

In search of 21st Century Skills task engines

DEVELOPMENT OF C21ST SKILLS MATERIALS ACROSS THE CURRICULUM

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C21st Perspectives

Students cannot rely solely on left-brain skills for success in the 21st century. They also need to design innovations, communicate through compelling stories, develop rapport with others, and synthesize seemingly disconnected information in new ways.

Daniel Pink

simply adding a layer of expensive tools on top of the traditional curriculum does nothing to address the learning needs of modern learners.

There will be changes in what students learn. But it's just as important to recognize the ongoing shifts in how and when they learn. EnGauge

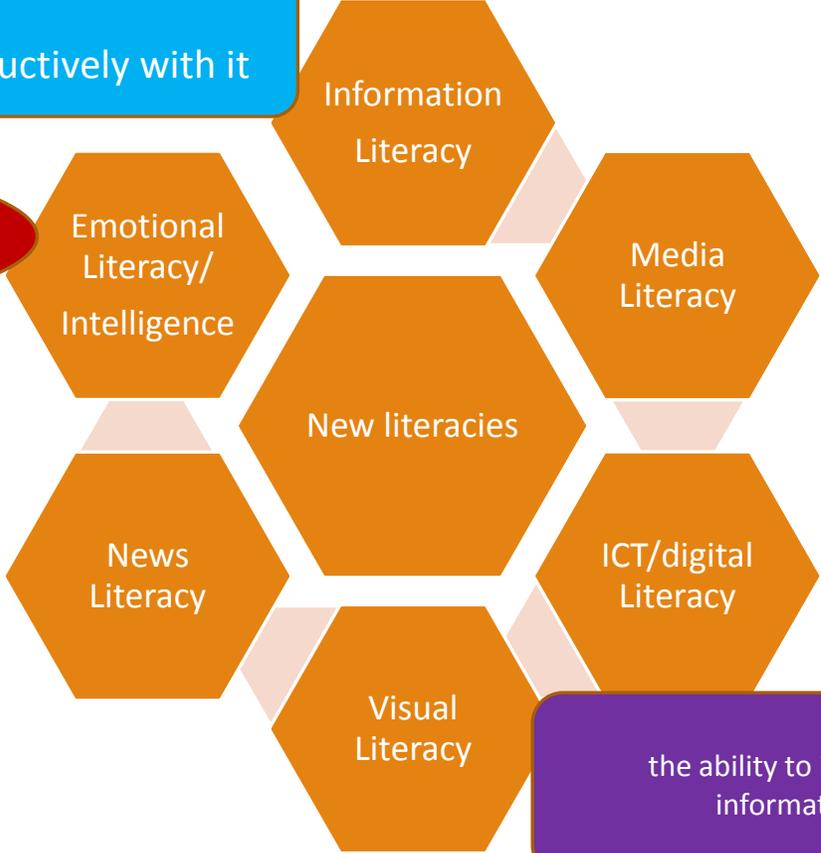
The cumulative amount of information in different forms of media that exists on the planet, from the beginning of recorded history to the present is - by most serious estimates - doubling every two years.

TECHNOLOGY IS ONLY TECHNOLOGY TO THOSE WHO WERE BORN BEFORE IT.

In the literature about curriculum and our methodological response, there's a profusion of new literacies under discussion

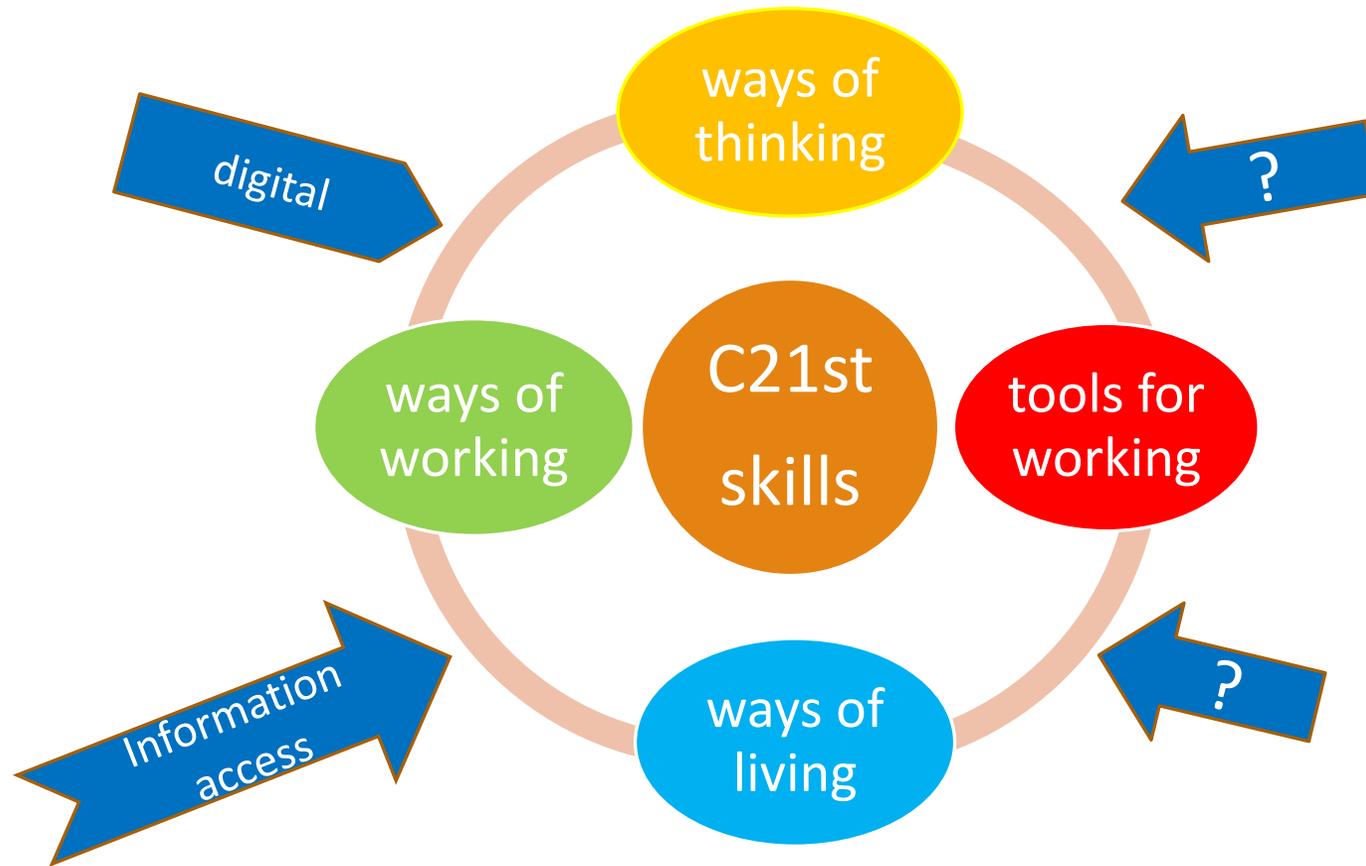
the ability to mine new information and interact constructively with it

constellation of behavioural dispositions and self-perceptions concerning one's ability to recognise, process, and utilise emotion-laden information



the ability to interpret, negotiate, and make **meaning** from information presented in the form of an image

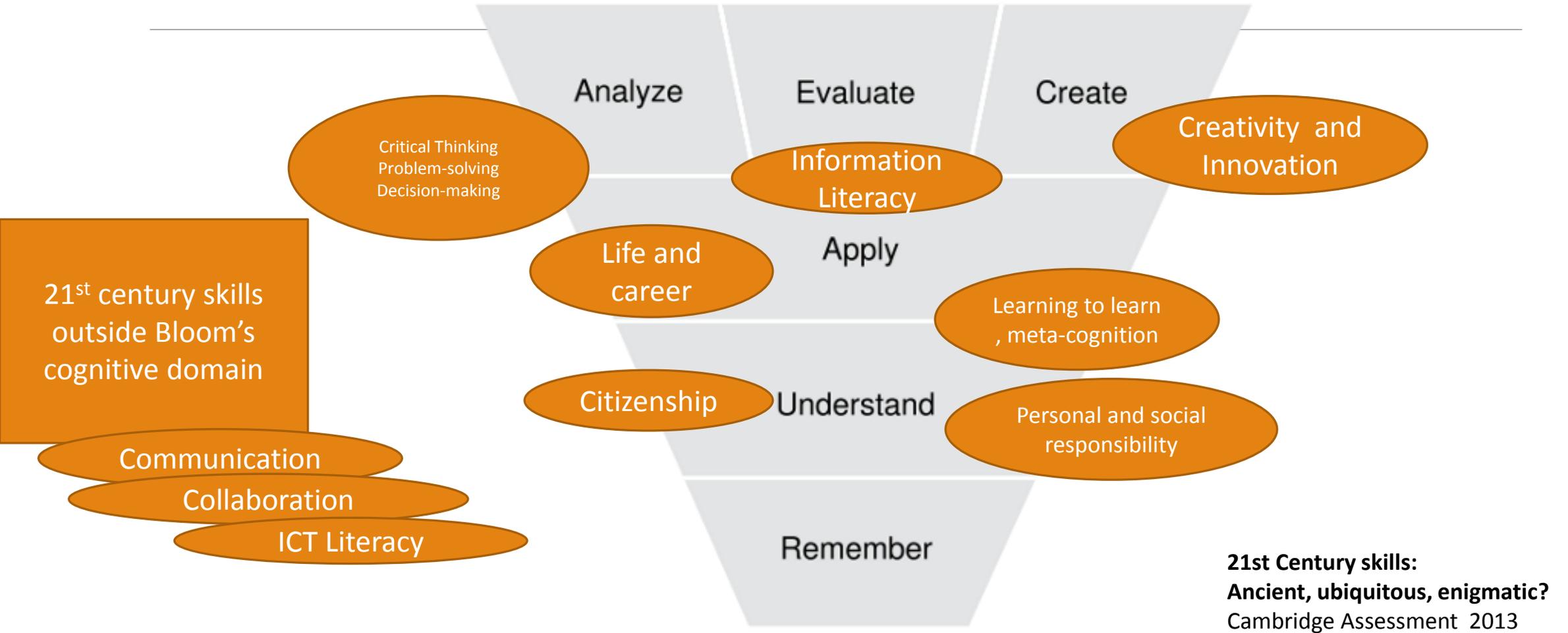
Broad *C21st skills* definition



Digital Generation X



Approximate mapping of 21st century skills onto Bloom's cognitive domain



PEDAGOGIC THINKING AND C21ST SKILLS

Critical and creative thinking

- Factual knowledge
- Conceptual knowledge
- Procedural knowledge
- Meta-cognitive knowledge

Information Technology

- IT and ICT skills
- Digital Literacy

Interpersonal and Social Awareness

- Organisation skills
- Communication and collaboration skills
- Citizenship

Possible Critical and Creative Thinking Skills Matrix

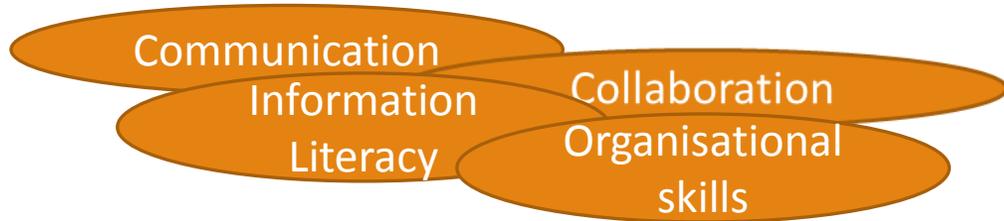
	analysing	reasoning	problem - solving	evaluating	possibility thinking	creative thinking
Factual						
Conceptual						
Procedural						
Metacognitive						

	analysing	reasoning	problem - solving	evaluating	possibility thinking	creative thinking
IT and ICT skills						
Digital Literacy						

	analysing	reasoning	problem - solving	evaluating	possibility thinking	creative thinking
Organisation skills						
Communication and collaboration skills						
Citizenship						

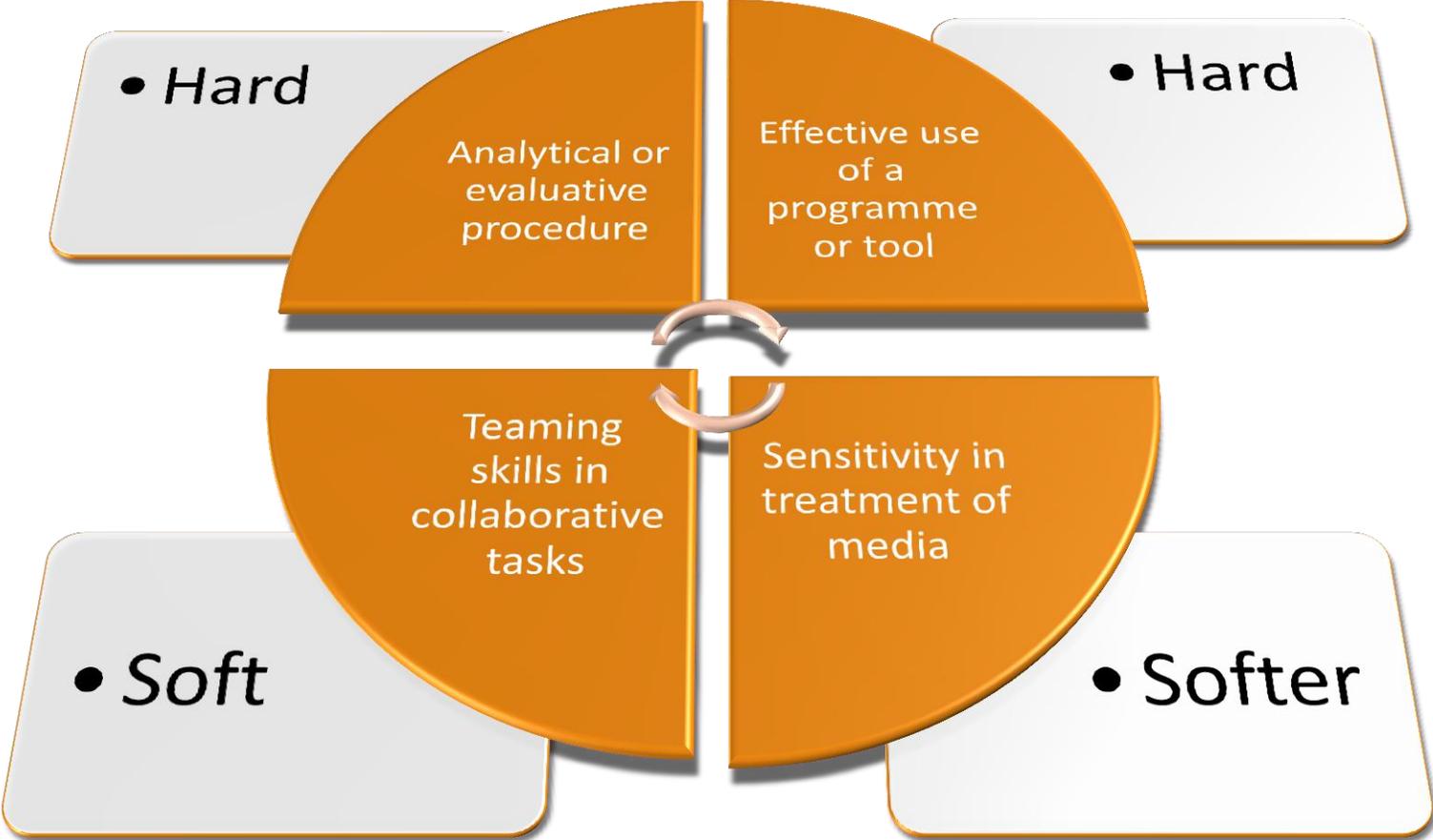
21st Century Skills – Infusion across the curriculum

Multi-layered tasks which involve higher-order cognition processes in one or more elements of the task and are completed through task stages which involve high doses of



and thus allow for a clear focus on soft skills development

Skills Infusion Model



Learning styles or modes



Didactic limitations of [verb] 'rubric' approach

After Bloom, Governments, Ministries etc. became too concerned with lists of types of questions/rubrics i.e. teacher-centred applications

What we really need is to bring Bloom's cognitive model into learner-centred activity focus by stressing task-based processes which involve C21st higher order thinking in Speaking, Writing, Listening and Reading

So moving more *from 'what' higher order thinking skills you require to task processes teachers use [how] to effectively facilitate their engagement with higher order thinking*

Task Engines / Task Modalities

which engender C 21st learning



knowledge
construction



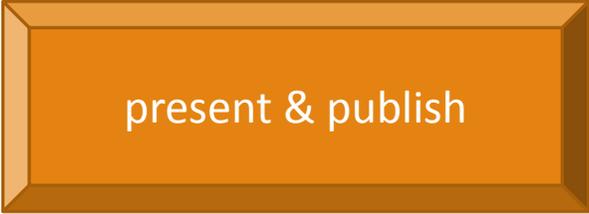
mediation



synthesis



question framing



present & publish



simulation
modelling

Weave these 'knowledge construction' dimensions within our learning everyday tasks

Teach skills through real-world contexts

Vary the context in which student use a newly taught skill

Emphasise the building blocks of higher-order thinking

- Build background knowledge
- Classify things in categories
- Arrange items along dimensions
- Make hypotheses
- Draw inferences
- Analyse things into their components
- Solve problems

Encourage students to think about the thinking strategies they are using



Guess the Google

GUESS-THE-GOOGLE

TIME REMAINING
:08

INCORRECT GUESSES

- + palette
- + rainbow
- + color

ENTER KEYWORD.

GUESS

Superlative Imposter [What's the task mechanism?]

SIZE: Lake Michigan the Pacific Ocean the River Nile the Caspian Sea

NUMBER OF PEOPLE: Mexico City China English Chinese

SIZE: Mount Everest the Empire State Building Jupiter the Sahara

WEATHER CONDITIONS: Ethiopia Antarctica the North Pole Bangladesh

ANIMALS: leopard ostrich great white shark giraffe

Communication

Collaboration

Classic 'knowledge construction' task frames

Find the thread

Odd one out

Which one fits?

Same or different?

What's the connection ?

Situate the context

Framing and gaming



question framing

If the answer is

Beans in a jar

enhance short video with commentary

script a voiceover for documentary footage explaining impact, repercussions of what is being witnessed

mediation

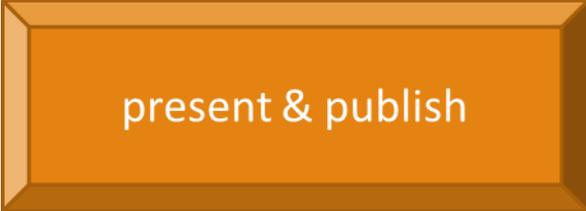
evaluate and extend range and depth of questions



synthesis

research processes of effective interview techniques and then extend range and depth of a given set of interview questions

remix media elements in presentation about a current trend



present & publish

design a presentation using visuals, film or graphics to explain modern trends and/or neologisms e.g. FOMO

use modelling programmes to investigate outcomes

model different scenarios using modelling software and reach conclusions about initial hypotheses



With the right 'task engines' ...

Teaching shifts from focusing on covering all required content to focusing on the learning process, developing learners' ability to lead their own learning and to do things with their learning

Learning outcomes will be measured to some extent in terms of

- learners' capacities to build new knowledge and to lead their own learning effectively
- their proactive dispositions and their abilities to persevere through challenges
- the development of citizens who will prove to be life-long learners.

Be a total eclectic in collecting a range of simple interactive tools

<https://www.polleverywhere.com>

<https://tagul.com/>

<http://www.tricider.com/>

www.blabberize.com

www.escrapbooking.com

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