Principles & Practical Tools for Improving Classroom Assessment

Presented by Tr. Harvey F. Silver, EdD
WE KNOW IT...

BUT HOW DO WE DO IT?
5

PRINCIPLES

PRACTICAL TOOLS

Back to School
Assessment:
It’s not just for teachers anymore!

SHIFT:
A teacher-directed process
A process where students play an active role
This segment:
Tools for engaging students in the assessment process at all stages of an instructional sequence.
Backwards Learning

Beginning
Backwards Learning

What is my TASK?

What are my KNOWING goals?

What are my DOING goals?
CLASSROOM EXAMPLE:
A high school student’s analysis of a culminating assessment task on renewable/non-renewable energy...

What is my task?
Write an editorial that explains the difference between renewable and nonrenewable energy and that takes a position on how to address the energy crisis.

What will I need to know?
What will I need to be able to do?
A 1st Grade Example: Completed as a class vs. individually

What is my task?
Make a poster that could teach someone the difference between books that tell stories and books that give you information. It should show examples of both kinds of books.

What do I need to know?
- I need to know what a story book is.
- I need to know what an information book is.

What do I need to be able to do?
- Explain the difference between a story book and an information book.
- Find examples of both kinds of books.
- Make a poster.

- This tool, like others in the book, can be modified for use with younger students—e.g., by having them work as a class.
- This tool, like others, can be used to target Common Core State Standards (in this example, RL.1.5).
REFLECTION: How might students benefit from using this tool?

- Understand the goals more deeply
- Gives purpose and meaning to upcoming tasks
- Gets students in the habit of analyzing tasks and setting goals for achieving them
Backwards Learning promotes success by helping students identify learning goals/targets at the beginning of an instructional sequence.
Another way to promote success is to help students understand what quality looks like *before* they start working on an assignment.

Two ways to do this:

- **GIVE STUDENTS CRITERIA FOR HIGH-QUALITY WORK (E.G., A RUBRIC)**

- **“Student-Generated Assessment Criteria”**
A tool that prepares **students** to produce high-quality work by showing them examples of what it looks like and helping them identify its essential attributes

- High-Performance Approach
- Three-Level Approach
High-Performance Approach

- Independently, in groups, as a class

The beginning of a strong narrative...

- Is interesting and makes you want to read more
- Tells you what event or experience the writer is going to be writing about
Three-Level Approach

<table>
<thead>
<tr>
<th></th>
<th>EXCELLENT SAMPLES</th>
<th>AVERAGE SAMPLES</th>
<th>BELOW-AVERAGE SAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITION</td>
<td>Writer’s position is clearly stated and easy to find.</td>
<td>Writer’s position is a little bit hard to follow or hard to find.</td>
<td>Writer doesn’t take a position or position isn’t clearly explained.</td>
</tr>
<tr>
<td>EVIDENCE</td>
<td>Position is supported with logical and relevant evidence.</td>
<td>Needs more (or more convincing) evidence to support the position.</td>
<td>Evidence is missing, unconvincing, or irrelevant.</td>
</tr>
<tr>
<td>ORGANIZATION</td>
<td>Reasons/evidence are presented in a logical order.</td>
<td>Reasons/evidence would make better sense in a different order.</td>
<td>Components (position, evidence, conclusion) are absent/out of order.</td>
</tr>
</tbody>
</table>
You just saw two tools for engaging students in the assessment process early in an instructional sequence.

“Backwards Learning”

“Student-Generated Assessment Criteria”

What about engaging students in the middle of an instructional sequence... as instruction is happening?
Invites students to give real-time feedback about the pace and effectiveness of instruction by holding up colored index cards.

Stop, Slow, Go!

STOP

SLOW

GO
- **Pace**
  - Too fast?
  - Too slow?
  - Just right?

- **Level of understanding**

- **During a presentation or while working independently**

\[ 3^2 \times 3^{-5} = ? \]
Engages students in the assessment process at the end of an instructional sequence by inviting them to reflect on and learn from their end-of-unit tests

Test Feedback Form:

**TEACHER**

Test Feedback Form:

Name: [Name]  Date: [Date]

Part 1: How do you feel about your performance on this test? (Circle one)
- Confident
- Great
- Pretty good
- Not so good
- Not at all

Part 2: Do you think your performance on this test is a good indicator of your knowledge or understanding of the topic? (Circle one)
- Yes
- No
- Don't know

Why or why not?

Option: I didn't do well on this test because I didn't understand some key concepts, or I also got really nervous and made a lot of mistakes. I also know I usually get really nervous when I have tests.

Next, I'd like to talk about strategies for studying with pre-test quizzes.

Part 3: This test (or my performance on this test) was like...
- [ ] Just right
- [ ] More EASY
- [ ] More difficult

Explanation:

Thank you for filling out your test feedback form. I'd like to ask a few questions to help you better understand your test and how it relates to your overall learning.

Part 4: How much time did you spend studying?

- [ ] Less than 1 hour
- [ ] 1-2 hours
- [ ] More than 2 hours

If you could go back in time and study for the test again, would you do anything differently?

Explanation:

I really want you to be honest about your test results. It's okay if you didn't do well on this test. I want to understand why so I can help you improve.

Part 5: How well did classroom lessons, assignments, and study sessions prepare you for this test?

[ ] Not really
[ ] Somewhat
[ ] Moderate
[ ] Good
[ ] Excellent

Explanation:

I want to know if your study session was helpful. It's okay if you didn't do well on this test. I want to understand why so I can help you improve.

Part 6: Do you know anything about this topic that wasn't on the test? Tell me about it on the back.

[ ] Yes
[ ] No

Explanation:

I want you to think about what you learned in class that wasn't on the test. If you had any questions, I'd like to hear about them so I can help you understand them better.

End
- Share their reflections on test taking and preparing for the test

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**Part 1:** How do you feel about your performance on this test? (circle one)

- Fantastic!
- Great
- Pretty good
- OK
- Not so good
- I feel sick!

**Explain:**

Just like DNA, I have a lot of information stored in me, but that information needs to be expressed in order to be useful and I didn't express it on this test because I got nervous. I also ran out of time.

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**WEEKS**   **DAYS**   **HOURS**   **MINUTES**

If you could go back in time and study for this test again, would you do anything differently?

**Explain.**

I realize now that I was confused about the way that the three different kinds of RNA function in protein synthesis, so I'd review their functions more thoroughly. I'd also spend more time reviewing the problem sets since there were a lot of application.

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**Part 6:** Do you know anything about this topic that wasn't on the test? Tell me about it on the back...
You’ve learned 4 tools for accomplishing this shift...

A teacher-directed process

A process where students play an active role

- Backwards Learning
- Student-Generated Assessment Criteria
- Stop, Slow, Go!
- Test Feedback

habits, and the degree to which instruction prepared them to succeed.
PRINCIPLE TWO:
Assess for 21st-century success.

SHIFT:
A focus on facts and memorization

A focus on 21st-century skills & understandings, particularly those highlighted in the Common Core
What would assessing for 21st-century success look like in the context of vocabulary instruction?

Can you MEMORIZE?

Do you UNDERSTAND?

“Association Triangles”
Association Triangles

Colonists

Stamp Act

Parliament
Association Triangles

Common Core Connections:

- Ideal for developing and testing students’ grasp of general and content-specific vocabulary terms (CC Language Anchor Std 6)

- Can be used with non-vocabulary standards as well
A MATH triangle
Classifying shapes according to their attributes
(CC 3.G.1, 4.G.2)

A LITERATURE triangle
Recounting the plot and determining the central message of a fable
(CC RL.3.2)
Association Triangles

When to use it?

- **Beginning**: Assess prior knowledge
- **Middle**: Check for understanding
- **End**: End-of-unit test
Association Triangles: Vocabulary knowledge and skills

**4-2-1 Summarize:** Other Common Core Skills
Summarizing, writing, collaboration, identifying main ideas
4-2-1 Summarize

A tool that solidifies and tests students’ grasp of what they’ve learned from readings, lectures, etc., by having them identify, discuss, and summarize the key points with their classmates.

Summarizing skills:
- Emphasized in the Common Core
- Positive impact on student achievement
4-2-1 Summarize

What are the basic steps?

Record the 4 most important ideas.

Share, compare, agree on the 2 most important.

Share, compare, identify the 1 most important.

Write a summary paragraph focused on the main idea.
### On your own
#### FOUR key ideas

| In the 1900s, there were more than 100,000 tigers in the world. | Today, there are fewer than 3200 tigers left on Earth. | Humans have destroyed a lot of the tiger’s habitat. | Tigers are also getting killed by poachers and farmers. |
Common Core Connections:

- Develops students’ ability to identify & summarize key ideas from a text (CC Reading Anchor Std 2)

- Builds explanatory writing skills (CC Writing Anchor Std 2)

- Teaches students to develop and strengthen their writing via planning (CC Writing Anchor Std 5)

- Engages students in peer-to-peer conversations about grade-appropriate texts & topics (CC Speaking & Listening Anchor Std 1)
PRINCIPLE THREE:

The only real similarity between aiding & grading is that they rhyme.

SHIFT:

Assessment as a means of evaluating learning

A means of advancing teaching and learning
There are a lot of different ways to aid...

BEGINNING:
- Clarify goals and expectations
- Teach students what quality looks like

MIDDLE:
- Assess learning and respond accordingly
- Give students feedback that helps them improve

END:
- Let students learn from end-of-unit assessments
- Promote productive reflection

“Backwards Learning”
“Checklists”
“Stop, Slow, Go!”
“Glow & Grow”
“Test Assessment”
“Test Feedback”
Checklists

A tool that improves students’ performance on assigned tasks by spelling out what students need to do or include in order to complete those tasks successfully.
Checklists

When I am giving an oral presentation...

☐ I make a conscious effort to speak slowly, loudly, and clearly.

☐ I use visual displays like charts/graphs to try and clarify my points.

☐ I support my statements and positions with specific evidence/examples.

☐ I stop at various times to address people’s comments/questions.
Checklists

Student Self-Assessment

When I am giving an oral presentation...

☐ I make a conscious effort to speak slowly, loudly, and clearly.

✓ I use visual displays like charts/graphs to try and clarify my points.

✓ I support my statements and positions with specific evidence and examples.

✓ I stop at various times to address people’s comments/questions.

Teacher Feedback

PRINCIPLE 3: Aiding vs. grading

PRINCIPLE 1: Students as active players

PRINCIPLE 2: Common Core skills (Speaking & Listening Stds)
A tool that boosts achievement by focusing more on *aiding* than grading

Two kinds of feedback:

GLOW

GROW
Glow & Grow

Three ways your work GLOWS:

😊 Your sentences start with capital letters and end with periods.
😊 You remembered to give three reasons why you like your toy.
😊 You stuck to the topic. Everything is about your favorite toy.

Two ways your work can GROW:

🔍 Four of your sentences start with the word “my.”
🔍 Can you start some of them with a different word?
🔍 Your letter “z” is backwards.
🔍 Can you find and fix your mistakes?
# Glow & Grow

## A high school history example: Document-based essay feedback

<table>
<thead>
<tr>
<th>Here’s where your work GLOWS:</th>
<th>Here’s where your work can GROW:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You present a clear thesis that addresses the question without simply restating it.</td>
<td>1. Remember to address both parts of the writing prompt. (Most of your piece is about the first part.)</td>
</tr>
<tr>
<td>2. You supported your thesis with appropriate evidence from the documents that were provided. Your interpretation of the data table in document #5 was right on target.</td>
<td>2. Your points will be stronger and clearer if you discuss documents that have a similar focus/point together (e.g., the ones that present a negative view of immigration).</td>
</tr>
<tr>
<td>3. Your analysis of document #2 takes into account the fact that its author might not be completely unbiased.</td>
<td>3. Can you use information beyond that found in the documents to support your case further? If yes, do it!</td>
</tr>
</tbody>
</table>

- Which is more likely to raise achievement? 🌞 ⬆️ vs. ⬇️
- The often-untapped power of the “Glow”
Test Assessment

Problem!
Test Assessment

A tool that *aids* students by encouraging them to analyze their performance, not just look at their grades

- Which learning targets did I miss?
- What can I do to hit them?
## Learning Targets/Goals

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Know the major categories of typefaces and their distinguishing features.</td>
<td></td>
</tr>
<tr>
<td>Be able to select an appropriate typeface for a given communication objective.</td>
<td></td>
</tr>
</tbody>
</table>

### What do I need to work on? How will I do it?

Based on my test performance, I definitely need to improve my understanding of the different kinds of typefaces. I’ll make a compare and contrast organizer to see if it helps me understand and remember their key features. I’ll also make some flashcards to test my ability to recognize examples of each type.

### Follow-up test or task

End
PRINCIPLE FOUR:

One size doesn’t fit all!

SHIFT:

One-size-fits-all assessment and instruction

Differentiated assessment and instruction
What does differentiation mean in the context of assessment?

Beginning
Assessing & addressing differences
“From Topics to Top Picks”

Middle
Designing differentiated assessments
“Task Rotation”

End
“To teach a student well, a teacher must know that student well.”

—Tomlinson and Imbeau (2010)
From Topics to “Top Picks”

Assessing interest is important!

Doesn’t have to be complicated!

Bonus: Previews the learning to come

*Inspired by Tomlinson’s (2001) Interest Questionnaire
STUDENT INTEREST SURVEY

Name:
Date:

We’re headed west...

Next week, we’ll start learning about America’s westward expansion. Before we begin, I am interested in finding out what you already know about this topic and what you’re interested in learning. Please help me by completing this three-part survey.

PART 1: The topics that we’ll cover in this unit are listed below. Please rank them from most to least interesting (1=most interesting, 10=least interesting).

If there are any topics that you wish we’d cover, go ahead and add them to the list!

___ O Pioneers! Who Were You? And How Did You Live?
___ The Rush Is On: Looking for Gold in California
___ Famous Trails and Travelers
___ The Country Moves West: Will Slavery Follow?
___ Traveling West (Wagons and Ponies and Trains...Oh, My!)
___ Exploring New Lands with Adventurous Explorers
___ Trappers, Trailblazers, Gunslingers, and Outlaws
___ The Trail of Tears and the Fate of the Native Americans
___ From Sea to Shining Sea: Our Country Is Growing!
___ Law and Order in the Wild West
___ Other (tell me more) ____________________________

- How did this teacher ASSESS students’ interests?
- How did this teacher ENGAGE student interest?
“But it’s important for students to learn all the material – not just the stuff they’re interested in!”

⇒ The idea isn’t to skip.

USE students’ interests. \hspace{1.5cm} BROADEN students’ interests.
What does differentiation mean in the context of assessment?

Assess & Address

Design differentiated assessments that let all students shine

“Task Rotation”
**Task Rotation**

<table>
<thead>
<tr>
<th>SINGLE ASSESSMENT TASK</th>
<th>FOUR ASSESSMENT TASKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A task for you...</td>
<td>A task for you...</td>
</tr>
<tr>
<td></td>
<td>And you...</td>
</tr>
<tr>
<td></td>
<td>And you...</td>
</tr>
<tr>
<td></td>
<td>And you...</td>
</tr>
</tbody>
</table>

“Something for everyone”
| "Remembering" | "Relating" |
| "Reasoning"   | "Creating"  |
Task Rotation

A kindergarten example:

<table>
<thead>
<tr>
<th>MASTERY TASK</th>
<th>INTERPERSONAL TASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draw a flowering plant and label its parts.</td>
<td>If you were a plant, how would you feel on a sunny day?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UNDERSTANDING TASK</th>
<th>SELF-EXPRESSIVE TASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why are plants important to our world? Think of two reasons.</td>
<td>What would life be like if there were no plants?</td>
</tr>
</tbody>
</table>

- Plant drawing with text: "I am happy. I like the sun cause it grows me up.
- Plant drawing with text: "I was sick because I had no food to eat, or things to wear. I had to go live on the ground."
- Child drawing with text: "food"
- Child drawing with text: "medisin"
“Remembering” task

MASTERY TASK

Draw a flowering plant and label its parts.
“Reasoning” task

UNDERSTANDING TASK

Why are plants important to our world? Think of two reasons.
“Creating” task (creating a hypothesis)

SELF-EXPRESSIVE TASK

What would life be like if there were no plants?

I was sick because I had no food to eat, or clothes to wear. I had to live on the ground.
“Relating” task

INTERPERSONAL TASK

If you were a plant, how would you feel on a sunny day?

I am happy.
I like the sun
cause it grows me up.
A mathematics example:

<table>
<thead>
<tr>
<th>MASTERY TASK</th>
<th>INTERPERSONAL TASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>If a rectangle that is 4” x 10” is placed next to one that is 5” x 12”, what is the perimeter of the combined figure? What is the area of the combined figure?</td>
<td>Draw a picture of the floor plan of your home showing the dimensions of each room. Then compute the perimeter and area for each room and order them from largest to smallest according to their perimeter.</td>
</tr>
</tbody>
</table>

![Rectangle Diagram](image)

If you have a figure like the one below, what are the fewest number of sides you must know to accurately calculate the perimeter and area? Explain your answer.

Create a problem in which students must find the perimeter and area of two rectangles, a square, and an equilateral triangle. The problem must be solved using four measurements. Can you create another problem using only three measurements? How about two?

<table>
<thead>
<tr>
<th>UNDERSTANDING TASK</th>
<th>SELF-EXPRESSIVE TASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image]</td>
<td>[Image]</td>
</tr>
</tbody>
</table>
What advantages does the four-style approach offer?

- Comfort for all students
- Challenge for all students
- Practice developing different kinds of thinking & learning skills
- Practice answering different kinds of questions
- A more comprehensive picture of what our students know

<table>
<thead>
<tr>
<th>TASK ROTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remembering</td>
</tr>
<tr>
<td>Retelling</td>
</tr>
<tr>
<td>Reasoning</td>
</tr>
<tr>
<td>Analyzing data</td>
</tr>
</tbody>
</table>
How critical is this kind of differentiated approach?

Sternberg and Grigorenko (2004) note that students who fail to fulfill their academic potential often fail because we have failed to teach and assess them in ways that are consistent with their individual talents and styles of thinking.
PRINCIPLE FIVE:

You can’t build quality in at the end of the line.

SHIFT:

Assessment as something that happens at the end of the line

Something that happens throughout the instructional process
Tools for all stages...

**Beginning**
- From Topics to Top Picks
- Backwards Learning
- Checklists
- Student-Generated Assessment Criteria

**Middle**
- Stop, Slow, Go!
- Association Triangles
- 4-2-1 Summarize
- Glow & Grow

**End**
- Task Rotation
- Test Assessment
- Test Feedback
**How is this tool used in the classroom?**

- To get immediate feedback about the ideas.
- To assess students' understanding of key ideas.
- To have students review, synthesize, and discuss.

**EXAMPLE 1:** A world history teacher used this strategy to help students review a lesson.

**EXAMPLE 2:** A math teacher used this strategy to help students review a recent lesson.

**What is it?**

A tool that tells us what students are getting out of their learning experiences by having them record three things they learned, two questions they have, and one main idea.

**What are the benefits of using this tool?**

Checking for understanding and adjusting instruction accordingly are two of the most important things we can do as educators. Because it’s not necessary or feasible to do in-depth checks all the time, it’s important to have quick-check tools like 3-2-1 in our repertoire. In a matter of minutes, 3-2-1 gives us specific feedback about what students have learned, what they have questions about, and whether they’ve grasped the big picture. It benefits students as well since the process of recording facts, questions, and big ideas helps them review and synthesize what they’ve learned.

**What are the basic steps?**

1. Give students a list of key facts and questions. (Pre-questions are also optional.)
2. Have students write down three facts and two questions.
3. Review students’ responses. Use what you learn to gauge the effectiveness of your lesson.

**Teacher Talk**

- Adjust the 3-2-1 items as needed to fit your content and goals; use Example 3 as a model.
- Use students’ questions to identify areas of interest as well as areas of confusion. Address interest-driven questions during future lessons (a good strategy for boosting engagement) or encourage students to pursue these questions on their own.
- When using this tool with very young students, you can have them complete the 3-2-1 items as a class (students speak their ideas aloud, you help refine and record them). If students aren’t ready to identify main ideas on their own, use questions and prompts to help them.

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Author of Math Tools, Grades 3-12

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Building Students’ Conceptual Understanding
and Mathematical Vocabulary
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