Building a Culture of Inquiry: Analysis & Interpretation

Vicki L Wise, PhD
Director, Assessment and Research EMSA
Portland State University

Oregon Assessment in Student Affairs Conference
Student-Centered Assessment: Voices, Data, and Meaning
You are here, so what are the questions you need answered in this session?

Take 5 minutes to write down a question you have, if you have any.

Remember, others probably have the same questions too!
ENVISIONING A CULTURE OF INQUIRY

INQUIRE PURPOSEFULLY
- Determine what information is needed to move priorities forward
- Develop a relevant question
- How will the question be answered? Determine the process to be used to investigate the question

INVESTIGATE
- Review relevant knowledge and information around the topic
- Identify or create appropriate methods for data collection & analysis
- Collect data

ANALYZE & INTERPRET
- Data analysis
- Comprehensive review (for example, comparison to benchmarks and national standards)
- Construct meaning from data

SHARE INFORMATION
- Identify stakeholders
- Frame interpretations of data to make meaning for stakeholders
- Identify & implement method for communicating to interested parties

TAKE ACTION
- Based on results, determine necessary changes or interventions
- Develop strategies and allocate resources to implement change
- Determine if action was effective

---
Division Excellence through Daily Effectiveness, Problem Solving, Responsible Decision Making, Successful Planning and Student Success

Developed by Student Affairs Strategic Planning Initiative 6
Questions or comments, contact Student Affairs Research, Evaluation & Planning (Maureen.Cochran@oregonstate.edu)
Analyze/Interpret

Analyze & interpret data in light of your original questions.

Analyze & interpret data dependent upon whether you used
• quantitative vs. qualitative,
• direct vs. indirect,
• formative vs. summative methods.
## Quantitative or qualitative methods?

<table>
<thead>
<tr>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers/numeric values</td>
<td>Text/narrative</td>
</tr>
<tr>
<td>Breath</td>
<td>Depth</td>
</tr>
<tr>
<td>Who, what, where and when</td>
<td>Why &amp; how</td>
</tr>
<tr>
<td>Faster to collect</td>
<td>Longer to collect</td>
</tr>
<tr>
<td>Easier to report and analyze</td>
<td>Harder to report &amp; analyze</td>
</tr>
<tr>
<td>Generalization &amp; representation</td>
<td>Possibly transferable</td>
</tr>
<tr>
<td>Surveys</td>
<td>Interview</td>
</tr>
<tr>
<td>Longitudinal tracking</td>
<td>Focus groups</td>
</tr>
<tr>
<td>Rubrics (if aggregating scale numbers)</td>
<td>Portfolios</td>
</tr>
<tr>
<td>Usage numbers</td>
<td>Rubrics (if using descriptions)</td>
</tr>
<tr>
<td></td>
<td>Document/artifact analysis</td>
</tr>
</tbody>
</table>
Let’s compare…

<table>
<thead>
<tr>
<th>Need</th>
<th>Quant</th>
<th>Qual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need satisfaction data</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Need data to overhaul a program or end a program</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Need to conduct an assessment in a short time and no assessment help</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Need to provide strong measures of student learning</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Need to report data to multiple stakeholders (e.g., administrators,</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>students, community members)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Direct or indirect measures?

<table>
<thead>
<tr>
<th>Direct</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data which requires students to display their knowledge, behavior, or thought processes.</td>
<td>Data which asks students to reflect upon their knowledge, behaviors, or thought processes.</td>
</tr>
<tr>
<td>Focus Groups</td>
<td>Surveys</td>
</tr>
<tr>
<td>Quizzes/Tests</td>
<td></td>
</tr>
<tr>
<td>Direct Observation</td>
<td></td>
</tr>
<tr>
<td>Document/Artifact Analysis</td>
<td></td>
</tr>
<tr>
<td>Rubrics</td>
<td></td>
</tr>
</tbody>
</table>

Where on campus would you go or who would you consult with if you had questions about which courses to register for the fall? Please indicate your level of agreement with the following statement: I know of resources on campus to consult if I have questions about which courses to register for in the fall.
## Formative or summative interpretations?

<table>
<thead>
<tr>
<th>Formative</th>
<th>Summative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted during the program</td>
<td>Conducted after the program</td>
</tr>
<tr>
<td>• Purpose is to provide feedback</td>
<td>• Makes judgment on quality, worth, or compares to standard</td>
</tr>
<tr>
<td>• Use to shape, modify or improve program</td>
<td></td>
</tr>
<tr>
<td>Generally, determined by</td>
<td></td>
</tr>
<tr>
<td>• What you are assessing</td>
<td></td>
</tr>
<tr>
<td>• How you intend to use the data</td>
<td></td>
</tr>
</tbody>
</table>
Tips for making sense of your data

Quantitative

Qualitative
Quantitative data

• Sources
  - Surveys
  - Institutional records
  - Document/content analysis
  - Scoring of rubrics and portfolios
  - Numerical data from observations (e.g. counts and tallies)

• Use statistical procedures to interpret
Descriptive Statistics

- Count
- Percent
- Frequency
- Crosstabs

Measures of Frequency

- Mean
- Median
- Mode

Measures of central tendency

- Range
- Variance
- Standard deviation

Measures of dispersion or variation

WARNING
Depends on type of scale:
- Nominal
- Ordinal (Likert like)
- Continuous (Likert)
Qualitative data

- Interviews/Focus groups
- Observations
- Document analysis
- Rubrics (depending on the rubric)
Basic qualitative analysis

- Organize the data
- Familiarize yourself with the data
- Generate categories, themes, and patterns
- Code the data
- Search for alternative explanations
- Write the report
Rules for all data analysis

• Answer your original questions
• Make sure to disaggregate
• Look for both corroborating/discriminating evidence
• Use comparative data
• Triangulate data
Final Check In

What were the most helpful things covered today?

What are your remaining questions or concerns?

Contact me: wisevl@pdx.edu