Formative Assessment

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1

Resources

PW = feedback

2

Essential Questions

What is formative assessment?

Why formative assessment?

What is feedback?

What is a feedback system?

How can we give better feedback?

3

Essential Questions

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4

Definition of formative assessment

"We use the general term   to refer to all those activities that provide information to be used as feedback to modify teaching and learning activities.

Such assessment becomes *assessment* when the evidence is actually used to adapt the teaching to meet student needs"

(Black & Wiliam, 1998, p. 140) 5

True formative assessment

❑It is only 'formative' if –

1. There are built-in opportunities to use the feedback

2. The feedback refers to <u>ongoing</u> goals, not just past teaching

6

3 simple examples

1. Writing a draft of a paper, getting feedback from peers and teacher, revising the paper as appropriate

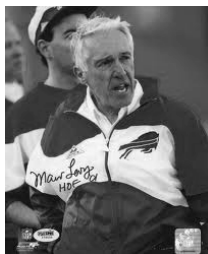2. A pre-test in science and math that looks for common misconceptions and their being overcome in the post-test

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Formative Assessment – the basics

Try again | A key task

Advice, re-teaching if needed | Feedback Against Goals

9

Marv Levy once said...

□"What do you think we do out here – wind up a playbook in July and pray?..."

10

Levy:

□"...Coaching is about adjustment in light of ongoing results and our goals"

11

CAUTION, therefore

□Genuine formative assessment concerns YOUR long-term goals, not just "Did they learn what I just taught?"

12

Implications

▫ Focus on –

- Clear program & course goals
- Recurring performances
- Recurring questions
- Overcoming of persistent misunderstandings and performance deficits

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Course Planner for Transfer: US History Example

Transfer Goals	EQs	Who is an American? Says who?	When and why have we struggled to honor our ideals?	What has been gained and lost in our expansion and growth?	Who has the power, who doesn't, and why?	What is the proper role of the federal gov't?	Why have we fought? What was gained and lost as a result?	What is America's role in the world?
1. Find appropriate sources and evaluate the validity and usefulness of sources, primary and secondary								
2. Apply an understanding of the past to an analysis of the present and predictions of the future								
3. Analyze and evaluate conflicting historical accounts & interpretations into a new synthesis								
4. Demonstrate perspective in considering events, narratives, interpretations, and arguments								
5. Critique the work of other historians: identify slant, bias, distortion, oversight, and misinterpretation								
6. Develop and support an independent thesis, to construct a sound historical argument								
7. Construct and defend a historical narrative – your story of events								

Most powerful formative assessment

▫ Explicit performance goals

▫ Models of those goals

▫ Timely feedback against those goals

▫ Ongoing self-assessment & self-adjustment

▫ Advice, as needed

▫ BUILT-IN opportunities to try again – time allotted in the unit plan

▫ A grade/score is not typically counted

15

CAUTION

❑The key to effective formative assessment is not collecting feedback but knowing what to do with it to improve learning.

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Implications

❑Think backward from the use of the feedback, not just the method(s) of formative assessment

▪ E.g. How will results from exit slips help you? Help students? i.e. **If results are poor, how will you re-teach or revise plan?**

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"most effective" college courses

❏from

- "Students overwhelmingly report that the single most important ingredient for making a course effective is getting rapid response on assignments and quizzes.

- "Students suggest that it should be possible in certain courses to get immediate feedback. They suggest that the professor should hand out an example of an excellent answer.

- Richard Light

19

Feedback & use (cont.):

- "Secondly... an overwhelming majority are convinced that their best learning takes place when they have a chance to submit an early version of their work, get detailed feedback and criticism, and then hand in a final revised version...

- Many students observe that their most memorable learning experiences have come from courses where such opportunities are routine policy."

20

Hattie's Meta-analysis

Rank	Influence	ES
1	Self-report/ self-assess	1.44
5	Reciprocal teaching	.74
8	Feedback	.72
9	Formative evaluation to teachers	.70
11	Meta-cognition strategies	.67

21

Video examples

❑Eric Mazur – Harvard University

❑2ⁿᵈ grade & 5ᵗʰ grade Socratic Seminar and de-brief

22

Eric Mazur - Physics at Harvard

❑After 10 minutes, Mazur poses a question that requires conceptual understanding (such as estimating the displacement of a toy boat in a bathtub).

- Students write their answers on a sheet and identify their levels of confidence in the answer.
- In pairs, attempt to convince others of their answers.
- Students then answer the question a second time and report their confidence levels again.
- The whole class is polled again about their answers.

23

Mazur's data

❑Mazur has collected data on the impact of his approach on several outcome measures over a decade vs. traditional lecture -

- students performed considerably better on standard physics course exams
- students scored higher on measures of traditional problem solving
- Students scored much higher in conceptual understanding

24

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25

CAUTION

❑MOST people are confused about what true feedback is.

26

IF… THEN…

❑What was the best feedback you ever received?

❑After sharing: what is common to all the stories – what is true of the best feedback giving, in general?

27

One day 20 years ago, my son wrote -

JUSTIN

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_____
_____
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Then, I wrote:

N

And asked: "What is *this* letter?"

He answered - "N"

"Right!" I said
Then I wrote:

H

And asked: "What is *this* letter?"

He answered - "H"

_____
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I said: That's right.

Then I asked, what is *this* letter of yours?

JUSTIN

And he answered...

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He said:

❑ "Not what I wanted!"

❑ Thus, an *effective* feedback system

Coaching

❑ "A coach is someone who can give correction without causing resentment."

> ▪ Gallimore, R., & Tharp, R. G. (2004). What a coach can teach a teacher, 1975-2004: Reflection and reanalysis of John Wooden's teaching practices. The Sport Psychologist, 18, 119-137

Concept Attainment: Feedback

1. Compare examples (YES) with non-examples (NO) of a concept.
2. Identify the distinguishing characteristics of each.
3. Test your 'theory' against new cases.
4. Refine your concept, as needed.

33

YES: Examples of (oral) feedback

❑ "You had me in the opening paragraph with the graphic description of her face; you lost me in the 4th paragraph – I couldn't tell who was talking and how the dialogue fit with what came before."

❑ "Your conclusion does not follow from the data and reasoning provided. You haven't accounted for the outliers.

34

YES: Examples of <u>non-verbal</u> feedback:

❑ No one clapped with much enthusiasm after a student's speech.

❑ A math student sets about revising her visuals after self-assessing her work against models from past years

❑ The student trying to ask for directions in a French language scenario tries again to communicate in light of puzzled looks on the listeners' faces

❑ The science student realizes the experiment must be re-done in light of the data being so inconclusive

35

NO: <u>not</u> feedback

❑ "Good job!"

❑ "Try harder!"

❑ "Good – 87%"

❑ "Next time, start with your thesis statement upfront."

❑ "Your story about ants? I love ants!"

❑ "B+"

❑ "Why did you use that tone of voice"

36

So, what *is* feedback?

❑What distinguishes the examples from the non-examples?

37

	YES	NO
I can't hear you	☐	☐
Good lecture!	☐	☐
Speak louder, please	☐	☐

38

	YES	NO
Nice job: good lecture!	☐	☐
No one laughed at your joke	☐	☐
"Poor shot!"	☐	☐

39

Feedback?　　　YES　NO

"I noted that 3 of the 28 students in groups of 4 were off-task when I went around the room"　☐　☐

You, the teacher see that kids are starting to fidget; your goal was engaged and on-task behavior　☐　☐

"What was your thinking about the use of the graphic organizer?　☐　☐

40

Feedback?　　　YES　NO

"You might want to post your EQ and refer to it multiple times"　☐　☐

"You only called on the girls"　☐　☐

"Why did you group them by ability?　☐　☐

41

Feedback, defined

☐<u>Useful</u> descriptive information on one's performance, <u>given</u> a specific & known goal

- Feedback is **not** evaluative
- Feedback is **not** advice

42

14

Feedback, defined (2)

- Learning what worked and why, not just what didn't work
  - "feedback" <u>doesn't</u> mean only "a focus on deficits"

43

Feedback, defined (2)

- i.e. students need both positive and negative feedback – not to be confused with praise and criticism

44

Feedback, defined (3)

- The feedback questions:
- Given the goal and attempt, what worked? Why? What didn't? Why?

45

Advice, defined

❑Useful information on what to do to <u>improve</u> performance, based on the feedback and the goal

46

Advice, defined (2)

❑The advice question:

▪Given the result & other feedback, how might performance be improved?

47

Feedback vs. Advice

❑We tend to give too much advice, too quickly!

▪Ideally, the student can self-advise, based on rich feedback and clear goals/models

48

Evaluation, defined

❑Value is placed on the performance –

- "Good job"
- "B –"

49

Evaluation

❑We tend to give too much evaluation or praise/blame instead of feedback

50

Too much grading, not enough feedback

❑Secondary-level teachers tend to do far more evaluation than formative assessment

☞**Tip: put a colon after praise/blame**

❏When you hear yourself say "Good job" or "No, not right" immediately say WHY in terms of goal/results –

- *Good job:* your provocative comments, your use of silence, and overall pace made them engaged right from the start and kept them so.

- *No, not right: that didn't engage them.* Your pace was slow and the content did not offer any surprise, suspense or provocative ideas or questions that might engage someone.

52

☞**Tip: Have students help create the criteria**

❏The feedback will be both clearer and more readily accepted if students helped create the criteria for the performance in question.

53

☞ **Useful tip: avoid 'pleasing' language and tone**

❏It should <u>never</u> seem to students that the job is to please you

❏It is more a matter of fact:

- What, specifically, they did or did not do that was necessary for achieving a clear desired result.

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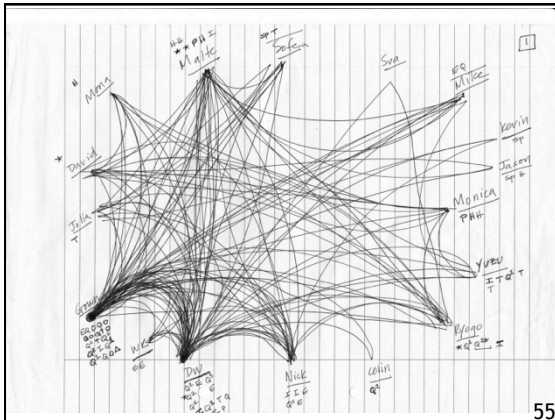
Helpful feedback: criteria

❏ The more feedback is –

- Detailed and specific description of what you did and didn't do in light of goal(s)
- Derived from concrete standards/models
- Timely & On-going
- User-friendly - in approach and amount
- Consistent (across time and people)
- Expert; Accurate
- Honest and de-personalized, yet constructive

❏ ...the more likely the help will be understood, accepted, and useful

56

Clear Models + Criteria

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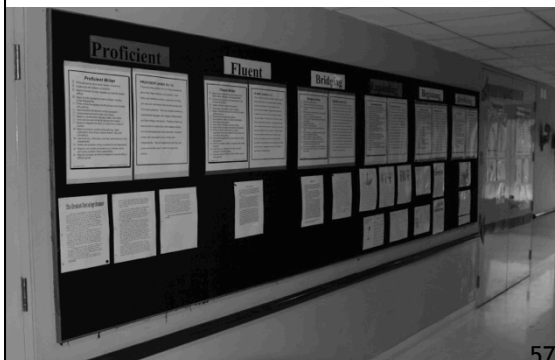
Note: Rubrics are NOT sufficient

❑ Rubrics are very general, derived from many samples

❑ Better to have just the models than just a rubric

58

Essential Questions
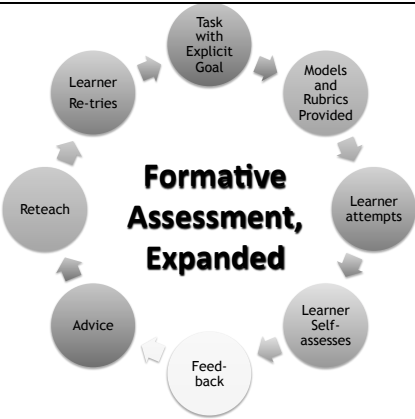
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59

Formative Assessment, Expanded

- Task with Explicit Goal
- Models and Rubrics Provided
- Learner attempts
- Learner Self-assesses
- Feedback
- Advice
- Reteach
- Learner Re-tries

60

20

Example

- GOAL: Write an essay
- MODEL: sample papers, good and bad; rubrics that identify criteria & indicators
- ATTEMPT 1 + SELF-ASSESSMENT: draft paper with self-assessment against rubric
- FEEDBACK: comments that refer to specifics of learner attempt & models + rubrics
- ADVICE: practical tip on a key or targeted deficit
- ATTEMPT 2: final draft + self-assessment

61

62

Elem school – Self-Assessment

63

User-friendly indicators

64

What formative assessment IS NOT

❑It is not formative assessment if –

- There is no opportunity to use feedback to improve
- If all that is assessed is content never to recur
- The student only gets a grade or total score

65

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66

"Can you tell me how to get to Carnegie Hall?"

❑Practice

Get feedback on your feedback

67

Tips for improving efficiency

❑Highlight feedback to the group on most important common points

❑Develop their skill in peer review

❑Use multiple feedback givers

❑Use non-human feedback devices and approaches where possible

68

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advice: criteria

❑The advice should be –

- Brief and practical
- Modeled
- Focus on 1 area
- Offered only if recipient of feedback can't self-advise based on the feedback

69

When the news is not so good

▫The feedback should be 'sandwiched'–

▪ Success

▪ Deficit

▪ Success

70

Rubrics

▫Make them highly descriptive – derived from models

▫Focus more on impact rather than just content and process

Analyzing Samples

Excellent   Good   Acceptable   Not Acceptable

DESCRIPTOR   DESCRIPTOR   DESCRIPTOR   DESCRIPTOR

72

Rubrics

❏Goal: "Excellent oral presentation"

- Look at samples
- Sort via draft criteria
- Describe each pile of samples

73

What happens if you don't!

❏Goal: "Excellent oral presentation"

❏Proposed criteria:

- Accurate content
- Eye contact
- Organized
- Good diction

74

Example of problematic criteria

❏Goal: "Excellent oral presentation"

❏Proposed criteria:

- Accurate content
- Eye contact
- Organized
- Good diction

Couldn't you do all those – without success?

75

More generally...

❑Could a performance have good *content* and the performer use good *processes* – but the performance still not have the desired result?

76

Typical criteria questions

	PROCESS	CONTENT
	• Was the work **polished**? • Was the group **efficient**? • Was the paper **organized**? • Was the approach **methodical**? • Was the paper **well-researched**?	• Was the content **accurate**? • Was the paper **on target**? • Was the content **appropriate** for this audience and purpose? • Were the calculations **precise**?

Impact criteria

❑IMPACT:

▪ The result, given the goal

▪ The effect, given the intent

▪ The bottom line, regardless of effort

▪ The point of performance

78

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Impact criteria questions

IMPACT	PROCESS	CONTENT
• Was the story **engaging**? • Was the proposal **persuasive**? • Was the speech **memorable**? • Was the problem **solved**? • Was the Spanish speaker **understood**? • Was the historical narrative **illuminating**?	• Was the work **polished**? • Was the group **efficient**? • Was the paper **organized**? • Was the approach **methodical**? • Was the paper **well-researched**?	• Was the content **accurate**? • Was the paper **on target**? • Was the content **appropriate** for this audience and purpose? • Were the calculations **precise**?

Developing a rubric

1. Brainstorm the key indicators/criteria of excellent vs. sub-standard performances.
2. Group indicators by more general criteria
3. Compare with others or to existing real-world examples
4. Settle on a refined set of valid criteria (3-4) and checklists, as needed
5. Draft descriptors of highest level/not up to standard for each criterion
6. Flesh out a scale of 4 (or 6) points; analyze the 'cut' score via samples on both sides
7. Refine descriptors via more samples of work
8. Focus on IMPACT

80

☞TIP: make the implicit explicit

❑That's really a key value of rubrics with rich value-neutral descriptors and indicators: to have a streamlined, evidence-based & consistent system in which feedback can be given quickly, validly, and reliably.

81

27

Tips for improving efficiency

❑Highlight feedback to the group on most important common points

❑Develop their skill in peer review

❑Use multiple feedback givers

❑Use non-human feedback devices and approaches where possible

82

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Tips for improving feedback & performance

❑De-personalize judgment into the facts of the *goal* and the *results*

❑Provide multiple models to support goals and rubrics

❑Ask performers to self-assess against the goal before your feedback (& any advice)

❑Use only descriptive language in rubrics, and refer to that language when giving oral feedback

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Resources

❑Grant's article in Ed Leadership:
- http://www.ascd.org/publications/educational-leadership/sept12/vol70/num01/Seven-Keys-to-Effective-Feedback.aspx

❑Grant's follow-up blog entry:
http://grantwiggins.wordpress.com/2012/11/04/on-feedback-13-practical-examples-per-your-requests/

❑Many resources at:

www.grantwiggins.info

E-mail: gwiggins@authenticeducation.org

84

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Recent articles of note

❏The benefits of more & spaced testing:

- http://www.newrepublic.com/article/114793/american-schools-need-more-testing-not-less
- http://psych.wustl.edu/memory/Roddy%20article%20PDF's/BC_Roediger%20et%20al%20(2011)_PLM.pdf
- http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_199104_dempster.pdf

85

Recent articles of note

❏The benefits of pre-testing:

- http://www.nytimes.com/2014/09/07/magazine/why-flunking-exams-is-actually-a-good-thing.html

86

Internet resources

❏http://ati.pearson.com/tools-resources/
❏http://ati.pearson.com/downloads/SevenStrategies_StudyGuide_web.pdf
❏http://www.scholastic.com/teachers/article/what-are-formative-assessments-and-why-should-we-use-them
❏http://wvde.state.wv.us/teach21/ExamplesofFormativeAssessment.html
❏http://www.ascd.org/publications/books/108018/chapters/Formative-Assessment@-Why,-What,-and-Whether.aspx
❏http://www.edutopia.org/blog/formative-assessments-importance-of-rebecca-alber   87

Assessment for Learning:
References & Resources

- On Eric Mazur's Physics teaching
  - http://www.columbia.edu/cu/gsapp/BT/RESEARCH/mazur.html
  - http://www.bedu.com/Newsletterarticle/mazurperspective.html
- On Black & Wiliam's research
  - http://www.pdkintl.org/kappan/kbla9810.htm
  - http://english.unitecnology.ac.nz/resources/resources/classroom_learning.html
- British Websites on Formative Assessment
  - http://www.qca.org.uk/7659.html
  - http://www.qca.org.uk/293_3236.html
  - http://www.qca.org.uk/downloads/unlocking.pdf
- Research on homework
  - http://www.nfer.ac.uk/publications/other-publications/downloadable-reports/recent-research-on-homework-an-annotated-bibliography.cfm
  - http://www.centerforpubliceducation.org/site/c.kjJXJ5MPIwE/b.2466963/k.D3DF/Key_lessons_What_research_says_about_the_value_of_homework.htm

88

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