FROM “GOOD TO GREAT” IN ASSESSMENT: HOW TO DEVELOP MORE EFFECTIVE ASSESSMENT FINDINGS AND ACTION PLANS

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A Quick Review: Goals for 2011-2012

On October 1\textsuperscript{st}, here’s what we hope to see in the WEAVE reports and narratives:

- More faculty/staff involvement within each department
- Additional learning outcomes measured (so that all outcomes are measured in a three-year cycle)
- Data showing that changes made to curriculum, pedagogy, advising, services, etc. were related to higher student learning outcomes. In other words, if scores from 2011-2012 are significantly higher than the previous year, please highlight these.
- Again, we need to have assessment findings from 100% of departments for our Higher Learning Commission requirements
MISSION ACCOMPLISHED?

- You’ve made it—the end of the spring semester has arrived!
- The tests have been administered, essays have been completed, and surveys collected.
- Now what...?
PLANNING YOUR SUMMARY AND ANALYSIS

- Draw upon your training and skills as a researcher—these certainly apply to assessment 😊

- What kinds of questions do you want your assessments to answer?
  - Why did you conduct the assessment?
  - What are you and your audience(s) looking for from the results?

- What kinds of achievement targets, standards, or benchmarks are you using?
  - Results should be compared against these targets.
USING TECHNOLOGY FOR DATA INPUT AND ANALYSIS

- Scanners and optical mark Readers to read bubble sheet tests and forms.
- Software programs that facilitate data entry and analysis (Excel, SPSS, SAS, etc.)
- Turning Point clickers used for data collection
DOCUMENTATION AND STORAGE

- Make sure your results are saved, with backups.
- Consider saving:
  - A listing of raw data
  - Notes on coding
  - Copies of completed student work, rubrics, surveys, tests, and the like.
- When other faculty are reviewing students’ work, a copy of the students’ work should be made, with the students’ names removed
- If you choose to use a sample, be sure the sample is representative, and not just the best work.
What kind of results do you have?

- **Dichotomous results** – Two possible values, such as part-time/full-time enrollment.
- **Categorical Results** – Break the students into discrete categories (i.e., those from different concentrations)
- **Ordered (or Ranked) Results** – Results can be put into a meaningful order.
- **Scaled (Interval and Ratio) Results** – Numerical results, and the difference between, e.g. a 1 and a 2 is the same as the difference between a 4 and a 5.
- **Qualitative Results** – Open ended text-based results, such as reflective results, notes from focus groups, and responses to open-ended survey questions.
**Five Basic Ways to Summarize Results**

1. **Tallies**
   - Counts of how many students earned each rating or chose each option.
   - If using a test or rubric, you can tally how many students answered each question correctly.
   - Can be useful with small numbers of students

2. **Percentages**
   - Easier to understand than raw numbers.
   - Percentages make it easier to compare groups of different sizes (since class sizes can vary from year to year)
FIVE BASIC WAYS TO SUMMARIZE RESULTS

3. Averages
   - Decide whether the mean, median, or mode best represents that data.
   - This is probably the most common method.

4. Aggregates: Summarizing Results into Overall Scores
   - An overall score. Rubrics and tests can be aggregated into a single score or grade. This can help in giving feedback to students on overall performance and help faculty determine course grades.
   - Sub-scores. Grouping together related items on a rubric, test, or survey to address a common subject or learning outcome.
   - Leaving things be. Don’t create an aggregate score if you don’t need it.
FIVE BASIC WAYS TO SUMMARIZE RESULTS

5. Qualitative Summaries
   - Summarizing reflective writing, open-ended survey questions, and notes from focus groups.
     - **Quick read-throughs.** Read all the responses quickly to get a general impressions.
     - **Grouped listings.** For assessment info composed of brief statements that fall into reasonable discrete categories.
     - **Thematic analysis.** Extensive qualitative analysis done by identifying the themes with each response and grouping the responses by common themes, patterns, links, and relationships.
REPORTING YOUR FINDINGS: DESCRIPTION AND INTERPRETATION

• In summarizing your results, include specific numbers/percentages when possible.
• Report differences from previous years (if data were collected), and highlight why changes might have occurred.
• Not every finding needs to be reported—focus primarily on the highest and lowest items.
• Compare new data to achievement targets. Did students meet or deviate from expectations?
• Identify what lessons your faculty learned from the data about your students.
• Determine the broader implications that can be drawn about your program.
ENSURING RELIABILITY IN YOUR SCORING/RUBRICS

- Calibration of scoring across instructors and sections is very important.
- Optimal to have a team of faculty review the papers/tests/projects being used for assessments.
- Take some time to review several common papers, which ensures greater inter-rater reliability.
- Identify areas of disagreement, which should be discussed and clarified.
EVALUATING THE VALIDITY/RELIABILITY OF YOUR ASSESSMENTS

- How well does your sample reflect all your students? Is it representative?
  - Consider group demographics
- How precise are your sample results?
  - Be aware of error margin when reporting results.
- How well does each test item discriminate between high and low scorers?
  - Students who answer any one test item correctly should do better on the overall test than students who get the item wrong, and vice versa.
  - Items that don’t follow this pattern are probably not working correctly; something is being read in the question that is not intended.
Evaluating the Quality of Your Assessment Instruments

- How difficult is each test item?
  - It can be helpful to calculate the percentage of students who answered each item correctly or earned acceptable ratings on each rubric criterion.

- The 50 Percent Rule
  - If more than half the students got a particular test question wrong or fail a particular part of the assignment, the problem probably likes not with the students but with teaching methods, curriculum design, or the test or assignment itself.
  - The question might be asked in a way that causes students to misinterpret.
  - The question might pertain to a trivial concept that students overlooked.
EVALUATING THE ACCURACY AND QUALITY OF YOUR ASSESSMENT STRATEGIES

Do other assessments corroborate your findings?
- Students scoring well on a writing sample assessment should also score well on published writing tests and receive high ratings for writing skills from professors.

Do results fall in appropriate patterns?
- Students should score better at the end of a program than at the beginning.
- High grades should generally translate to high assessment scores.
- Pre-subject assessment should predict performance to some extent.
Are Results Too High or Too Low?

- Acceptable scores are usually between 60-90%.
- An unusually high number of “excellent” scores could indicate lax scoring. Review standards and discuss whether they can be raised.
- For scores that are lower than expected, check to be certain that the students’ performance is corroborated by classroom scores.
COULD YOU ANALYZE YOUR RESULTS IN OTHER WAYS?

- Summarizing results only describes student learning.

- Statistical analysis can explain, predict, or explore, considering questions like:
  - “What kind of students are most likely to drop out?”
  - “How did students perform in the traditional course, as compared to the redesigned or online course?”
  - “What instructional strategies most help students learn to think critically?”
  - “Why did student learn X but not Y?”
  - “What general education courses best prepare students to do well in this program?”
  - “Are there any other relationships between results?”
ACTION PLANS: THE BASICS

- Celebrating Successes
- Addressing Weaknesses
- Being Specific in Necessary Follow-Up Tasks
CELEBRATE GOOD ASSESSMENT RESULTS

- Recognize students for outstanding work, perhaps in a departmental showcase or newsletter.
- Provide a public forum for students to present their work, such as a student research conference.
- Make outstanding papers available to other students as models (with permission).
- Share your work in the Scholarship of Assessment.
ADDRESS DISAPPOINTING ASSESSMENT RESULTS

- Any of the following components could be at fault:
  - Learning outcomes
  - Curriculum
  - Teaching methods
  - Assessment instrument or strategy

- Do not:
  - Sweep results under the rug.
  - Take a punitive approach.
Taking Action on Your Assessment Results

- Consider changes to your learning outcomes:
  - Do you have too many outcomes? (3-7 is recommended)
  - Are your outcomes appropriate? (Using various levels of Bloom’s Taxonomy)
  - Could you clarify or refine your outcomes? (Is the wording used too obtuse/academic?)

- Consider changes to your curriculum:
  - Learning outcomes should be mapped to specific classes
  - Look at support services such as tutoring
  - Examine the electives taken by students who are and are not performing well

- Consider changes to teaching methods
- Consider changes to assessment strategies, timing, and instruments.
USE ASSESSMENT RESULT TO INFORM PLANNING AND RESOURCE ALLOCATION

- If too many learning outcomes are being assessed, drop the attention given to some of them.
- If learning outcomes are not being achieved, more attention may be allocated to teaching those outcomes.
- May need additional staff (with specific expertise).
- May need to add a course.
- Give funding priority to requests/initiatives that are supported by assessment evidence.
Creating the Action Plan

- After determining needed changes (to learning outcomes, curriculum, budget allocation, etc.), create the action plan:
  - Outline the steps necessary for each change.
  - Determine who will implement the changes
  - Determine a timeline for implementing changes.
  - Describe any resources that are needed

- It is best to have documentation of the changes made through these action plans (e.g., in syllabi, the course catalogue, meeting minutes)
A Few More Areas for Future Development

- Encouraging higher order thinking as students progress through the curriculum
- Making sure that the curriculum and pedagogy is more directly tied to your learning outcomes (i.e., curriculum mapping)
- Using multiple types of assessments
  - Assessing students’ learning in high impact experiences (internships, undergraduate research, service learning, study abroad)
  - Student surveys gauging their learning/satisfaction in the department
UPCOMING ASSESSMENT WORKSHOPS IN 2012-2013

- August 2012 - New Faculty Orientation Presentation
- September 2012 - Workshop on General Education Assessment
- October 2012 - Workshop on Assessment Basics
- November 2012 - Workshop on Department/Unit Assessment Teams
- January 2013 - Workshop on Major Field Tests /ETS-PP/Roo Writer
- February 2013 - Workshop on Departmental Satisfaction/Learning Outcomes Surveys
- March 2013 - Workshop on Curriculum Maps
REFERENCES
