



FORMATIVE ASSESSMENT AS AN INSTRUCTIONAL TOOL

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Howard Gardner's *the Unschooled Mind*

“...schools everywhere have embraced ‘correct answer compromises’ instead of undertaking risks of for understanding”

Shift in philosophy

Traditional

- Assign and Grade
- Grades and Points are used to motivate and punish
- Behavior is factored with academic
- One try to show mastery
- Averaging
- Almost everything is worth points or grades
- More summative than formative assessments

Progressive

- Teach and Assess
- Grade are used to reflect where a child is on the learning continuum
- Behavior is separated from academic
- Multiple attempts to show mastery
- Grades are achieved at the end of learning
- More formative than summative assessments

Current Assessment Concerns

- High Stakes Testing
- Curriculum
- Achievement Reporting
- Students' Learning

Current Concerns:

High Stakes Testing

- High Pressure Assessments given once a year do not impact student achievement
- Results received six months later
- Little validity on the student level
- Have little to no meaning for the student
- Lack a balanced assessment system
 - Class
 - District
 - State

Current Concern: Curriculum

- Test Prep
- Coverage of Material
 - Breadth and no depth
- Knowledge and fact finding more than Reasoning and Concept (pressured by high stakes accountability assessments.)
- The textbook is the curriculum

Current Concern:

Achievement Reporting

- Are student grades an accurate reflection of academic ability?
- Rubric Example
- www.polleverywhere.com

A. Items 1 – 10

Ten items that require recall of important but **simpler** content that was explicitly taught.

Total for section =

B. Items 11 – 14

Four items that ask for application of **complex** content that was explicitly taught AND similar to what was taught.

Total for section =

C. Items 15 – 16

Two items that ask for application in situations that **go beyond** what was explicitly taught.

Total for section =

TOTAL /100

A. Items 1 – 10

Ten items that require recall of important but **simpler** content that was explicitly taught.

Total for section =	40/40
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All correct

B. Items 11 – 14

Four items that ask for application of **complex** content that was explicitly taught AND similar to what was taught.

Total for section =	20/40
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Two correct

C. Items 15 – 16

Two items that ask for application in situations that **go beyond** what was explicitly taught.

Total for section =	0/20
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None correct

TOTAL	60 /100
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A. Items 1 – 10

Ten items that require recall of important but **simpler** content that was explicitly taught.

Total for section =	70/70
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All correct

B. Items 11 – 14

Four items that ask for application of **complex** content that was explicitly taught AND similar to what was taught.

Total for section =	10/20
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Two correct

C. Items 15 – 16

Two items that ask for application in situations that **go beyond** what was explicitly taught.

Total for section =	0/10
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None correct

TOTAL 80 /100

A. Items 1 – 10

Ten items that require recall of important but **simpler** content that was explicitly taught.

Total for section =	20/20
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All correct

B. Items 11 – 14

Four items that ask for application of **complex** content that was explicitly taught AND similar to what was taught.

Total for section =	20/40
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Two correct

C. Items 15 – 16

Two items that ask for application in situations that **go beyond** what was explicitly taught.

Total for section =	0/40
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None correct

TOTAL 40 /100

Current Concern: Achievement Reporting

- Are student grades an accurate reflection of academic ability?
- Rubric Example
- “He is failing because he doesn’t turn in any of the homework. The only thing keeping him passing is he is doing great on the tests”
- “He is failing the tests, but he is turning in all the homework.”
- Is behavior factored into grades?
- Do grades inform the student about their learning?

Current Concerns: Students' Learning

- Students have learned to play the game
- Point collectors
- “how much is this worth?”
- “Is this for a grade?”
- What are they motivated by?
 - Points?
 - Rewards?
 - Learning?
- ***The great 3rd grade shift***



ASSESSMENT FOR LEARNING

A shift in why we assess and a shift in how
students respond to assessment



When I teach do I...?

Assign and Grade
Or
Teach and Assess

Formative Assessment

- “Assess”
 - From the Latin *assidere*—**to sit beside**.
- ...include all activities undertaken by teachers and/or students which provide information to be used as feedback to modify the teaching and learning activities in which they engage (Black and Wiliam).
- The most effective provide frequent, immediate, and specific feedback.

Essential questions

- What impact can the process of formative assessment have on student learning?
- What are the major attributes of formative assessment as a process and how can educators and students implement them?
- What does formative assessment as a process look like?

Learning TARGETS

- Participants will...
 - understand the need for and the basic philosophy of formative assessment
 - understand how to apply the attributes of formative assessment in:
 - The classroom level
 - The school level
 - And district level
 - be able to identify and begin to implement formative assessment attributes to refocus students on learning instead of point-collecting

Formative vs. Summative

- **Summative** assessments show if the student has mastered the concept/material/task/standard.
- **Formative** assessments show the **student** and **teacher** where the student is on the continuum of learning.
- It can show where they have been, where they are, and where they need to go.

Examples

- When the cook tastes the soup, that's formative assessment; when the customer tastes the soup, that's summative assessment.
- The coach critiquing a player's form shooting a free-throw during practice is formative; the manager keeping stats on free-throws during the game is summative.
- The Band Director telling a trumpet player he is off the beat during rehearsal is formative; the judge deducting points at the solo and ensemble competition is summative.
- The rough draft **can** be formative; the final draft **can** be summative.
- Homework **can** be formative; the test **can** be summative

Black and Wiliam, 1998

Involving students in assessment and increasing the amount of descriptive feedback, while decreasing evaluative feedback, increases student learning significantly. While all students show gains, students who usually achieve the least show the largest gains overall.

Effect Size

- The meta-analysis reported typical effect size between .04 and .07
- An effect size of .07 would move the U.S. from the middle of 41 countries in Mathematics achievement to one of the top 5.

Black and et al 2004 Study

- A study was conducted to examine the impact utilizing specific attributes identified as necessary for assessment to be formative.
 - Feedback, self- and peer-assessment, etc.
- The result was a 0.3 standard deviation in a variety of externally administered standardized achievement test.

Formative Assessments

- Should provide information to
 - Student
 - Teacher
 - Parents
 - Admin/District
- The most important are the students and the teachers



5 Attributes of Formative Assessment

- Learning Progressions
- Learning Goals/Targets and Criteria for Success
- Descriptive Feedback
- Self- and Peer-Assessment
- Collaboration

1. Learning Progressions

- “Learning progressions describe how concepts and skills build in a domain, and show the trajectory of learning...”
- They are the plan and scaffolding

2. Learning Goals/Targets

- Identify and communicate the instructional goals to the student.
- Provide the criteria by which learning will be assessed.
- Understood by students

3. Descriptive Feedback

- Students should be provided evidence-based feedback linked to the Goal/Target
- Where is the student, where do they need to go, what can they do to close the gap.

4. Self- and Peer-Assessment

- Provides more opportunities for students to hear feedback
- Relieves the teacher from being the sole giver of feedback
- Students become self-reflective
- Students become concerned about peers
- Encourages Collaborative Atmosphere

5. Collaboration

- The final attribute
- Achieved when the previous are in place
- Encourages self-directed learning
- Addresses the concern with student apathy
- Refocus on learning and not just point collecting
- Shift in culture
 - Student
 - And Teacher

Four Levels of Implementation

Popham (2008) describes four levels...

- Level 1 calls for the teacher to use formative assessments to collect information to make instructional decisions
- Level 2 calls for the student to use formative information to make decisions about learning
- Level 3 classroom climate shift
- Level 4 school wide implementation

A question: What has the biggest impact on student achievement?

- The biggest impact on a student's achievement is not:
 - Standardized Tests
 - Textbooks
 - District Initiatives
 - Computer Software
 - Economic Status
- The biggest impact is....

...what happens in the classroom!

- ⦿ However, the person with the most impact on student achievement is not the teacher...
- ⦿ ...it is the student followed closely by the teacher (Stiggins, Davies, and Wiliam).
- ⦿ No matter how great a teacher you are, the student has control over his or her learning.
- ⦿ We must get the students involved in their learning and allow them to become self-directed learners.

Crucial Components

- Communicate the learning target (unit, lesson, activity, assignment, assessment)
 - Attribute #2
- Provide descriptive, specific, and timely feedback to the student about their progress toward that target
 - Attribute #3
- Use the collected formative information to make decisions about instruction and learning
- Allow and encourage students to continue to learn and show you when they have

Teacher Feedback

- What formative feedback does a teacher receive about student progress or achievement?
- Grades on assignments
- Grades on tests/papers/quizzes/projects, etc.
- Classroom monitoring
- Asking questions
- Class discussions

Teacher Feedback Cont.

- What feedback do you use to make instructional decisions?
- Week by week
- Day by day
- Minute by minute

Student Feedback

- What formative feedback does a student receive about his or her progress or achievement?
- Is it day by day, minute by minute?
- Does it show the student where on the continuum of learning they are (where have I been, where am I now, where do I need to go)?

Student Feedback:

Grades and Homework

- Points and grades are not effective feedback.
- Grades are effective motivators for the highest achieving students and not for most struggling learners.
- Zero versus the D-
- When a grade is attached it becomes summative.
Trashcan effect
- Students response to feedback
 - “I understand where I am, where I need to go, and **I choose to keep trying.**”

Student Feedback:

Grades and Homework

- Most learning comes from mistakes and failures.
- When do we give students a chance to make mistakes and learn from their failures without fear of averages, grades, and points?
- Football practice
 - 4-5 days of practice
 - Stats only kept on Gameday
- Music
 - Practice
 - Concert
- What about the real world?
 - Driving test
 - Pilots
 - Doctors

Student Feedback: Grades and Homework

- ◎ I can hear your collective thought “Students won’t do it without fear of grades.”
- ◎ How’s that working currently? The structure of education has added to that problem.
- ◎ Fear is not an effective motivator for the struggling student (Stiggins)
- ◎ Yes, we need to change the student culture from point collecting back to learning (Guskey)
- ◎ Failing AP classes
- ◎ *It is not about being right it is about the learning!*
—Dylan Wiliam



When I Teach, DO I WANT TO...?

Assign and Grade
Or
Teach and Assess

Strategies for Teachers...

... to gather formative data and involve students in their learning

- Make asking questions formative
 - Only raise hand to ask a question
 - Pose, Pause, Pounce, Bounce
- Red, yellow, green
 - Cups
 - Cards
- [Activotes and Activexpressions](#)
- Create assessments that break questions into targets/standards/concepts/skills/etc
- Other Suggestions

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Total for section =

TOTAL

/100

Levels of Learning Instead

- ◎ Make Scores on a 4 point scale rubric
 - ◎ 1 a partial knowledge of simpler and complex details
 - ◎ 2 no major errors or omissions regarding simpler and complex detail BUT major errors or omissions regarding the complex ideas and processes
 - ◎ 3 no major errors or omissions regarding any of the information and/or processes (simple or complex) that were explicitly taught.
 - ◎ 4 in addition to exhibiting level 3 performance, in-depth references and applications that go beyond what was taught in class
 - ◎ .5 allows for increased distinction (1.5, 2.5, etc)
- (Marzano)

A. Items 1 – 10 Level 2.0

Ten items that require recall of important but **simpler** content that was explicitly taught.

Total for section =

All correct

B. Items 11 – 14 Level 3.0

Four items that ask for application of **complex** content that was explicitly taught AND similar to what was taught.

Total for section =

Two correct

C. Items 15 – 16 Level 4.0

Two items that ask for application in situations that **go beyond** what was explicitly taught.

Total for section =

None correct

TOTAL 2.5

STANDARD 1 - Content Knowledge

The competent teacher understands the central concepts, methods of inquiry, and structures of the disciplines and creates learning experiences that make the content meaningful to all students.

All of Proficient plus: 1F. Uses resources and materials that address learning standards, student needs, and student abilities 1L. Facilitates learning experiences that make cross-curricular connections and/or life-career experiences 1K. Multiple learning styles are utilized	Excellent 4
All of 2 and some of 4	3
1H. Demonstrates effective assessment strategies during the lesson and/or afterward 1I. Promotes student use of appropriate technologies as part of the lesson 1J. 1G. Aware of and anticipates common concept misunderstandings and employs a variety of methods to address these 1M. Employs adaptations and accommodations as defined by IEPs or 504s Local: Understands/has command of the subject matter	Proficient 2
Some of 2	Needs Improvement 1
1H. Students are passive learners who are sometimes engaged in generating and testing knowledge 1I. Learning experiences rarely promote student skills in technologies appropriate to the discipline 1J. Teacher has limited awareness of common misunderstandings in the discipline and instruction does not adjust for these 1G. Limited pathways to inquiry are demonstrated 1M. Learning experiences are designed globally and are only loosely adapted to provide access to individuals with disabilities	Unsatisfactory 0

Strategies for Student Feedback...

- ...to help students gather information about their learning and where they are on the continuum of learning
- Homework=practice
 - Allow students to make mistakes and learn from them without fear
- Pretest=90%=no homework or limited homework
- Target/Standard aligned pretest drives student study and homework
- Target aligned assessments show what the student has mastered and what they need to work on.

Student Feedback Continued

- The punishment for not doing needed homework or assignments should be to do them.
- A zero does not promote learning.
- Allow students to master the material/concept/target/etc.
 - If they do not master it they should continue their learning with that target/etc.
 - Allow them to show mastery again (Driver's Test)

Student Feedback Continued

What about the highest achieving students?

- Provide assessments that represent the full range
- Satisfaction of mastery is represented by the first 3 sections of the assessment
- The last section is the challenge, or the last few questions of each section are the next level of learning.
- 100%?!

Remember

- How do you learn?
- Fixing the sink
- When you try something different in the classroom and it doesn't work well and your students didn't get it--do you get a grade and move on?
- Or, do you learn from that?
- So should our students
- Assign and Grade or Teach and Assess

Professional Development

- Learning Teams
 - A dedicated group of teachers volunteering to go deeper with formative assessment and share with his or her peers
 - Anyone can join
 - Meets monthly
- Curriculum, Instruction, and Assessment Committee
 - Board of Education Committee
 - Representation by teachers, support staff, Admins, Board Members, Parents, Community Members, and Students

A challenge today

- Work together to find ways to increase the formative feedback to your students.
- What are you doing that others can try?
- What are ways we can help students understand where they are on the learning continuum, where they need to go, and what that looks like?
- It shouldn't be a surprise to them

Websites

Rick Stiggins / Educational Testing Service

- <http://www.assessmentinst.com>

Robert Marzano / Marzano Research Lab

- <http://www.marzanoresearch.com/>

Hawaii Standards-Based Report Cards

- <http://reportcard.k12.hi.us/>

Model School District

Grand Island Public Schools
Grand Island, Nebraska

<http://www.gips.org/learning/Grading-and-Reporting>

Fully implementing “Assessment for Learning” fundamentals. Policies are well-developed and clearly articulated. Good model to follow.

A few quotes

“...schools everywhere have embraced ‘correct-answer compromises’ instead of undertaking ‘risks for understanding.’”

—Howard Gardner, *The Unschooled Mind*

“It is not about being right it is about the learning!”

—Dylan Wiliam

“Don’t ask ‘Do I have buy-in from all the adults?,’ rather you should ask... ‘Is it the right decision for students?’”

—Douglas Reeves

The goal...

- The goal is to refocus students' attention to learning and not points and “playing the game”.
- The goal is to provide students with a clear understanding of what they should be learning and not just doing.
- The goal is student ***learning***.

Resources

- Wiliam, D., Lee, C., Harrison, C., & Black, P. (2004). Teachers Developing Assessment for Learning: Impact on Student Achievement. *Assessment in Education Principles Policy and Practice*, 11(1), 49-65.
- Stiggins, R. (2007). Assessment through the Student's Eyes. *Educational Leadership*, 64(8), 22-26.
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- McManus, S. (2008). Attributes of Effective Formative Assessments. In T. C. o. C. S. S. Officers (Ed.), *Formative Assessment for Teachers and Students State Collaboration on Assessment and Student Standards of the Council of Chief State School Officers: The Council of Chief State School Officers*.

Resources

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- Leahy, S., Lyon, C., Thompson, M., & Wiliam, D. (2005). Classroom Assessment: Minute by Minute, Day by Day. *Educational Leadership*, 63(3), 18-24.
- Black, P., & Wiliam, D. (1998b). Inside the Black Box: Raising Standards Through Classroom Assessment. *Phi Delta Kappan*, 80(2), 139-144.
- Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the Black Box: Assessment for Learning in the Classroom. *Phi Delta Kappan*, 86(1).

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