Assessment: How Do You Know If They Are Learning?

Helen Bond, Ph.D. hbond@howard.edu







Presentation Objectives

- At the completion of this presentation the participants should be able to:
- Define assessment and the purposes of assessment in the context of the teaching, learning, and assessment cycle;
- Identify the different types of assessments
- Explain the difference between formative, diagnostic, and summative assessment; and
- Apply different types of assessments in your courses

The Key Assessment Question(s)?

- 1. Are students learning?
- 2. If so, what are they learning, and under what conditions?
- 3. Who is not learning and why?
- 4. And what can be done about it?

Purposes of Assessment

- 1. Assessment of learning (help identify if students are achieving outcomes or objectives)
- 2. Assessment for learning (formative assessment is to provide ongoing feedback that can be used to improve teaching and improve learning)
- 3. Assessment <u>as</u> learning (using assessments to teach)

How do instructors benefit from assessment? from assessment?

How do students benefit

Develop	a culture	of trans	parency	and
fairness				

Students are aware of their own progress.

Improves teaching

Provides a quality education for students.

Assessment helps teachers remain objective in the grading process.

Students have additional opportunities gain mastery of the material.

Reduce uncertainty of student learning between periods

Helps students improve.

Provides feedback on the effectiveness of the teaching methods, materials, and curriculum.

Provides opportunities for students to participate in the assessment process (selfassessment and peer-assessment).

Builds confidence among stakeholders

Builds confidence among students, builds trust.

The Teaching Learning Assessment (TLA) Process

Teach

What should my students know or be able to do or appreciate at the end of my lesson?

Objectives/Outcomes

Learn

What will I do and what will my students do so that they will learn the material I want them to learn?

Methods/Pedagogy

Assess

How will I know that my students have learned what I wanted them to learn?

Assessment/Evaluation

Formative vs. Summative

Formative Assessment:

- The ongoing or continuous evaluation of learners
- The purpose of formative assessment is to collect data or information that is used to improve teaching and learning outcomes (diagnostic)
- Examples may include homework, questioning, essays, journals writing, muddiest point, one-minute paper, KWLQ...

Summative Assessment:

- Is the final evaluation of previous learning to determine achievement.
- Results provide information on the readiness and preparedness of students to proceed to the next level.
- Examples may include formal examinations, tests, and profiles of achievement such as overall portfolio assessment.

Types of Classroom Assessments

Diagnostic assessments (formative) □ KWLQ (formative) Minute Paper (formative) □ The Muddiest Point (formative) Questioning-Checking for understanding (formative) Journal Writing Exams/Tests/ (summative) □ Exam/Test Candy Wrappers (formative) Peer Assessments □ Self Assessments Portfolio Assessment – (summative and formative)

Diagnostic Assessment

 Diagnostic assessment involves the gathering and evaluation of data that can be used to diagnose or determine strengths and weaknesses of students.

Provides information on:

- Student's prior knowledge
- Misconceptions before beginning learning
- □ How students learn (learning style)
- Students placement in a course or program

Types of Diagnostic Assessments

- Pre-tests (on content and abilities)
- Post-test
- Self-assessments (identifying skills and competencies)
- Discussion board responses (on contentspecific prompts)
- Interviews (brief, private, 10-minute interview of each student)
- KWLQ

KWL Process

Know:

List what I know about....(Your subject matter)

Want:

List what I want to learn about(Your subject matter)

Learned:

List what I have learned about(Your subject matter)

KWLQ: Diagnostic Assessment

- In the "K" or know column list what is currently known or believed in regards to pedagogy (the strategies, techniques, and values involved in the teaching and learning process).
- In the "W" column brainstorm, participants will list everything they want to learn about pedagogy.
- <u>The "L" column</u> stands for what has been learned about pedagogy. The "L" column can be placed on the wall in the classroom to continually assess learning.
- <u>The "Q" column</u> stands for any future questions participants may have about pedagogy. After completion of the activity, participants may list questions in this column.

KWHLAQ Critical Thinking Strategy

Know:	Want:	Learned:			
List what I know about	List what I want to learn about	List what I have learned about			
Know:	Want:	Learned:	Questions:		
List what I know about	List what I want to learn about	List what I have learned about	List additional questions that I have about		
Know: List what I know about	Want: List what I want to learn about	How will I find information? (Which resources, web pages, texts, formulas,	Questions: List additional questions that I have about		
Know:	Want:	How	Learned:	Action	Questions
List what I know about	List what I want to learn about	will I/we find the answers to our questions?	List what I have learned.	What action will I/we take?	What new questions do I/we have?

Minute Paper

Please answer each question in 1-2 sentences.

1. What was the most useful or meaningful thing you learned during this session?

2. What question(s) remain upper-most in your mind as we end this session?

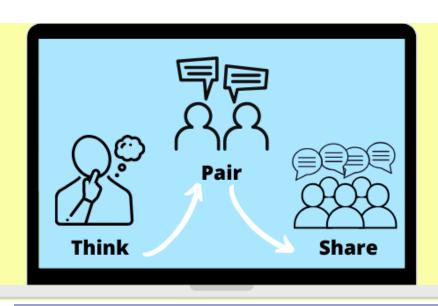
The Muddiest Point

What was the muddlest point in this session?

(In other words, what was not clear to you?)

Think-Pair-Share

Think-pair-share – This active learning strategy is when students are given time to think about what has just been asked or presented by the teacher and then discuss it with a student or students sitting nearby and then share.



Let's think pair and share! What do you think the answer is?



Journal Writing as a Reflective Classroom Assessment



 Journal writing requires little more than paper and a pencil and yet is one of the most flexible and easy to implement active learning and assessment strategies to use.

Benefits:

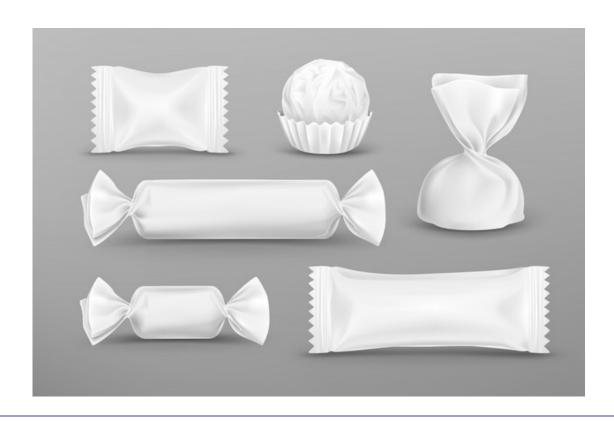
- Critical thinking
- Reflect on problems and consider other perspectives.
- Summarize ideas, practice writing paragraphs
- Practice grammar and sentence and idea construction
- Use journals as a learning log way
- Writing is a way to make meaning
- Writing improves reading and comprehension.
- When students reflect and write about what they are thinking, they show their thinking process (metacognition).



Self-Assessment! Try the Exam-Test Wrapper (aka., Candy Wrappers)



Exam "wrap around" services!





Self-Assessment! Try the Exam/Test Wrapper (aka., Candy Wrappers)



Exam wrappers are activities that "wrap around" an exam—that is, they come either before or after the exam, or both—and that help students plan their study for the exam or reflect on their performance afterward and strategize how they can improve their performance on the next exam

Self-Assessment! How do they work? Try Exam Wrappers

- 1. Exam wrappers are short handouts that students complete when an exam is turned back to them. It helps them review the test in the context of their learning and study own habits
- 2. Wrappers collected and reviewed by the instructor, and then returned to students before the next exam, as a review/reminder of what they need to work on.
- 3. These exam wrappers direct students to review their performance (and the instructor's feedback) with an eye toward adapting their future learning.



Self-Assessment Try the Exam Wrappers



Sample wrapper questions: Read over your graded exam then answer the following questions:

- 1. How much time did you spend preparing for this exam?
- **2.** When and where did you do this preparation? <u>Describe</u>:
- 3. What did you do during your preparation time? <u>Describe</u>:
- 4. What answers did you do best on? Why?





Self-Assessment! Try the Exam Wrapper

5.	What kinds	of mista	kes did yo	ou make?	Estimate	where y	ou had
the	e most trouble	or where	you lost the	most points	s:		

Trouble understanding a concept (or list specific concepts) Trouble remembering lines/formulas/structures Trouble with definitions Trouble with technique Not concentrating/focused enough Careless mistakes Lack of preparation Not being able to formulate an approach to the problem Grammatical errors Unclear expectations Reviewed the wrong material Not practicing enough
Not practicing enough
Anxiety (and specifically over what?)
Adab





The Exam Wrapper Questions to help students reflect

- **6**. What study /practice strategy did you use and what worked best and/or worst?
- 7. What aspect(s) of your preparation for this exam seemed or were different from your other exam preparations? Did these changes have any effect?
- 8. Name at least three things you will do differently next time in preparing.
- Be specific. For example, will you spend more time, start your
 preparation earlier, change a specific study habit, try a new one (if so,
 try to name it), sharpen some other skill (if so, name it), participate in
 more review opportunities or something else.



Sample Exam, Homework, or Candy Wrapper!

Question # missed	Type of Question	Why did you answer this question wrong?	What should the correct answer be and why?
	RecallApplicationAnalysis	 Simple mistake Don't understand the question or concept I don't remember this being covered Other (explain) 	
	RecallApplicationAnalysis	 Simple mistake Don't understand the question or concept I don't remember this being covered Other (explain) 	
	RecallApplicationAnalysis	 Simple mistake Don't understand the question or concept I don't remember this being covered Other (explain) 	



Sample Exam, Homework, or Candy Wrapper!

Question #	Rate your confidence level	Did you get it correct or incorrect?	If incorrect, what type of mistake did you make?
1	ConfidentSomewhat confidentUnsure/Guessing	Correct Incorrect	 Simple mistake Don't understand the question or concept I don't remember this being covered Other
2	Confident Somewhat confident Unsure/Guessing	Correct Incorrect	Simple mistake Don't understand the question or concept I don't remember this being covered Other
3	ConfidentSomewhat confidentUnsure/Guessing	Correct Incorrect	Simple mistake Don't understand the question or concept I don't remember this being covered Other
4	ConfidentSomewhat confidentUnsure/Guessing	Correct Incorrect	Simple mistake Don't understand the question or concept I don't remember this being covered Other
5	ConfidentSomewhat confidentUnsure/Guessing	Correct Incorrect	Simple mistake Don't understand the question or concept I don't remember this being covered Other
6	ConfidentSomewhat confidentUnsure/Guessing	Correct Incorrect	 Simple mistake Don't understand the question or concept I don't remember this being covered Other







- 1. Before an exam, Immediately afterward, or when graded exams are returned to students.
- 2. End of the exam itself; Include some exam-wrapper questions on the exam so that students can reflect on their experience immediately after they've finished.

3. Benefits:

- **A. Transfer:** Skills enhanced will transfer to other learning contexts.
- **B.** Quick! They don't take up much class time, and can be done as homework.
- **C.** Adaptable to different disciplines and courses, and to other assignments.
- D. Repeatable; they can be used for multiple assignments over a semester.

Portfolio Assessment

- What is a portfolio?
- Student portfolios are a collection of evidence, prepared by the student and evaluated by the faculty member, to demonstrate mastery, comprehension, application, and synthesis of a given set of concepts.
- Why use portfolios?
- Portfolio assessment strategies provide a structure for long-duration, in-depth assessments.

Sample Student Portfolio



Try Peer-Assessment!

(peer evaluation, or peer review)

- Peer assessment is a part of peer learning, which can be defined as 'students learning from and with each other in both formal and informal ways. Peer assessment is students providing feedback to their peers-other students.
- Involve students in developing the criteria they will apply to each other's work.
- Conduct a mock" peer- and self-assessments to make them more comfortable when assessing their own work and the work of others.

Try Peer-Assessment!

(peer evaluation, or peer review)

- 1. Consider allowing students to evaluate one another anonymously.
- 2. Discuss evaluation criteria with students before a peer assessment activity occurs; consider revising the criteria in response to student feed back.
- Distribute examples of what you consider to be thoughtful, respectful, and constructive feedback.
- 4. Develop clear evaluation criteria or rubrics and distribute them before students are required to submit an assignment, so students know how they will be evaluated.

Best Practices: Peer-Assessment Start with a Well-Designed Rubric

- 1. Use objective indicators for performance levels that are constructive and positive (excellent, good, acceptable, and needs improvement).
- 2. When establishing and differentiating performance level criteria, avoid using negative language that focuses on failure.
- Limit the number of components you wish to provide feedback on.
- 4. Avoid checklists.
- 5. Provide rubrics in advance for students to self-evaluate or exemplar submissions when appropriate.

Best Practices: Peer-Assessment Start with a Well-Designed Rubric

- Learning partnerships & study groups one to one or small group discussions in which students support each other's learning;
- Work-in-progress reports individuals or groups working together on a project or assignment, followed by questions and answers and discussions;
- Seminar presentations/learning exchanges formal student presentations to peers in small groups or pairs related to a shared project or assignment;
- Student-led workshops students work together to plan and conduct a workshop or 'microteaching' session for their colleagues;
- Debriefing sessions in pairs, small groups or larger plenary sessions following a field placement, industrial visit or work experience program.

How to: Peer Assessment of Group Work Participation

Peer assessment of group work participation

- 1. Grading group work can be a challenge because it is difficult to determine the contributions of each individual student.
- 2. Many instructors use peer assessment to supplement instructor grades by adding a **participation component** to group assignments.
- 3. Students give a participation score and overall comments for each group member using a rubric that is based on criteria that the instructor establishes.
- 4. The instructor then uses these evaluations to give each student an overall participation grade for the assignment.

How does it work? Formative Peer Assessment

Formative Peer Assessment

- 1. Students are introduced to the assignment and criteria for assessment
- 2. Students are trained and given practice on how to assess and provide feedback
- 3. Students complete and submit a draft
- 4. Students assess the drafts of other students and give feedback
- 5. Students reflect on the feedback received and revise their work for final submission
- 6. Assignments are graded by the instructor
- 7. Instructor reflects on the activity with the class

Sample Presentation Rubric Peer Assessment

CATEGORY	5	3	1	0
Preparedness	Student is completely prepared and has obviously rehearsed.	Student seems pretty prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
Comprehension	Student is able to accurately explain the topic to their classmates.	Student is able to somewhat explain the topic to their classmates.	Student is lacking in explaining the topic to their classmates.	Student read the slides, and I can't tell if they understood the topic.
Volume and Presentation Skills	Volume is loud enough to be heard by all audience members throughout the presentation, and didn't just read powerpoint.	Volume is loud enough to be heard by all audience members at least 90% of the time, and didn't just read powerpoint.	Volume is loud enough to be heard by all audience members at least 80% of the time, and didn't just read powerpoint.	Volume often too soft to be heard by all audience members, and student read directly from powerpoint.
Stays on Topic and appears organized	Stays on topic all (100%) of the time, and presentation is well organized.	Stays on topic most (99-90%) of the time, and presentation is very organized.	Stays on topic some (89%-75%) of the time, and presentation is somewhat organized.	It was hard to tell what the topic was, and the presentation was unclear or sloppy.
Biology Content	Completely demonstrated why this was an appropriate topic for a biology presentation	Mostly demonstrated why this was an appropriate topic for a biology presentation	Somewhat demonstrated why this was an appropriate topic for a biology presentation	Did not demonstrated why this was an appropriate topic for a biology presentation

Sample Presentation Rubric Peer Assessment

Peer Evaluation Form for Group Work

Your name

Write the name of each of your group with the statement on the left, using numbers in each column.				
numbers in each column.				
Evaluation Criteria	Group member:	Group member:	Group member:	Group member:
Attends group meetings regularly and arrives on time.				
Contributes meaningfully to group discussions.				
Completes group assignments on time.				
Prepares work in a quality manner.				
Demonstrates a cooperative and supportive attitude.				
Contributes significantly to the success of the project.				
TOTALS				

Rating Scale

1	2	3	4	5	N/A
Strongly disagree	Disagree	Plus/Minus	Agree	Strongly Agree	Can't rate

+

Ratings		CONTENT AND INFORMATION	Comments
_	1.	Clearly stated learning objectives or purpose.	
	2.	Choice of topic appeared to have value for the audience.	
	3.	Content was appropriate.	
		Sequencing of content was logical.	
		Presenter provided a succinct concluding summary emphasizing the main points to take away.	
		PRESENTATION STYLE	
		Audiovisuals clearly enhanced and supported the presentation of content.	
		Handouts were concise and provided valuable supplementary and supporting information.	
	3.	Vocal intonation and inflection conveyed enthusiasm and emphasis appropriately; added interest to the presentation.	
	4.	The audience had appropriate opportunity to participate with questions, discussions or hands-on exercises.	
	5.	Time distribution provided sufficient attention to the most important topics; did not feel rushed or overly extended.	
		Reflected creativity.	
	7.	Appeared to have noticeable impact on learners.	
Overall As	sessmen	t and General Strengths:	

Assessment Best Practices

- 1. Assess your assessment (validity, reliability, culturally relevant).
- 2. Assess frequently.
- 3. Use wrap-around assessment services.
- 4. Use a variety of assessments, subject to your discipline and outcomes.
- 5. Consider incorporating the assessment into normal instructional activities.

Thank you!

Please feel free to contact me if you would like further information.

Contact me at hbond@howard.edu
Helen Bond, Ph.D.
Howard University
Washington, D.C.

