


## **Formative Assessment Research, Margaret Heritage, CRESST, UCLA**

- Black and Wiliam, in their meta-analysis of research on classroom assessment, concluded that ongoing assessment by teachers combined with quality feedback produced powerful and positive effects on achievement. These studies range over ages (from 5-year olds to university undergraduates), across several school subjects, and over several countries. Teachers who used formative assessment were able to achieve in six months or seven months what would otherwise have taken a year (Black & Wiliam, 1998).
- Many studies reviewed by Black & Wiliam that examined gains between pre- and post-tests when teachers used formative assessment, compared with matched control groups not using formative assessment, showed effect sizes in the range of 0.4 to 0.7. The magnitude of this effect would mean that the average student in the formative assessment group would achieve at the same level as a student in the top 35% of those not in the formative assessment group (NRC, 2000).
- Teachers' improved formative assessment practices assessment result in gains in achievement on externally mandated standardized tests (Wiliam, Lee, Harrison & Black, 2004)
- Ruiz-Primo & Furtak (2007) showed that high-quality planned daily assessment conversations could be linked to increases in students' performance.
- Formative assessment can enhance learning when designed to provide students with feedback about specific qualities of their work, and provide feedback about how to improve (e.g., Black & Wiliam, 1998; Crooks, 1988; Natriello, Rea-Dickens, 2001; Turnstall & Gipps, 1996).
- Students' involvement in their own assessment produces learning gains (e.g., Ross et al, 2002; Wiliam et al., 2004)
- AfL action research projects found that students become more autonomous learners as a result of active involvement in their own learning. In the projects students developed increased of when they were learning and when they were not. This ability to monitor one's own learning is one of the most important benefits of formative assessment (Black, Harrison, Lee, Marshall, Wiliam, 2003).
- PISA 2000 found that within each country students who use metacognitive strategies (self-monitoring) more frequently perform better on the combined PISA reading literacy scale than those who do not (OECD, 2001).

# Formative Assessment

Margaret Heritage


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## Overview

- The Big Assessment Picture
- What is Formative Assessment
- Putting All the Pieces of Formative Assessment Together
- What Teachers Need


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## Coherent, Comprehensive and Continuous System



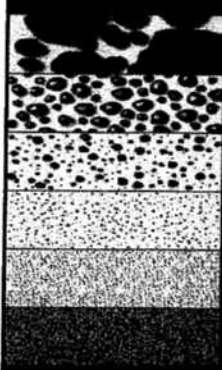

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## Who Needs What and When?




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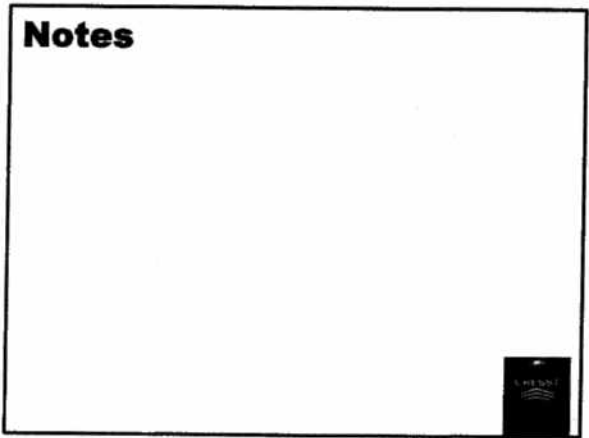


## Different levels of granularity for different purposes

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## Notes



## What is Formative Assessment?

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## What is Formative Assessment?



- An ongoing process to close the gap between the learner's current state and desired goals

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## Why Should You Care About It?

Black and Wilam, in their meta-analysis of research on classroom assessment, concluded that ongoing assessment by teachers combined with quality feedback produced powerful and positive effects on achievement. These studies ranged over ages (from 5-year-olds to university undergraduates), across several school subjects, and over several countries. Teachers who used formative assessment were able to achieve in six months or seven months what would otherwise have taken a year (Black & Wilam, 1998).

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## Why Should You Care About It?

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## Why Should You Care About It?

- Teachers' improved formative assessment practices (assessment result in gains in achievement) are directly measurable (Black, 2002) (Black, Lee, Harrison & Byrnes, 2004).
- Ruiz-Pompe & Furtak (2007) showed that high-quality planned daily assessment conversations were linked to increases in students' performance.

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## Notes



## What Are Formative Assessment Practices?

- Eliciting evidence about student learning
- Providing feedback to teachers and student about learning
- Using feedback to adjust instruction and learning tactics in real time
- Involving students actively in their learning

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## Eliciting Evidence

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## A Moving Picture

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
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**Informing instruction  
minute-by-minute, day-by-  
day**

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## Notes



## Strategies

- ✓ Questioning (planned for interaction)
- ✓ Discussion (student/student - teacher/student)
- ✓ Observation
- ✓ Work samples (written work, artifacts, oral presentations, performance)
- ✓ Quizzes
- ✓ Mid-lesson checks (white boards)
- ✓ Exit cards
- ✓ Tests

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## Interpreting Evidence and Using Feedback

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## Interpreting Evidence to Identify the Gap

Learning goal and evidence for success

Assessment Strategy

Interpretation

Assessment Data

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## The Just Right Gap

QuickTime™ and a PDF (Acrobat) document are needed to see this picture.

- Adapting instruction to meet the learning needs

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## Feedback to Students

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## Notes



Formative assessment can enhance learning when designed to provide students with feedback about specific qualities of their work, and provide feedback about how to improve (e.g. Black & Wiliam, 1998; Crooks, 1988; Natriello, Rea-Dickens, 2001; Turnstall & Gipps, 1996)

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### Feedback to Students

Clear, descriptive, criterion-based feedback to students that indicates:

- ✓ *how their response differed from that reflected in desired learning goal*
- ✓ *how they can move forward*

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### Student Involvement

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### Student Involvement

Quality and quantity of student involvement are critical to success.

- Sharing learning goals and criteria for success
- Self- and peer-assessment
- Using feedback

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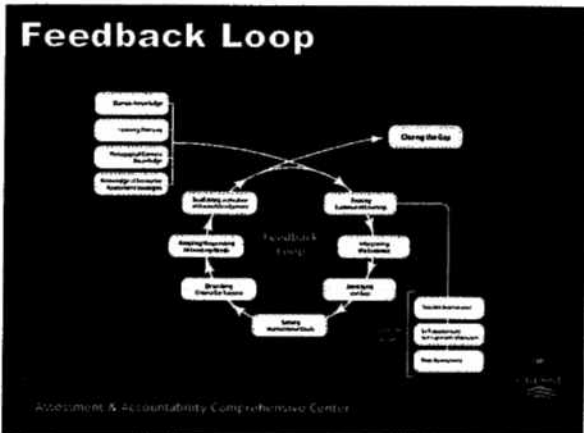
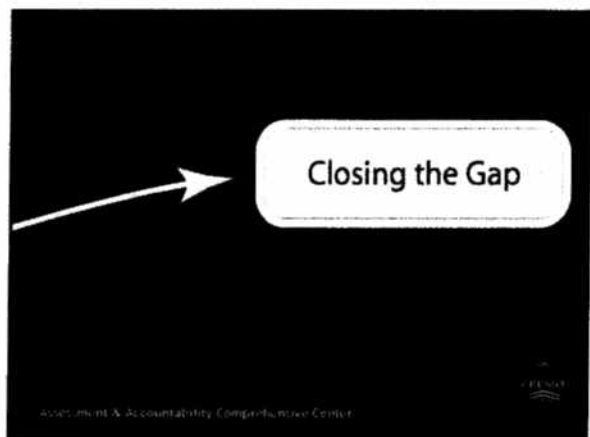
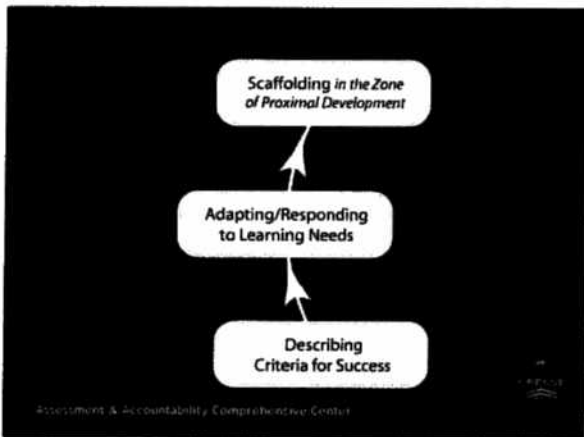
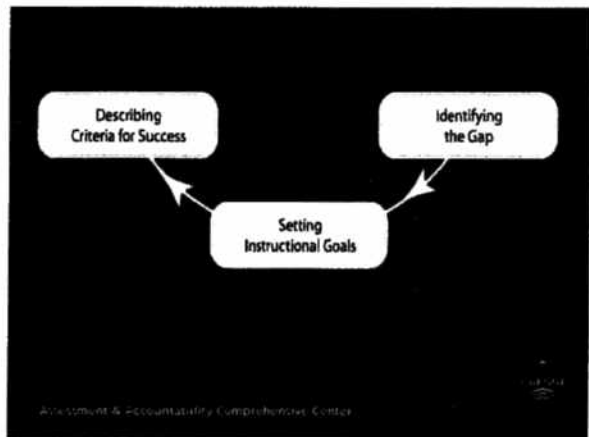
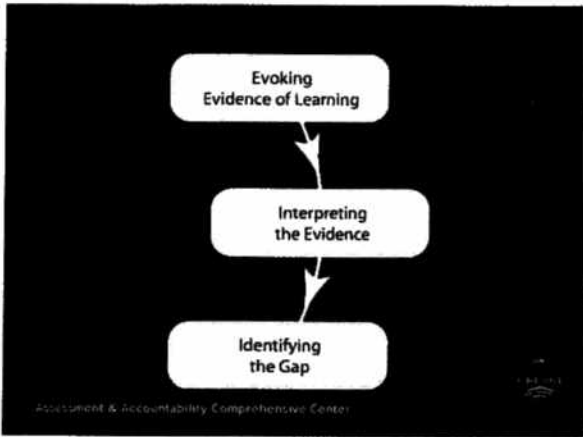
- PISA 2000 found that within each country, students who use metacognitive strategies (self-monitoring, self-assessment) more frequently perform better on the combined PISA reading literacy scale than those who do not (IEA, 2001)
- Students' involvement in their own assessment practices improves learning gains (e.g., Ross et al., 2002; Wilam et al., 2004)
- The ability to monitor one's own learning is one of the One of the most important benefits of formative assessment (Black, Hanson, Lee, Marshall, Wilam, 2003)

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### Notes

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### Notes

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## What Teachers Need to Be Skillful in Formative Assessment

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## Teachers Need:

- Content knowledge
- Knowledge of formative assessment strategies
- Skills in interpreting evidence, and using evidence to plan instruction
- Instructional strategies
- Skills in giving feedback
- Skills in teaching and using self- and peer assessment

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## Teachers Need:

- Support from policy makers, administrators, and stakeholders, for the use of formative assessment
- Pre-service training
- Sustained investment in professional development
- Recognition that developing formative assessment practices takes time
- Relief from having to administer more tests

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## Notes

