SMART Assessment:
Assessment for Academic Programs

Why do we assess students' learning?

- To measure how and what our students learn

- To improve education experiences (if necessary)

- To understand what our students are mastering

- To improve teaching pedagogy

- To understand curricular efficacy

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+ Consider…

1. Who are your students?
   - What do you know (or not know)about their abilities when they enter the program?
   - Helps you effectively assess their learning and make informed changes in pedagogy/educational practices

2. What do you want to learn about your students' learning?
   - Be curious about what/how/how well/when/where/why students learn or have difficulty learning
   - Make it collaborative!

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What goes in the SMART report?

- Closing the Loop: Previous FY Assessment Summary

- Program Mission

- Program Goal

- Student Learning Outcome

- SMART Feedback

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Mission Statement

- Ideally, it should answer
  - What do we do?
  - How do we do it?
  - For whom do we do it?

- A well-crafted mission statement
  - Short and concise.
  - Easily understood by those in and outside the unit.
  - Describes what we do, how we do it, and for whom we do it.
  - Connects to the broader college and university missions.

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Mission Statement: Example

- The **mission** of the Department of Sociology is to create a learning environment that promotes a scientific understanding of social life. Through teaching, scholarship, and service, the Department of Sociology provides educational experiences that encourage students to think sociologically about the significance of social structures and processes, multicultural perspectives, and emerging interdependencies among members of the global community. As part of a liberal arts education, the Department of Sociology encourages the development of critical thinking, effective communication, responsibilities of community membership, and other transferable skills as part of career preparation.
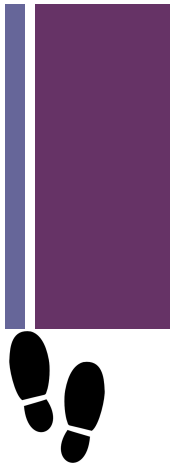
+ Mission Statement

■ **Why is this important?**

- Centralizes goals
- Makes us focus on why we do what we do and what kind of graduates we hope to produce.

■ **Take the next step:**

- Mission statements should be reviewed on a regular basis to assure they are still relevant to the program, the college, and the university.

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+ Goals

- Program goals are broad statements about the knowledge, skills, and dispositions you want students to possess when they leave your program

- Goals are LARGE, overarching statements…they are the next step down from your mission statement and should be derived from it

- Goals and outcomes are NOT the same! Your outcomes should not be restated goals. If they are, one or the other is at an incorrect level of measurement

Goals (and outcomes): Bloom's Taxonomy

Know		Comprehend	
Count	Read	Classify	Interpret
Define	Recall	Cite	Locate
Describe	Recite	Conclude	Make sense of
Enumerate	Record	Describe	Paraphrase
Find	Reproduce	Discuss	Predict
Identify	Select	Estimate	Report
Label	Sequence	Explain	Restate
List	State	Generalize	Review
Match	View	Give examples	Summarize
Name	Write	Illustrate	Trace

Apply		Analyze	
Assess	Instruct	Break down	Examine
Change	Predict	Characterize	Illustrate
Chart	Prepare	Classify	Infer
Choose	Produce	Compare	Limit
Compute	Relate	Contrast	Outline
Construct	Report	Correlate	Point out
Demonstrate	Select	Diagram	Prioritize
Determine	Show	Differentiate	Relate
Develop	Solve	Discriminate	Separate
Establish	Use	Distinguish	Subdivide

Synthesize		Evaluate	
Adapt	Invent	Appraise	Interpret
Categorize	Modify	Argue	Judge
Compose	Organize	Assess	Justify
Construct	Perform	Choose	Predict
Create	Produce	Compare & Contrast	Prioritize
Design	Propose	Conclude	Prove
Formulate	Reinforce	Critique	Rank
Generate	Reorganize	Decide	Rate
Incorporate	Rewrite	Defend	Reframe
Integrate	Structure	Evaluate	Support

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Goals: Example

- **Goal** 1: Gather research data to advance knowledge of human social phenomena.

- **Goal** 2: Produce research papers according to standards typical of sociology.

- **Goal** 3: Define and illustrate fundamental concepts in sociology.

- **Goal** 4: Demonstrate critical appreciation of social and cultural variation.

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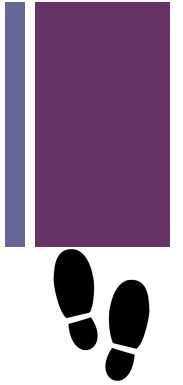
+ Goals

- **Why is this important?**
  - Orient the entire program to the end student product.
  - Allow us to discuss the bigger picture.
  - Keep us focused on a unifying vision of who we are as a program.

- **Take the next step:**
  - Consider whether your goals truly encompass everything a student should learn in your program.
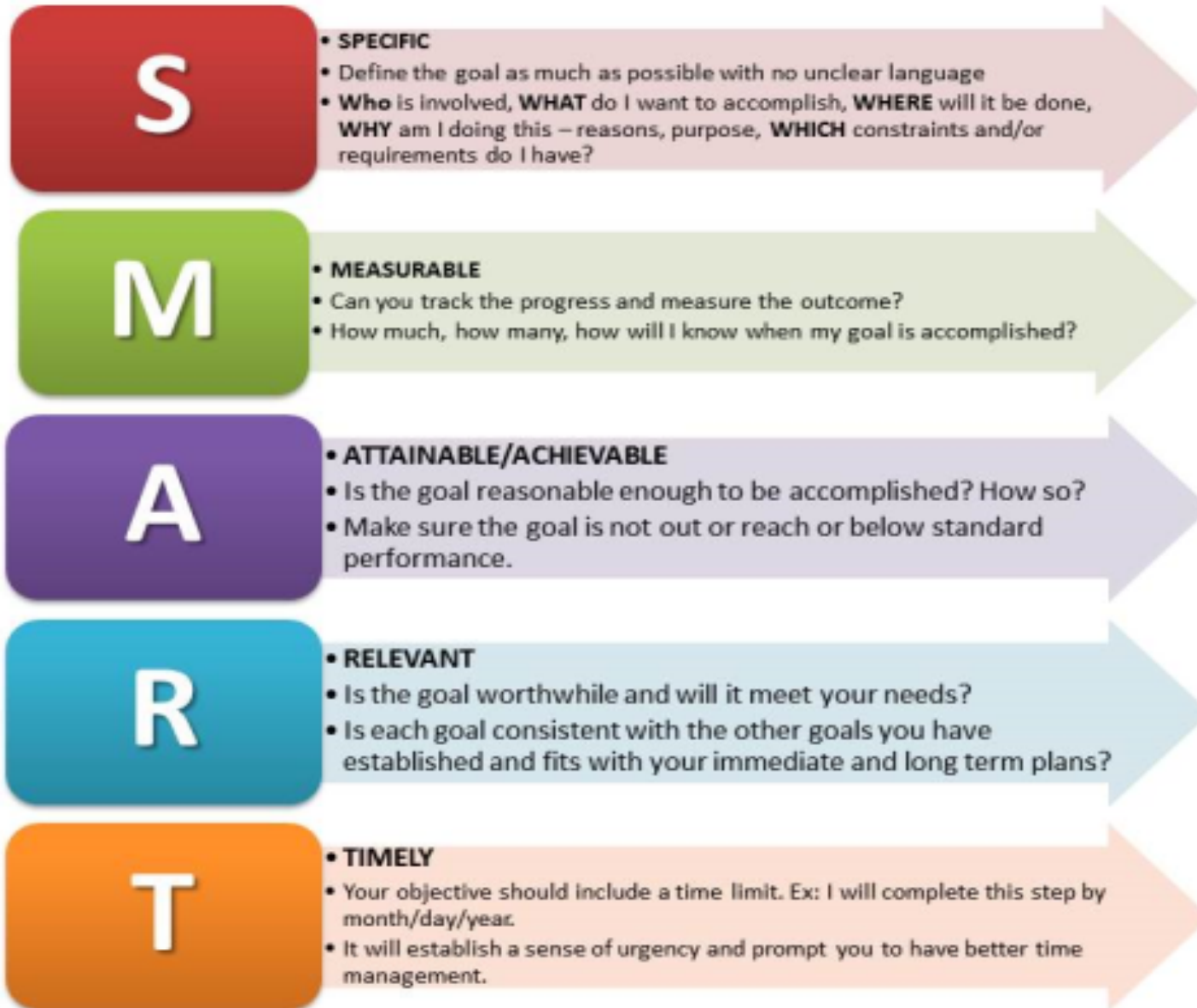 - Can you push beyond content goals and think about broader skills?

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+ Outcomes

- **What?** – description of what it is we want to achieve, the objective

- **How?** – how we measure progress, how will we determine if goal is achieved

- **How much?** – target standard of achievement

- **Who?** – who is responsible

- **When?** – when is the goal to be completed or when will we measure and take stock

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Five characteristics of well-written outcomes

S
- **SPECIFIC**
- Define the goal as much as possible with no unclear language
- **Who** is involved, **WHAT** do I want to accomplish, **WHERE** will it be done, **WHY** am I doing this – reasons, purpose, **WHICH** constraints and/or requirements do I have?

M
- **MEASURABLE**
- Can you track the progress and measure the outcome?
- How much, how many, how will I know when my goal is accomplished?

A
- **ATTAINABLE/ACHIEVABLE**
- Is the goal reasonable enough to be accomplished? How so?
- Make sure the goal is not out or reach or below standard performance.

R
- **RELEVANT**
- Is the goal worthwhile and will it meet your needs?
- Is each goal consistent with the other goals you have established and fits with your immediate and long term plans?

T
- **TIMELY**
- Your objective should include a time limit. Ex: I will complete this step by month/day/year.
- It will establish a sense of urgency and prompt you to have better time management.

+ Outcomes: Example

- Goal 1: Gather research data to advance knowledge of human social phenomena.
    - **Outcome** 1.1: Demonstrate the ability to plan and carry out original research projects.
    - **Outcome** 1.2: Demonstrate the ability to write up original research projects using standard reporting, analysis and citation techniques.
- Goal 2: Produce research papers according to standards typical of sociology.
    - **Outcome** 2.1: Demonstrate proper use of sociological writing in research papers.
    - **Outcome** 2.2: Integrate disciplinary terminology into essay papers.

- Goal 3: Define and illustrate fundamental concepts in sociology.
    - **Outcome** 3.1: Summarize basic knowledge, questions and issues in at least two substantive areas of sociology.
    - **Outcome** 3.2: Compare and contrast major sociological theories.
- Goal 4: Demonstrate critical appreciation of social and cultural variation.
    - **Outcome** 4.1: Demonstrate awareness of the politics of "difference" in American life and its inequalities.
    - **Outcome** 4.2: Compare and contrast life in at least two cultures or geographical areas other than one's own.

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+ Outcomes

- **Why is this important?**
  - Operationalize our broad goals into measurable statements.
  - Identify specific skills that allow us to know if we're meeting our goals.

- **Take the next step:**
  - Attempt to decouple outcomes from particular courses or activities.
  - Students should be exposed to a concept in multiple places. Assessing as many of them as possible is key.

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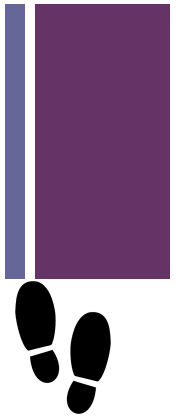
+ Measures

- What is a measure??
  - A **measure** (or *metric* or *means of assessment*) is the way in which we gauge progress toward our goal.
  - It should answer the **How?** question for accomplishing our goal.
  - A measure is most often numerical, and taking the **measurement** (or assessment) typically results in a *number.*

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+ Examples of possible measures

- Direct measures
  - Exam items (standardized or created)
    - Licensure/certification exams
  - Rubric score(s) (standardized or created)
  - Assignment grade(s)
  - Observations and evaluations in fieldwork

- Indirect measures*
  - Self-assessment/surveys
  - Reflections
  - Employment/placement rates
  - Course evaluation items related to content

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*to be used sparingly and for supplemental information

+ Matching a measure to an outcome

- Some hints:
    - As with exam questions, a measure may be a piece of an assignment, not the whole thing
    - All measures should not be at program end—formative assessment is important!
    - If using standardized versions of a measure, be sure all pieces are applicable
    - If a rubric is used, perhaps only a row or two are assessed for the particular outcome
        - Example: Students will properly synthesize information to create a publication-quality literature review

Research Rubric	Exceeds Expectations	Meets Expectations	Needs Improvement	Does Not Meet Expectations
Information Clarity	55%	45%	0%	0%
Literature Review	10%	15%	50%	25%
Integration of Knowledge	40%	50%	10%	0%
Writing Style	35%	55%	10%	0%
Overall	35%	41.25%	17.5%	6.25%

Matching measure to an outcome: Example

- Outcome 1.1: Demonstrate the ability to plan and carry out original research projects.

  - **Measure**: Program-created rubric on research

- Outcome 3.2: Compare and contrast major sociological theories.

  - **Measure**: Final exam questions in theory course

- Outcome 4.2: Compare and contrast life in at least two cultures or geographical areas other than one's own.

  - **Measure**: AAC&U VALUE Rubric on Intercultural Knowledge

    - Row 1: Cultural self-awareness

    - Row 2: Knowledge of cultural worldview frameworks

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+ Measures

- **Why is this important?**
  - Measures are the meat of the work that we use to do for assessment. If they are weak or do not match the outcomes, they are useless.

- **Take the next step:**
  - Move beyond a total assignment grade or test result as an assessment measure.
  - Concentrate on what the outcome is really asking students to demonstrate and measure only that.
 - Be sure assignment scores do not rely on subjective standards.

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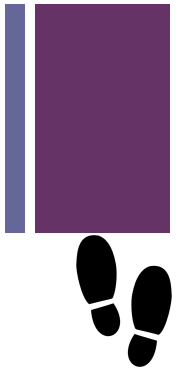
+Targets

- What is a target??

  - A **target** (or *desired outcome*) is the value or amount that we hope to achieve for our measure.

  - It should answer the **How Much?** question for accomplishing our goal.

  - A target is most often numerical, and after taking the measurement, we obtain an **outcome** (number) which is then compared to our target.

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+ Targets: Example

- Measure: Program-created rubric on research
  - **Target:** 80% of students will meet or exceed expectations on the overall research rubric
- Measure: Final exam questions in theory course
  - **Target:** On each subsection of questions (conflict theory, rational choice theory, symbolic interactionism), students will answer 75% of the questions correctly
- Measure: AAC&U VALUE Rubric on Intercultural Knowledge
  - Row 1: Cultural self-awareness and Row 2: Knowledge of cultural worldview frameworks
  - **Target:** 90% of students will reach a minimum of 'Milestone 2'
  - **Target:** 20% of students will achieve 'Capstone'

+ Targets
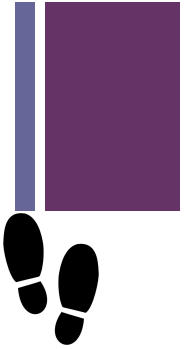
- **Why is this important?**
  - Targets make us think about what is realistic for students (as a whole) to accomplish. They are our way of deciding the level of acceptability for ourselves.

- **Take the next step:**
  - 100% is generally an unrealistic target. It also gives nothing to reach for. If students are meeting target 100% of the time, the target is too easy.
  - Consider a more realistic benchmark. Or, consider changing the assignment or outcome if students continue to meet it easily.

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Results

- Results must directly align to measures and targets

- If using multiple measures, you must have multiple data sets

- Use tables to display results

- Avoid generalizing/over simplifying results

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Results: Example

- Measure: Program-created rubric on research
  - 80% of students will meet or exceed expectations on the overall research rubric
- **Result**: 76.25% (Not met)

Research Rubric	Exceeds Expectations	Meets Expectations	Needs Improvement	Does Not Meet Expectations
Information Clarity	55%	45%	0%	0%
Literature Review	10%	15%	50%	25%
Integration of Knowledge	40%	50%	10%	0%
Writing Style	35%	55%	10%	0%
Overall	35%	41.25%	17.5%	6.25%

+ Results: Example

- Measure: Final exam questions in theory course

  - On each subsection of questions (conflict theory, rational choice theory, symbolic interactionism), students will answer 75% of questions correctly

- **Result**: Over 75% on 2 of 3 subsections (Partially met)

Subsection	% correct Section 301	% correct Section 302	% correct Section 303	Average % correct
Conflict Theory	79%	87%	86%	84%
Rational Choice Theory	97%	92%	94%	94.3%
Symbolic Interactionism	74%	76%	68%	72.7%

Results: Example

- Measure: AAC&U VALUE Rubric on Intercultural Knowledge
  - Row 1: Cultural self-awareness and Row 2: Knowledge of cultural worldview frameworks
    - 90% of students will reach a minimum of 'Milestone 2'
    - 20% of students will achieve 'Capstone'
  - **Result**: 95% and 90% met a minimum of Milestone 2 (Met)
 - **Result**: 12% and 9% met Capstone (Not met, but it was a stretch goal)

Intercultural Knowledge Rubric	Capstone 4	Milestone 3	Milestone 2	Benchmark 1
Cultural self-awareness	12%	41%	42%	5%
Knowledge of cultural worldview frameworks	9%	33%	58%	10%

+ Results

- **Why is this important?**
  - Move beyond anecdotes and faculty meeting talk.
  - Not much point to the rest of this with no results, huh?

- **Take the next step:**
  - If you took the next step in measurement, your results are going to look and feel so much more helpful to you!
  - Try to use a frequency distribution rather than an average if you use rubrics. Much more useful for nuance.

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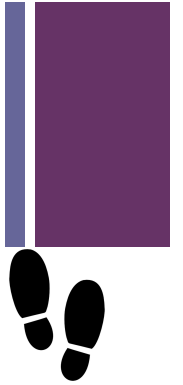
+ Interpretation

- What do you know now that you didn't know before?

- What was surprising (or not surprising) to you about the results?

- Does looking at the results give you answers or more questions?
  - If more, how can you modify your assessment plan going forward in order to answer them?

- Step back out of yourself and your possible defensiveness: what are students NOT learning that you want/expect them to?

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Interpretation: Example

- Measure: Program-created rubric on research
  - Result: 76.25% (Not met)
    - **Interpretation**: Looking at the rubric, it seems as though the literature review section is where students struggled the most. We're happy with the rubric, so we will encourage instructors to spend more time on lit review in class and help them develop corresponding activities.
- Measure: Final exam questions in theory course
  - Result: Over 75% on 2 of 3 subsections (Partially met)
    - **Interpretation**: Students struggled most with symbolic interactionism, which is consistent with informal feedback from theory instructors. An additional reading will be added to the course as well as the availability of an online module students can use on their own.

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+ Interpretation: Example

- Measure: AAC&U VALUE Rubric on Intercultural Knowledge
  - Result: 95% and 90% met a minimum of Milestone 2 (Met)
  - Result: 12% and 9% met Capstone (Not met, but it was a stretch goal)
    - **Interpretation**: We're pleased that the minimum benchmark for the rubric was met, but surprised we fell so far below our potential target for Capstone. We are going to reevaluate whether or not the target is realistic, possibly focusing on moving a greater percentage of students to Milestone 3 instead, as there is room for growth in that area. The rubric was somewhat challenging for students so we will also encourage instructors to be sure to review it in conjunction with the assignment.

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+ Interpretation

■ Why is this important?

- This is your opportunity to really reflect on what you're doing well and what you can improve upon. It's not meant to make you feel bad or be discouraging!

- It will help guide you down the path of making improvements. If you speculate on why things went well or badly, you can begin to make the necessary changes.

■ Take the next step:

- Everyone in the program should participate in this activity. Try bringing some surprising or concerning results to a program meeting and have all faculty around the table offer interpretations. Getting the conversation started is half the battle.

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Closing the Loop: Annual Assessment Summary

- For each outcome from the previous year assessment SMART report (FY16 in this case), respond to the following:
  - List the outcome
  - For this outcome, what actions/modifications did you propose to implement?
  - Did you implement them?
  - Did you see an impact in your program?
    - If no, will you continue to monitor this outcome? Will you drop this as an outcome? Why? What happens next?
    - If yes, what was the impact? How did it improve student learning, service, instruction, etc?

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+ Closing the Loop: Annual Assessment Summary: Example
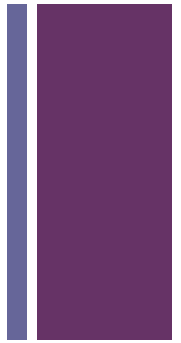
- **Goal 2, Outcome 2.1:** Demonstrate proper use of sociological writing in research papers.

  - Our students continue to struggle to strengthen their writing skills. Our attempt during FY16 to use a score sheet to help them with this yielded poor results. The score sheet was used by students and instructors to rate papers on common writing errors. We expected there would be rough agreement in the skills a student to needed work on. In practice, we discovered that it was difficult for both instructors and students to quantify the skills we were attempting to assess. Student/faculty agreement occurred only 48% of the time.

  - **Closing the Loop:** As we feel there is no skill as important as writing to our students' success, during FY17 we revised the score sheet and created a new handout to more clearly explain expectations to students. This year, all of our faculty utilized these tools in several different classes over both semesters. This year's evidence shows student/faculty agreement on skills is up to 62% and we hope further use of the tools will improve understanding.

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# + Closing the Loop: Annual Assessment Summary

- **Why is this important?**
  - Helps you see improvements and celebrate them!
  - Keep track of consistent areas in need of attention
  - Avoid past mistakes
  - What's the point of making changes if you're never checking to see if they made a difference?

- **Take the next step:**
  - A clear interpretation of results each year will assist a clear closing the loop the following year
  - Changes you make in response to data shouldn't be cosmetic—make them work for you!

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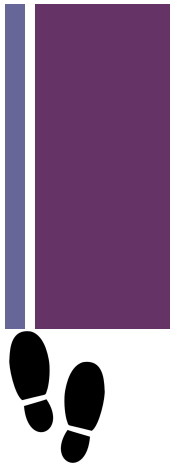
+ General Suggestions

- Don't include EVERYTHING, but don't include NOTHING
  - An outsider (like me!) should be able to read the report with clarity
  - It is unnecessary, however, to include items like assignment prompts and instructions.

- Better planning leads to better data and more useful results
  - Think critically about what you really want to know about your students
  - Curiosity, not compliance!

- If you're ready to take any of those next steps, contact me!!

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+ Contact ME!!

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