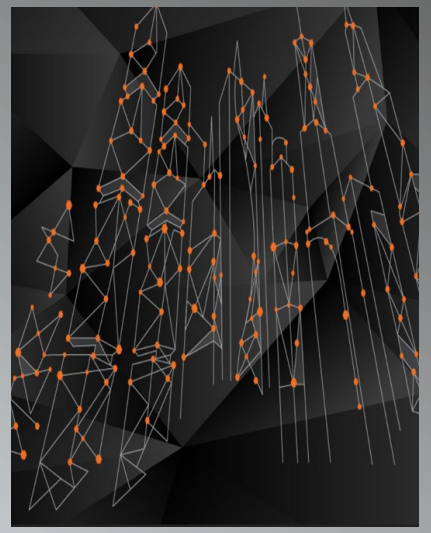
Focus of presentation



My perspective on a “curriculum with skills and competencies for a changing world” - drawing in particular on the work of the Centre for Curriculum Redesign

The Future Reimagined

“Lifeworthiness” and “lifereadiness” – David Perkins

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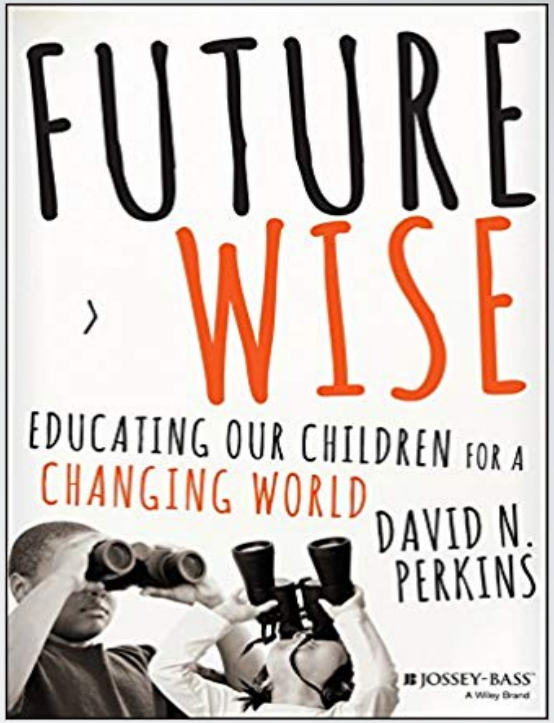

"Lifeworthy"

School curriculums should be redesigned, using "what is likely to matter in the lives learners are likely to live" as a core measure: "lifeworthiness"

How often is a particular fact, understanding, or skill likely to come up? With what importance? Would it grow in breadth and depth and significance over time—or do we simply forget it?

"Perhaps we need a different vision of education, a vision that foregrounds educating for the unknown as much as for the known. Perhaps we need a vision of education that's more "future wise" reflecting our best guesses about what's most likely to happen and foregrounding flexible knowledge likely to inform whatever does happen."

"Lifeworthy content may well get taught ineffectively and therefore not do learners much good."

"What kinds of teaching and learning make understandings liferready? In broad terms, the answer is simple: the learning process has to involve experience with thinking, applying, noticing, and caring. "

Returning to:

"Our vision of the post-COVID-19 basic education is anchored on the immediate implementation of a curriculum with skills and competencies for a changing world."

Is there is a shared understanding on the nomenclature of "skills and competencies for a changing world"?

- How does notion of "skills and competencies for a changing world" account for the literacies important for a changing world?
- Is the assumption that the notion of skills and competencies for a changing world include such literacies?

Centre for Curriculum Redesign (CCR): *Four dimensional education framework,* Framework consists of knowledge, skills, character, and meta-learning. Knowledge refers to what we know and understand. The other dimensions are competencies – skills (how we use what we know), character (how we behave and engage in the world) and meta-learning (how we reflect and adapt). In other words – competencies involve a mix of social, emotional, and cognitive capabilities. (And skills are a type of competency.)

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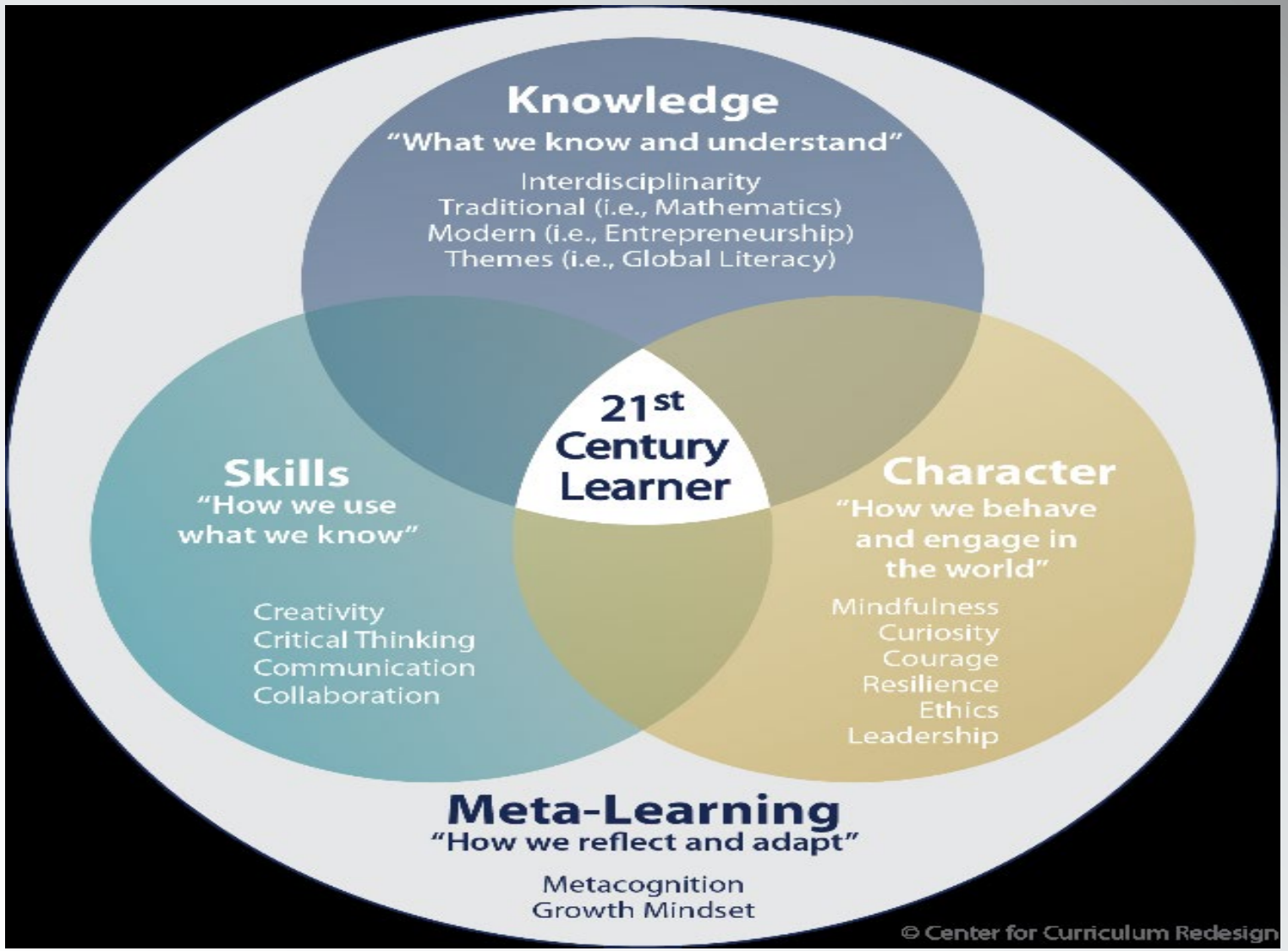
FOUR-DIMENSIONAL EDUCATION

THE COMPETENCIES LEARNERS NEED TO SUCCEED



Authors:

Charles Fadel
Maya Bialik

Bernie Trilling

School learning: the **foundation** for all future learning

Centre for Curriculum Redesign

1) **Foundational Knowledge**: a solid base of knowledge on which to build when it comes time to learn more, or from which to apply what was learned in a real world setting.

2) Foundational Competencies: motivation and ability to effectively activate knowledge when relevant and to learn more when it becomes necessary

I add:
3) Foundational literacies:
Reading,w***R***iting, and a***R***ithmetic, the so-called 3Rs.

In fast-changing world: digital literacy – becoming a foundational literacy
Other literacies: Data-literacy, information literacy

Foundational Knowledge

Core Concepts

The most important concepts that learners must understand in order to be able to make connections and meaning, resulting in transfer.
The fundamentals

David Perkins: “expert amateurism”: “robust and flexible understanding of the fundamentals”
Focus on helping learners to understand the connections between concepts and between concepts and content detail.

Fragmented information is the enemy of deeper (meaningful learning).

Fragmented information makes it difficult for learners to develop conceptual frameworks that they can later use to understand new information or to build upon existing information.

Foundational Knowledge

Essential Content
The most important content knowledge that students must know (rather than looking it up) in order to learn concepts and make informed decisions throughout their lives.

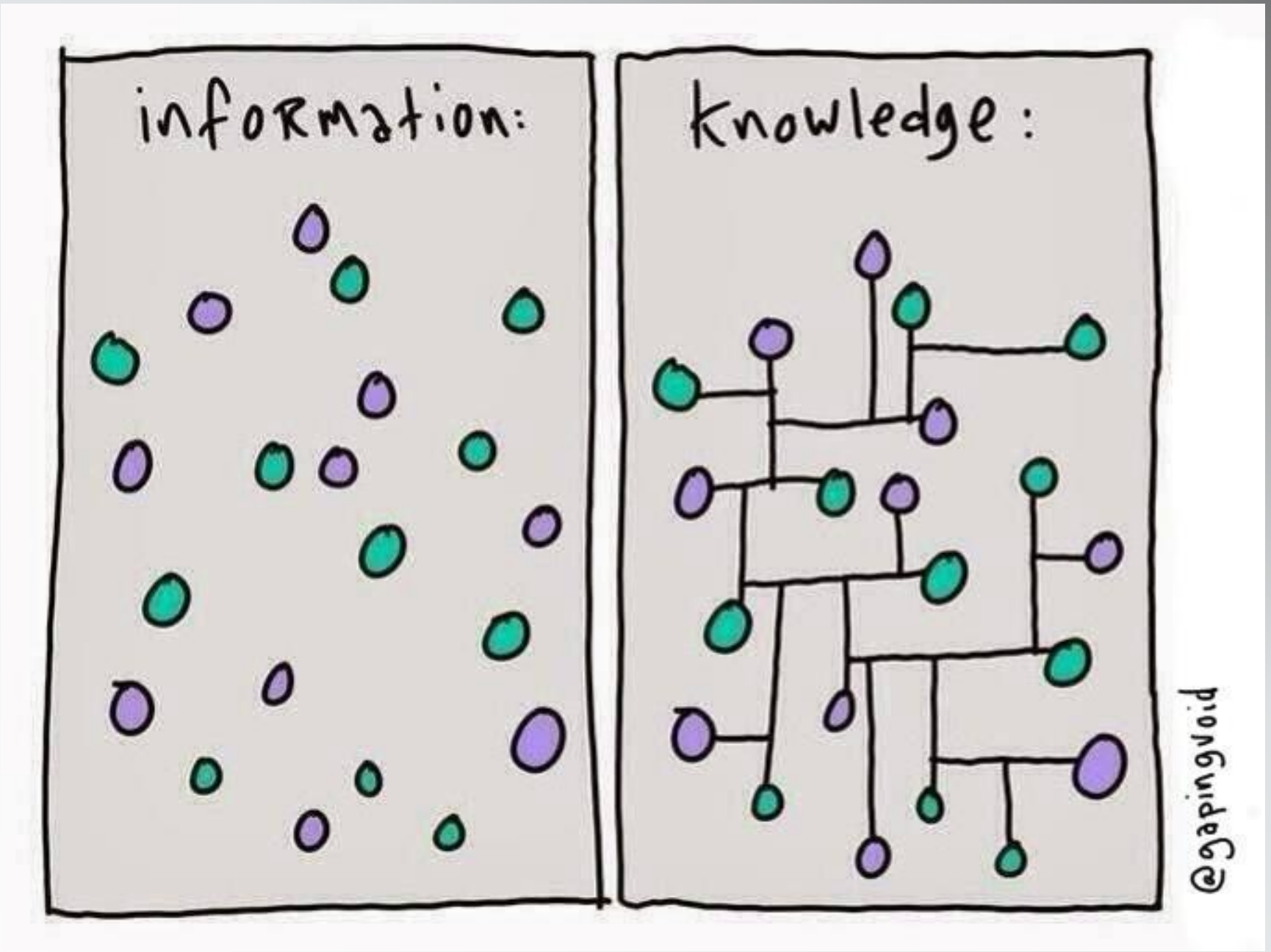
Given the ubiquity of information – “Google” – what is essential content worth knowing?

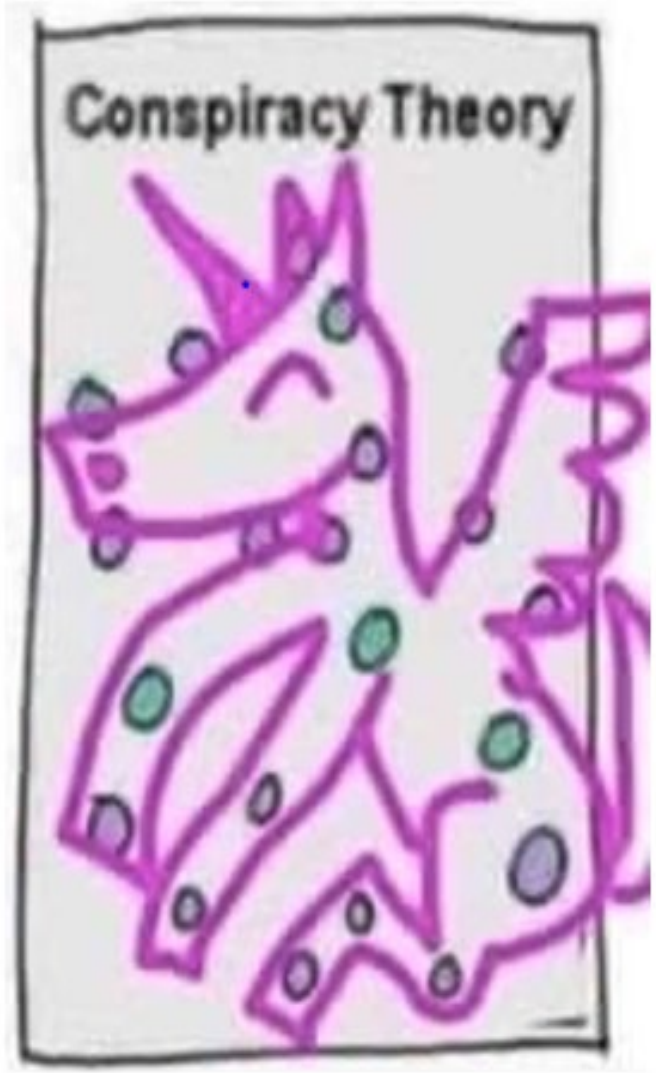
Pairing of essential content with core concepts

“Pruning” the curriculum?

Curating the curriculum for relevance (Charles Fadel)

The difference between information and knowledge





To make us smile:

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Foundational Competencies:

Skills: What we do with what we know
Creativity, Critical Thinking, Communication, Collaboration (4Cs)
Character: How we behave and engage in the world
Mindfulness, Curiosity, Courage, Resilience, Ethics, Leadership
Meta-Learning: How we reflect and adapt
Metacognition, Growth Mindset

Skills

False dichotomy: Skills and knowledge
When knowledge is learned without skills – often learned superficially (resulting in surface learning) – not transferable
"Deep understanding and actionability for the real world will occur only by embedding skills within knowledge domains, such that each enhances the other." (CCR)

Shared understanding on what the 4Cs entail in action?

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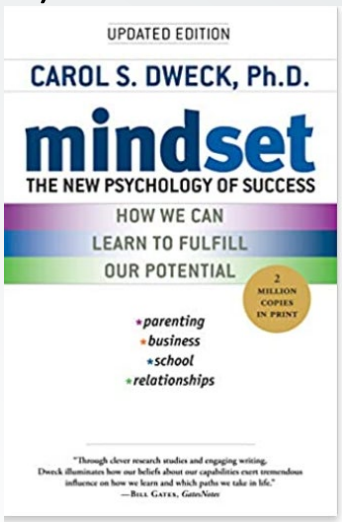
Teaching through infusing the 4Cs

Agreement with Charles Fadel: A claim that the four Cs are prominent in teaching is valid only if there is evidence of deliberate, comprehensive, systematic and demonstrable infusion of the four Cs.

Teaching through infusing the 4Cs, coupled with meta-learning, if done well, will support meaningful (deeper) learning.

Growth mindset: Carol Dweck
Innate ability does matter but effort can yield gains.
Learners differ in intelligence (inborn ability) but intelligence can be changed through sustained hard work (the notion of growth mindset – that effort will lead to increased competence).



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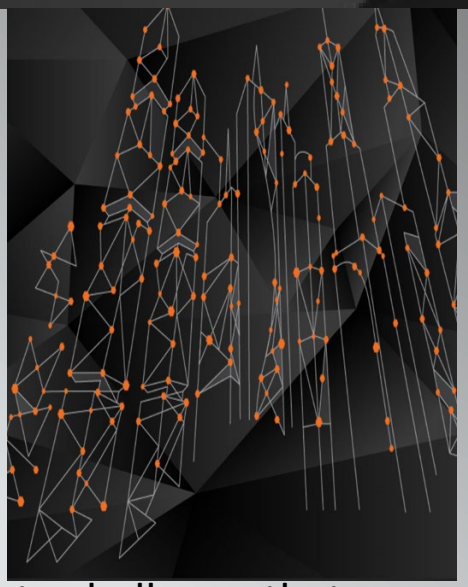
A Pilot in lesson design at UJ: 2021

Designing lessons invoking science of learning principles (coupled with classroom implications) and competencies for a changing world



Some of the principles that guide lesson design:

- We understand/learn new things/ideas by relating them to what we already know. What we know determines what we learn. If what learners know and believe is not engaged, they will likely fail to grasp new concepts and information taught.
- Our working memory is small. Too much information swamps our working memory.
- Having learned something does not imply that transfer will happen automatically
- Learning requires cognitive engagement which is supported through moderate challenge that elicits interest. Cognitive engagement implies paying attention to something and thinking about it. Whatever learners think about, is what they will remember.

PLUS

- Invoking the 4Cs and meta-learning - deliberately, and demonstrably

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