Building competency-based assessments

Esther Care

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@Care_Esther

Model

- Competence-based assessment requires students to demonstrate what they can do
- Demonstration can be through students taking action, making something, speaking, or writing

Source: OECD's Global Competence Model (2016)

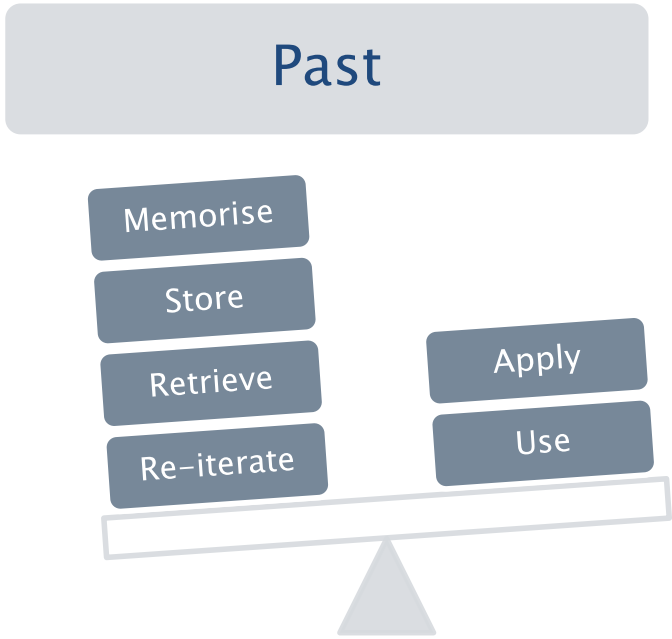

science
history
geography
mathematics
arts
physical-education
social-science
philosophy
languages
health


self-regulation
digital
sustainability
literacy
thinking
information
critical
technology
independence
motivation
citizenship
tolerance
civic
awareness
global
innovation
collaboration
cooperation
communication
creativity
problem-solving
multiculturalism

Brief review

- In the past, education has tended to prioritise the ability to memorise, store, and recall facts or learning

- Competence-focussed teaching, learning, and assessment values the application and demonstration of learning, not its re-iteration
- Where competence-based assessment HAS occurred in traditional school subjects, it has focussed on how students reason with or use knowledge, for example in critical thinking and problem solving

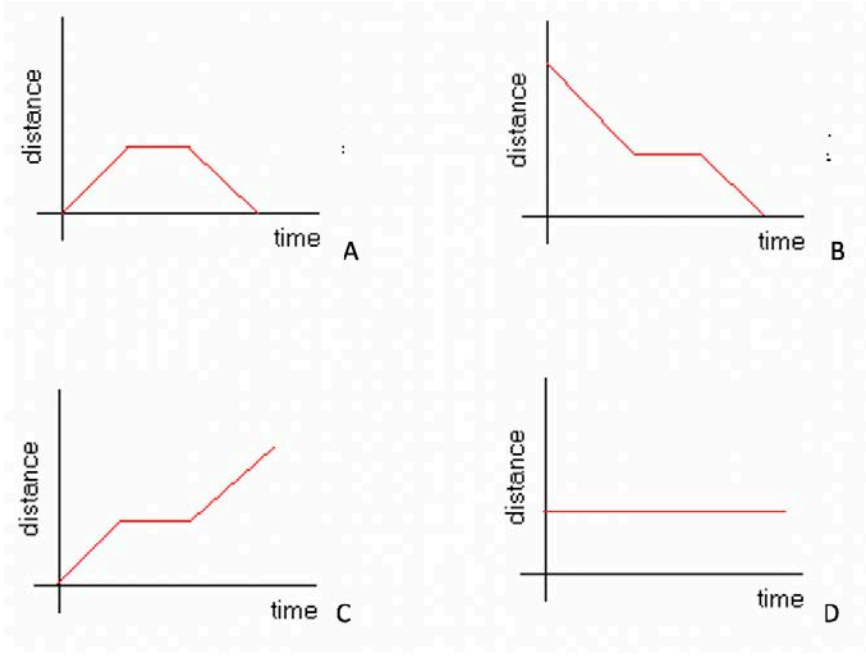


Memorisation

- What countries do these flags represent?

Competency

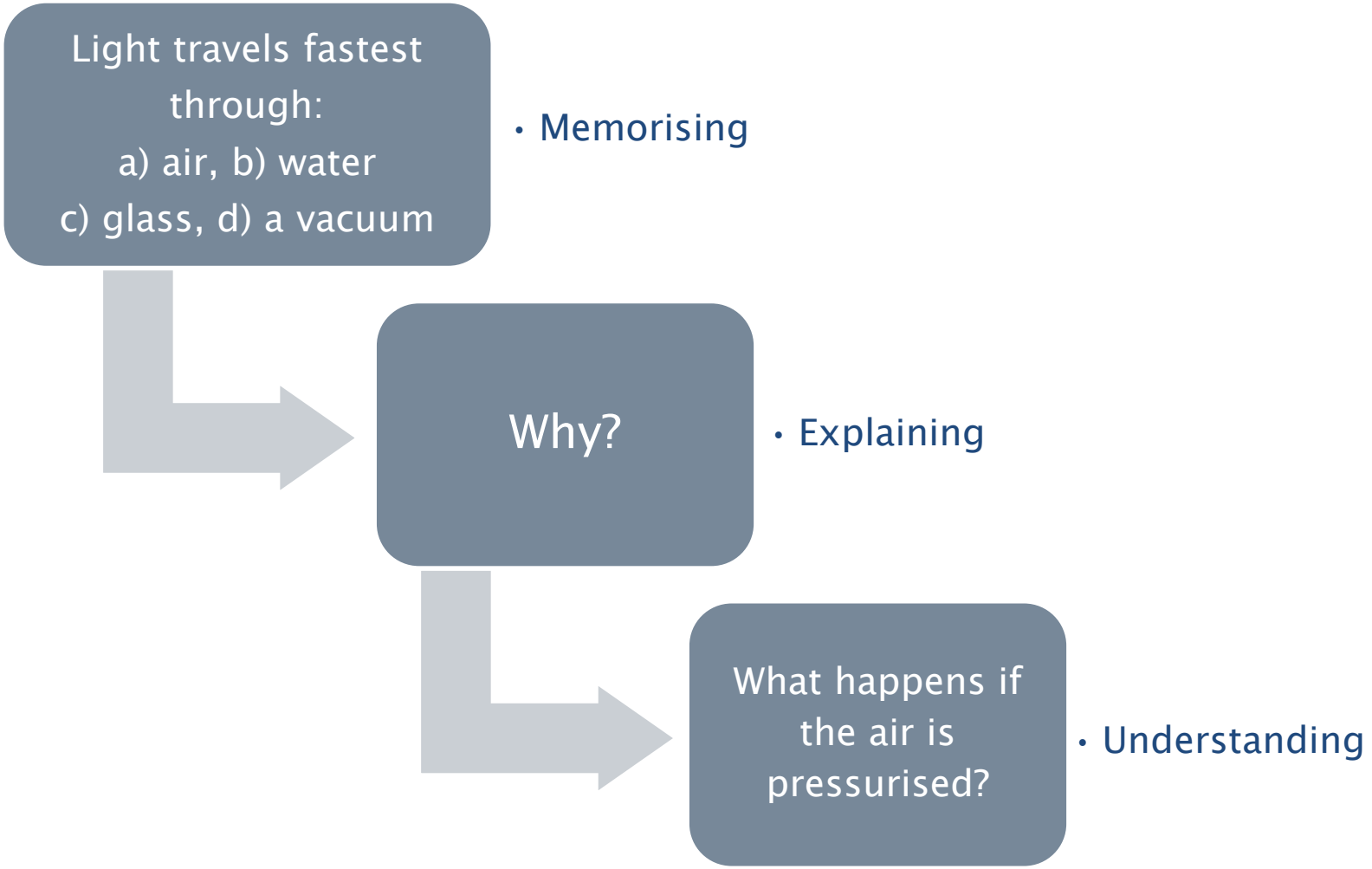
- Amir drove at a constant speed for 2 hours. He then stopped for an hour to do some shopping and then went back home driving at a constant speed.
- Which of the graphs best represents the changes in the distance from home as Amir was driving?



Differences: ‘cognitive’ and ‘social’

- Demonstration of cognitive competencies is relatively easy to assess due to the substantial role played by knowledge, and the appropriateness of written media for communicating the competency
- Demonstration of social competencies is less easy to assess as these may not rely on knowledge to the same degree, and written media are not as ubiquitously appropriate for communicating the competency

Example: ‘Cognitive competencies’ assessment



Example: 'Social competencies' assessment

EXAMPLE TASK FORMAT

- Take a familiar scenario
- Identify each person's needs
- Identify resources available
- Prompt students to work together to identify solutions to the mismatch between needs and resources

ISSUES

- No one correct answer
- How to capture and evaluate inputs and participation of students in collaborative groups

Serrekunda is an over-crowded town. Large families including grandparents, and their adult children with their wives and husbands and children, all live in small two or three room houses. One issue that these families experience is that there is not enough coal for everyone to use as needed.

Each member of the family has different daily needs and uses for coal. The mother needs coal to make food. The grandmother needs coal for heat during the day to stay warm and watch the baby grand-daughter. The young student needs coal for light to study.

- Each of these activities require different daily amounts of coal.
- 7 units of coal to make food
- 8 units of coal for light
- 8 units of coal for heat
- The family has only 15 units of coal each day.

Expert knowledge of the nature of the skills

To use and assess social competencies, we need to have a thorough understanding of what subskills contribute to them...

Dimensions of collaboration	Subskills
Participation	Taking responsibility Sharing Turn taking Engaging
Communication	Receptive Expressive
Negotiation	Compromising Perspective taking
Decision making	Analysing Evaluating Planning

Opportunity

- Thailand's five key competencies, and Indonesia's six 'karakter' provide the opportunity to evaluate student learning through a lens beyond knowledge accumulation or its routine application
- Use of competencies provides an approach to assessment of deep learning and understanding

Assessment

- For cognitive competencies, many current assessment approaches used in schools can be adapted
- For social competencies, checklist approaches can be used to track students' participation and inputs in terms of actions having occurred

Requirement

- A competency-based assessment approach requires:
  - knowing what the distinct competencies, or skills, are
  - knowing what the contributing subskills are, in just the same way as we know what the contributing parts of a maths curriculum are

Challenge

- Developing methods to capture competencies is the issue, not how to construct assessment tasks
- How to capture quality of 'social' competencies poses greater difficulty due to their dynamic nature and the media through which they are expressed

Key factors in assessment of competencies

- Focus on evidence – what can the student do?
- Infer from the evidence
- Be explicit about learning objectives in behavioural terms

- Not interested in comparing students
- Do not ‘over-test’
- Do not rely on ‘fuzzy’ learning goals

Some 21st century skills assessment initiatives

	Summative	Assessments for national use	Teacher assessment training	ILSA
Australia				PISA
Cambodia				PISA-D, SEA-PLM
Indonesia				PISA
Nepal				
Philippines				PISA, SEA-PLM

ILSA = International Large Scale Assessment

Optimizing Assessment for All

Nepal

"But this will change the way we teach"

In late 2019, Nepal announced integration of five skills domains through the curriculum as of 2020; assessment as an integral part of teaching and learning; viewing source of curriculum as problems, ideas, concerns posed by life...

Cambodia

Widespread regional assessment training schedules

No confusion! No excuses! No distractions!

https://www.iea.nl/studies/iea/21csmap

IEA

21CS MAP

21ST CENTURY SKILLS MAPPING

MAPPING 21ST CENTURY SKILLS IN A CHANGING WORLD

Education is changing. No longer just focused on the acquisition of a knowledge-based curriculum, countries worldwide are expanding their educational vision to include what are often termed 21st century skills (21CS).

Wide-ranging skills such as critical thinking, communication, decision-making, creative thinking, and cross-cultural competencies are often included. However, there is no consensus on what is meant by 21CS or how these skills are included in countries' curricula. To address this gap, the International Association for the Evaluation of Educational Achievement (IEA) is implementing a new, comparative, curriculum mapping study: 21CS MAP.

Resources

Care, E. (2020). *Optimizing Assessment for All: Assessment as a stimulus for scaling 21st century skills in education systems.* Washington D.C.: The Brookings Institution. https://www.brookings.edu/research/optimizing-assessment-for-all-assessment-as-a-stimulus-for-scaling-21st-century-skills-in-education-systems/

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Professor Esther Care
ecare@unimelb.edu.au

@Care_Esther