Shotton Hall

Teaching School Alliance

National College for School Leadership

NQT Session 5 Assessment

Assessment approaches (questioning and MCQs)

November 2020

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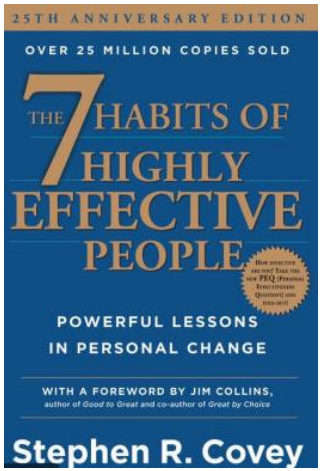
'Begin With the End in Mind'

'He who has a why can deal with any what or how'

Stephen Covey

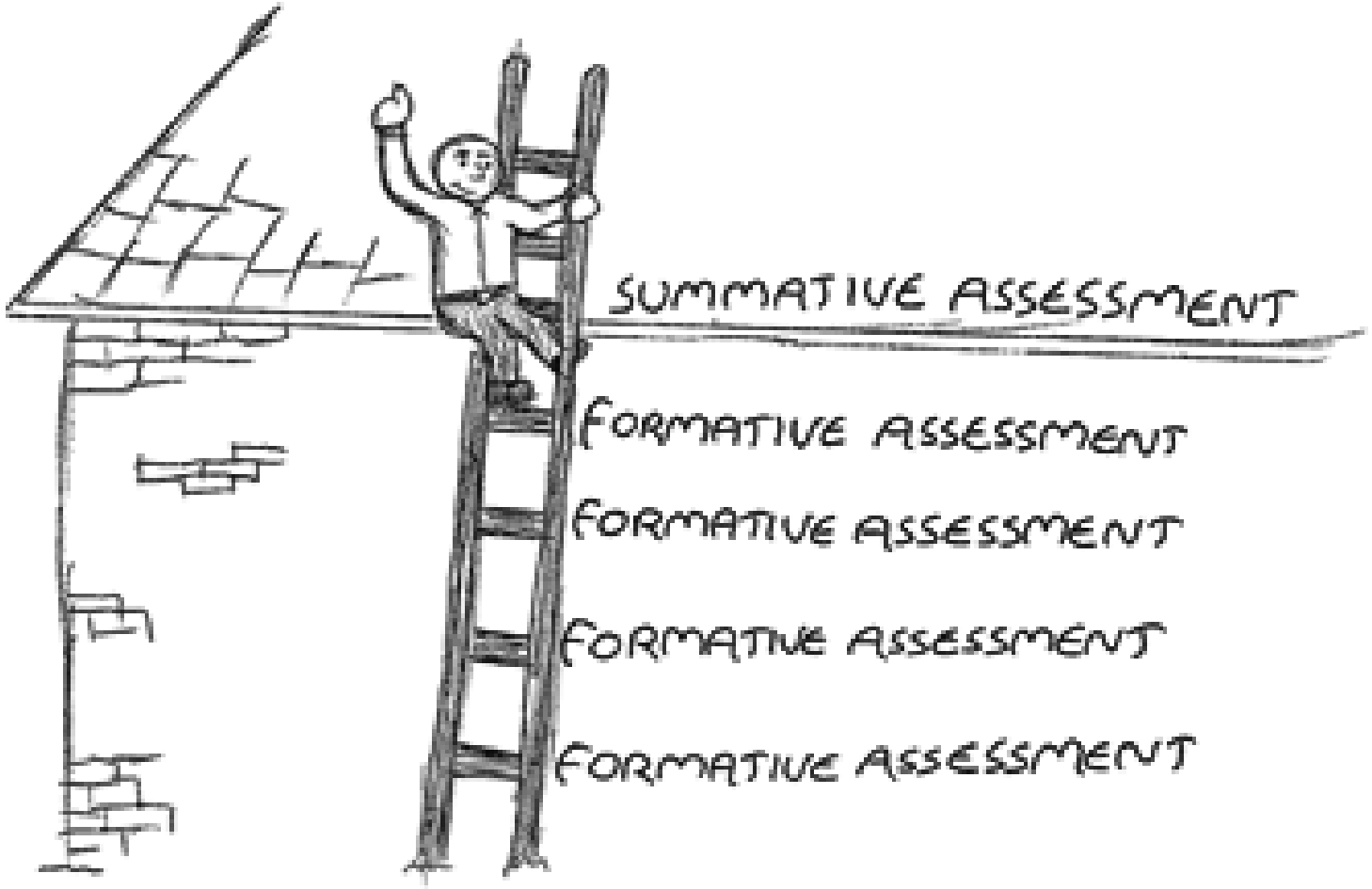


Question 1

What are the two main purposes of assessment?

Answer 1

Formative and summative



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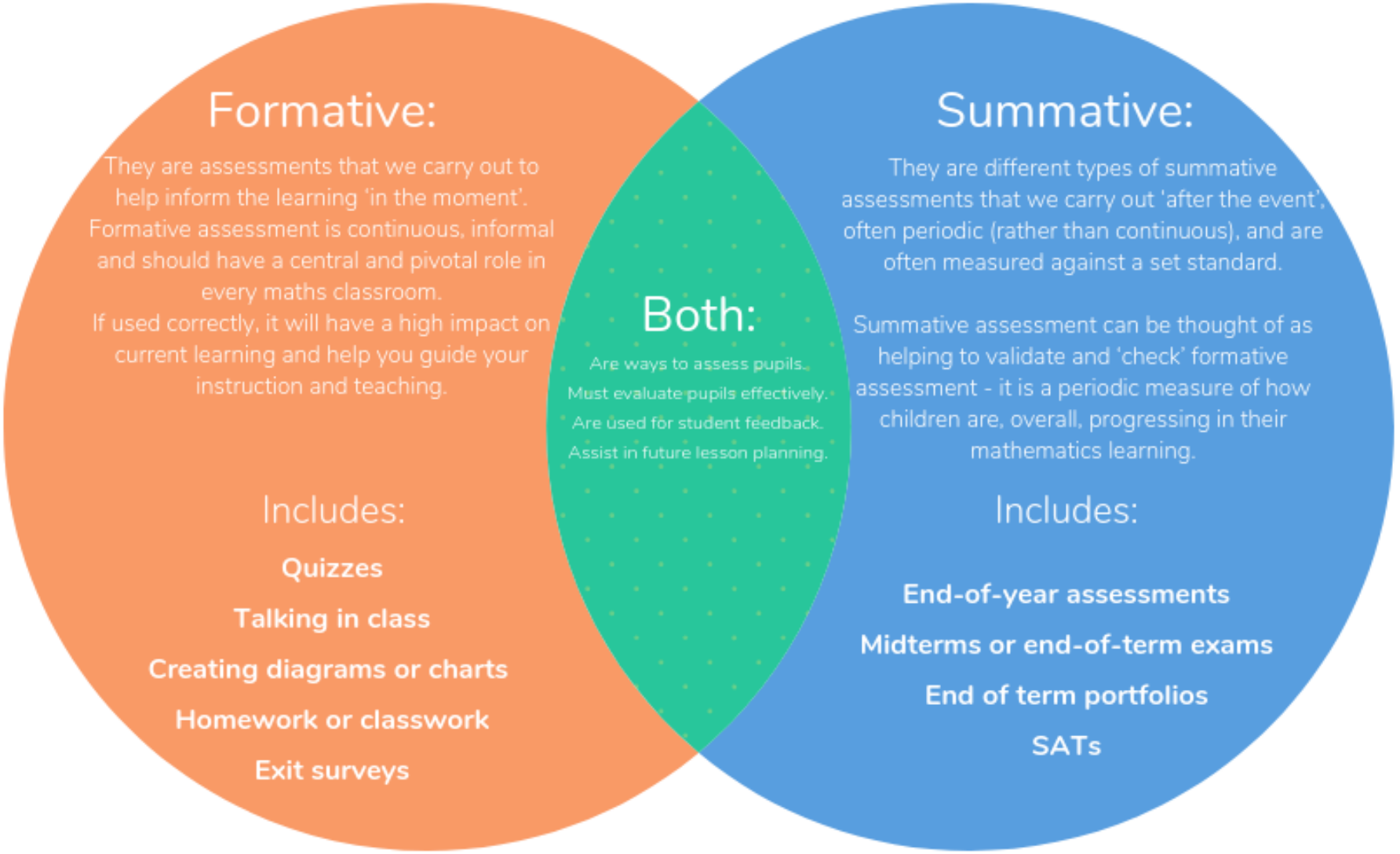

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Question 2

What are the four pillars of assessment?

Answer 2

Purpose – what do you want to measure? Why do you want to measure this?

Reliability – how precisely do the questions or tasks measure pupils capabilities? How accurate and consistent are the interpretations?

Validity – is the test capable of effectively measuring what you want it to?

Value – is it worth the time and effort for the impact on pupils' learning?

Question 3

True or false: more feedback is usually a good thing

Answer 3

False: feedback should be given sparingly so that is it meaningful

What, how, why

What: assessment techniques

How: examples (including MCQs), reflection on current practice

Why: you already know the theory from ITT year so we look at the techniques in more depth

Questioning

Teachers ask lots of questions for different purposes

One critical purpose is to understand what is happening inside pupil's heads – are they learning what we hope?

However, asking questions in the right way and at the right time can be hard…

Cold calling
No-opt out
Checking for understanding
Probing
Say it again, better
Think, pair, share
Whole class response

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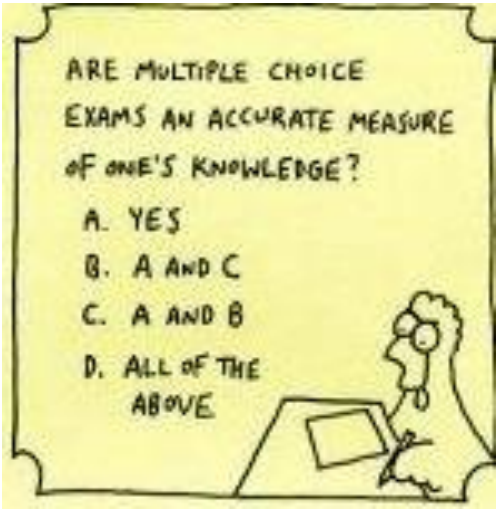
Multiple Choice Questions

North East
Learning Trust

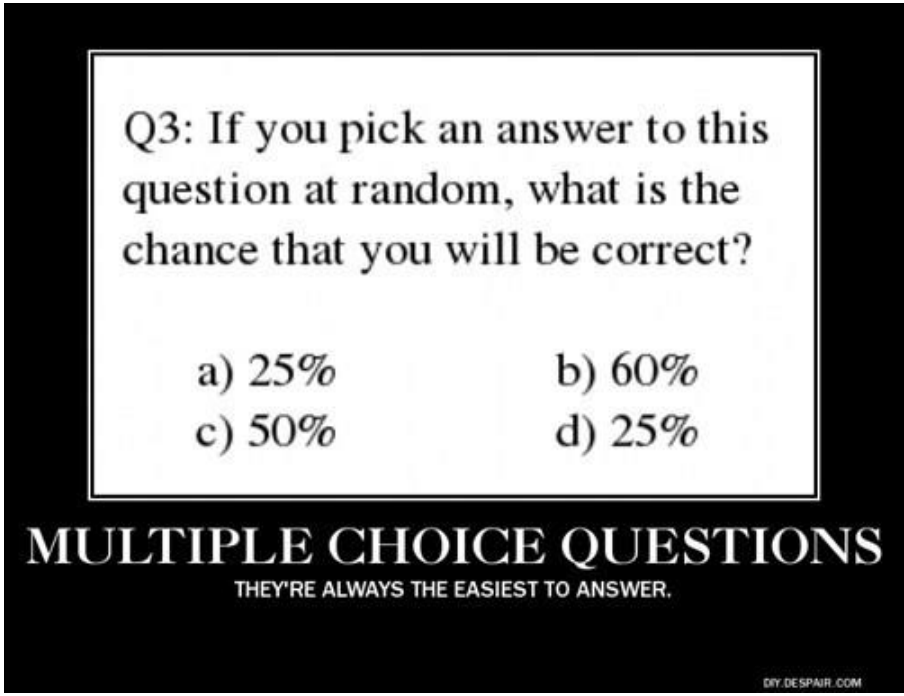
Criticisms of MCQs

- Pupils might guess the right answer
- By exposing the right answer as one of the alternatives, they engage recognition skills rather than retrieval
- Don't measure 'complex learning'



- They can be susceptible to guessing, (Burton et al. 1991), although it's unlikely that a student will ace a test adopting this technique (Christadoulou, 2016).
- They cannot measure production skills like writing ability, creativity, or articulation of thought (Zimmaro, 2010).
- They are not quick to construct, and good MCQ construction takes time (Zimmaro, 2010).
- MCQ scores are influenced by risk-taking traits. Boys are more likely to guess than girls, and risk –taking is also associated with certain cultures and socio-economic background (Ben-Shakhar and Sinai, 1991).

A, B, C, or D? "Well I haven`t had a B for like 4 questions so I`ll choose that".



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- Bjork argues that MCQs are often not good tests,

but this is because they are done badly rather than because

of any intrinsic flaw.

So… the questions must be carefully constructed

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Why use MCQs?

- *'Properly constructed MCQs can be important learning events for students'* (D. Christodoulou)
- Can be used formatively and summatively
- Great for hinge questions & targeting key misconceptions
- Reduce workload
- Generate great class discussions
- Quick & easy to mark & analyse (including computer marking)
- Reliable assessment
- Results can produce a pattern of mistakes common to class (very precise diagnosis of understanding)
- If well designed, they require higher order thinking & can be more challenging than ordinary questions
- Aid knowledge retention

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- Well constructed MCQs trigger productive retrieval processes
- They have an advantage over other questions as they require recall of knowledge pertaining to incorrect alternatives also (recall why they are incorrect)
- MCQs foster test-induced learning
- They are capable of assessing difficult, conceptual material

- They produce more reliable information than other types of test such as open- ended questions, as they're objectively scored (Burton et al., 1991).
- The student can answer more multiple choice questions than open-ended questions, covering a broader, more representative subject base[JD1] (Zimmaro, 2010; Burton et al., 1991)..
- They're quick to mark and quick to complete! (Christoadoulou, 2016)!.
- A well- crafted MCQ will allow the teacher to identify misconceptions easily and in the same amount of time (Christodoulou, 2016)

Interactive MCQs

Forms

Great for homework!

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Designing challenging MCQs

- Incorrect alternatives (distractors) must be plausible, but not so plausible that they are unfair
- '*They are very difficult to write*' (D. Christodoulou)
- Dylan William notes that one way to avoid the problem of pupils guessing is to have more than one right answer
- The best MCQs require more than just recall
- The distractors must be carefully designed to test misconceptions
- Comparisons between topics
- The correct answer should not be longer as this can be a clue.
- Potential misconceptions should be included: the idea is to **respond** to **inferences (actionable meanings)** gained through our **teaching**.

Increasing rigour in MCQs

plausibility of answers

Having answers that are close to the correct answer or are plausible answers means it is much more difficult to guess.

A wider range of answers

3 answers gives a 33% chance of guessing right, but 5 answers means a 20% chance of guessing correctly.

Having more than one right answer

Having a set of correct answers where one is a better, more accurate answer than the others requires students to use judgement skills to arrive at the most appropriate answer

Using negative questions or reversing the question

Which of these is NOT the right answer?

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7 Principles for Designing Multiple Choice Options

1. The proximity of options increases the rigour of the question.
2. The number of incorrect options increases rigour.
3. Incorrect options should be plausible but unambiguously wrong.
4. Incorrect options should be frequent misconceptions.
5. Multiple correct options make a question more rigorous.
6. The occasional negative question encourages pupils to read the questions more carefully.
7. Stretch questions can be created with comparisons or connections between topics.

@Joe_Kirby

https://pragmaticreform.wordpress.com/2014/04/12/mcqdesign/

Can’t we guess the answers?

- A criticism of MCQs is that it can be made easy for students to guess correct answers. However, this can be mitigated in a number of ways:

1. Increase the number of distractors, making it less likely that a guess will right.
2. Increase the number of questions. A students might get lucky once or twice, but they are unlikely to get lucky five or ten times.
3. Include more than one right answer; two questions with two answers correct out of a choice of five means their chance of guessing correct is less than 1 in 1000.
4. Analyse the result of a question at the level of the class, not at the level of the individual.

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