



How can assessment support learning?

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Overview of presentation

- Why raising achievement is important
- Why investing in teachers is the answer
- Why assessment for learning should be the focus
- Why teacher learning communities should be the mechanism



Raising achievement matters

- For individuals
 - Increased lifetime salary
 - Improved health
- For society
 - Lower criminal justice costs
 - Lower health-care costs
 - Increased economic growth



Where's the solution?

- **Structure**
 - Small high schools
 - K-8 schools
- **Alignment**
 - Curriculum reform
 - Textbook replacement
- **Governance**
 - Charter schools
 - Vouchers
- **Technology**



It's the classroom

- Variability at the classroom level is up to 4 times greater than at school level
- It's not class size
- It's not the between-class grouping strategy
- It's not the within-class grouping strategy
- It's the teacher



Teacher quality

- A labor force issue with 2 solutions
 - Replace existing teachers with better ones?
 - No evidence that more pay brings in better teachers
 - No evidence that there are better teachers out there deterred by certification requirements
 - Improve the effectiveness of existing teachers
 - The “love the one you’re with” strategy
 - It can be done
 - We know how to do it, but at scale? Quickly? Sustainably?

Functions of assessment

- For evaluating institutions
- For describing individuals
- For supporting learning
 - Monitoring learning
 - Whether learning is taking place
 - Diagnosing (informing) learning
 - What is not being learnt
 - Forming learning
 - What to do about it



Effects of formative assessment

- Several major reviews of the research
 - Natriello (1987)
 - Crooks (1988)
 - Black & Wiliam (1998)
 - Nyquist (2003)
- All find consistent, substantial effects

Kinds of feedback (Nyquist, 2003)

- Weaker feedback only
 - Knowledge of results (KoR)
- Feedback only
 - KoR + clear goals or knowledge of correct results (KCR)
- Weak formative assessment
 - KCR+ explanation (KCR+e)
- Moderate formative assessment
 - (KCR+e) + specific actions for gap reduction
- Strong formative assessment
 - (KCR+e) + activity



Effect of formative assessment (HE)

| | N | Effect |
|-------------------------------|----|--------|
| Weaker feedback only | 31 | 0.16 |
| Feedback only | 48 | 0.23 |
| Weaker formative assessment | 49 | 0.30 |
| Moderate formative assessment | 41 | 0.33 |
| Strong formative assessment | 16 | 0.51 |

Formative assessment

- Classroom assessment is not (necessarily) formative assessment
- Formative assessment is not (necessarily) classroom assessment

Formative assessment

Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting pupils' learning. It thus differs from assessment designed primarily to serve the purposes of accountability, or of ranking, or of certifying competence. An assessment activity can help learning if it provides information to be used as feedback, by teachers, and by their pupils, in assessing themselves and each other, to modify the teaching and learning activities in which they are engaged.

Such assessment becomes 'formative assessment' when the evidence is actually used to adapt the teaching work to meet learning needs.

Black et al., 2002

Feedback and formative assessment

- “Feedback is information about the gap between the actual level and the reference level of a system parameter which is used to alter the gap in some way” (Ramaprasad, 1983 p. 4)
- Three key instructional processes
 - Establishing where learners are in their learning
 - Establishing where they are going
 - Establishing how to get there



Aspects of formative assessment

| | Where the learner is going | Where the learner is | How to get there |
|---------|---|--|---|
| Teacher | Clarify learning intentions | Engineering effective discussions | Providing feedback that moves learners on |
| Peer | Understand/clarify criteria for success | Activating students as instructional resources for one another | |
| Learner | Understand criteria for success | Activating students as owners of their own learning | |



Five key strategies...

- Clarifying and understanding learning intentions and criteria for success
- Engineering effective classroom discussions that elicit evidence of learning
- Providing feedback that moves learners forward
- Activating students as instructional resources for each other
- Activating students as the owners of their own learning



...and one big idea

- Use evidence about learning to adapt instruction to meet student needs



Keeping Learning on Track (KLT)

- A pilot guides a plane or boat toward its destination by taking constant readings and making careful adjustments in response to wind, currents, weather, etc.
- A KLT teacher does the same:
 - Plans a carefully chosen route ahead of time (in essence building the track)
 - Takes readings along the way
 - Changes course as conditions dictate

Types of formative assessment

- Long-cycle
 - Focus: between units
 - Length: four weeks to one year
- Medium-cycle
 - Focus: within units
 - Length: one day to two weeks
- Short-cycle
 - Focus: within lessons
 - Length: five seconds to one hour

Practical techniques: Questioning

- Improving teacher questioning
 - Generating questions with colleagues
 - Closed v open
 - Low-order v high-order
 - Appropriate wait-time
- Getting away from I-R-E
 - Basketball rather than serial table-tennis
 - ‘No hands up’ (except to ask a question)
 - Class polls to review current attitudes towards an issue
 - ‘Hot Seat’ questioning
- All-student response systems
 - ABCD cards
 - Mini white-boards
 - Exit passes

Practical techniques: feedback

- Comment-only grading
- Focused grading
- Explicit reference to rubrics
- Suggestions on how to improve
 - ‘Strategy cards’ ideas for improvement
 - Not giving complete solutions
- Re-timing assessment
 - (eg two-thirds-of-the-way-through-a-unit test)



Practical techniques: sharing learning expectations

- Explaining learning objectives at start of lesson/unit
- Criteria in students' language
- Posters of key words to talk about learning
 - eg describe, explain, evaluate
- Planning/writing frames
- Annotated examples of different standards to 'flesh out' assessment rubrics (e.g. lab reports)
- Opportunities for students to design their own tests

Practical techniques: peer and self-assessment

- Students assessing their own/peers' work
 - with scoring guides, rubrics or exemplars
 - two stars and a wish
- Training students to pose questions
- Identifying group weaknesses
- Self-assessment of understanding
 - Red/green discs
 - Traffic lights
 - Smiley faces
 - Post-it notes
- End-of-lesson students' review