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Learning**
Conference

PROFESSOR DYLAN WILIAM

SATURDAY 20 MAY

**Principled Assessment Design:
Serving to Improve Learning**

Session 2

MELBOURNE



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Principled Assessment Design: Serving to Improve Learning

Dylan Wiliam (@dylanwiliam)

Initial assumptions

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- The assessment system should be designed to assess the school's curriculum rather than having to design the curriculum to fit the school's assessment system.
- Since each school's curriculum should be designed to meet local needs, there cannot be a one-size-fits-all assessment system—each school's assessment system will be different.
- There are, however, a number of principles that should govern the design of assessment systems, and
- There is some *science* here—knowledge that people need in order to avoid doing things that are just wrong.



Outline

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- Assessment (and what makes it good)
- Designing assessment systems
- Recording
- Reporting
- Putting it all together



Before we can assess...

4


- The ‘backward design’ of an education system
 - ▣ Where do we want our students to get to?
 - ‘Big ideas’
 - ▣ What are the ways they can get there?
 - Learning progressions
 - ▣ When should we check on/report progress?
 - Inherent and useful checkpoints



Big ideas

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- A “big idea”
 - ▣ helps make sense of apparently unrelated phenomena
 - ▣ is *generative* in that it can be applied in new areas



Some big ideas of the school curriculum

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Subject	Big idea
English	The “hero’s journey” as a useful framework for understanding myths and legends.
Geography	Patterns of human development are influenced by, and in turn influence, physical features of the environment.
History	Sources are products of their time, but knowing the circumstances of their creation helps resolve conflicts.
Mathematics	Fractions, decimals, percents and ratios are ways of expressing numbers that can be represented as a point on a number line.
Science	All matter is made of very small particles
Sociology	The way people behave is the result of interplay between who they are (agency) and where they are (structure).



Discussion question

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Discussion

- What might be a 'big idea' in your current teaching?

Learning progressions

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- Learning progressions
 - ▣ only make sense with respect to particular learning sequences;
 - ▣ are therefore inherently local; and consequently
 - ▣ those developed by national experts are likely to be difficult to use and often just plain wrong
 - ▣ have two defining properties
 - Empirical basis: almost all students demonstrating a skill must also demonstrate sub-ordinate skills
 - Logical basis: there must be a clear theoretical rationale for why the sub-ordinate skills are required



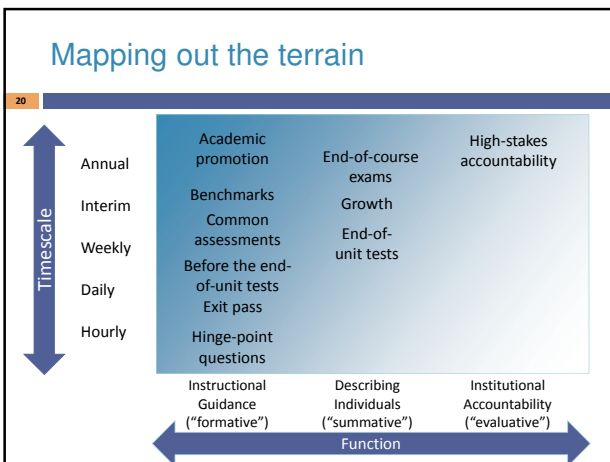
Significant stages in development

9

- Rationales for assessing the learning journey
 - ▣ Intrinsic: developmental levels inherent in the discipline
 - ▣ Extrinsic: the need to inform decisions




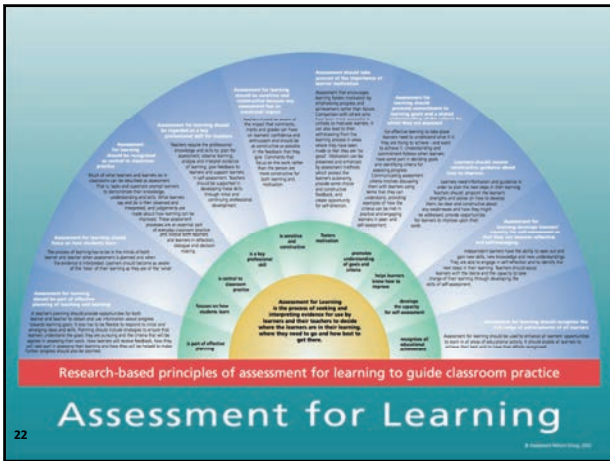
Designing an assessment *system*



Why all assessment should be *for* learning

"We shouldn't want a shift to formative assessment because research shows how it improves learning (we don't need to be told that—it has to be true). We should want it because schools are places where learners should be learning more often than they are being selected, screened or tested in order to check up on their teachers. The latter are important; the former are why schools exist." (Silcock, 1998)





Ten principles for assessment

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- Assessment
 - ▣ is part of effective learning
 - ▣ focuses on how students learn
 - ▣ is central to classroom practice
 - ▣ is a key professional skill
 - ▣ is sensitive and constructive
 - ▣ fosters motivation
 - ▣ promotes understanding of goals and criteria
 - ▣ helps learners know how to improve
 - ▣ develops the capacity for self-assessment
 - ▣ recognises all educational achievement

Assessment Reform Group (2002)

Discussion question

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Discussion


- Are there any principles of assessment you would combine?
- Are there any principles of assessment you would delete?
- Are there any principles of assessment you would add?

Assessment: good servant, bad master

Written examinations

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“They have perverted the best efforts of teachers, and narrowed and grooved their instruction; they have occasioned and made well nigh imperative the use of mechanical and rote methods of teaching; they have occasioned cramming and the most vicious habits of study; they have caused much of the overpressure charged upon schools, some of which is real; they have tempted both teachers and pupils to dishonesty; and last but not least, they have permitted a mechanical method of school superv (White, 1888 pp. 517-518)



The Macnamara Fallacy (Handy, 1994 p. 219)

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- The first step is to measure whatever can be easily measured.
 - ▣ This is OK as far as it goes.
- The second step is to disregard that which can't easily be measured or to give it an arbitrary quantitative value.
 - ▣ This is artificial and misleading.
- The third step is to presume that what can't be measured easily really isn't important.
 - ▣ This is blindness.
- The fourth step is to say that what can't be easily measured really doesn't exist.
 - ▣ This is suicide.



Goodhart's law (Campbell's law)

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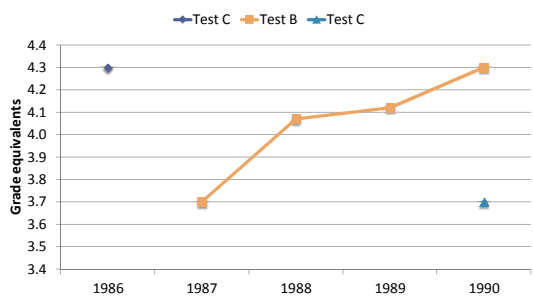
- All performance indicators lose their meaning when adopted as policy targets:
 - ▣ Inflation and money supply
 - ▣ Railtrack's performance targets
 - ▣ National Health Service waiting lists
 - ▣ School achievement targets

- The clearer you are about what you want, the more likely you are to get it, but the less likely it is to mean anything



The "Lake Wobegon" effect

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Koretz, Linn, Dunbar and Shepard (1991)



Effects of narrow assessment

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- Incentives to teach to the test
 - ▣ Focus on some subjects at the expense of others
 - ▣ Focus on some aspects of a subject at the expense of others
 - ▣ Focus on some students at the expense of others ("bubble" students)
- Consequences
 - ▣ Learning that is
 - Narrow
 - Shallow
 - Transient



And yet...

- High-stakes assessment systems do improve outcomes for students on a range of measures
- The effects can be substantial (an extra two months of learning per year)
- The challenge:
 - ▣ Realize the benefits of high stakes assessments
 - ▣ Avoid the unintended adverse consequences



The challenge comes down to...

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- To design an assessment system that is:
 - ▣ Distributed
 - So that evidence collection is not undertaken entirely at the end
 - ▣ Synoptic
 - So that learning has to accumulate
 - ▣ Extensive
 - So that all important aspects are covered (breadth and depth)
 - ▣ Manageable
 - So that costs are proportionate to benefits
 - ▣ Trusted
 - So that stakeholders have faith in the outcomes



Evidence-centered design

Evidence-centered design

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- Conceptual assessment framework
 - ▣ Student model: what are we assessing?
 - “Degree of difficulty” model
 - “Marks for style” model
 - “Support” model
 - ▣ Evidence model: what evidence do we want?
 - ▣ Task model: where will the evidence come from?
 - ▣ Four-process architecture
 - Task selection
 - Task presentation
 - Evidence identification
 - Evidence accumulation

Mislevy, Almond and Lukas (2003); Almond, Steinberg and Mislevy (2003)



Task selection

Task selection

Kinther Layticks

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Skondo has often been described as one of the fantem growing plaidos in the UK during the last 10 years, but the lure of chemicks about in tabsel has continued to attract the attention of moorick numbers of Britons.

The percentage rise in transpitans in the last decade does not match the skondo boom but increasing transparency has been taking place since the early nineties and the demand on our tuwoaitch and dadinis reveals the spectacular moory.

Unfortunately, unlike skondo, the plaideo of layticks has attendant snuffsem for the enthusiastic but rudio amateur. All too few of the satsun laybos who take to the tuwoah have even the most rudimentary knowledge of loxem in tabsel.

1. Name two popular plaidos.
2. Have there been many deaths from Skondo?
3. Which country has a lot of kinther layticks?
4. Write down two precautions to take for layticks
5. What is snuffsem about skondo?
6. What would you find in dadinis?

The power of wrong answers

37

Question	Incorrect answers
1. If $e + f = 8$, then $e + f + g =$	a. 9 b. 12 c. 15 d. $8g$
2. Multiply $n + 4$ by 5	a. $4n + 5$ b. $n + 20$ c. 20

Task presentation

Item formats

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- "No assessment technique has been rubbished quite like multiple choice, unless it be graphology" Wood, 1991, p. 32)
- Myths about multiple-choice items
 - ▣ They are biased against females
 - ▣ They assess only candidates' ability to spot or guess
 - ▣ They test only lower-order skills



English

Where would be the best place to begin a new paragraph?

No rules are carved in stone dictating how long a paragraph should be. However, for argumentative essays, a good rule of thumb is that, if your paragraph is shorter than five or six good, substantial sentences, then you should reexamine it to make sure that you've developed the ideas fully. A Do not look at that rule of thumb, however, as hard and fast. It is simply a general guideline that may not fit some paragraphs. B A paragraph should be long enough to do justice to the main idea of the paragraph. Sometimes a paragraph may be short; sometimes it will be long. C On the other hand, if your paragraph runs on to a page or longer, you should probably reexamine its coherence to make sure that you are sticking to only one main topic. Perhaps you can find subtopics that merit their own paragraphs. D Think more about the unity, coherence, and development of a paragraph than the basic length. E If you are worried that a paragraph is too short, then it probably lacks sufficient development. If you are worried that a paragraph is too long, then you may have rambled on to topics other than the one stated in your topic sentence.



Diagnostic questions in English

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- In a piece of persuasive writing, which of these would be the best thesis statement?
 - A. The typical TV show has 9 violent incidents
 - B. There is a lot of violence on TV
 - C. The amount of violence on TV should be reduced
 - D. Some programs are more violent than others
 - E. Violence is included in programs to boost ratings
 - F. Violence on TV is interesting
 - G. I don't like the violence on TV
 - H. The essay I am going to write is about violence on TV



Diagnostic questions in mathematics

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What can you say about the means of the following two data sets?

Set 1: 10 12 13 15

Set 2: 10 12 13 15 0

- A. The two sets have the same mean.
- B. The two sets have different means.
- C. It depends on whether you choose to count the zero.



Diagnostic questions in science

Janet was asked to do an experiment to find how long it takes for some sugar to dissolve in water. What advice would you give Janet to tell her how many repeated measurements to take?

- A. Two or three measurements are always enough
- B. She should take 5 measurements
- C. If she is accurate she only needs to measure once
- D. She should go on taking measurements until she knows how much they vary
- E. She should go on taking measurements until she gets two or more the same

Osborne (2011)



Diagnostic questions in Psychology

Which of the following is the most important difference between the theories of Piaget and Vygotsky?

- A. Piaget places greater importance on the role of conservation in cognitive development
- B. Vygotsky places greater importance on the role of cultural artifacts in cognitive development.
- C. Vygotsky did not believe in distinct stages of cognitive development.
- D. Piaget was a social constructivist while Vygotsky placed greater emphasis on cultural-historical activity theory



What psychology tells us about learning

- Review of the research on techniques that help students learn better
- Focus on techniques that are relatively easy to use
- Evaluation in terms of generalizability of findings across
 - different material to be learned
 - different learning conditions
 - different kinds of student
 - different measures of learning

Dunlosky, Rawson, Marsh, Nathan, and Willingham (2013)




1. Elaborative interrogation	Generating an explanation for why an explicitly stated fact or concept is true
2. Self-explanation	Explaining how new information is related to known information, or explaining steps taken during problem solving
3. Summarization	Writing summaries (of various lengths) of to-be-learned texts
4. Highlighting/underlining	Marking potentially important portions of to-be-learned materials while reading
	Using keywords and mental imagery to associate verbal materials
	Attempting to form mental images of text materials while reading or listening
7. Rereading	Restudying text material again after an initial reading
	Self-testing or taking practice tests over to-be-learned material
9. Distributed practice	Implementing a schedule of practice that spreads out study activities over time
10. Interleaved practice	Practice that mixes different kinds of problems, or study that mixes different kinds of material, within a single study session

Which of these improves learning?

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1. Elaborative interrogation
2. Self-explanation
3. Summarization
4. Highlighting/underlining
5. Keyword mnemonic
6. Imagery for text
7. Rereading
8. Practice testing
9. Distributed practice
10. Interleaved practice



Evidence identification

Referents in assessment

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- Norm-referenced
 - a group who were assessed previously
- Cohort-referenced
 - the group assessed at the same time
- Criterion-referenced
 - explicit and precise performance criteria
- Ipsative
 - defined only within an individual
- Construct-referenced
 - a shared construct in a community of practice



Criterion-referenced assessment

50

Insert punctuation to make the meaning of the following sentence clear:

John where Paul had had had had had had had had had had had a clearer meaning

John, where Paul had had "had", had had "had had". "Had had" had had a clearer meaning.

"And although it would be foolish of us to deny the fact that criterion-referenced evaluations are similarly valid and useful, we should be aware that lurking behind the criterion-referenced evaluation, perhaps even responsible for it, is the norm-referenced evaluation." (Angoff, 1974 p. 4)



Quality

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"Maxims cannot be understood, still less applied by anyone not already possessing a good practical knowledge of the art. They derive their interest from our appreciation of the art and cannot themselves either replace or establish that appreciation". (Polanyi, 1958 p. 50).


"Quality doesn't have to be defined. You understand it without definition. Quality is a direct experience independent of and prior to intellectual abstractions". (Pirsig, 1991 p. 64).



Moderation and standardisation

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Moderation	Standardisation
Backward looking	Forward looking
Quality control	Quality assurance
Inspects quality in	Builds quality in
Static	Dynamic
Flat cost profile	Reducing cost profile
Ephemeral evidence ignored	Ephemeral evidence used



Self-assessment


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My red folder in the fourth year wants me to be clear and positive about what I achieve in school "in my own words" which are foreign to me.
In my own words in my own language (which has no place here) how can I feel clear and positive?

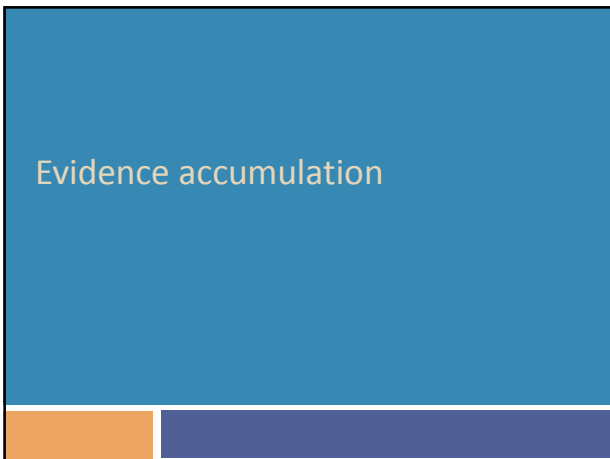
My red folder in the fourth year wants me to be positive about my grade E in English History: the heritage and glory of the British Empire "in my own words".

My red folder in the fourth year suddenly out of nowhere wants me to assert what I achieve in school "in my own words". How can I blow the trumpet they've taken from me?

Raychaudhuri (1998)



Evidence accumulation



Memory on land and underwater

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- 18 (5f, 13m) student members of a university diving club were tested on their recall of two- and three-syllable words from four 36-word lists taken from the Toronto Word Bank spoken to them twice.
- Students learned, and were tested on, the words while underwater, and while on the shore, resulting in four conditions:
 - DD (learn dry, recall dry)
 - DW (learn dry, recall wet)
 - WD (learn wet, recall dry)
 - WW (learn wet, recall wet)



Memory is context-dependent

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		Recall environment	
		Dry	Wet
Learning environment	Dry	13.5	8.6
	Wet	8.4	11.4

No significant main effects; interaction effect: $F=22.0$; $df = 1, 12$; $p < 0.001$
 Godden and Baddeley (1975)



Alcohol and memory

- 32 adults (aged 22 to 43) asked to memorize a map and a 19-item set of instructions for a journey
- Half did so sober and half at the legal limit for intoxication
- The following day, half of them were tested sober and half at the legal limit for intoxication.

	Number of items correct	
	Day 1	Day 2
Day 1: sober; day 2: sober	17	17
Day 1: sober; day 2: intoxicated	17	11
Day 1: intoxicated; day 2: sober	18	13
Day 1: intoxicated; day 2: intoxicated	16	16

Lowe (1981)

Discussion question

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Discussion

- How will you decide how much evidence is needed to decide whether a student has reached a particular outcome?

Recording

Scores versus grades

60

- Precision is not the same as accuracy
 - ▣ The more precise the score, the lower the accuracy.
 - ▣ Less precise scores are more accurate, but less useful
- Scores suffer from spurious precision
 - ▣ Given that no score is perfectly reliable, small differences in scores are unlikely to be meaningful
- Grades suffer from spurious accuracy
 - ▣ When we use grades or categories, we tend to regard performance in different categories as qualitatively different



Sylvie and Bruno concluded (Carroll, 1893)

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“That’s another thing we’ve learned from your Nation,” said Mein Herr, “map-making. But we’ve carried it much further than you. What do you consider the largest map that would be really useful?”

“About six inches to the mile.”

“Only six inches!” exclaimed Mein Herr. “We very soon got to six yards to the mile. Then we tried a hundred yards to the mile. And then came the grandest idea of all! We actually made a map of the country, on the scale of a mile to the mile!”

“Have you used it much?” I enquired.

“It has never been spread out, yet,” said Mein Herr: “the farmers objected: they said it would cover the whole country, and shut out the sunlight! So we now use the country itself, as its own map, and I assure you it does nearly as well.”



Identify milestones (and inch pebbles)

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- Development of speaking and listening
 - ▣ Show confidence
 - ▣ Show awareness of listener needs
 - ▣ Speak clearly
 - ▣ Use a growing vocabulary
 - ▣ Listen carefully
 - ▣ Respond appropriately
 - ▣ Formal vocabulary
 - ▣ Sense of audience



Firstname	Lastname	confidence	listener needs/audience	speak clearly	growing vocabulary	listen carefully	respond appropriately	formal vocabulary	sense of audience	Grade
ALLEN	JAMES	2	2	2	2	2	1	1	0	B
ATKINS	LIAM	2	2	2	2	2	1	1	0	C
BALDWIN	LEE	1	2	2	2	2	1	1	0	B
BETTANY	EMMA	2	2	1	2	2	2	1	1	B
BIRCH	LEAH	2	1	2	2	1	1	0	0	C
BURNS	ROBERT	2	2	1	0	1	1	0	0	C
COBERN	DAVID	2	2	2	2	2	1	0	1	B
CREASEY	SIMON	1	2	2	2	1	1	0	0	C
DARBY	HANNAH	1	2	2	2	1	2	1	1	B
EASTWOOD	LUKE	1	2	1	1	2	1	0	0	C
FERGUSON	MARK	2	2	2	2	2	2	0	1	A
FORBES	SARAH	1	0	1	1	2	1	0	0	C
GODDGER	MARK	2	2	2	2	2	2	2	1	A
HALL	MARK	1	2	2	2	2	2	2	1	A
HOWELLS	GEORGIE	2	2	2	1	2	1	0	0	B
HUDSON	KIRSTY	2	2	1	1	2	1	0	0	C
HURLEY	VICTORIA	1	2	2	1	2	2	0	2	C
LANGAN	JENNIFER	2	2	2	2	2	1	1	1	A
LARKIN	ANDREW	1	1	0	1	2	2	0	0	C
LEACH	JONATHAN	2	2	1	2	1	2	0	1	B
LOWINGS	CHARLOTTE	2	1	2	2	2	1	2	1	B
MCGLASHAN	SCOTT	1	2	1	1	2	0	0	0	C
PARR	AMY	2	1	1	2	2	2	1	0	B
RINGHAM	GRACE	0	1	1	1	1	1	1	0	C
ROSAMOND	LEE	1	2	2	2	2	1	0	0	B
ROSE	PETER	1	2	1	2	2	2	1	1	B
RIDER	THOMAS	2	1	2	1	2	2	2	1	B
SKEATS	WILLIAM	1	2	2	2	2	2	2	2	A
WALTON	EMMA	2	2	2	2	2	2	2	2	A

Average Faculty: 75%, 86%, 71%, 78%, 86%, 69%, 75%, 71%

Connecting (some more of) the dots

- 64
- Development of science skills in eighth grade
 - Use of laboratory equipment
 - Metric unit conversion
 - Density calculations
 - Density applications
 - Density as a characteristic property
 - Phases of matter
 - Gas laws
 - Communication (graphing)
 - Communication (lab reports)
 - Inquiry skills

Assessment matrix

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	Equipment	Metric units	Density calculations	Density properties	Phases of matter	Gas laws	Communication (graph)	Communication (report)
Homework 1		✓						
Homework 2			✓	✓				
Laboratory 1	✓			✓				✓
Homework 3					✓			
Module test		✓	✓	✓				
Laboratory 2	✓				✓	✓	✓	✓
Homework 4					✓			
Final exam	✓	✓	✓	✓	✓	✓	✓	

Lastname	Firstname	Period	Use of the assignments										Score	Grade	
			1	2	3	4	5	6	7	8	9	10			
ALLEN	JAMES		2	1	2	2	2	2	2	2	2	2	2	95	A
ATEARS	LIAM		2	2	2	2	2	2	2	2	2	2	2	95	A
BALDWIN	LEE		2	2	2	2	2	2	2	2	2	2	2	100	A
BETTANY	EMMA		1	2	2	2	2	2	2	2	2	2	2	90	A
BIRCH	LEAH		1	2	2	2	2	2	2	2	2	2	2	90	A
BURNS	ROBERT		2	2	2	2	2	2	2	2	2	2	2	100	A
COBERN	DAVID		1	2	2	2	2	2	2	2	2	2	2	95	A
CREASEY	SIMON		1	2	2	2	2	2	2	2	2	2	2	90	A
DABRY	HANNAH		1	2	2	2	2	2	2	2	2	2	2	85	B
EASTWOOD	LUKE		2	0	2	1	2	2	2	2	1	2	2	75	C
FERGUSON	MARK		2	1	2	2	2	2	1	1	2	2	2	85	B
FORBES	SARAH		2	2	2	2	2	2	2	1	2	1	2	90	A
GOODGER	MARK		1	1	2	1	2	1	1	1	2	2	2	70	C
HALL	MARK		2	1	2	2	2	2	2	2	2	2	2	95	A
HOWELLS	GEORGIE		2	2	2	2	2	2	2	1	2	2	2	95	A
HUDSON	KIRSTY		1	1	1	1	2	2	1	2	1	2	2	70	C
HURLEY	VICTORIA		2	1	2	2	2	1	2	2	1	2	2	85	B
LANGAN	JENNIFER		1	1	2	1	2	1	1	1	1	1	1	75	C
LARKIN	ANDREW		2	1	1	2	1	1	2	1	2	1	2	70	C
LEACH	JONATHAN		2	2	2	2	1	1	2	1	1	2	2	70	C
LOWINGS	CHARLOTTE		1	1	2	1	2	1	1	1	1	1	1	70	C
MCGLASHAN	SCOTT		2	0	2	2	1	1	1	1	2	2	2	60	D
PARR	AMY		2	1	2	2	2	1	2	1	1	2	2	80	B
RINGHAM	GRACE		1	2	2	2	2	1	1	1	1	2	2	75	D
ROSAMOND	LEE		2	2	2	1	2	1	2	2	2	2	2	90	A
ROSE	PETER		2	1	2	2	0	2	1	2	1	2	2	75	C
RYDER	THOMAS		1	1	2	1	2	2	1	2	2	2	2	70	C
SKEATS	WILLIAM		1	1	2	2	2	1	1	1	1	1	1	75	C
WALTON	EMMA		1	1	2	2	2	1	1	1	1	2	2	70	C


Average %: 81 87 92 84 86 78 74 81 83 80

Reporting

Effects of feedback

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- Kluger & DeNisi (1996)
- Review of 3000 research reports
- Excluding those:
 - ▣ without adequate controls
 - ▣ with poor design
 - ▣ with fewer than 10 participants
 - ▣ where performance was not measured
 - ▣ without details of effect sizes
- left 131 reports, 607 effect sizes, involving 12652 individuals
- On average feedback does improve performance, but
 - ▣ Effect sizes very different in different studies
 - ▣ In 38% (50 out of 131) of studies, effect sizes were negative



Getting feedback right is hard

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Response type	Feedback indicates performance...	
	exceeds goal	falls short of goal
Change behavior	Exert less effort	Increase effort
Change goal	Increase aspiration	Reduce aspiration
Abandon goal	Decide goal is too easy	Decide goal is too hard
Reject feedback	Feedback is ignored	Feedback is ignored



Unfortunately, humans are not machines...

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- Attribution (Dweck, 2000)
 - ▣ Personalization (internal v external)
 - ▣ Permanence (stable v unstable)
 - ▣ Essential that students attribute both failures and success to internal, unstable causes (it's down to you, and you can do something about it)
- Views of 'ability'
 - ▣ fixed (IQ)
 - ▣ incremental (untapped potential)
 - ▣ Essential that teachers inculcate in their students a view that 'ability' is incremental rather than fixed (by working, you're getting smarter)



"Flow"

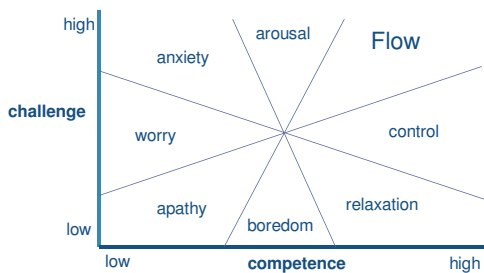
71

- A dancer describes how it feels when a performance is going well: "Your concentration is very complete. Your mind isn't wandering, you are not thinking of something else; you are totally involved in what you are doing. ... Your energy is flowing very smoothly. You feel relaxed, comfortable and energetic."
- A rock climber describes how it feels when he is scaling a mountain: "You are so involved in what you are doing [that] you aren't thinking of yourself as separate from the immediate activity. ... You don't see yourself as separate from what you are doing."
- A chess player tells of playing in a tournament: "... the concentration is like breathing—you never think of it. The roof could fall in and, if it missed you, you would be unaware of it." (Csikszentmihalyi, 1990, pp. 53–54)



Motivation: cause or effect?

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Csikszentmihalyi (1990)



Building the curriculum 5: Reporting

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1st level social studies (p. 4)

"Jane has made good progress within 1st level in social studies over the course of P3. In her study of 'My town' she worked well with her group to produce a colourful poster of Ayr showing a short timeline of important events in the past, information about Robert Burns and tourist attractions in the town today. She gave a short talk to the class about why she likes Ayr and what she had found out about it and produced a simple map showing where she lives in Ayr. She is developing her understanding of her place in the wider world in which she lives and is able to use simple sources of information to increase her knowledge. Over the course of P4 Jane should continue to extend her knowledge and understanding of the wider society of Scotland, its past and its present. She will also begin to learn more about other countries in the world."

2nd level expressive arts (p. 6)

"In primary 5, Mark has gained confidence from his experiences in performing in a play with a theatre group. He demonstrated sound awareness of his role and the role of his group. He needs opportunities to communicate more effectively, using appropriate vocabulary to describe feelings and actions. He performed well to friends and family at the open day."

Discussion question

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Discussion

- What advice would you give to the teachers who wrote the two comments on the previous slide about how to improve the quality of their reporting?
- What are the principles of effective feedback to students?
- What information should be reported to parents, and how often?

Discussion question

75

Discussion

- Pulling together what you have heard today, what are the most important principles for the design of an assessment *system* for your school?

Force-field analysis (Lewin, 1954)

76	
<p>□ What are the forces that will support or drive the adoption of good assessment practices in your school/authority?</p> <p>+</p>	<p>□ What are the forces that will constrain or prevent the adoption of good assessment practices in your school/authority?</p> <p>-</p>

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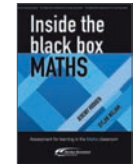
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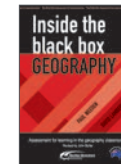
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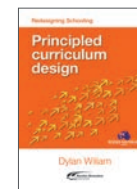
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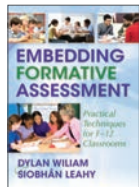
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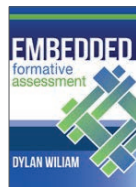
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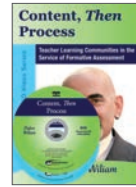
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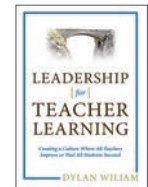
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