Materials linked from the November 22, 2019 Curriculum Council agenda.

Best Practices in Learning Outcomes and Assessment

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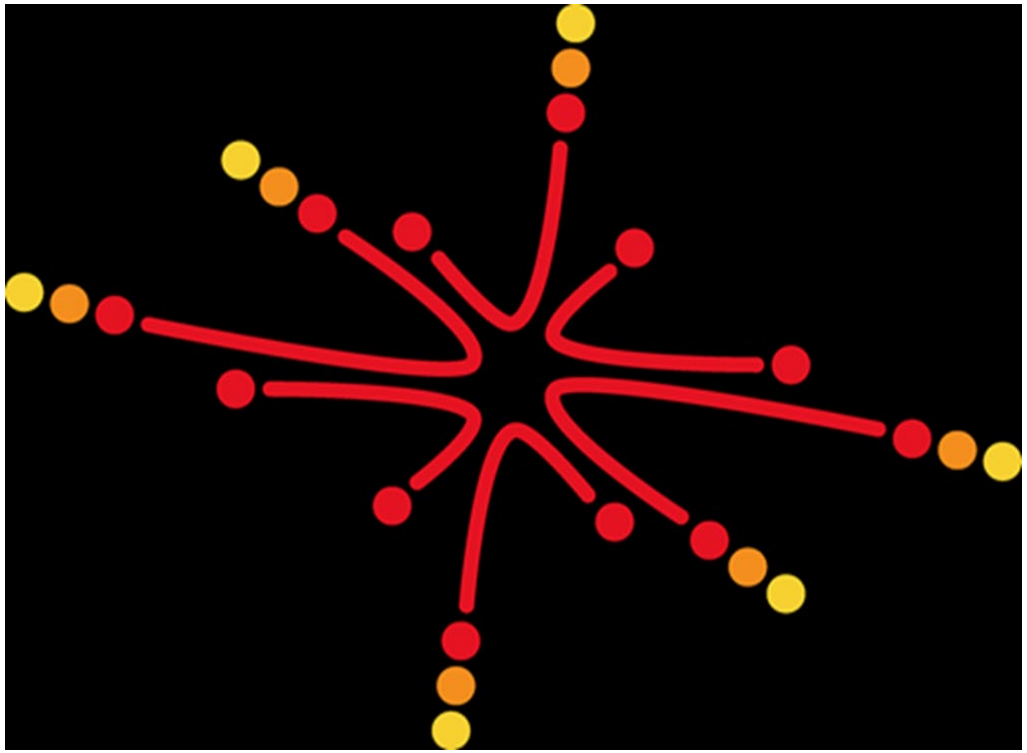


Oregon State University
Center for Teaching and Learning

PRESENTATION AGENDA

1. Introduction to Sparkshops
2. Presentation: Best Practices in Learning Outcomes and Assessment
3. Activity: Implementation Questions/Reflection
4. Conclusion

Focus of Presentation

Best practices in learning outcomes and assessment at the course level.

Establishing Terminologies

- Learning Goals: Broad plans for learning that cut across programs.
- Student Learning Objectives (SLOs): Narrow course-specific objectives established by a university teacher to guide student learning.
- Student Learning Outcomes: The actual learning achieved and demonstrated by students.

Best Practices in Learning Outcomes: The Power of Student Learning Objectives (SLOs)

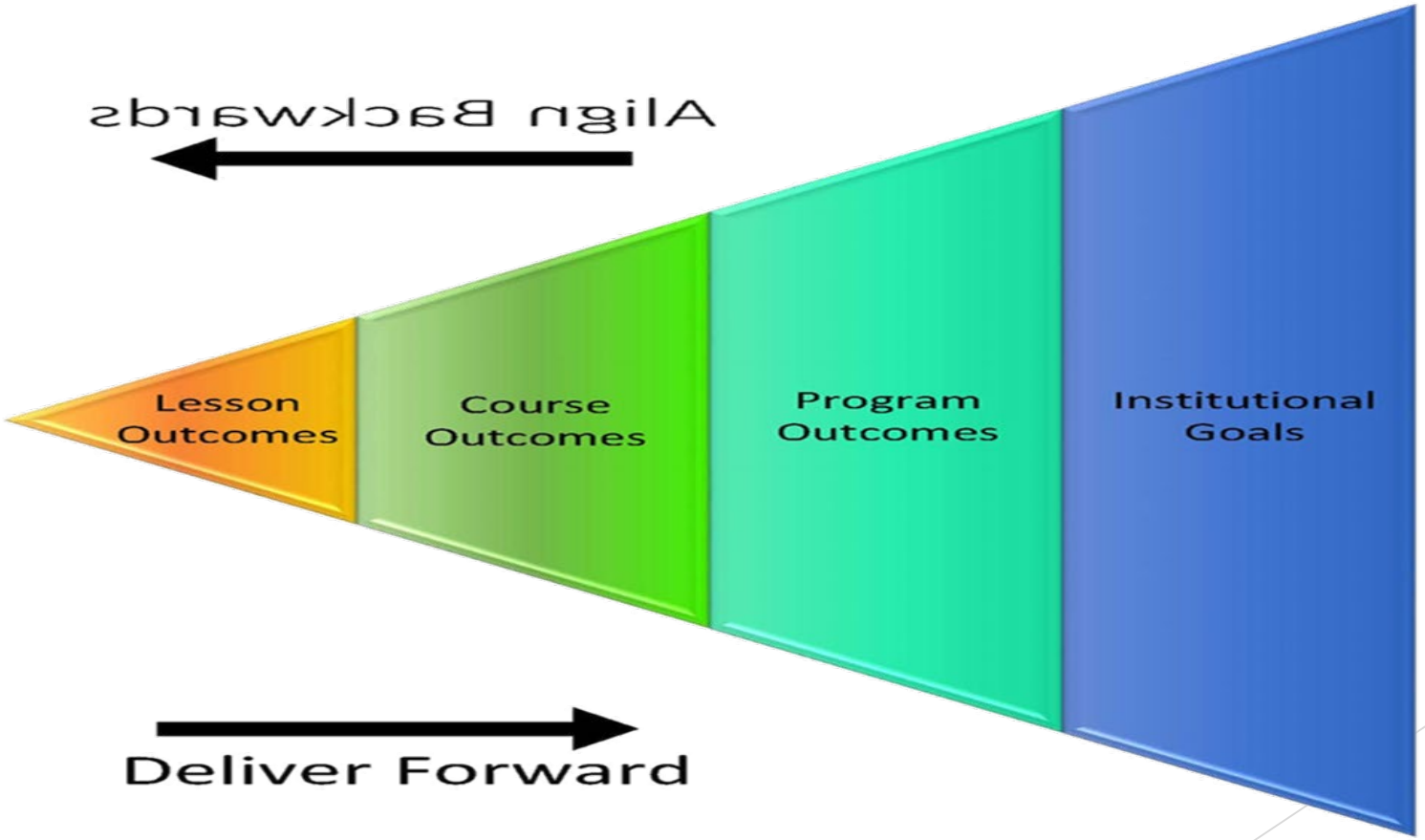
"Knowing that learning outcomes should drive education, model [university] teachers' classroom assessment procedures mimic the larger assessment process; they set learning objectives, assess learning outcomes, and utilize information to improve teaching and learning"

(Richmond, Boysen & Gurung, 2016, p. 104).

SLOs: At the Core of Assessment

Specific, behavioral statements of the intended results of a particular learning experience.

Alignment of Outcomes

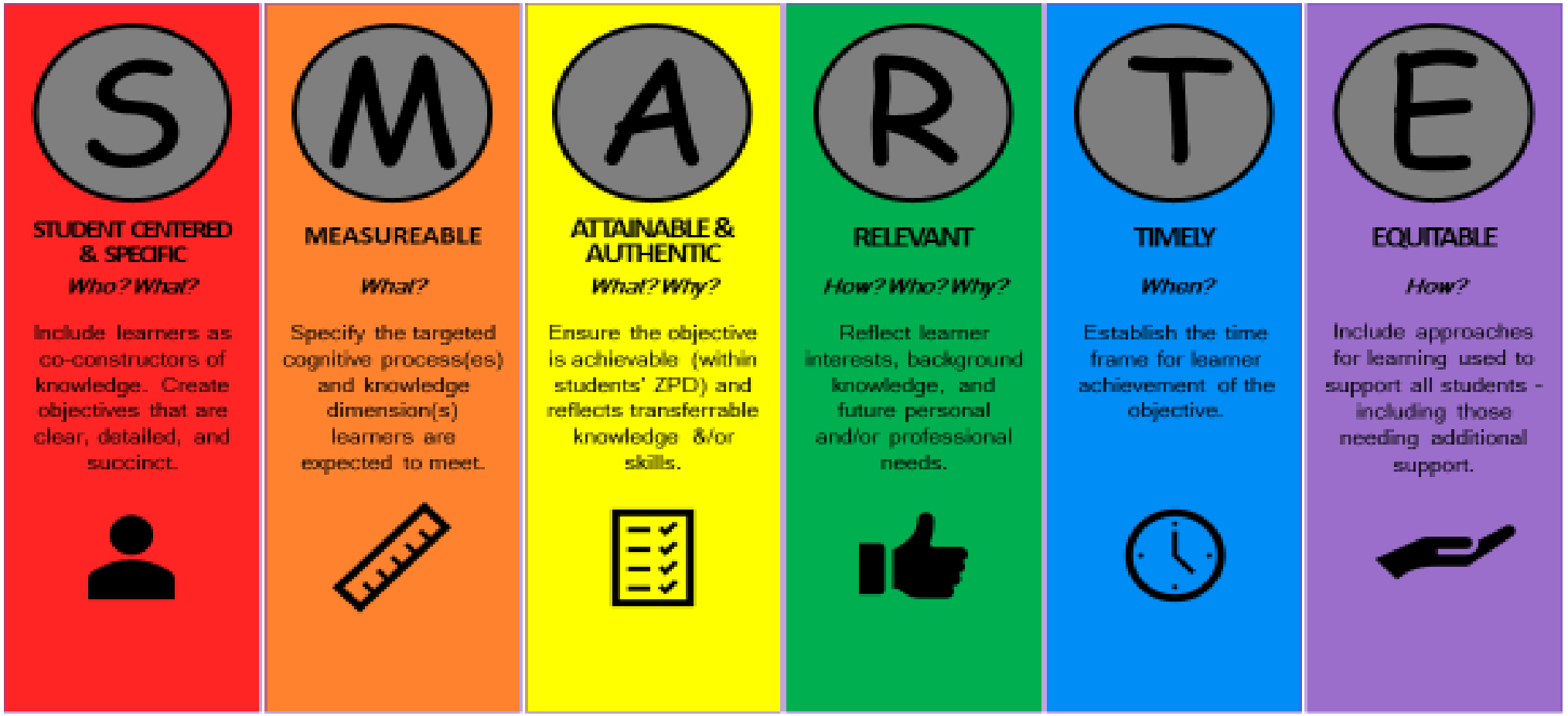


SMARTE SLOs

- SLOs are written in a decisive and specific way to guide lesson planning and student learning outcomes.
- SLOS are S M A R T E:

- Student-centered
- Measurable
- Attainable
- Results-oriented
- Time-bound
- Equitable

SMARTE SLOS



Funmi Amobi & Brooke Howland
OSU, CTL 10/29/19

SLOS: MORE THAN SMART, SMARTE

1. SMART SLO

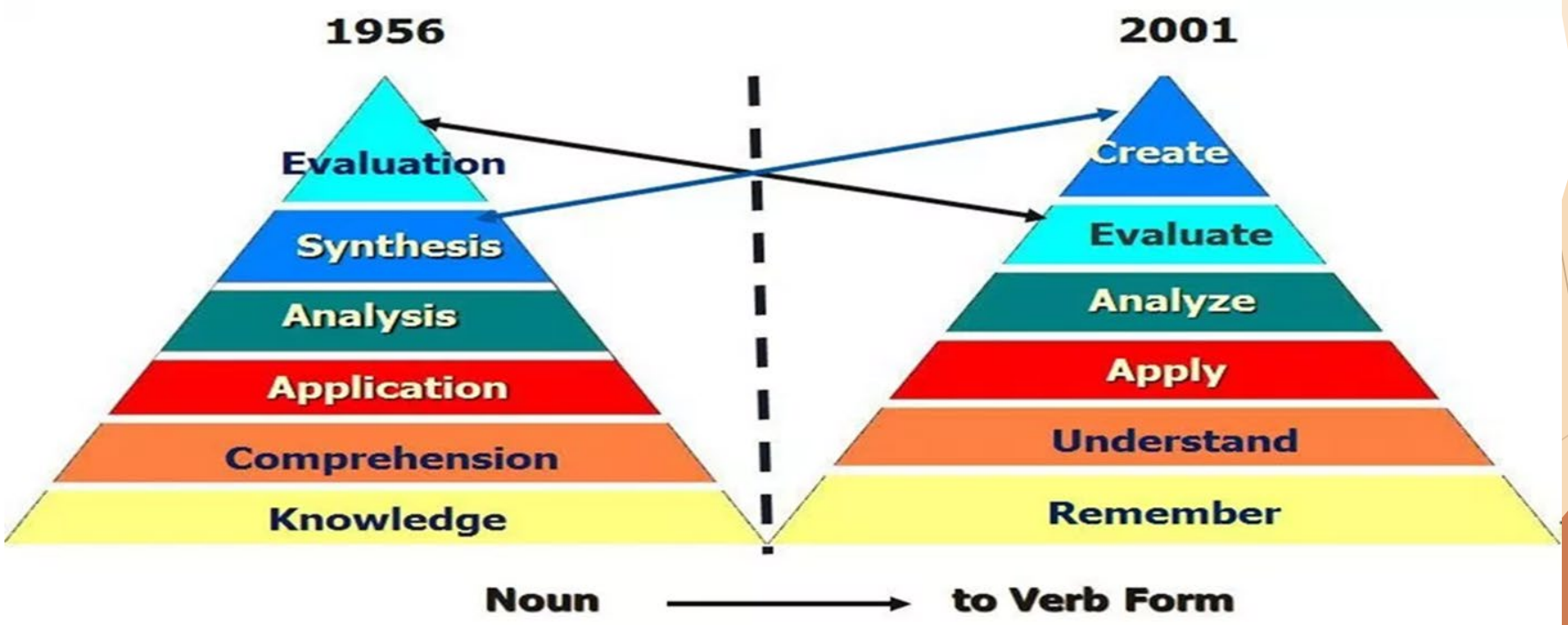
By the end of this presentation, participants should be able to construct S M A R TE R student learning objectives to guide formative and summative assessments of learning outcomes in their classes.

2. SMARTE SLO

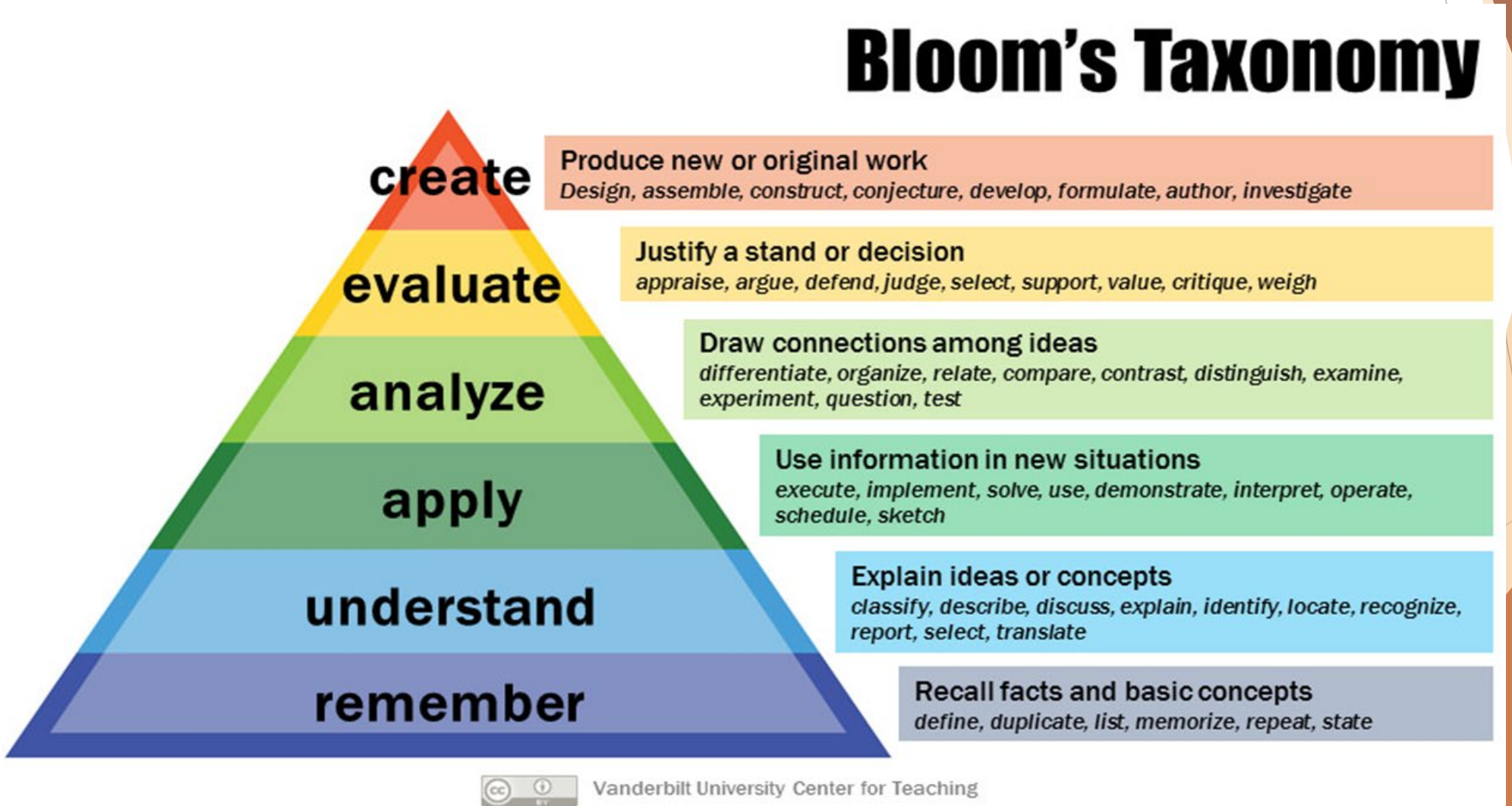
Working in small groups, participants will use the Taxonomy Table to assess the alignment between the cognitive processes and the knowledge dimensions of their SLOs.

Using Bloom's Taxonomy to Make SLOs S M A R TER

Bloom's Taxonomy 1956 and Anderson and Krathwohl Revised Bloom's Taxonomy 2001.



Cognitive Levels: Revised Bloom's Taxonomy



Bloom's Dimensions of Knowledge = SMARTER SLOS

	Cognitive Processes					
The Knowledge Dimensions	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
Factual						
Conceptual						
Procedural						
Metacognitive						

Table: 1.2 colorized version from original by Anderson, L. W. and Krathwohl, D. R., et al. (Eds.) (2001)

Constructing SMARTER SLOS: An Example

Working in collaborative groups, participants will use the Taxonomy Table to correctly match the cognitive processes and the knowledge dimensions of their SLOs.

Cognitive Level: Evaluate

Knowledge Dimension: Procedural

Blending Bloom's Cognitive Levels and Dimensions of Knowledge To Construct SMARTER SLOs

Matching Dimensions of Knowledge with corresponding Bloom's levels helps university teachers to:

- Align learning objectives and outcomes directly with assessments and instructional strategies;
- Construct specific, measurable and results-oriented learning objectives;
- Map the progression of student learning at both knowledge dimensions and cognitive process levels.

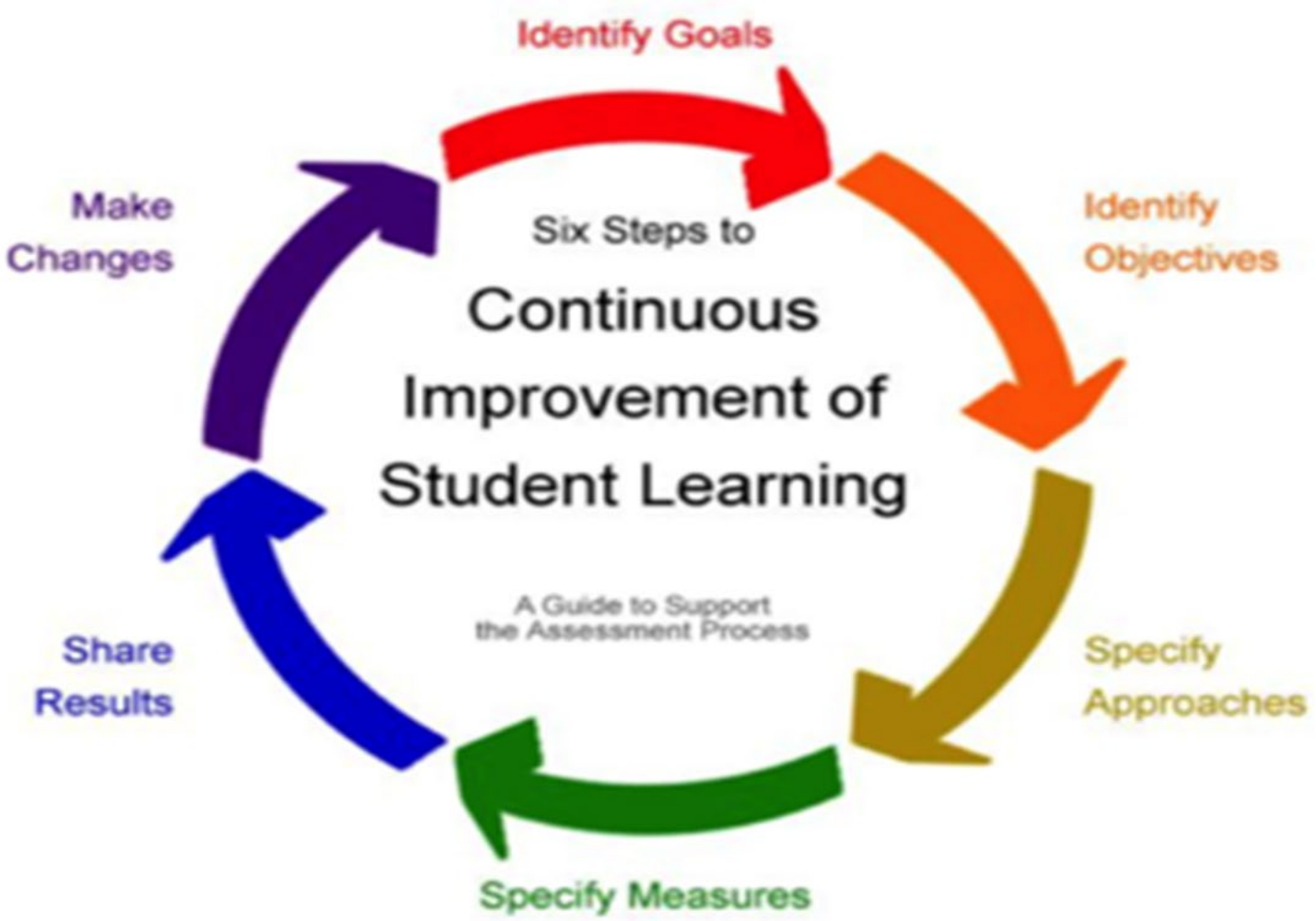
Assessment of Student Learning Outcomes

Continuous Process of:

1. Establishing clear student learning objectives (SLOs);
2. Implementing learning opportunities for students to achieve learning outcomes;
3. Gathering and interpreting evidence to ascertain how well student learning matches outcomes;
4. Using resultant information to improve student learning and teaching.

(Suskie, 2009)

The Assessment Process



The central question of assessment is,
"Are students learning?"
(Richmond, Boysen & Gurung, 2016, p. 103)

"The learning objectives shape the nature of both instruction and assessment"
(Bain, 2004, p.162).

Assessment: Alignment and Process

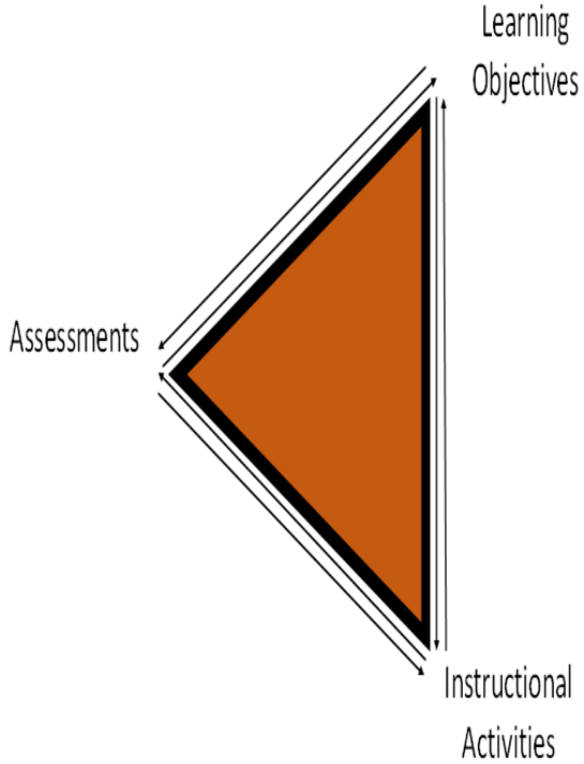
Begin with the end in mind: Backward Design

Learning Objectives: What should students know, understand and be able to do (KUDs) when they leave this class/course?

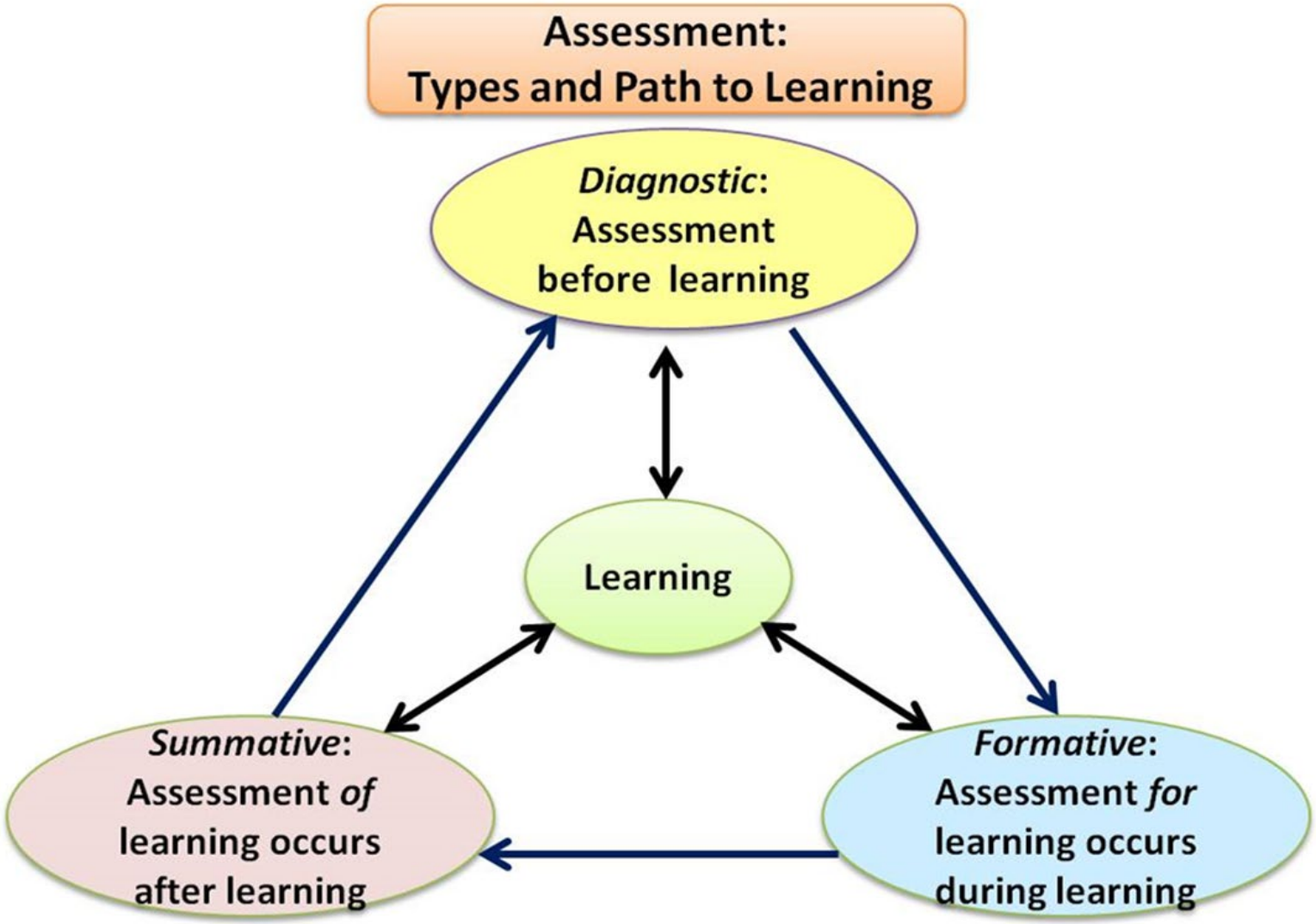
Assessments: What kinds of evidence will students produce to 'reveal' that they have achieved the learning objectives specified?

Instructional Activities: What kinds of instructional activities will students need to reinforce learning objectives and prepare for assessments?

(Wiggins & McTighe, 2005)



Types of Assessment



Diagnostic Assessment: Before Instruction

Diagnostic assessment encompasses two stages:

1. Capture students' thinking in advance before a class session;

2. Use the feedback to tailor teaching and student learning experiences.

(West, 2018)

Diagnostic Assessment: Techniques

- Just-in-Time Teaching
- Know-Wonder-Learned
- Sentence Stem Predictions
- Anticipating and Predicting New Information
- Background Knowledge Probe

Formative Assessment

WHAT?

Assessment for learning: Generally simple, low-stakes, non-graded in-class activity that is used to give both the university teacher and students feedback about the teaching and learning process as it is taking place.

HOW?

Decide what you want to assess;

Choose a classroom assessment technique (CAT);

Implement it;

Review the results and decide what changes to make.

WHY?

Helps students become monitors of their own learning;

Provides immediate, ongoing evidence about students' knowledge, understanding and skills.

Formative Assessment: Classroom Assessment Techniques (CATs)

1. Minute Paper
2. Muddiest Point
3. Focused Listing
4. One-Sentence Summary
5. Think-Pair-Share
6. Retrieval Practice

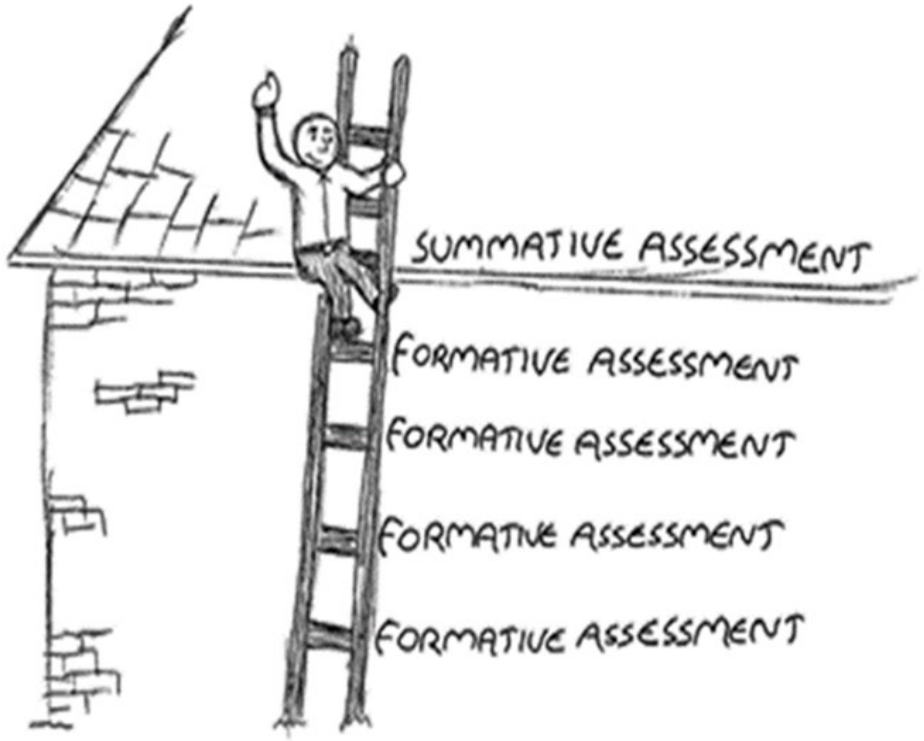
(Angelo & Gross, 1993; Brame, 2016)

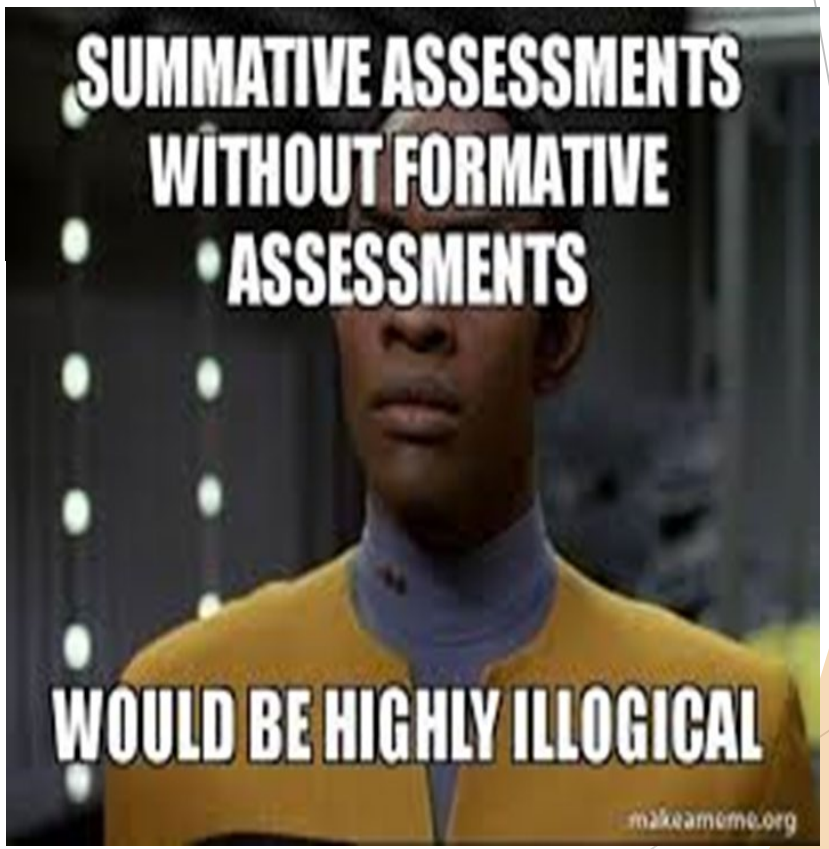
Don’t Do This


TIGER
I TAUGHT STRIPE HOW TO WHISTLE
I DON'T HEAR HIM WHISTLING
I SAID I TAUGHT HIM. I DIDN'T SAY HE LEARNED IT
BUD BLAKE 5/6

Formative and Summative Assessments

Formative assessment: A ladder/bridge to successful summative assessments.





OSU Quality Teaching Document

University teachers are encouraged to measure and document student achievement of learning outcomes and provide opportunities for students to reflect on growth.

“Examples might include:

- Using pre/post assessments [Formative and Summative Assessments]
- Using assessment to monitor progress.”

(Quality Teaching 1.5)

Summative Assessment (Evaluation)

What it is

- Assessment of learning outcomes—obtained at the end of a learning unit or course.

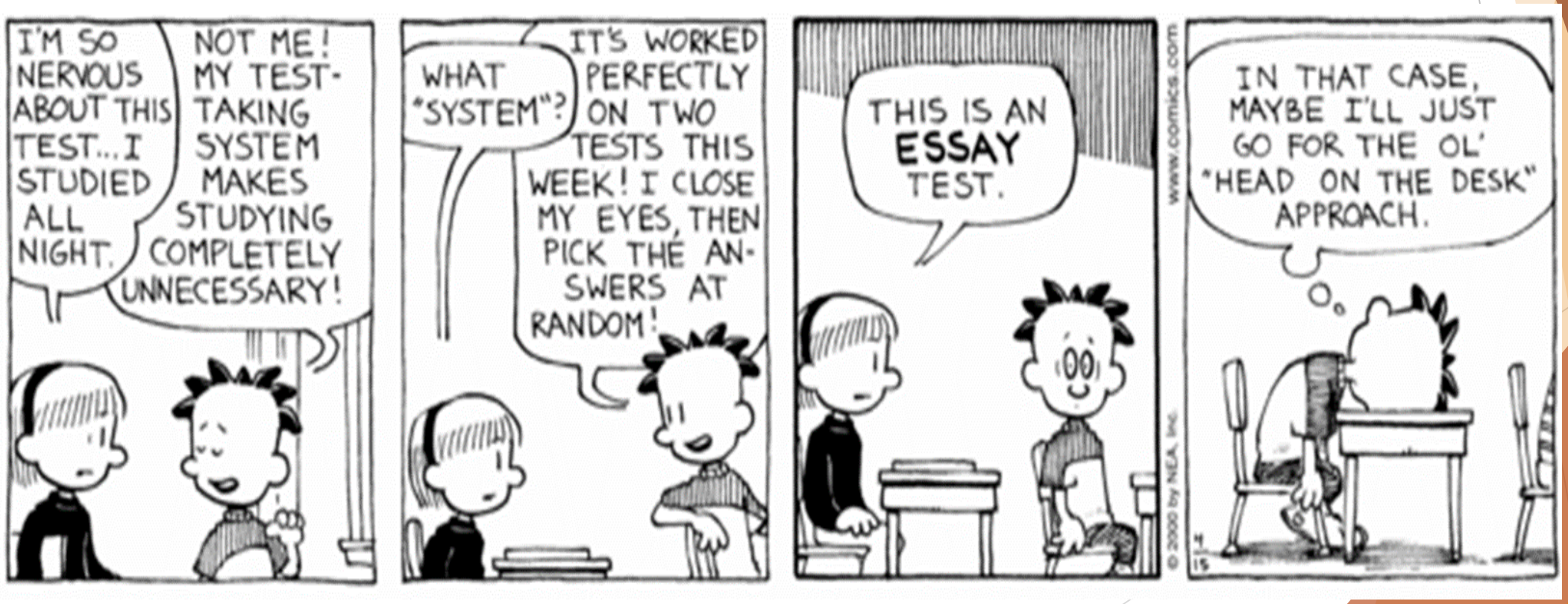
Drawbacks

- Occurs at the end of a learning unit or course so faculty may not be able to use the results to guide instruction of current students.
- Students may not receive feedback to guide learning.

Getting Around the Drawbacks

- Use results to guide instruction and learning in subsequent classes;
- Give comprehensive examinations;
- Use formative assessment techniques to prepare students for summative assessment.

"Effective assessment is more like a scrapbook of mementos and pictures than a single snapshot. Rather than using a single test, of one type, at the end of the teaching, effective [university teachers] gather lots of evidence [of student learning] along the way" (Wiggins & McTighe, 2005, p. 152).



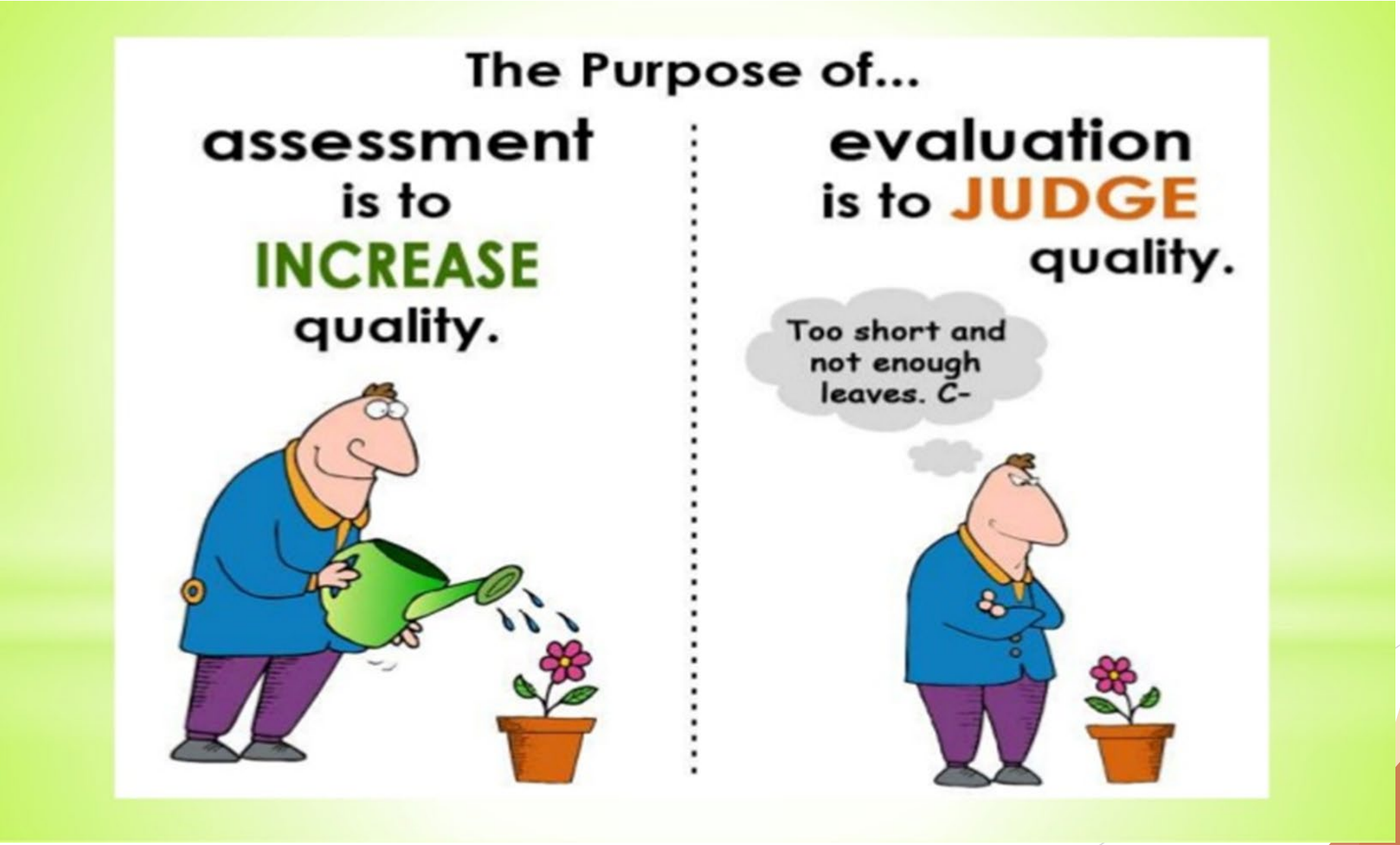
The Difference Between Assessment and Evaluation

Evaluation is using assessment information to make informed judgment.

Steps 3 & 4 of the Assessment Process:

1. Establishing clear student learning outcomes;
2. Implementing learning opportunities for students to achieve the outcomes;
3. Gathering and interpreting evidence to ascertain how well student learning matches outcomes;
4. Using subsequent information to improve teaching and student learning.

Assessment and Evaluation



Evidence of Student Learning

Direct Evidence: Compelling evidence of what students have and have not learned.

- Research projects, exhibitions, theses (scored using a rubric);
- Scores on locally-designed multiple-choice or essay tests;
- Written performances or presentations, papers (scored using a rubric);
- Portfolios of student work;
- Observations of student work in presentations, debates, group discussions;
- Student reflections (if required as learning outcomes. OSU Quality Teaching Document 1.5 Example: "Incorporating student self-reflection in assessments."

Indirect Evidence: Proxy signs that students are probably learning.

- Course grades;
- Assignment grades (if not accompanied by a rubric or scoring criteria).

(Suskie, 2009)

Meaningful Evaluation of Student Learning: Three Best Practices

1. Use an Embedded plan matrix;
2. Implement effective feed up, feedback, feed forward;
3. Use a descriptive rubric.

Embedded Assessment Plan Matrix: Align Learning Objectives with Evaluation

Learning Objectives	Exams	Papers	Assignments	Performance Tasks
1.	X	X	X	
2	X	X	X	
3	X			X
4	X		X	X

(Richmond, Boysen & Gurung, 2016)

Embedded Assessment Matrix Plan Process

Useful for planning how assessment will occur:

- Determine the student learning objectives for a course.
- Match course assignments, tests and performance tasks with specified learning objectives.

Subsequently, assignments and examinations become the tools for assessing learning outcomes.

The Power of Feedback

"The secret to better student evaluations and better teaching is better feedback. Focus on providing your students with the feedback they need to improve."

(Orlando, 2019)

Types of Feedback

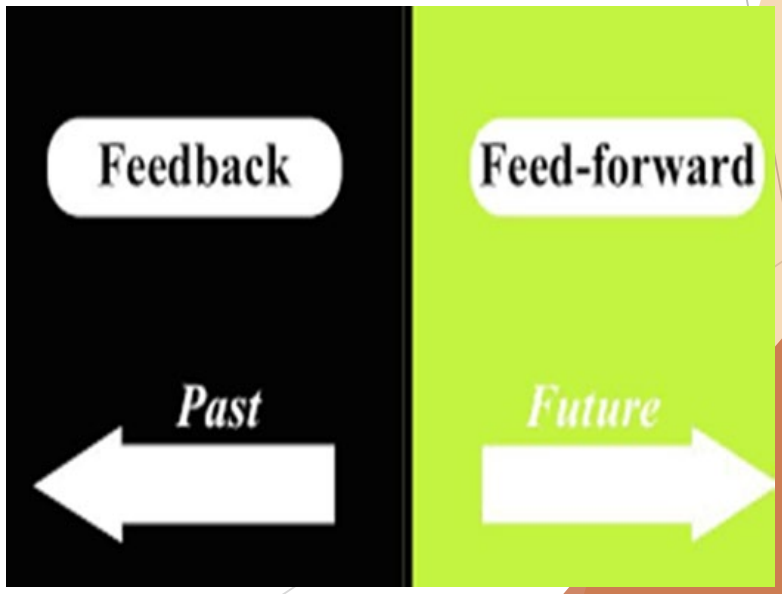
- Feed Up: Provide information on why the assessment task is important within the context of student learning objectives and outcomes.

- Feedback: Refers to what was done well or poorly. Begin feedback with a reminder about the specific learning objectives of the assignment.

- Feed Forward: Provide feedback to students first, followed by guidance on how to improve the performance.

Difference Between Grades and Feedback

- A grade is a symbol that represents a student's performance against some standard.
- Grades are back-ward facing.
- The purpose of feedback is to reduce/narrow the discrepancies between current performance and a standard.
- Feedback is forward-facing.
- Do not use feedback to justify a grade.



"The solution to grading chaos is to make evaluation criteria more explicit, and there exists no better tool for outlining expectations than rubrics" (Richmond, Boysen, & Gurung, 2016, p.120).

OSU Quality Teaching Document 2.1 Example: "Using rubrics aligned to assessments."

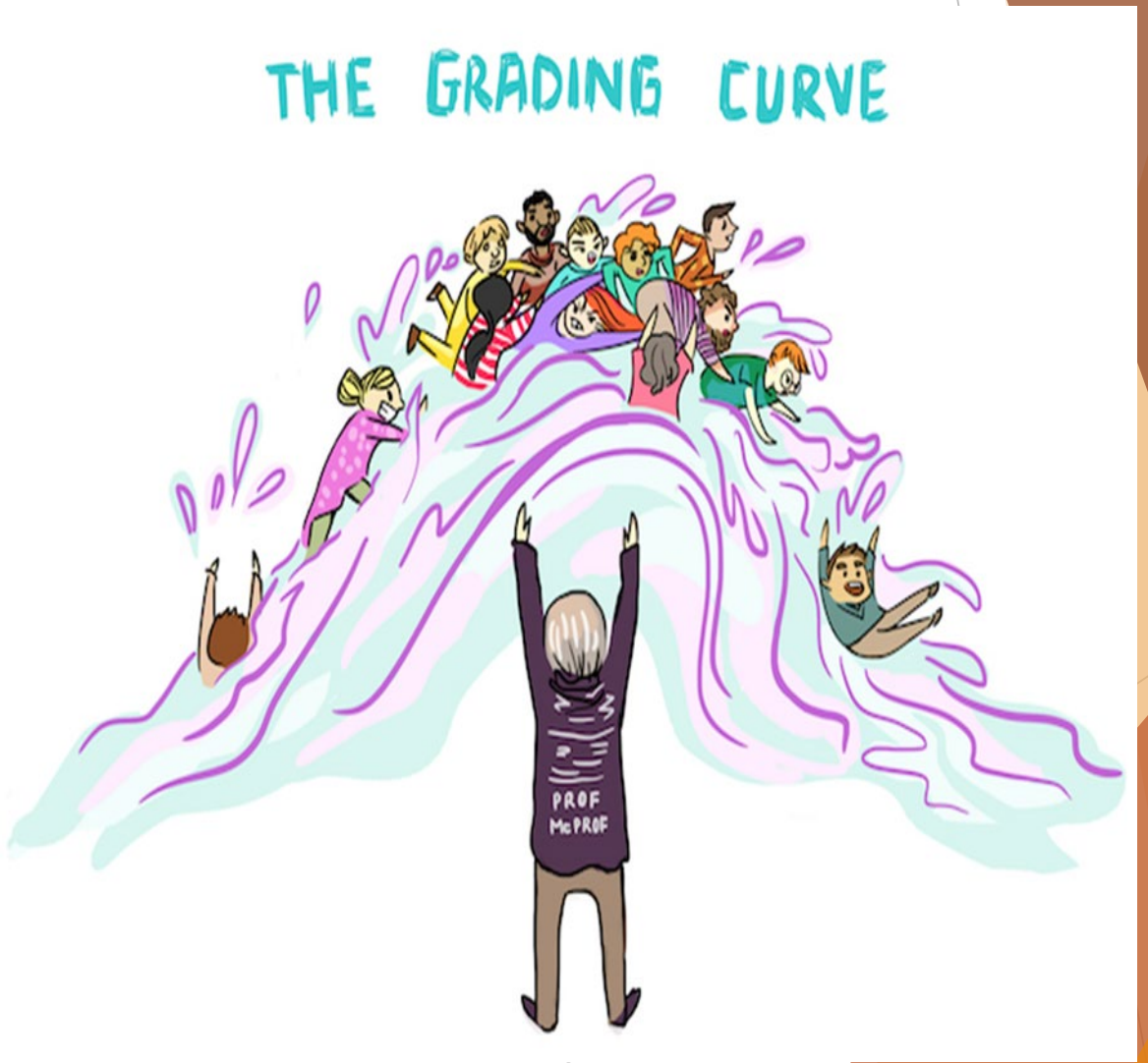
Components of a Descriptive Rubric

Assignment Components/ Criteria	Level of Performance			
	Outstanding	Above Average	Average	Below Average
Introduction				
Content				
Analysis				
Organization				
Writing				
APA Format				

Watch Out! Common Grading Errors

- Leniency errors
- Generosity errors
- Severity errors
- Central tendency errors
- Halo effect bias
- Contamination effect bias
- Similar-to-me effect
- First-impression effect
- Contrast effect
- Rater drift

(Suskie, 2019)



Reflection

Think about the best practices of learning outcomes and assessment that you would like to incorporate into your teaching and work. Share your reflection with a participant or a small group of participants.

- How might you implement these best practices in your classes and/or work?
- What other best practices are you currently using?
- How effective are these practices ?

Share out

Thank you for giving the opportunity to present during your meeting!