

21st Century skills: Ancient, ubiquitous, enigmatic?



CAMBRIDGE ASSESSMENT

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28th February 2013



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Local Examinations Syndicate

An introduction to 21st Century skills

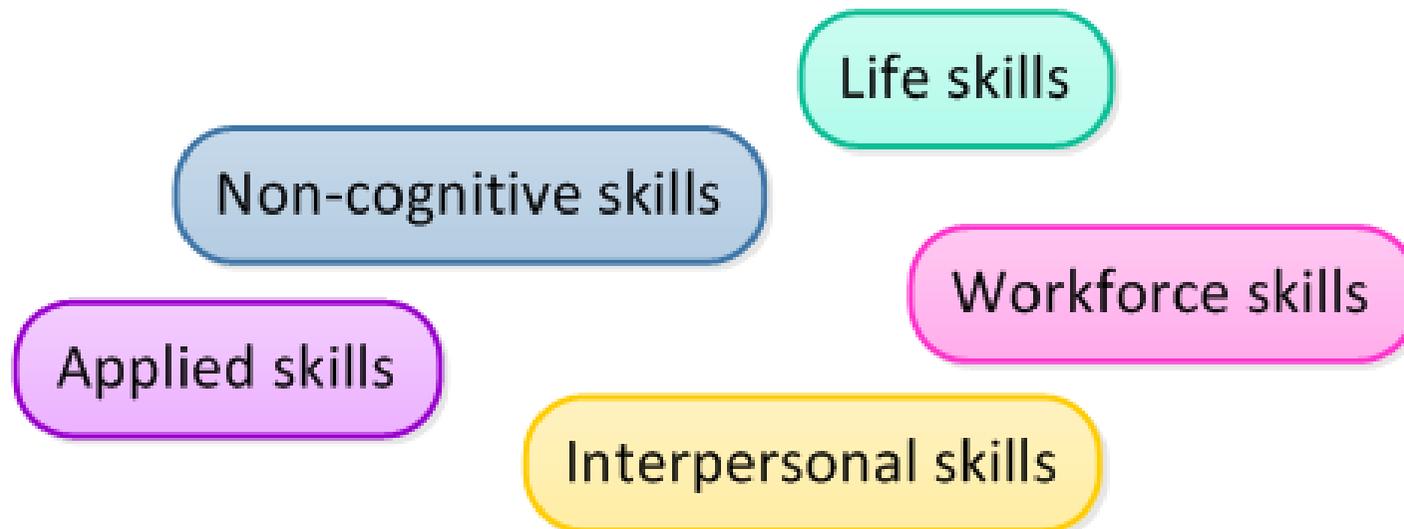
- What is meant by this term?
- How are 21st Century skills developed in young people?

The broad argument for 21st Century skills

- Life in a global economy is highly international, multicultural, and inter-connected
- Seismic advances in ICT & in access to it
- Economies of developed countries have shifted from a basis of material goods & services to information & knowledge
- The understanding and skills needed today are different
- Emphasis on *use* of information over possession of facts and figures

What are 21st Century skills?

- No single widely-accepted definition
- Literature contains hundreds of overlapping descriptors of the skills set:



ATC21S categories of 21st Century skills

Category	Skills
Ways of thinking	<ol style="list-style-type: none">1. Creativity & innovation2. Critical thinking, problem-solving, decision-making3. Learning to learn, metacognition
Ways of working	<ol style="list-style-type: none">4. Communication5. Collaboration (teamwork)
Tools for working	<ol style="list-style-type: none">6. Information literacy7. ICT literacy
Living in the world	<ol style="list-style-type: none">8. Citizenship – local & global9. Life & career10. Personal & social responsibility

Other perspectives

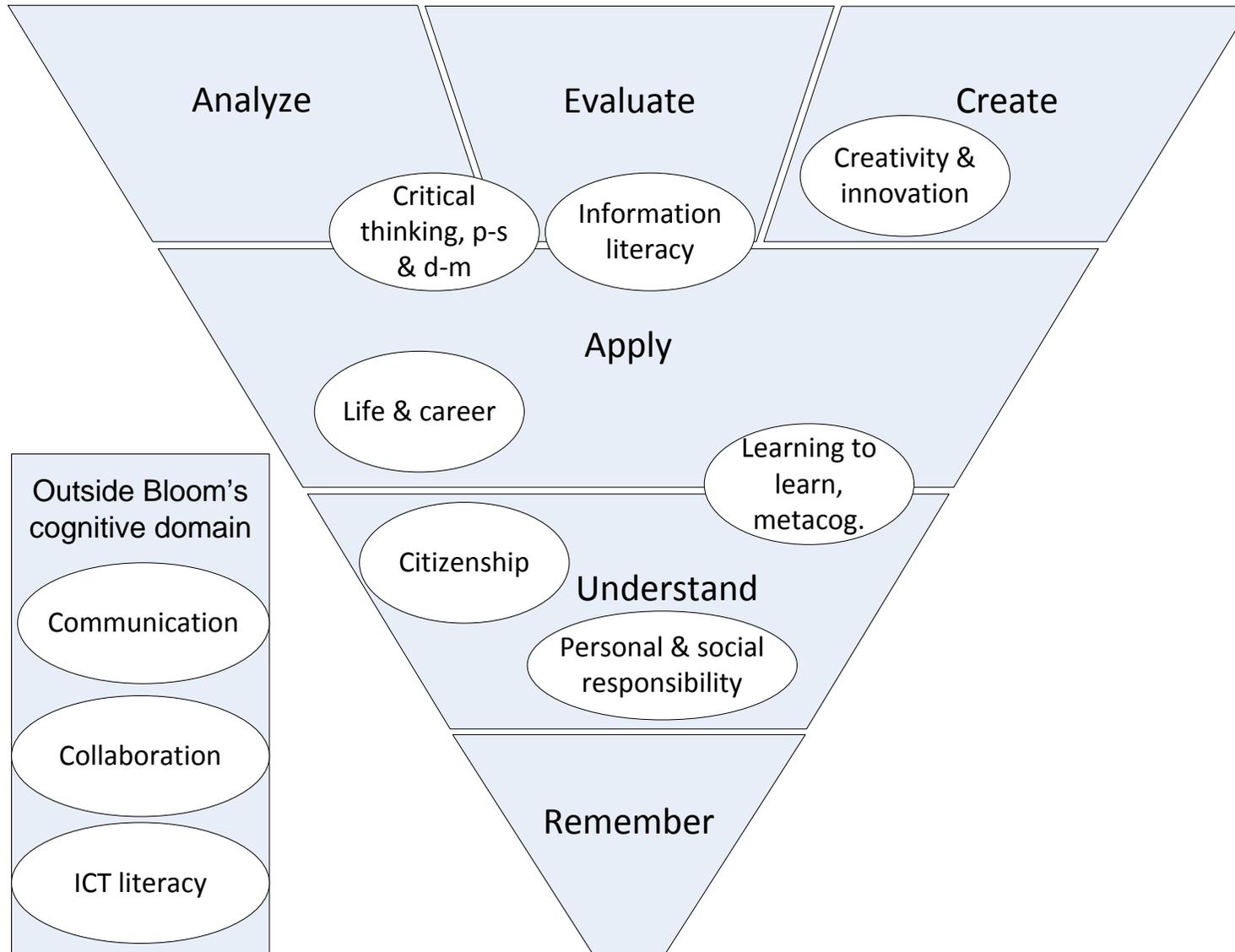
<p>Cambridge University admissions:</p> <p>Mental fluency, articulacy, high motivation, and an interest in complexity</p>	<p>Multilingualism:</p> <ul style="list-style-type: none">• Speaking English in addition to a different native language• Speaking another language (not necessarily English)
<p>Links to 'emotional intelligence', a (malleable) aspect of personality</p>	<p>Subject-specific uses:</p> <p>21st Century literacy 21st Century science etc. (→ Subjects must evolve to meet new needs)</p>

There are multiple approaches to developing 21st Century skills in young people.

Approach 1: Continue with long-standing teaching methods

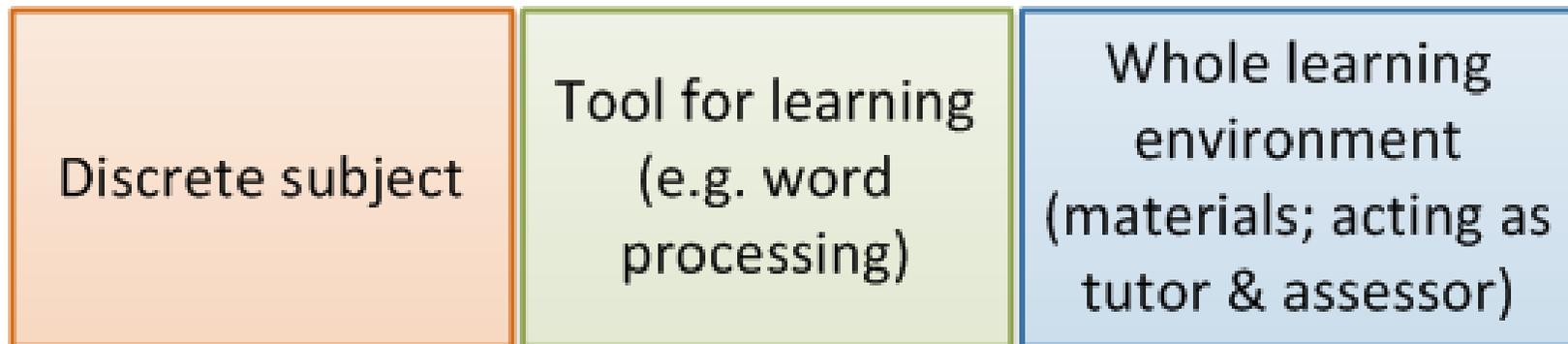
- Nothing new - current focus is due to deficits in aspects of current education system
- Creative, critical & analytical thinking valued by many philosophers & educators (Socrates to John Dewey)
- Maths, science, & vocational courses can be reconceptualised in terms of problem-solving & critical thinking skills (e.g. ACME, 2011; Rose, 2011)

Bloom et al.'s taxonomy of educational objectives (cognitive domain, 1956)



Approach 2: Develop curricula covering 21st Century skills explicitly

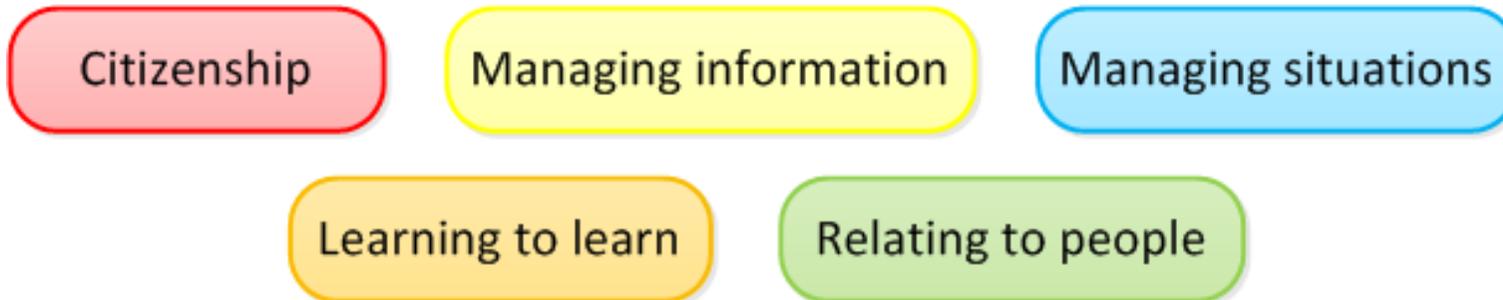
- Critical thinking now a subject in its own right
- Thinking skills and global perspectives courses
- Debate over positioning of ICT in the curriculum:



Approach 3: Adopt a skills-centred pedagogy in schools and colleges

E.g. RSA's *Opening Minds* framework:

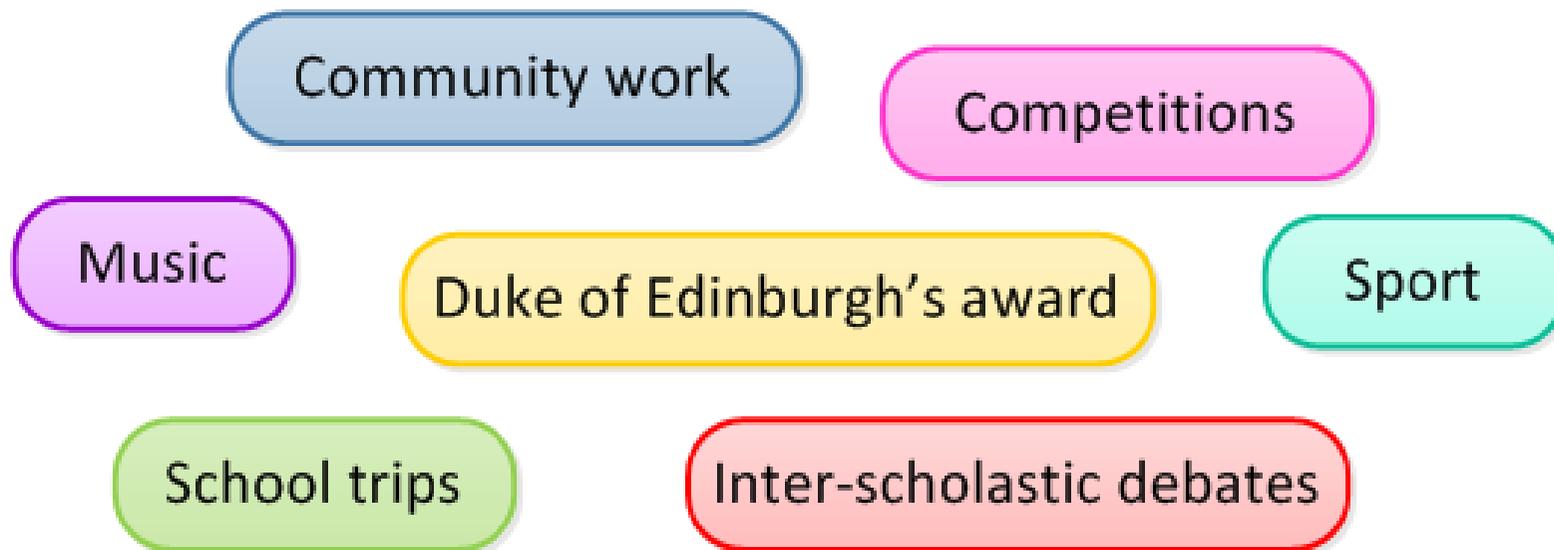
5 competences:



Teachers use the competences to develop curricula to suit their own schools, and can use whatever content they like

Approach 4: Nurture 21st C skills through extra- curricular activities

I



- Concerns over inequality and inequity

Approach 5: Develop 21st C skills in the workplace

“Workplace apprenticeship is the fundamental principle of vocational training in Germany and is thought to combine the most favourable conditions for developing skills.”

Tremblay and Le Bot (2003, p. 14)

Approach 6: Cultivate 21st C skills through independent research projects

