Using Assessment Results: Setting Benchmarks

Faculty Senate Assessment Committee
Based upon MSCHE workshop by Jodi Levine Laufgraben

Shirley Lin
FSAC co-chair
Professor, Chemistry

Spring 2016
Today

Goals

- Assist departmental assessment leadership in setting expectations for student performance

Outcomes

- Define benchmarking in assessment of student learning
- Describe various methods for benchmarking student work
- Apply different methods of benchmarking to assessment results
Benchmarking

- something that serves as a standard by which others may be measured or judged

- For student learning assessment, this is sometimes called setting target levels of performance or setting expectations
Assessment Cycle

1) Select learning outcome(s) to be assessed.

2) Locate demonstrations of outcome(s) and collect student work products.

3) Analyze student work and determine to what extent students are meeting expectations.

4) Share and discuss results internally.

5) Determine (if appropriate) actions for program improvement (and also the assessment activities)

Clearly Articulated Learning Outcomes
Benchmarking and FSAC Rubric

| Methodology | Collection | Documentation of each learning outcome being measured.
|-------------|------------|-----------------------------------------------------------------
|             |            | Hitting the day.
|             |            | Student work either is an appropriately collected sample (simple random or systematic), a population, or otherwise suitably selected to ensure that results are representative and the amount of work is feasible for the assessment committee.
|             |            | Assessment materials do not include student work and/or are gathered on a volunteer or an ad hoc basis. The collected materials are either too little or too much for the committee to reasonably examine.
| Collaborative Effort | Evaluation and analysis of student work is shared by multiple faculty members and, when appropriate, procedures for improving rater agreement (inter rater reliability) are indicated. | Evaluation and analysis of student work is shared by multiple faculty members.
|             |            | Assessment of student work or other assessment materials takes place in isolation and/or analysis of results is primarily handled by a single individual.
| Performance | Target level or performance expectations are indicated for students at various points within the program reflecting expected development | Target level or performance expectations are indicated for the assessment and appear appropriate.
|             |            | Criteria for different levels of performance have been indicated, but expectations are not clearly identified or are inappropriate (much too high or too low).
Midn X scores 55 on an exam.

Did Midn X “do well”?

To answer this question, we must compare this score to “something else” (the benchmark) and decide where should the performance of Midn X be
Local Standard

Suppose 35 is passing and 80 is a perfect score

Question answered: Are our students meeting our expectations?

Challenges:
• Establishing sound performance criteria
• Being sure criteria are externally informed
External Standard

Suppose 35 is passing and 80 is a perfect score on a published exam (99th percentile)

Question answered:
Are our students meeting external standards?

Challenges:
• Do the external standards match with our internal learning outcomes?

Aspiration
• How well do our students do compared to peers?
Value-Added Benchmark

Suppose Midn X scored 25 a year ago

Question answered:
Are our students improving?

Challenges:
• Is growth due to us?
• Imprecise assessments can mask growth
• Is this question relevant?
Historical Trends Benchmark

Suppose our class average is 65 now and 40 three years ago

Question answered: Are our teaching and curricula improving?

Challenges:
• Using the same assessment
• Changes in students and curricular over time
Strengths and Weaknesses Benchmark

Suppose Midn X scored a 65 for content knowledge and a 45 for real-world applications.

Question answered:
What are our students’ relative strengths and areas for improvement?

Challenges:
• Getting “sub-scores” that are truly comparable
Which standard or benchmark should you use?

- Each has advantages/disadvantages
- Each gives a somewhat incomplete picture
- Multiple perspectives give the most balanced picture of student learning
- Remember the original goal and purpose of assessment
Setting Performance Targets

- Is Midn X’s 55 good enough?
  - Why is 35 passing?
  - Why is being above average good enough?

- What level is minimally adequate? Why?

- What level is exemplary? Why?

- How many students should be minimally adequate? How many students should be exemplary?
Setting Benchmarks

- Have others set standards?
  - Disciplinary associations
  - On-line searches
  - Colleagues in peer institutions/programs

- Who might you involve in discussion?
  - Students
  - Faculty in your program
  - Faculty in more advanced programs
  - Employers
Use Samples of Student Work to Set Benchmarks

- What does an “A” look like?
- Would this paper embarrass us?
- Would this paper make us proud?
- Why?
Express Targets as Percentages, Not Averages

- “90% will score 65 or better”

- NOT “The average will be 65”
Your Targets May Vary

- Is this competency essential?
  - Calculating dosages
  - Delivering effective oral presentations

- Can a target be achieved along the way?

- How can performance expectations be communicated?
Resources:

- Faculty Senate Assessment Committee Members
  - Engineering & Weapons:
    - Dr. Steve Graham and Dr. Deborah Mechtel
  - Humanities & Social Sciences:
    - Dr. Michelle Allen-Emerson and Dr. Silvia Peart
  - Math & Science:
    - Dr. Nick Frigo and Dr. Shirley Lin
  - Professional Development:
    - LT C. Hirsch, LT C. Ronckett (incoming)
  - Leadership Education & Development:
    - CDR Joe McInerney, CDR Lon Olson (incoming)

- Office of the Academic Dean & Provost
  - Dr. Katherine Cermak

- Website: [www.usna.edu/Academics/Academic-Dean/Assessment/](http://www.usna.edu/Academics/Academic-Dean/Assessment/)
  - Workshops on assessment in conjunction with Center for Teaching and Learning
  - One-on-one consultations with departments, faculty, and staff
  - Yard-wide assessment events