



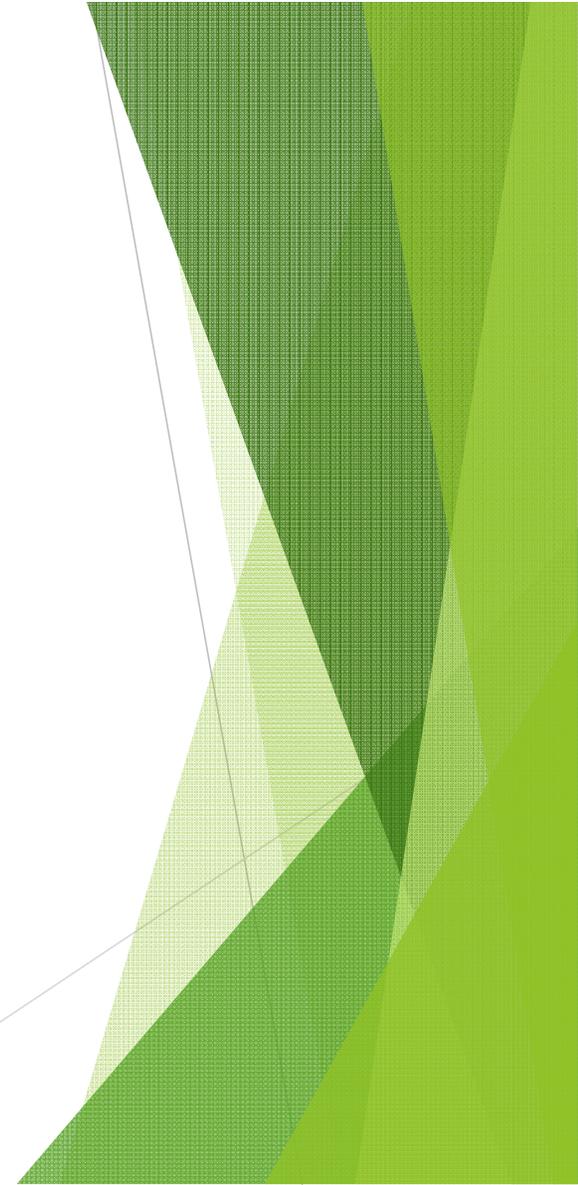
ASSESSMENT WORKSHOP

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Day 1

- ▶ Rubrics
- ▶ Reliability, Validity, and Data Analysis



What is assessment?

An on-going process to monitor and improve student learning

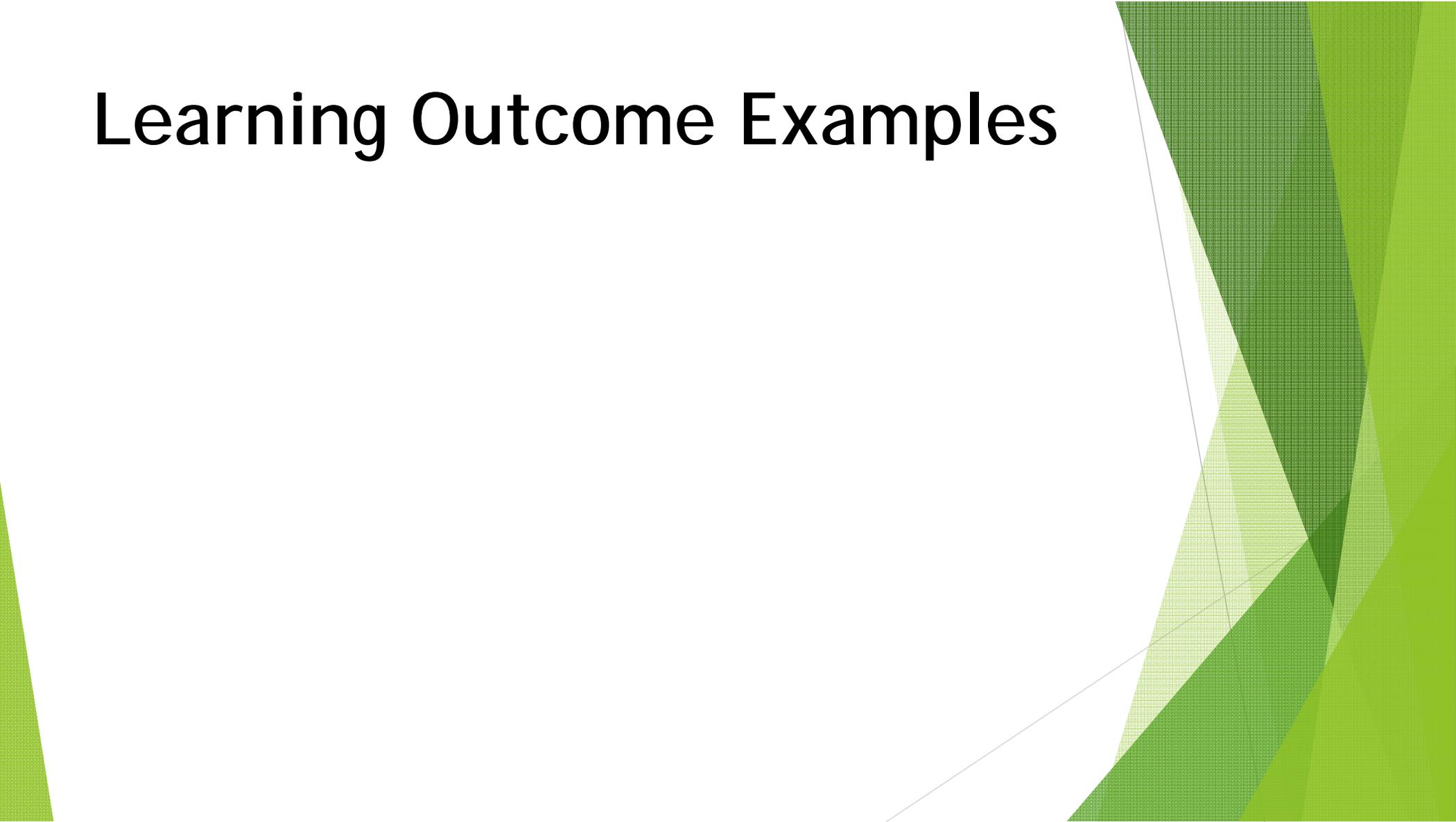
- ▶ Begin with SLOs (CLOs, PLOs, ILOs)
- ▶ Collect evidence about each SLO
- ▶ Assess the evidence and reach a conclusion
- ▶ Close the loop

Some Basic Vocabulary

- ▶ Direct vs. Indirect Assessment
- ▶ Authentic Assessment
- ▶ Formative vs. Summative Assessment

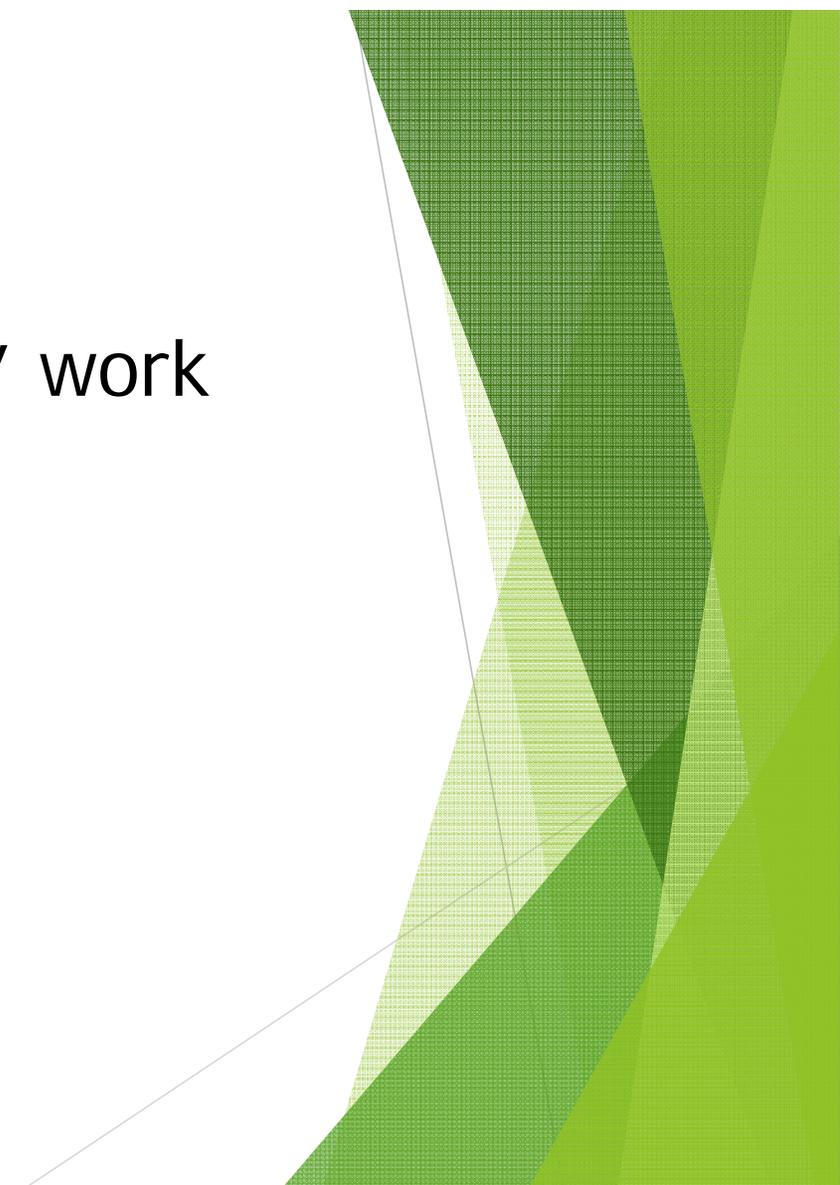
Our assessment plan should emphasize direct, authentic, summative assessment.

Learning Outcome Examples



Rubrics

- ▶ Criteria for assessing students' work
- ▶ Holistic vs. analytic rubrics



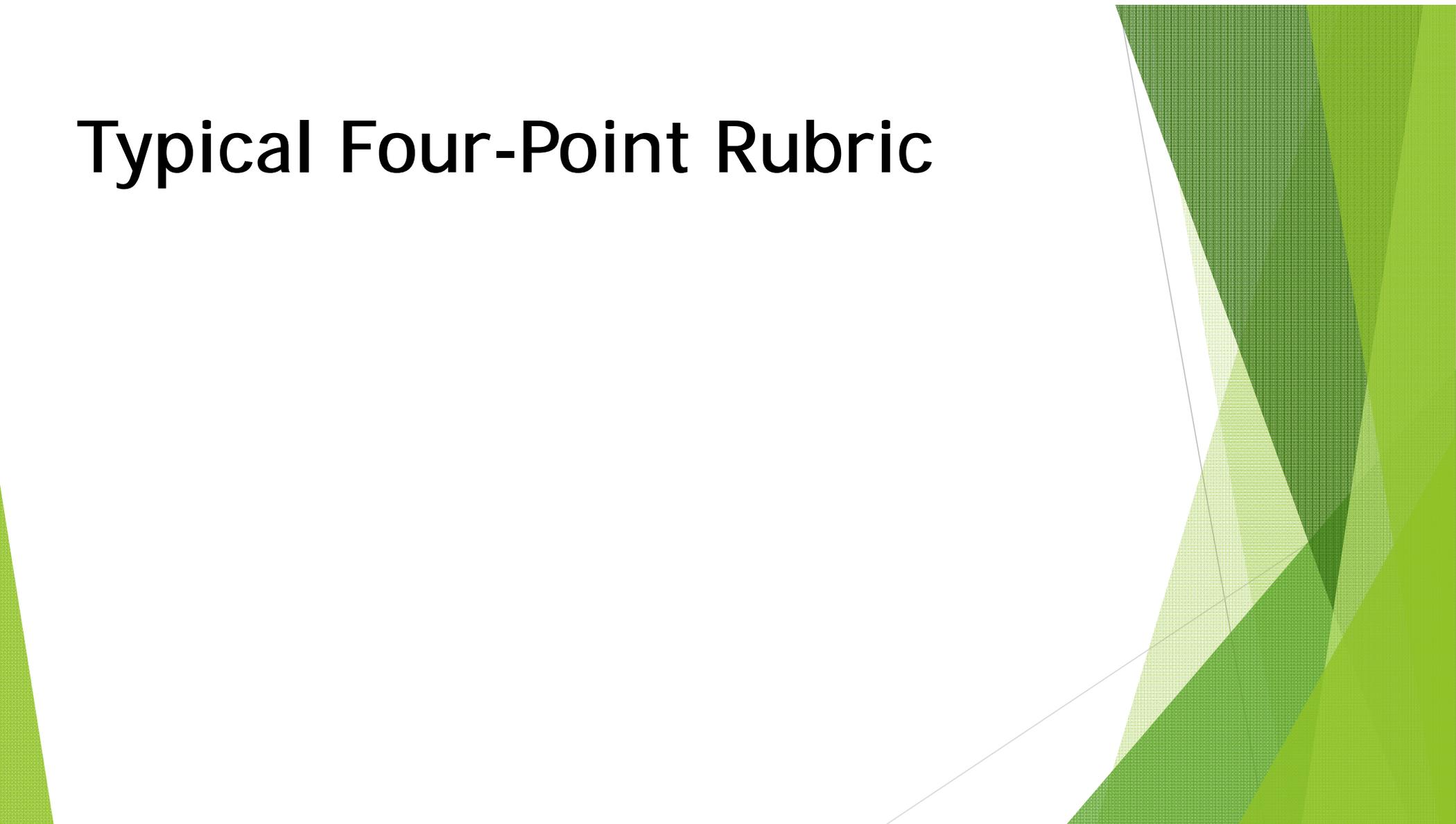
Rubric Examples



Rubric Strengths

- ▶ Define faculty expectations
- ▶ Complex products or behaviors can be examined efficiently.
- ▶ Well-trained reviewers apply the same criteria and standards.
- ▶ Rubrics are criterion-referenced, rather than norm-referenced.

Typical Four-Point Rubric

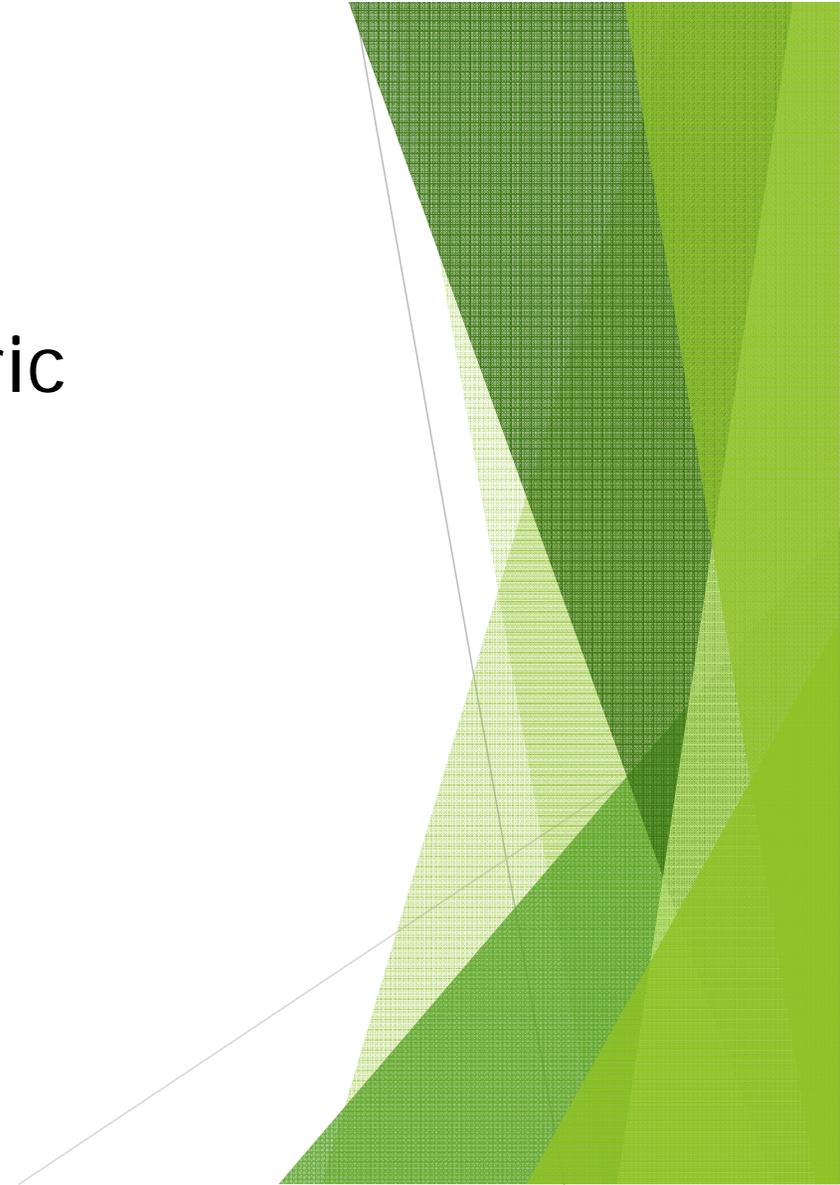


Rubric Category Labels



Creating a Rubric

- ▶ Adapt an already-existing rubric
- ▶ Analytic method



Drafting the Rubric

- ▶ Start at the extremes
- ▶ Some words I find helpful

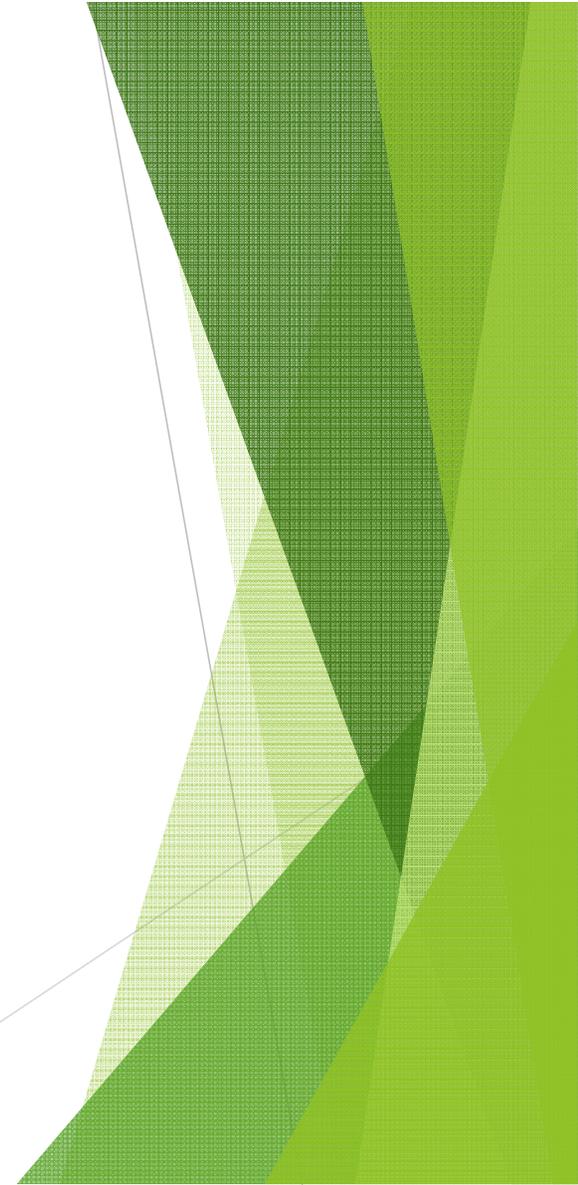


Let's draft a rubric.

- ▶ The Outcome
- ▶ The Evidence
- ▶ The Rubric Dimensions



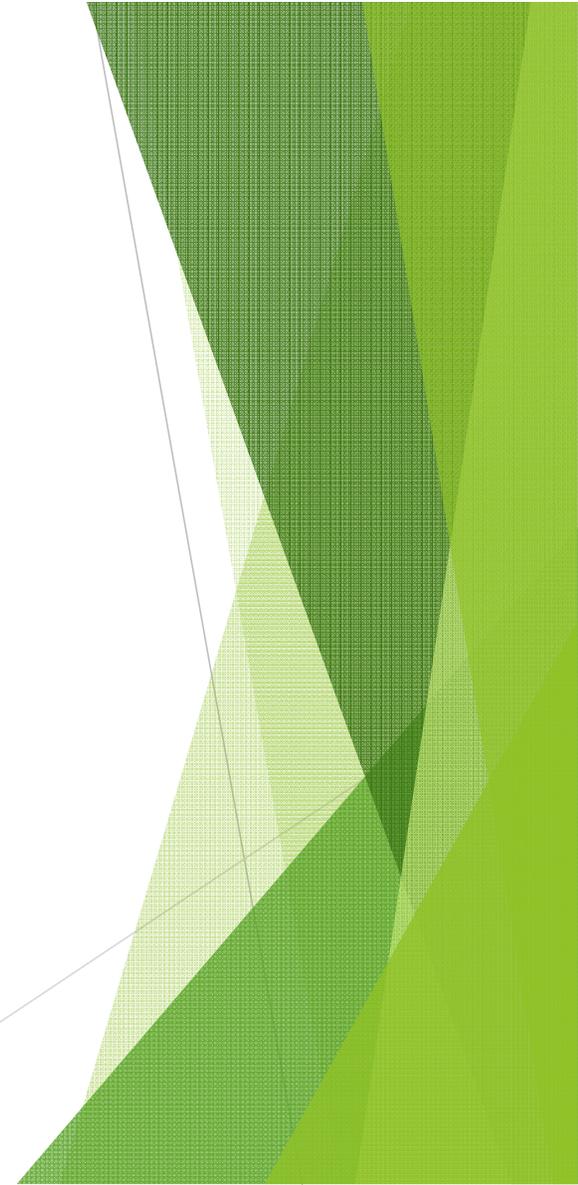
Assessment rubrics can be integrated into grading.



- ▶ Points are used for grading
- ▶ Categories are used for assessment
- ▶ All the scores are used to determine the grade.
- ▶ Only the results for the first three rows go into the assessment, and we reach a separate conclusion about each dimension.

Rubrics can:

- ▶ Speed up grading
- ▶ Clarify expectations to students
- ▶ Reduce student grade complaints
- ▶ Help faculty focus on important dimensions when providing feedback to students



Suggestions for Using Rubrics in Courses

1. Grade using rubrics
2. Integrate into lectures and activities
3. Develop a rubric with your students
4. Have students apply rubric to sample products
5. Have students provide peer feedback using a rubric
6. Have students self-assess using the rubric

Validity and Reliability

- ▶ Valid results are meaningful.
- ▶ Reliable results are consistent.



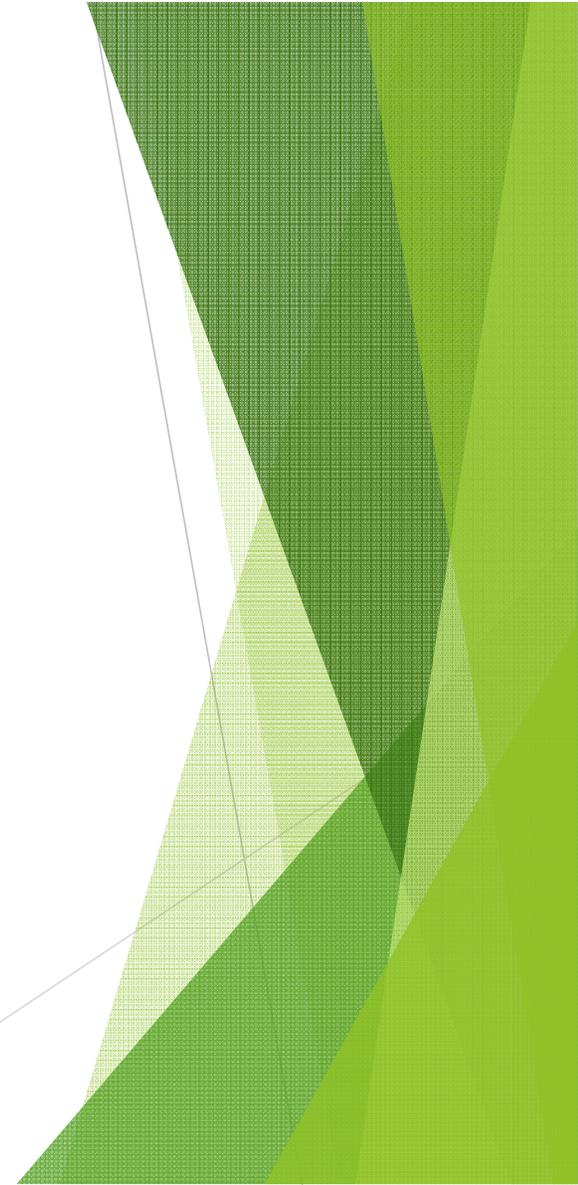
Examples

- ▶ A broken clock
- ▶ Assessment example 1
- ▶ Assessment example 2



How to Achieve High Validity

- ▶ good evidence
- ▶ a good sample
- ▶ a good rubric
- ▶ reviewers who carefully apply the rubric when they assess the evidence



How to Achieve High Reliability

- ▶ Calibrate reviewers

Data Analysis for Rubrics

- ▶ Calculate the proportion of students at each rubric level
- ▶ Apply a standard to reach a conclusion about student achievement

Data Analysis for Objective Test Scores

- ▶ Get a separate score for each outcome.
- ▶ Set a standard, such as the percentage of students who get at least 8 out of 12 questions right.
- ▶ Apply the standard.

Content Analysis of Qualitative Data

- ▶ Goal is to “hear” and report what was said
- ▶ Stay focused on the project goals
- ▶ Analysis should be “systematic, sequential, verifiable, and continuous”
- ▶ Begin by identifying themes
- ▶ Develop a coding plan and code the data
- ▶ Summarize results for the themes
- ▶ Also code demographic information to be able to compare groups

Content Analysis Example



Reporting Results

- ▶ Write the report with the audience in mind.
- ▶ Report the facts; don't get defensive or counterattack
- ▶ Provide occasional examples of responses.
- ▶ Include a unique response if it appears important.
- ▶ Include brief description of how the study was conducted.

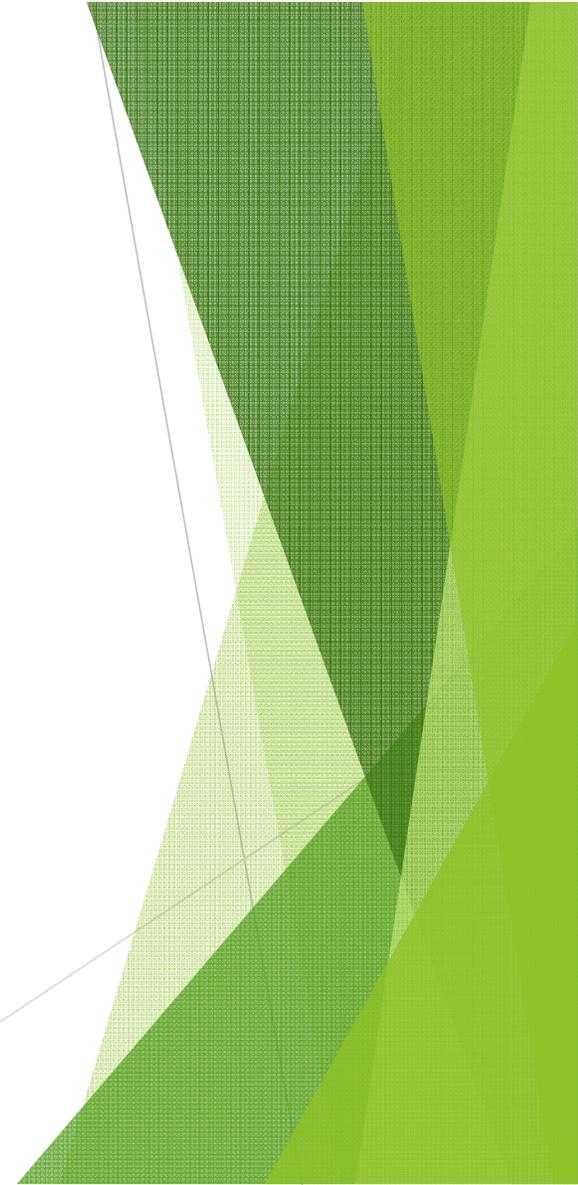
Advice from Krueger & Casey

- ▶ Get to the point quickly.
- ▶ Use clear, effective writing.
- ▶ “Provide enlightenment”
- ▶ Use multiple reporting strategies
- ▶ Outline for a written report
- ▶ Avoid the “ho-hum syndrome.”
- ▶ Avoid making too many points.

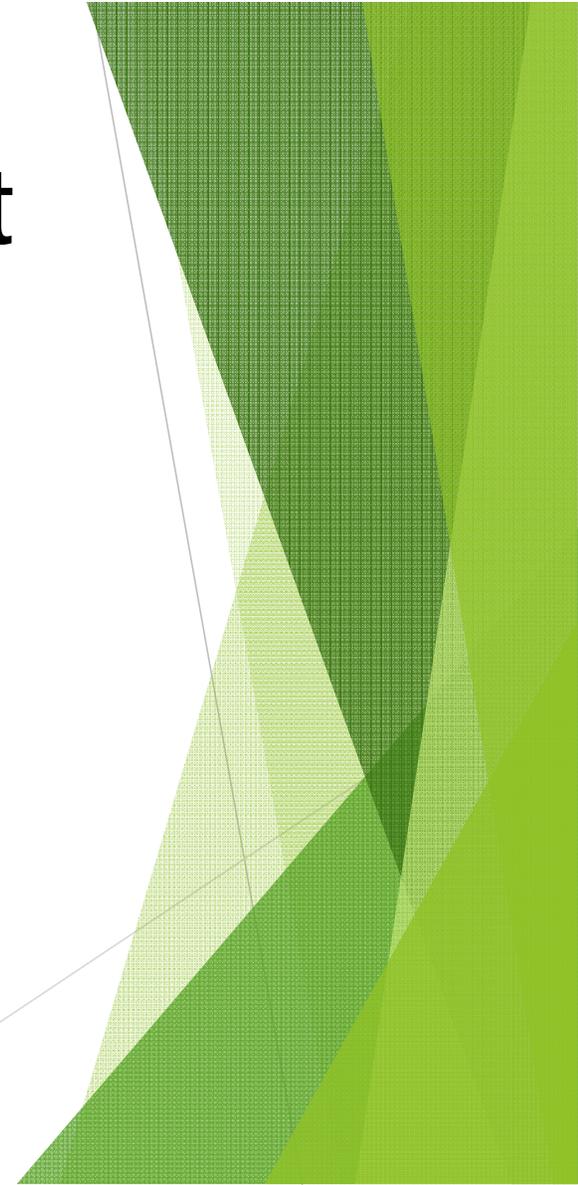
Comments?

Questions?

What did you learn today?



Day 2: Authentic Assessment and Inter-Rater Reliability



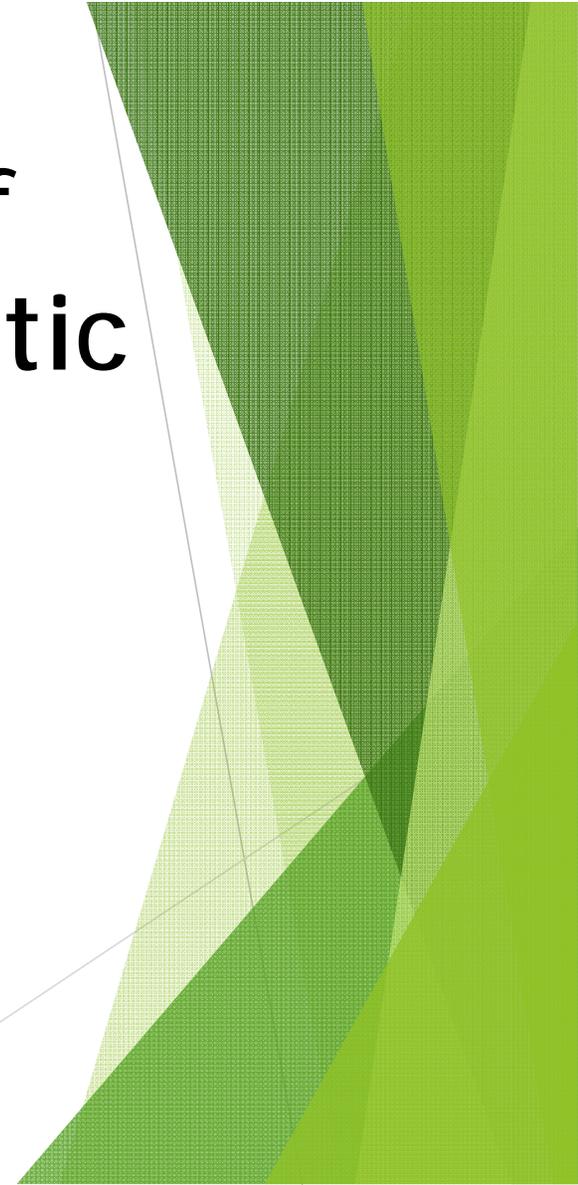
Four Principles for Direct Assessment

1. Require students to perform the outcome.
2. Align the evidence with the rubric.
3. Use authentic assessment when possible.
4. Emphasize summative evidence.

Some Ways to Do Authentic Assessment

1. Fieldwork/practica/internships
2. Simulations and role plays
3. Case studies
4. Analysis of newspaper or magazine articles, artifacts, current events, etc. to apply learning to new situations
5. Essays: Task, Role, and Audience

How could you assess each of these outcomes using authentic assessment?

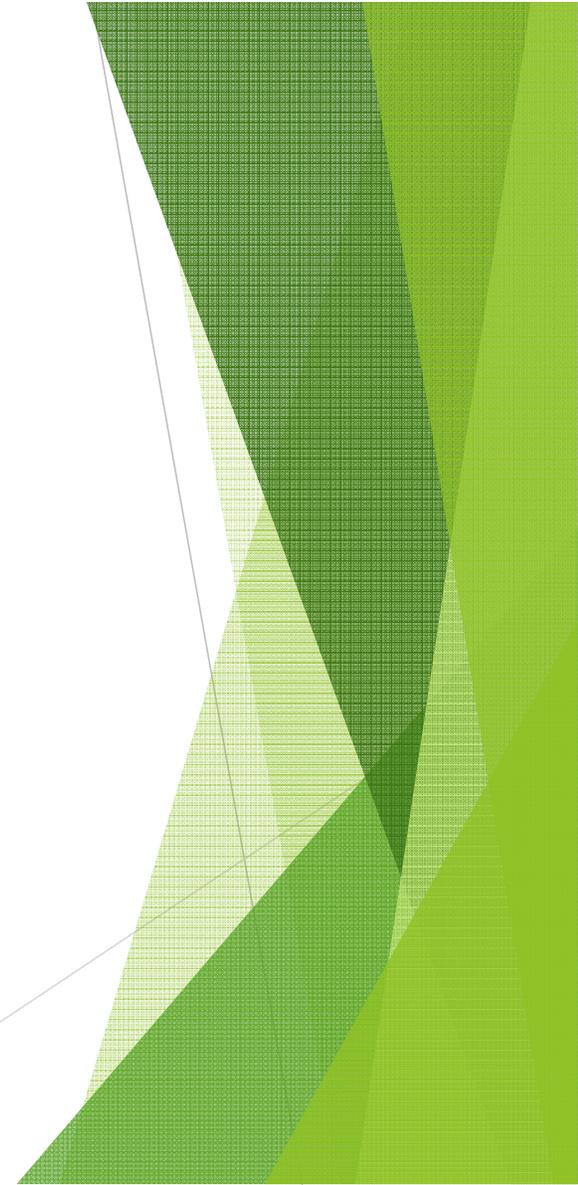


Signature Assignments

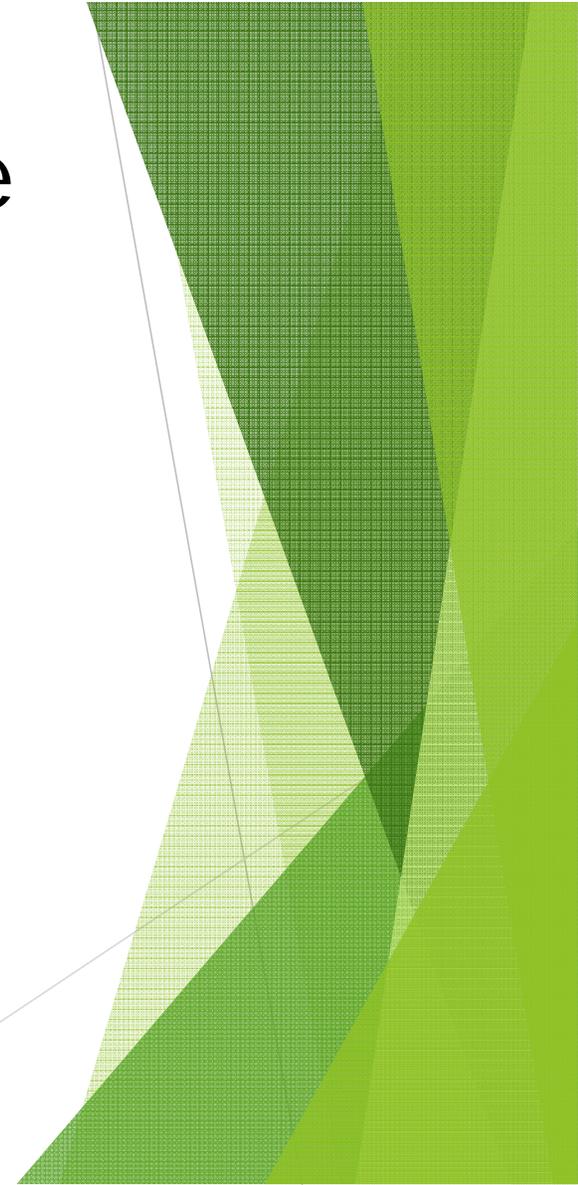
1. Assignment is designed to collect evidence for a specific SLO.
2. Generally, these assignments are designed to be used in multiple courses.
3. The assignment might be a homework assignment, an in-class activity, an out-of-class activity, or one or more exam questions.

Draft a signature assignment.

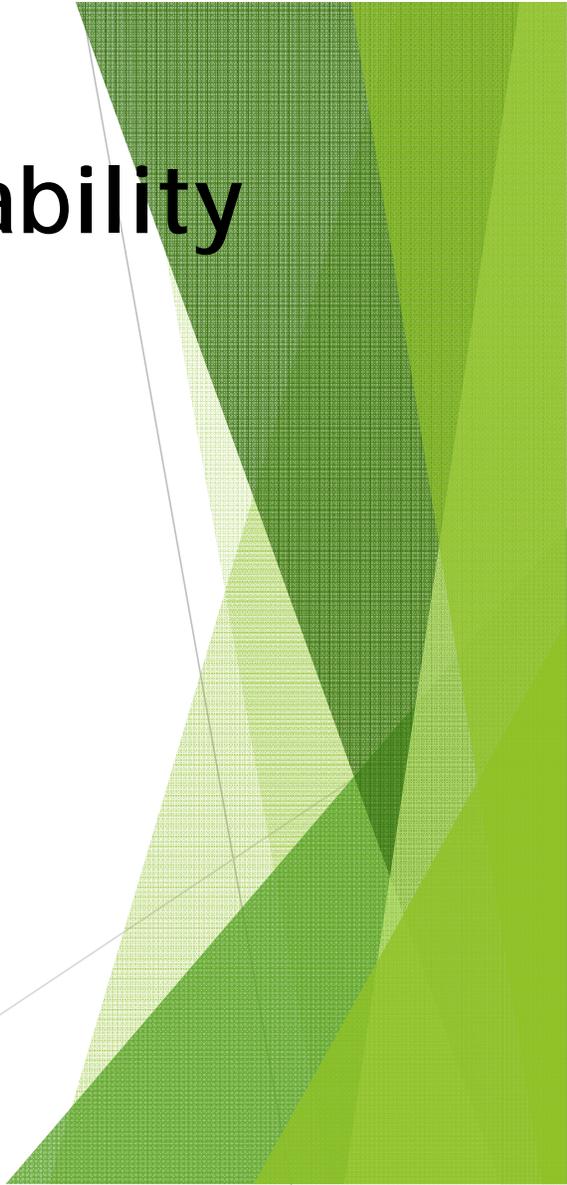
- ▶ What characteristics should this assignment have?
- ▶ How will you make this assignment authentic?



Draft an assignment for a course you teach that is authentic and that has the required characteristics for the writing signature assignment.



Calibration and Inter-Rater Reliability



Assessing Evidence in a Group

- ▶ One reader/document
- ▶ Two independent readers/document
- ▶ Paired readers

Before inviting colleagues to a group reading,

- ▶ Collect the assessment evidence and remove identifying information.
- ▶ Develop and pilot test the rubric.
- ▶ Select exemplars of weak, medium, and strong student work.

Calibration Exercise

- ▶ You and your colleagues are teaching a course on rubrics and want to apply a rubric to provide feedback and assess your impact.
- ▶ Students submit a two-dimensional analytic rubric that assesses an outcome dealing with Leadership.

Confidentiality and Focus

- ▶ Names of students and their teachers have been removed.
- ▶ If you recognize an individual, don't score the submitted essay if it makes you uncomfortable or if you think your judgment might be influenced. We will not discuss individual students or colleagues, and anything you learn about an individual or a colleague does not leave this room.

The Leadership Outcome

Students who complete our program can effectively lead groups to accomplish a task.



The Evidence

Faculty observe a student-led group with six members that must complete a task in 20 minutes.



The Rubric You Will Apply

- ▶ Validity
- ▶ Clarity for Decision-Making



You will score three examples
of student Leadership rubrics.



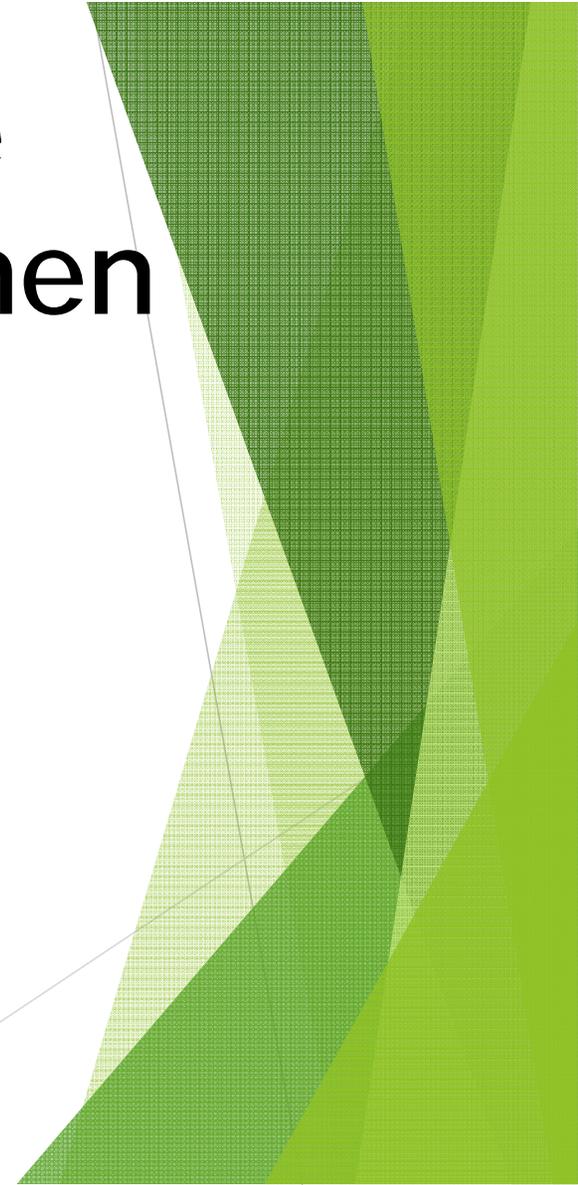
Rate each dimension separately.

- ▶ Don't let the first score you assign influence the second score (avoid the "halo" effect).
- ▶ Don't worry about how many scores of 1, 2, 3, or 4 you give. Let the rubric guide each judgment.

Your Task:

- ▶ Working only by yourself, use the criteria in the rubric to assign ratings from 1 to 4 to assess the Validity and Clarity of the three Leadership rubrics on the next page.

Look up when you're
done, so I can tell when
you're finished.



Ratings Summary and Discussion



Calibration Steps

- ▶ Orientation
- ▶ Everyone scores the exemplars.
They are chosen to vary in quality.
- ▶ Reach consensus on what the ratings should be.

After the Calibration

- ▶ You would score the rest of the artifacts, using either independent or paired readers

Rubric Calibration Script



Role play a calibration session.

- ▶ Pick a partner and role play a calibration session to assess writing skills in a sample of projects written by advanced students using the writing rubric on page 14.
- ▶ Use your own words, rather than read the script.
- ▶ Before you begin, decide if you are going to use independent or paired readers.

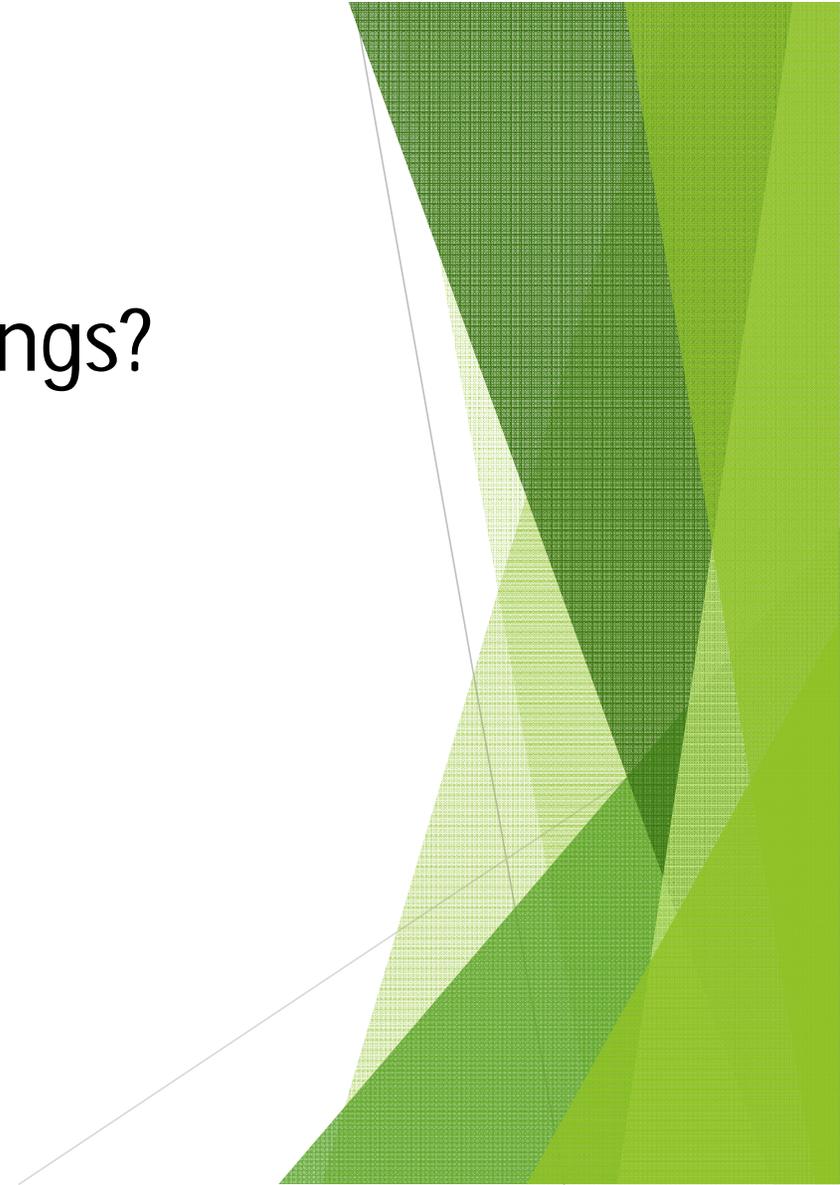
Inter-Rater Reliability

- ▶ Correlation
- ▶ Discrepancy Index



Example

How reliable were these ratings?



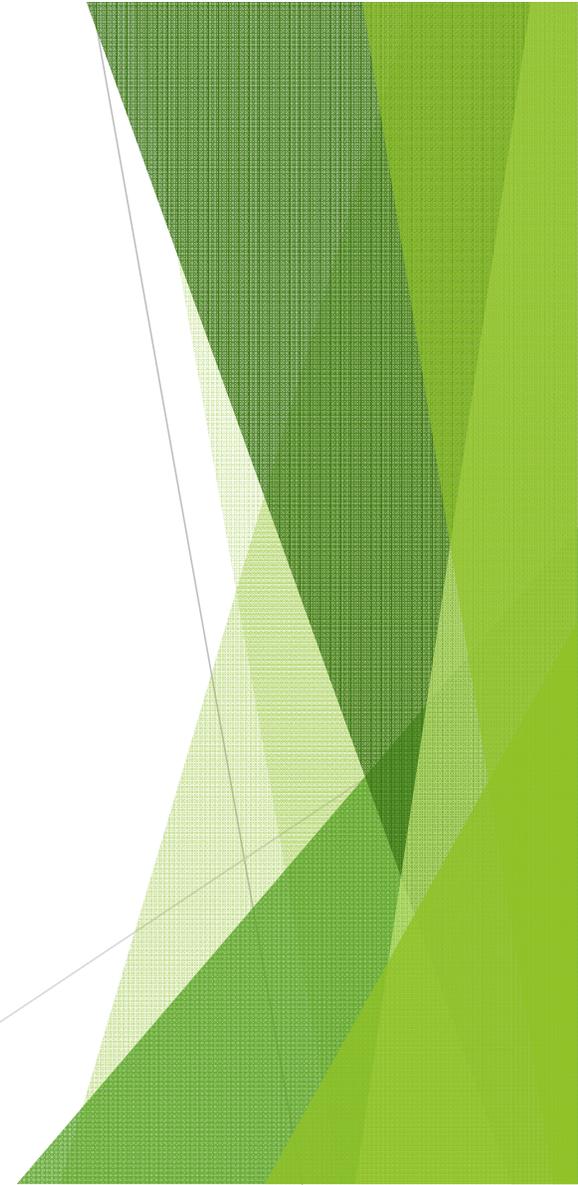
Calculations Using Excel

- ▶ A small number of essays are being used only to keep the data simple.
- ▶ I recommend at least 30 artifacts, preferably 50-80.

Comments?

Questions?

What did you learn today?



Why Assessment Matters



Outcomes-Based Education



Child Development Catalog Description

This course covers changes in cognition, personality, and motor skills from birth to early adulthood.



If you were teaching this course:

1. What would you do during class?
2. What homework would you assign?
3. What kinds of exam questions would you use?

Child Development Course Learning Outcomes

Students who complete this course can:

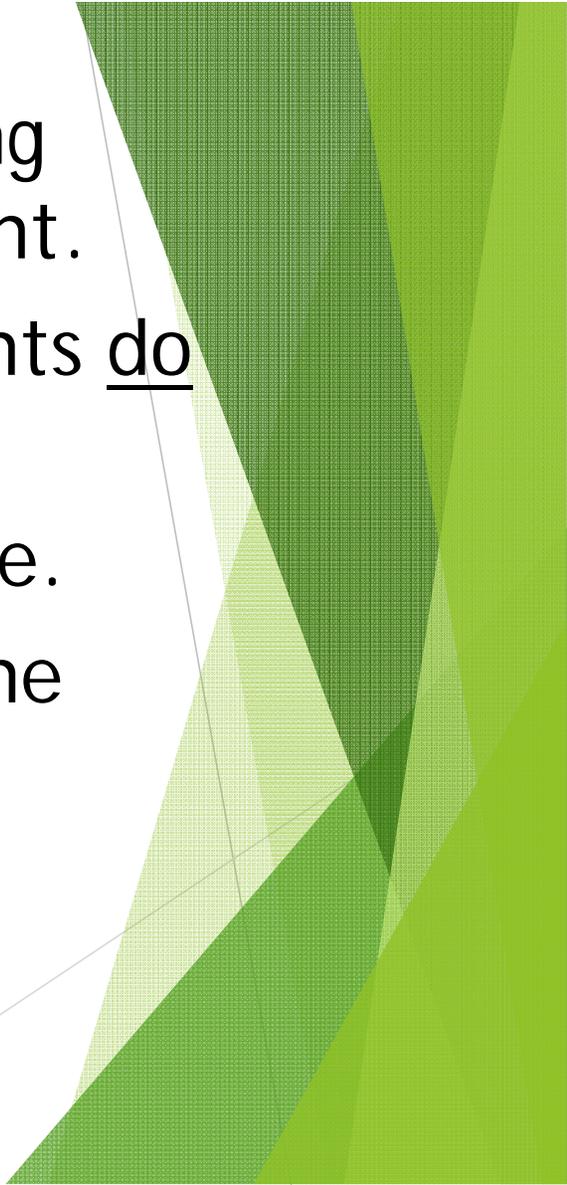
- ▶ Describe changes in cognition, personality, and motor skills from birth to early adulthood.
- ▶ Use developmental theories to explain these changes.
- ▶ Apply what they learn to parenting, education, and public policy issues related to children and families.

If you were teaching this course:

1. What would you do during class?
2. What homework would you assign?
3. What kinds of exam questions would you use?

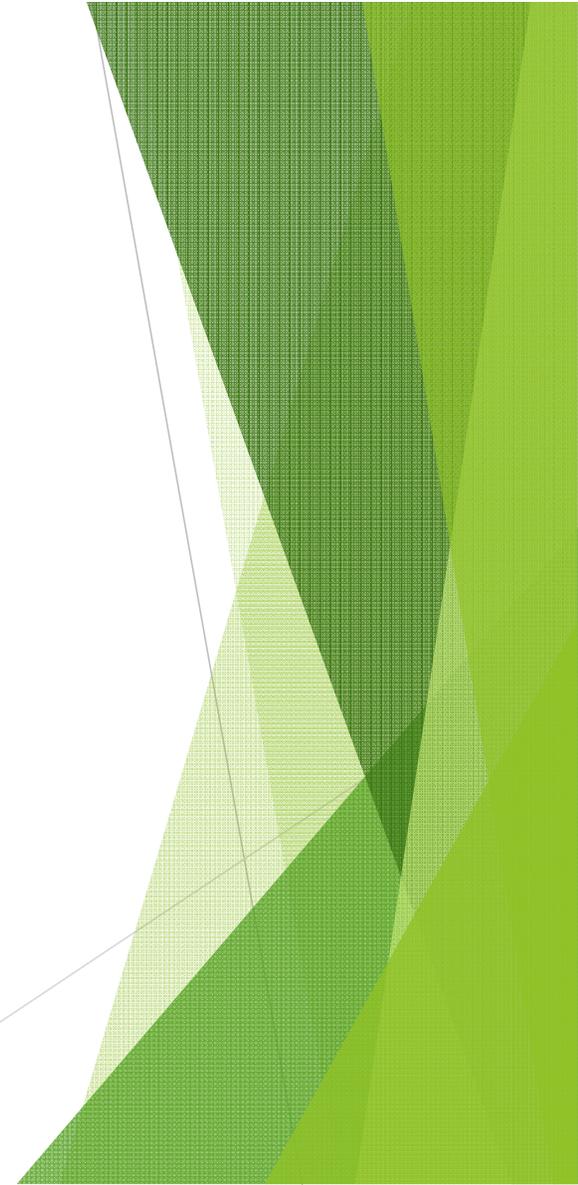
Course Plan

Learning Outcome	What Students Do to Master the Learning Outcome	Evidence Concerning How Well Learning Was Achieved
Describe changes in cognition, personality, and motor skills from birth to early adulthood.		
Use developmental theories to explain these changes.		
Apply what they learn to parenting, education, and public policy issues related to children and families		

- 
- ▶ OBE helps faculty focus on the learning that they have determined is important.
 - ▶ OBE focuses courses on helping students do things, not just memorize things.
 - ▶ Students who know the LOs learn more.
 - ▶ Assessment of CLOs helps faculty refine their courses over time.

The Cohesive Curriculum

- ▶ Coherence
- ▶ Synthesizing Experiences
- ▶ Ongoing Practice of Learned Skills
- ▶ Systematically Created Opportunities to Develop Increasing Sophistication and to Apply What Is Learned



The Curriculum Map

Course	PLO 1	PLO 2	PLO 3	PLO 4
100	I		I	I
101		I		D
102	D		D	
103		D		D
200	D		D	
229		D		D
230			D, M	
280		M		M
290	M		D, M	

The Curriculum Map

- ▶ Helps all faculty focus on the learning that they have determined is important.
- ▶ Systematically focuses the entire curriculum on helping students do things, not just memorize things.
- ▶ Developing the CLOs, PLOs, and curriculum map ensures that everyone has agreed on what each course is supposed to contribute.
- ▶ Assessment of PLOs helps faculty refine their curriculum over time.

Outcomes-Based Education

- ▶ Faculty collaborate to systematically plan and implement courses and curricula that are designed to foster student mastery of their agreed-upon learning outcomes.
- ▶ Faculty take an honest look at student learning, reflect on what they find, and use results to improve their courses and curricula.

Rubrics

- ▶ Represent faculty agreement on what your SLOs mean.
- ▶ If faculty use the same rubric, they are all helping students meet the same important criteria.
- ▶ Rubrics can be used in multiple ways: to clarify your expectations to students, to provide feedback to students, to allow self- or peer-feedback, to assess learning.
- ▶ Can speed up grading.

Authentic Assessment

- ▶ Focuses our attention on the kinds of learning that students will use for the rest of their lives.
- ▶ Emphasizes the deep and lasting learning we want to promote in our students.

Signature Assignments

- ▶ Can be integrated into the curriculum. This aligns courses with SLOs and encourages faculty to integrate relevant rubrics into the courses.
- ▶ Can be used to assess outcomes across a variety of courses.

Assessment

- ▶ Assessment is a tool. Just collecting evidence does not improve learning. A thermometer does not cure a fever. You can't fatten a pig by weighing it.
- ▶ Closing the loop is a crucial last step that is sometimes forgotten.
- ▶ Done well, assessment leads to incremental improvements in our courses and programs.
- ▶ The bottom line: assessment is for our students.

- ▶ **Comments?**
- ▶ **Questions?**
- ▶ **What did you learn about assessment this week?**