Formative-Assessment: What is it?

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Definition

Formative assessment is a planned process in which assessment-elicited evidence of students' status is used by teachers to adjust their ongoing instructional procedures or by students to adjust their current learning tactics.

-W. James Popham, 2008

Descriptive Attributes

- A process
- Key Question: Has each student learned?
- Helps students answer three questions:
    - Where am I going?
    - Where am I now?
    - How can I close the gap?
- Carefully-thought-out strategies and tools to engage students in learning in and outside of the classroom
- Classroom-based assessments used on an on-going basis in every classroom; as Wiliam said it is a series of constant readings, a minute by minute, day by day approach
- Yields student evidence of learning for both the student and teacher
- Guide students learning on a daily basis by providing information about what was learned and not learned
- Provide information to guide extra learning opportunities to students who are **struggling** academically
- Provide information to guide additional learning opportunities for students who are **doing well** academically
- Provides information to report student progress to students, parents, and other educators

Components

- Planning
- Learning Targets
- Student Evidence
- Formative Assessment Strategies
- Formative Assessment Tools
- Teacher Analysis
- Feedback

Planning. Before instruction begins, teachers make plans to identify which learning targets they will pinpoint, what kind of evidence they will gather, how they will involve students in the assessment process, when they will analyze data to determine the next steps, and how they might offer feedback.
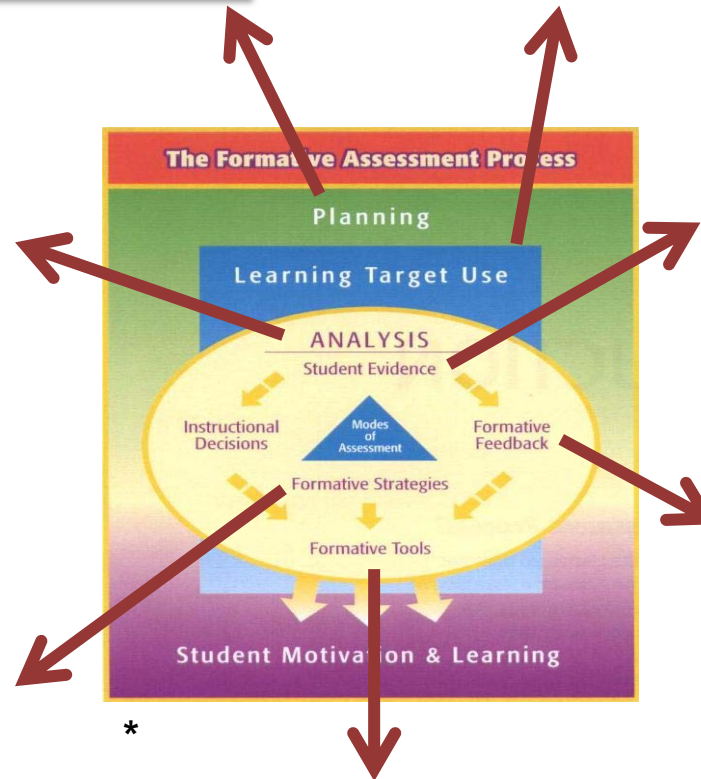
Learning Targets. Teachers identify learning targets to embed in daily instruction. Once identified teachers then are able to determine the best student evidence and appropriate strategies and tools.

Teacher Analysis. The fundamental purpose is for teachers to use student evidence to analyze student achievement in relationship to the intended learning targets. This enables teachers to make informed decisions about changing instructional plans, determining the most effective feedback, and deciding which strategies and tools to use with students.

Student Evidence. Teachers rely on student evidence to determine what students know and can do. This evidence can take the form of paper-pencil tests, essays, oral presentations, teacher observations, student-teacher conferences, reflection papers, and the like.

Formative Strategies. Teachers use formative-assessment strategies to involve students in the process by linking the strategies to learning targets, student evidence, and tools.

Feedback. Research indicates that focused feedback is one of the most significant causes of increased student achievement. Descriptive written and verbal, formative feedback, typically leads to increased student self-awareness about students' learning and achievement.

The Formative Assessment Process

Planning

Learning Target Use

ANALYSIS
Student Evidence

Instructional Decisions — Modes of Assessment — Formative Feedback

Formative Strategies

Formative Tools

Student Motivation & Learning

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Formative Tools. Tools are used to generate the desired student evidence in reference to the strategy selected. There are hundreds of "tools" in the formative assessment toolbox: thumbs up/down, "after-all" cards, exemplars, peer conferences, etc.

Formative-Assessment: What is it?

Formative Strategies

- Activating Prior Knowledge
- Goal Setting
- Self-Assessment
- Peer Assessment
- Feedback Use

> Strategies are methods for involving students in the process of assessment

> Strategies are employed to increase student metacognition

Activating Prior Knowledge

- This strategy provides data for the student and/or teacher about what the student already knows in reference to a learning target

Goal Setting

- This strategy helps students start thinking about their future learning and success.
- It requires students to determine what learning needs to take place over time.

Self-Assessment

- This strategy helps students evaluate what they know and are able to do according to criteria aligned to a learning target
- Students monitor their own progress and reflect on amount of growth, number of strengths, and need to self-correct errors.

Peer Assessment

- This strategy engages students in evaluating what their peers know and are able to do according to criteria aligned to a learning target
- Students monitor their own and peers' progress and reflect on amount of growth, number of strengths, and need to self-correct errors.

Feedback

- This strategy provides students with descriptive information from the teacher about their learning in reference to criteria

Formative-Assessment: What is it?

Formative Tools

Tools are observable applications of formative-assessment strategies used in the classroom with students; they are designed to generate student evidence that can be used to make decisions about customizing instruction and learning.

There are hundreds of examples, but the key to the formative-assessment process is the use of data generated from tools by the teacher to adjust instruction and/or by the student to adjust learning toward meeting targets.
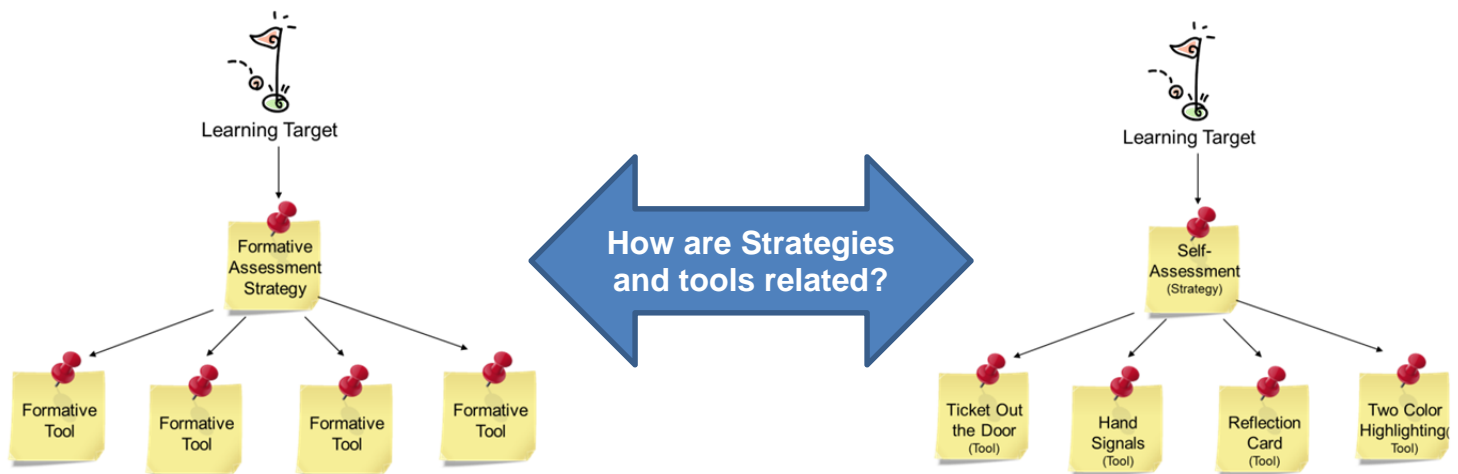
Activating Prior Knowledge

In *How the Brain Learns,* David Sousa (2001) notes that "past experiences always influence new learning. What we know acts as a filter, helping us attend to those things that have meaning and discard those that don't" (p. 49).

- **Definition:** Activating Prior Knowledge refers to the practice of beginning a lesson by bringing up topics with which the students already have some familiarity.
- By putting the upcoming lesson material into a familiar context for the students, the teacher is giving them a context into which they can then assimilate the new information and understanding.
- This discussion can also be used to gauge the level of prior knowledge of the students which can inform how to proceed with your instruction.

Purpose/Benefits of Activating Prior Knowledge:

- When students make connections learning increases
- Promotes the brain's ability to make connections to new learning and improve comprehension
- Brain's natural mechanism to try to fit new learning into existing knowledge
- Practice of beginning a lesson by bringing up topics with which the students already have some familiarity
- Giving students a **context** into which they can then **assimilate** the new information and understanding
- Discussion can be used to **gauge** the level of prior **knowledge** of the students
- Inform how to proceed with your **instruction**

Attributes of Activating Prior Knowledge:

- Schema, relevant background knowledge, prior knowledge or just plain experiences
- Formal or Informal
- Breadth and Depth of Knowledge
- Different backgrounds and experiences
- Predispositions, values, and beliefs
- Where they got the knowledge
    - Ensure effective instruction to address and correct misinformation
- Provide a common guide for pursuing and reaching goals
- Clarify gap between current and desired achievement levels
- Prepare students' brains for learning

Tools to Activate Prior Knowledge:

- On-Demand Writing
- Open ended questions
- Fill in the blank
- Draw a picture or illustrate their ideas about a topic (Gallery)
- Circle Map
- Entrance Slips
- Corners
- Sticky Notes
- KWL
- Brainstorming

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http://ohiorc.org/adlit/strategy/strategy_each.aspx?id=7

Goal Setting

A goal is what the student is trying to learn or achieve---an outcome or accomplishment. Achieving that goal in a realistic and strategic way is aided by goal setting, a cognitive process that effectively energizes a student to become more productive. (*Locke & Latham, 2002*)

Mark Lipsey and David Wilson (1993) . . . found that, on average, the act of setting academic goals had an effect size of 0.55. This means that the achievement scores in classes where clear learning goals were exhibited were 0.55 standard deviations higher than the achievement scores for classes where clear learning targets were not established. The differential translates into a 21-percentage point difference in achievement. (What Works in Schools by Robert Marzano, 2003)

A student's ability to set and achieve realistic goals is linked to higher grades, lower college dropout rates, and greater well-being in adulthood. (*The Wall Street Journal*, *March 9, 2011*)

 "Would you tell me please, which way I ought to go from here?" asked Alice. "That depends a great deal on where you want to get to," said the Cheshire Cat. (Lewis Carol, *Alice in Wonderland*)

Purpose/Benefits of Goal Setting:

Goal setting helps students learn how to learn in four main ways (Locke & Latham, 1990):

- Goals focus student attention on the learning task and the learning target.
- Goals stimulate appropriate student effort.
- Goals increase student persistence.
- Goals increase a student's desire and capacity to learn new strategies.

Attributes of Goal Setting:

- Helps students start thinking about their **future learning and success**.
- Requires students to determine **what learning** needs to take place **over time**.
- Effective goal setting is a continuous process of learning how to learn.
- Effective goals:
    - Precise
    - Detailed
    - Linked to the learning targets

Information Compiled by Roy Sovis and Melissa Wing, Coordinators for Instruction, Genesee Intermediate School District, Spring 2012.

Steps of Goal Setting:

1. Setting the Goal

    a. Students select a short term goal that is just right in terms of challenge and attainment.
    b. Identify bite-sized chunks within the learning target.
    c. Know the time frame to learn the bite-sized chunks.
    d. Clear on what they have to do or produce at the end of the time frame to demonstrate their learning.

2. Selecting the Tool

    a. Select a powerful set of tools.
    b. Tools must help them advance toward their goal.
    c. Provide for opportunities to receive feedback and scaffolds from their teacher and peers.

3. Assessing Performance

    a. Self-assessments and self-regulating provide opportunities to monitor and adjust what they are doing.
    b. Students are encouraged to gauge their progress towards their goal.
    c. Students learn to attribute their success on the task at hand to the things they can control---the set of strategies they choose and the amount and direction of their effort.
    d. Students learn to gather evidence to assess the effectiveness of the strategies and to adjust their own performance.

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Self-Assessment

"If formative assessment is to be productive, pupils should be trained in self-assessment so that they can understand the main purposes of learning and thereby grasp what is to be achieved". (Inside the Black Box, Wiliam and Black)

Sebba and colleagues (2008) Meta-Analysis showed that self-assessment had:

- Positive effect on learning across content areas
- Students
  - Showed greater engagement in learning
  - Showed increased independent learning
  - More aware of goals and objectives
  - Better understood what to do to improve

"Self-evaluation (self-assessment) is defined as students judging the quality of their work, based on evidence and explicit criteria, for the purpose of doing better work in the future."
(Carol Rolheiser and John A. Ross, http://www.cdl.org/resource-library/articles/self_eval.php)

Purpose of Self-Assessment:

Campbell, DeWall, Roth, and Stevens (1998) stated that self-assessments "provided students with a greater sense of ownership of their work, a more enthusiastic approach to learning, and the increased use of higher-order thinking".

Attributes of Self-Assessment:
- Helps students evaluate what they know and are able to do according to criteria aligned to a learning target
- Students monitor their own progress and reflect on amount of growth, number of strengths, and need to self-correct errors
- Happens daily
- Students take responsibility for own learning
- Make judgments about their own work
- Greater responsibility for learning
- Encourages engagement

Guide to Self-Assessment:

- Identify purpose
- Plan for specific opportunities
- Establish clear assessment criteria and share with students early
- Train students how to assess their own work

Information Compiled by Roy Sovis and Melissa Wing, Coordinators for Instruction, Genesee Intermediate School District, Spring 2012.

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http://www.reading.ac.uk/engageinassessment/peer-and-self-assessment/eia-peer-and-self-assessment-main.aspx

Peer Assessment

Peer assessment, the process through which students comment on and judge their peers' work, can improve and accelerate learning. (Mary A. Hansen and Anita Laquinta)

Self and peer assessment are assessment methods in which students assess their own work or that of their peers, preferably with reference to criteria and standards. (Clair Hughes)

Purpose/Benefits of Peer Assessment:

- Learner empowerment
- Learner confidence
- Learner ability to self-evaluate and reflect
- Gaining an ability to 'stand back' from own work for assessment purposes (critical friend feedback)
- Increased feedback for students
- Greater responsibility for learning
- Encourages engagement

Attributes of Peer Assessment:

- Internalize the characteristics of quality work
- Essential to supporting 'good' peer assessment
    - Preparation
    - Clear assessment criteria
- Students must understand the purpose of the peer assessment

Guide to Peer Assessment:

- Identify purpose
- Plan for specific opportunities
- Establish clear assessment criteria and share with students early
- Train students how to assess their peers work

Resources:

Hansen, Mary, and Anita Iaquinta. *"A Guide for Using Peer Assessment Formatively and Effectively." ASCD Express.* 3.5 (2007): n. page. Web. 25 Jul. 2012.
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http://www.reading.ac.uk/engageinassessment/peer-and-self-assessment/eia-peer-and-self-assessment main.aspx
http://www.uq.edu.au/courses-help/index.html?page=41842 (Hughes)

Feedback

Feedback is typically characterized as assessment of progress toward a goal, but it is also a cue to seek more information or instruction. (Jane E. Pollock)

"Feedback says to a student, "Somebody cared enough about my work to read it and think about it!" Feedback matches specific descriptions and suggestions with a particular student's work. It is just-in-time, just-for-me information delivered when and where it can do the most good." (Brookhart)

"The most powerful single modification that enhances achievement is feedback. The simplest prescription for improving education must be 'dollops of feedback'." (Hattie, 1992)

Purpose/Benefits of Feedback: (Brookhart)

- Describes quality of work in relationship to targets
- Observation of student's learning processes and strategies that help them improve
- Draws connections between work and effort

Feedback: Students are given information that prompts an action. A whole solution does not always need to be given. We can help students think about what to do, just by asking a question.

- Needs to be high quality
- Highlights successes (Between 1 and 3) and one area where some improvement is needed
- Be specific
- Timely
- Involves the learner
- Focuses on the target
- Occurs during learning
- Provides strategies to students
- Addresses partial learning
- Does not do thinking for the student
- Limits advices to what student can act on
- Students must have opportunity to apply the feedback

Types of Formative-Assessment Feedback

Descriptive Feedback: Primarily *tells* the student how to correct their reasoning. The purpose is to improve learning by indicating to the student what needs to be improved.

Effective Feedback: *Asks* the student what to do to move their reasoning to the next level. The purpose is to improve learning, by moving student reasoning to the next level.

Feedback Starters: Students are given information that prompts an action. A whole solution does not always need to be given. We can help students think about what to do, just by asking a question. (Chappuis)

Feedback Starters:

I like the way you…
This is quality work because…
Your thinking shows…
Two things you did really well are…
When explaining your topic you…
Your writing tells me…
Your thinking shows…
One thing to improve on…
You need more...
You need less…
Your next steps might be…
You might try…
You might have better results if you…
I noticed that…
You had some trouble with… Try…
Remember what we learned about…. Try…

Stars:

This is quality work because... I like the way you...
Your thinking shows... When explaining your topic you...
Two things you did really well are... Your writing tells me...

Wishes:

One thing to improve on... You need more....
You need less... When explaining your topic, consider.....
Your writing tells me... Your next steps might be...
You might try.... I would like to know more about....

http://grade67healthproject.wikispaces.com/Descriptive+Feedback

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