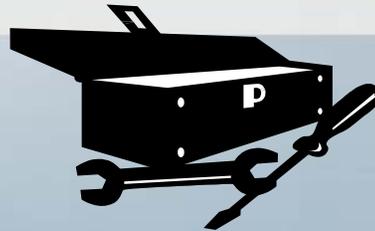


VAG 2005 Spring Drive-In: Communicating Assessment Results



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Overview

- 1) The Big Picture
- 2) The Meso- (Middle) Picture
- 3) The Nitty Gritty
- 4) Activity: Improving the Presentation of Results
- 5) Discussion/Q & A

THE BIG PICTURE

- Where does communicating assessment results fit into the assessment process?
- Creating a productive assessment climate

Communicating Results...

...bridges the gap between analyzing assessment data and using the results for program improvement.

Creating a Productive Climate

- Identify areas of need,
- but also...
- Showcase areas of strength
- Encourage administrators to reinforce faculty for good assessment practices (even if the results aren't flattering).
- FOLLOW THROUGH

Creating a Productive Climate

- Make program goals highly visible...all of the time
- Ensure that stakeholders have been involved in assessment process
- Allocate time and plan activities to communicate results
- Provide money, prizes, recognition, etc. for quality assessment.

Meso-Picture

- Who, What, How, and to Whom?
- Identifying what's important

Meso-Picture: Who, What, How, and to Whom?

- Source of Information (Who)
 - The Message Communicated (What)
 - Mode of Presentation (How)
 - The Audience (To Whom)
-
- Note: Majority of information in this section is adapted from:
Erwin, T. D. (1991). *Assessing student learning and development: A guide to the principles, goals, and methods of determining college outcomes*. San Francisco: Jossey-Bass.

The Source (Who)

- Source: Person(s) who convey(s) assessment results
 - Intrainstitutional (example, faculty)
 - Interinstitutional (example, dir. of asmt.)
 - External (example, SACS committee)

QUIZ

- Who would be the best person to report results for these purposes?
 - Program improvement
 - Assessment of general education
 - Commentary of quality to state officials

The Mode (How)

- Types of reports
 - Progress
 - **Final**
 - Technical
 - Summary
 - Media

The Mode (How) Continued...

Components of final report

- 1) Objectives
- 2) Assessment Methods
- 3) Analyses of Results
- 4) Uses
- 5) Future Assessment Plans and Goals

The Message (What)

- Positive, negative, mixed
 - Positive: everyone's happy—make sure you showcase these results if they are meaningful.
 - Mixed: more common
 - Negative: See next slide...

The Message (What) Continued...

- **Negative Results: What to Expect**
 - Blame of the instrument
 - Blame of the method
 - Blame of the source
- **Negative Results: How to Focus on Problems**
 - Spend time tightening methodology
 - Don't surprise stakeholders (communicate early and often)
 - Avoid analysis at the individual faculty level
 - Dig into problem areas with subsequent analyses
 - Celebrate good assessment

The Audience (To Whom)

- Presentation should be geared toward audience.
- Example: quantitative reasoning.
 - Do the college president and math faculty need to have the same level of detail?
- Probably not
 - Faculty members needs diagnostic information.
 - The president needs an executive summary.
 - *Sometimes I give the same report, but include an executive summary at the front (upper level administrators can read as little or as much as they want).

The Audience (To Whom) Continued...

- Careful with complexity
 - Include complicated analyses when warranted by research questions, but stick details in technical report or appendices, or talk to someone individually after presentation.
 - Simplify language when talking to most audiences.

Identifying What's Important

- Interpretation...please!
- Use statistics as a guide.
- Identify convergent findings.
- Discuss discrepancies.
- Tell a story.
- Dive in deeper when something looks unusual.
- Provide implications of results such as curriculum change or updated technology.

The Nitty Gritty

- Understanding data
- Summarizing data
- Presenting data

Now that you've collected the data...

- Clean up the data before analyzing
 - Multiple responses
 - Inapplicable responses
 - Missing data
 - Data entry errors

- Keep track of how you handled unusual data points

What kind of data do you have?

- Qualitative: open-ended questions, interviews, speeches
 - *What was the biggest surprise about college?*
- Categorical: numbers used to label categories and are arbitrary
 - *Which of the following best describes your employment setting? (1 = small animal practice, 2= mixed, 3=equine)*

What kind of data do you have?

- Ordered: responses are ordered in a logical manner
 - *What is your salary range? (1 = under \$15,000; 2 = \$15,000 - \$19,999; etc.)*
- Scaled: Scores on a continuous scale
 - *SAT scores, GPA, test grades*

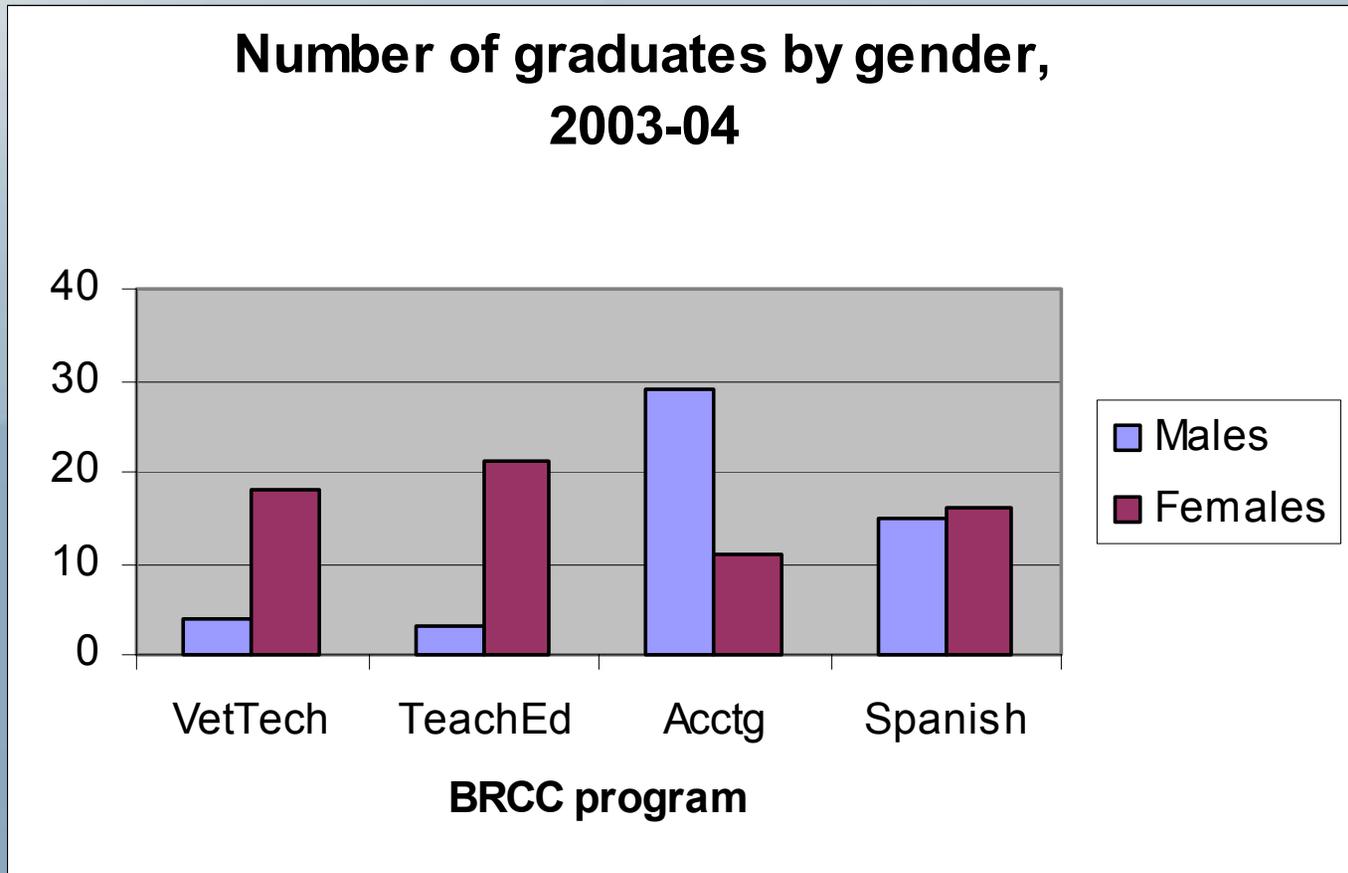
Summarizing the data

- Qualitative
 - Group responses together; combine similar responses into larger category
 - Provide a tallied list of responses and/or modal responses
 - Could do a bar graph if the picture tells an interesting story
 - Bar graphs: good for comparing information in frequency or percentage distributions

Summarizing the data

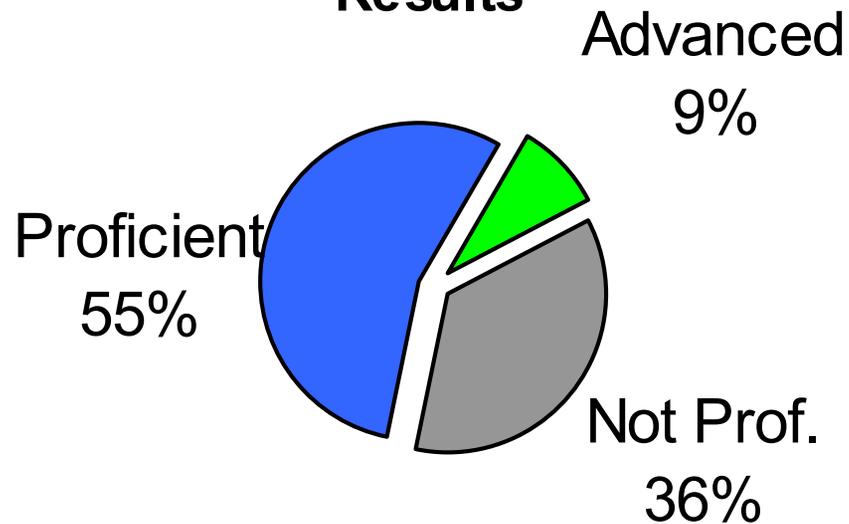
- Categorical (nominal) data
 - Like qualitative data, the most you can do is list frequencies (tallies) and modes
 - Bar graph, pie chart are options
 - Pie charts: Divides up total amount of some variable. Each “wedge” represents a portion (usually percentage) of the total. Often used for budgets.

Example: Bar Graph



Example: Pie Chart

VCCS Quantitative Reasoning, Spring 2004 Results



Summarizing the data

- Ordered (ordinal, ranked) data
 - Results are meaningful in their order: a “2” is higher than a “1,” for example.
 - In addition to mode and frequency data, you can also calculate a median as a way to describe the data.
 - There are nonparametric statistics that can be applied to ordered data.

Nonparametric statistics

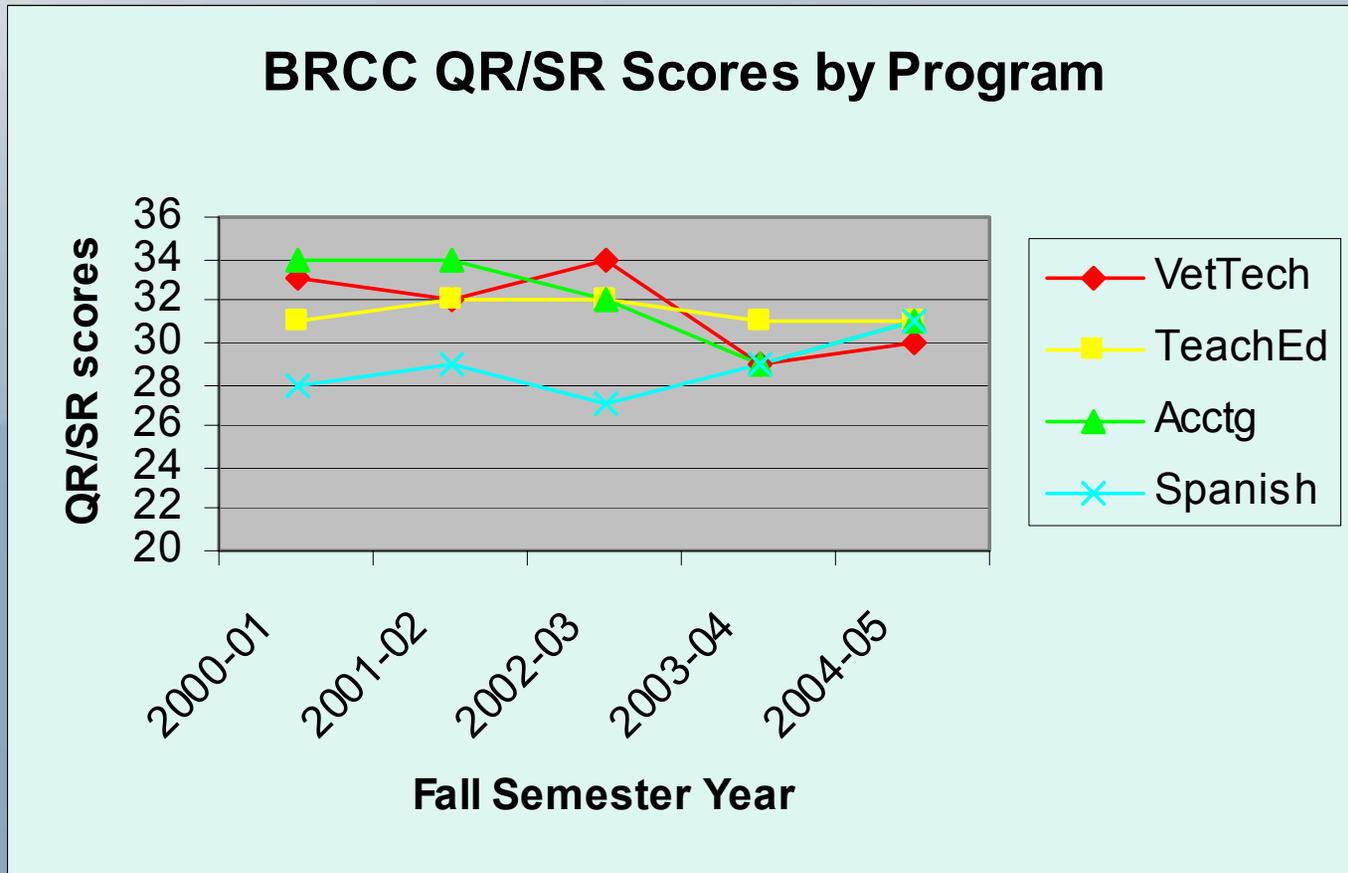
From: www.tufts.edu/~gdallal/npar.htm

Some Commonly Used Statistical Tests		
Normal theory based test	Corresponding nonparametric test	Purpose of test
t test for independent samples	Mann-Whitney U test; Wilcoxon rank-sum test	Compares two independent samples
Paired t test	Wilcoxon matched pairs signed-rank test	Examines a set of differences
Pearson correlation coefficient	Spearman rank correlation coefficient	Assesses the linear association between two variables.
One way analysis of variance (F test)	Kruskal-Wallis analysis of variance by ranks	Compares three or more groups
Two way analysis of variance	Friedman Two way analysis of variance	Compares groups classified by two different factors

Summarizing the data

- Scaled data
 - Gives you the most options in presenting the data: use parametric statistics (which look at variance around the mean)
 - Mean, median, standard deviation
 - Line graph would be good choice since variable is on a continuous scale
 - Line graphs: Used to display information about a single variable. Points are plotted, then connected by a line.
 - To summarize data, could also pool data into categories and construct a frequency distribution

Example: Line graph



Presenting your data

- There is not one correct way to summarize and present your data. You need to take into account:
 - Who is reading/using it?
 - Is it for descriptive purposes? Will it be used to make major changes?
 - What type of report was requested?
 - Does the audience want you to look beyond the data for trends, to surmise about reasons, or simply to describe the data that was collected?

Tables and Graphs

- Title should be descriptive
 - Blah: *Student Responses**
 - Aaahhh! : *Freshman Self-Ratings of Critical Thinking Skills*
- Be creative! Try using questions or “headlines” as titles
 - *Why Do Students Drop Out?*
 - *Women Are Generally More Satisfied Than Men*

*

Examples borrowed from *Assessing Student Learning: A Common-Sense Guide* by Linda Suskie (2004)

Tables and Graphs

- Should be able to stand on their own ... readers should be able to understand them without referring back to text.
- Label headings and axes
- Don't use abbreviations; avoid jargon
- Convert numbers into percentages and round to whole numbers
- Not too much info in one place; consider multiple tables or graphs if crowded

Tables and Graphs

- Should “tell the story”
- Highlight trends and differences for the reader
- **Example table:** from *Assessing Student Learning: A Common-Sense Guide* by Linda Suskie (2004)

Table 1

Example of “highlighting the differences” for the reader

Percent of first-year students saying chances are “very good” that they will:	St. Stephen’s University	All Private Universities	Difference
Get a bachelor’s degree	78%	74%	+4%
Be satisfied with your college	70%	49%	+21%
Make at least a “B” average	51%	42%	+9%

Giving your report impact

- Visual impact: important since many readers scan, rather than read, the report
- If you are comparing your department or college to others, put your results in **bold** or use shading for the columns of a table
- Pull quotes

Credibility

- Proofreading
- Cite sources
- Offer to make original data available upon request

Credibility

- How well does the sample used for assessment reflect the population?
 - Talk about your sample. If it is not representative of the population, come clean.
 - If data is available, lay out comparison for the reader (esp. an external audience)
 - “We sampled 246 students, 145 female (59%) and (41%), which is reflective of the overall gender split at our institution (60% female; 40% male).”

Go beyond the statistics ...

- People may not want to (or know how to) take the time to figure out what it all means. Interpret!
- “Math phobia” phenomenon – readers may glaze over from reading too many numbers, percentages, etc. Interpret!

Engage the audience

- Not too much information
- Put it in an order that makes sense to the reader
- Avoid unsurprising information
 - Not really surprising if you report more females than males are entering the Nursing program.

Reviewing your report

- Have various people review it prior to submission
- At least one person who is not familiar with the assessment should read it and offer suggestions on how to improve clarity

Discussion/Activity

Discussion

- How would you respond to someone who tells you that "no one ever reads assessment reports?"
- You are trying to convince your institution that assessment is important, and you are going to start by explaining how assessment is both an art and a science. What can you tell them?
- You are preparing yet ANOTHER report for the Health Professions department. You know that every year, they check off the box for "completed assessment report" and put the report in a filing cabinet. What can you do differently this year to see that the report is used to help the department (and your time is not wasted)?
- The Nursing department administered a 10-item survey to its graduates, with 8 questions on the front and two on the back. At least half of the respondents did not know there were questions on the back of the sheet, so you have a lot of missing data. What are some ways to handle the data from the last two questions?