



University of Wisconsin
Stevens Point

Assessment Methods and Metrics

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Ellen Meents-DeCaigny

Goals of Session

- **Part 1:** Review Considerations for choosing an assessment method
- **Part 2:** Review direct vs. indirect assessment of learning
- **Part 3:** Suggestions for other metrics to collect
- **Wrap-Up:** Timelines and next steps in implementing projects

Congratulations!



Assessment as an Inquiry Process



Project Planning

It is important to think about all elements of the plan

- Developing the question
- Choosing an appropriate methodology
- Communicating your results
- Being realistic about your timeline

Part 1: Choosing Assessment Methods

Collecting Data

- Driven by the outcome (purpose)
- Remember to explore existing data
- Remember to consider direct and indirect methods
- Align method with your outcome and the type of information you need

Scope

- What specific population of students will you assess?
- Of the total population what percentage will be invited to participate?
- Will the potential set of data adequately answer the assessment question?

Other considerations:

How will you gain consent from students participating in the project?

Do you plan to present or publish the results externally?

Data and You

- Data do **NOT** make decisions
- Data must be restructured into information that:
 - Provides a balanced view of the situation
 - Identifies issues and establishes progress
 - Is relevant to and sufficient for addressing key issues

Categories of Analyses

- Quantitative Methods: Determine Quantities
- Qualitative Methods: Describe Qualities
- Mixed Methods: Quantitative tells you what; Qualitative tells you why

When to Use Quantitative Methods

- When you have primarily numerical data (e.g. counts, scores, rating scale data, etc)
- When you are more interested in knowing “what” is happening
- What are some examples of assessment tools?

When to use Qualitative Methods

- When you have primarily text data
- When you are more interested in knowing “why” something is happening
- What are some example assessment tools?

Mixed Methods

- Multiple sources of evidence
- Useful to bring together the “what” and the “why”
- Qualitative analysis can be a tool for investigating unexpected results of quantitative analysis

Assessment: Mixed Methods

- Sequential Explanatory
- Sequential Exploratory
- Concurrent Triangulation

Part 2:

Direct vs Indirect

Assessment of

Learning

Part 2 Objectives

- Differentiate between Indirect and Direct Assessment
- Identify Direct Assessment Methods
- Write Effective Prompts
- Differentiate between Scoring Guides and Rubrics

Direct and Indirect Assessment of Learning

- *Direct* evidence of student learning is tangible, visible, self-explanatory, and compelling evidence of exactly what students have and have not learned.
- *Indirect* evidence consists of proxy signs that students are probably learning. Indirect evidence is less clear and less convincing.

Examples of Evidence

DIRECT

- Ratings of student skills (by advisor, employer, etc.)
- Written work, performances, presentations
- Portfolios
- Observation of behavior
- Student reflections

INDIRECT

- *Student* self ratings of their knowledge and skills and what they have learned over the course of a program
- Student satisfaction with learning
- Student perceptions
- Retention and graduation rates

Considerations with Direct Assessment

- Embedded vs. Add-on Assessments
- Objective vs. Subjective Assessment
- Quantitative vs. Qualitative Assessment

Activity: Developing a Prompt

- In your departmental groups develop brainstorm one or two methods to directly assess each of the program outcomes you have selected

Writing Effective Prompts

What is a Prompt?

“A prompt is simply an assignment: the statement or question that tells students what they are to do in a performance assessment, essay question, and virtually everything else we ask students to do except complete objective tests and rating forms.”

Suskie, L. (2009). *Assessing student learning: A common sense guide*. Jossey-Bass: San Francisco, CA

Two Types of Prompts

- **Restricted Response** prompts ask everyone to provide pretty much the same response, just in his or her own words.
- **Extended Response** prompts give students latitude in deciding how to complete the assignment. (Responses may vary considerably but all be equally outstanding.)

Importance of Good Prompts

- Good prompts are a critical part of teaching and learning process
 - Communicate expectations
 - Inspires students to do their best and achieve learning outcomes

“With a poorly written response, students may complete the assignment without learning what we want them to learn.”

Laying the Foundation

- Decide what you want students to learn from the experience.
- Determine how the learning aligns with your learning outcomes.
- Develop a meaningful task or problem related to identified learning outcome(s).
- Determine the methods you will use to measure (scoring guide, rubric, reflection, etc.) students' learning.

“You are there” Scenarios

- You are on the subway and overhear a conversation about . . .
- You are a corporate trainer leading a diversity workshop . . .
- You are a consultant working with a community organization . . .
- You are a business executive leading a high stakes meeting . . .

Prompt Example

Program Learning Outcome:

Students will be able to identify options for post-graduate study and understand the implications for each.

Prompt:

Please consider the options you've learned about to continue your education after you receive your bachelor's degree. Select one you think might be a good fit for you and briefly discuss:

- Master's Degree
- Joint Master's/PhD program
- Professional School
- Trade School

Better Prompt:

Throughout this program, we've discussed different options for continuing your education after you complete your bachelor's degree. Select two or three you feel might be a good fit for you and discuss the implications of each option based on your future goals and aspirations.

Assessment of Peer Minister Experience

Program Learning Outcome:

Catholic Campus Ministry peer ministers will identify their personal approach to prayer, leadership, and hospitality.

Prompt:

Reflect on your personal approach to prayer. How has your role as a peer minister in the Vincentian tradition influenced your approach to prayer?

Assessment of Peer Minister Experience

Program Learning Outcome:

CCM peer ministers will articulate the primary virtues and historical figures of the Vincentian tradition.

Prompt:

In examining the historical figures of St Vincent De Paul and St Louise De Marillac, what in their lives and ministries particularly resonates with you?

Break Time



Scoring Guides & Rubrics

Scoring Guides and Rubrics

As the name implies, scoring guides generally provide a structure and definition of how student performance will be judged.

A Scoring guide should be tied directly to the student outcome it is measuring.

Examples of Common Scoring Guides:

- Rubrics
- Structured Observation Guides

Elements of a Rubric

- **Criteria for Evaluation of Students' Performances**
- **Defined Levels of Performance**
generally associated with a numeric value (ex. 1-4)
- **Description of each Level**
detailed information regarding the qualities that should be or should not be present in a product/performance to receive a rating at each level

Development of Rubrics

Identifying important aspects (elements, behaviors, components, qualities, features, characteristics) **of a performance or product to be assessed.**

Questions to consider:

- What do I want my students to learn from carrying out this process or producing this product?
- What would a high quality product look like? What are its essential, defining characteristics or features?
- What does the student need to do to complete the performance task or produce the product that I have in mind?
- What are the specific steps the student will need to follow to complete a task?

Deciding on a range of score points for each of the important aspects.

Questions to consider:

- What is the minimum number of performance levels I need to adequately describe the range of performance I am seeing in student work?
- The range of score points can be binary (e.g., Achieved/Did Not Achieve, Met/Not Met) or more than two categories (e.g., Exceeded/Met/Did Not Meet).
 - A common number of categories is between 3 and 7. However, the choice of number of score points should not be arbitrary.

Two Main Types of Rubrics

1. Holistic Rubrics

2. Analytic Trait Rubrics Developmental Rubrics

Arter, J. & McTighe, J. (2001). *Scoring rubrics in the classroom* (T.R. Guskey & R.J. Marzano, Eds.). Thousand Oaks, CA: Corwin Press.

Holistic Rubrics

A holistic rubric gives one score for an entire work or product.

The rubric combines all important components of the student's performance to arrive at a single judgment of the quality of the final product.

Advantages

- Emphasis on what the learner is able to demonstrate, rather than what s/he cannot do.
- Saves time by minimizing the number of decisions raters make.
- Can be applied consistently by trained raters increasing reliability.

Disadvantages

- Does not provide specific feedback for improvement.
- When student work is at varying levels spanning the criteria points it can be difficult to select the single best description.
- Criteria cannot be weighted.

Example of Holistic Rubric

Articulating thoughts through written communication— final paper/project.

Above Average (4): The audience is able to easily identify the focus of the work and is engaged by its clear focus and relevant details. Information is presented logically and naturally. There are no more than two mechanical errors or misspelled words to distract the reader.

Sufficient (3): The audience is easily able to identify the focus of the student work which is supported by relevant ideas and supporting details. Information is presented in a logical manner that is easily followed. There is minimal interruption to the work due to misspellings and/or mechanical errors.

Developing (2): The audience can identify the central purpose of the student work without little difficulty and supporting ideas are present and clear. The information is presented in an orderly fashion that can be followed with little difficulty. There are some misspellings and/or mechanical errors, but they do not seriously distract from the work.

Needs Improvement (1): The audience cannot clearly or easily identify the central ideas or purpose of the student work. Information is presented in a disorganized fashion causing the audience to have difficulty following the author's ideas. There are many misspellings and/or mechanical errors that negatively affect the audience's ability to read the work.

Analytic Trait Rubrics

An Analytic Trait Rubric divides the product or performance into important components or traits, then evaluates each one separately.

Advantages

- Can provide useful feedback on areas of strength and weakness.
- Criterion can be weighted to reflect the relative importance of each dimension.
- Can give specific feedback on each important dimension.

Disadvantages

- Takes more time to create and use than a holistic rubric.
- Unless each point for each criterion is well-defined raters may not arrive at the same score.

Arter, J. and McTighe, J. (2001). *Scoring rubrics in the classroom* (T.R. Guskey & R.J. Marzano, Eds.). Thousand Oaks, CA: Corwin Press.

Office for Teaching, Learning, & Assessment (n.d.). *Types of rubrics*. DePaul University Office for Teaching Learning and Assessment. Retrieved February 13, 2013, from <http://condor.depaul.edu/tla/Assessment/TypesRubrics.html>

Example of Analytic Trait Rubric

Articulating thoughts through written communication— final paper/project.

Dimension	Needs Improvement (1)	Developing (2)	Sufficient (3)	Above Average (4)
Clarity (Thesis supported by relevant information and ideas.)	The purpose of the student work is not well-defined. Central ideas are not focused to support the thesis. Thoughts appear disconnected.	The central purpose of the student work is identified. Ideas are generally focused in a way that supports the thesis.	The central purpose of the student work is clear and ideas are almost always focused in a way that supports the thesis. Relevant details illustrate the author's ideas.	The central purpose of the student work is clear and supporting ideas always are always well-focused. Details are relevant, enrich the work
Organization (Sequencing of Elements/Ideas)	Information and ideas are poorly sequenced (the author jumps around). The audience has difficulty following the thread of thought.	Information and ideas are presented in an order that the audience can follow with minimum difficulty.	Information and ideas are presented in a logical sequence which is followed by the reader with little or no difficulty.	Information and ideas are presented in a logical sequence which flows naturally and is engaging to the audience.
Mechanics (Correctness of grammar and spelling)	There are five or more misspellings and/or systematic grammatical errors per page or 8 or more in the entire document. The readability of the work is seriously hampered by errors.	There are no more than four misspellings and/or systematic grammatical errors per page or six or more in the entire document. Errors distract from the work.	There are no more than three misspellings and/or grammatical errors per page and no more than five in the entire document. The readability of the work is minimally interrupted by errors.	There are no more than two misspelled words or grammatical errors in the document.

Office for Teaching, Learning, & Assessment (n.d.). *Types of rubrics*. DePaul University Office for Teaching Learning and Assessment. Retrieved February 13, 2013, from <http://condor.depaul.edu/tla/Assessment/TypesRubrics.html>

Developmental Rubrics

A type of analytic trait rubric

Not evaluating an end product or performance, but interested in answering the question, “to what extent are students who engage in our programs/services developing this skill/ability/value/etc.?”

Generally, this type of rubric would be based on a theory of development.

Advantages

- Useful when the goal of evaluation is to determine level of development rather than the quality of a final product.
- Rubric can be based on relevant developmental theory

Disadvantages

- Conceptually, more difficult to design.
- Requires close tie between assessment criteria and theory of development.

Example of a Developmental Rubric

Intercultural Maturity

Domain	Initial Level of Development (1)	Intermediate Level of Development (2)	Mature Level of Development (3)
Cognitive	Assumes knowledge is certain and categorizes knowledge claims as right or wrong; is naïve about different cultural practices and values; resists challenges to one's own beliefs and views differing cultural perspectives as wrong	Evolving awareness and acceptance of uncertainty and multiple perspectives; ability to shift from accepting authority's knowledge claims to personal processes for adopting knowledge claims	Ability to consciously shift perspectives and behaviors into an alternative cultural worldview and to use multiple cultural frames
Intrapersonal	Lack of awareness of one's own values and intersection of social (racial, class, ethnicity, sexual orientation) identity; lack of understanding of other cultures; externally defined identity yields externally defined beliefs that regulate interpretation of experiences and guide choices; difference is viewed as a threat to identity	Evolving sense of identity as distinct from external others' perceptions; tension between external and internal definitions prompts self-exploration of values, racial identity, beliefs; immersion in own culture; recognizes legitimacy of other cultures	Capacity to create an internal self that openly engages challenges to one's views and beliefs and that considers social identities (race, class, gender, etc.) in a global and national context; integrates aspects of self into one's identity
Interpersonal	Dependent relations with similar others is a primary source of identity and social affirmation; perspectives of different others are viewed as wrong; awareness of how social systems affect group norms and intergroup differences is lacking; view social problems egocentrically, no recognition of society as an organized entity	Willingness to interact with diverse others and refrain from judgment; relies on independent relations in which multiple perspectives exist (but are not coordinated); self is often overshadowed by need for others' approval. Begins to explore how social systems affect group norms and intergroup relations	Capacity to engage in meaningful, interdependent relationships with diverse others that are grounded in an understanding and appreciation for human differences; understanding of ways individual and community practices affect social systems; willing to work for the rights of others

Developmental Rubric: Direct Assessment

Scenario presented for a peer training program related to diversity:

Marieka walks into a study lounge to get some work done between classes and sits at an empty table. She overhears the following conversation between two students she knows from class.

Ed: “I can’t believe my brother didn’t get into Northwestern University – he had a 3.4 GPA in high school! You know that if he was black, he would have gotten in!”

Tiffany: “Yeah, they have all these programs to help ‘minorities,’ but if you’re white, no one cares. A lot of those kids who get special treatment because their great, great, great, great, greeeeaaatt grandpas were slaves are richer and went to better schools than we did. Slavery happened a long time ago – why are they still benefitting from it?”

Ed: “Worse than being white these days is being a white man. It’s nothing more than reverse discrimination!”

- 1. To what extent do you agree or disagree with Ed and Tiffany’s conversation?**
- 2. If you were Marieka, how would you react?**

Structured Observation Guides

A more qualitative type of scoring guide.

Advantages

- May allow for a richer description of student performance or work.
- May be useful for assessment of qualities that are difficult to operationally define, like attitudes or values

Disadvantages

- This is a more subjective approach to scoring.
- May be more difficult to align with learning outcomes.

Example of a Structured Observation Guide

Structured Observation Guide for a Presentation

<i>Effectiveness of Presenter in:</i>	<i>Notes</i>
Communicating the Purpose of the Presentation	
Organizing the Presentation	
Demonstrating Good Knowledge of the Topic(s)	
Speaking with Clarity	
Responding Appropriately to Participants' Questions	
Adhering to Time Constraints	
Accomplishing the Stated Objective	

Adapted from: Suskie, L. (2009). *Assessing student learning: A common sense guide*. Jossey-Bass: San Francisco, CA.

Part 3:

Collecting

Other Metrics

What other data is important?

Comparisons across years:

- Program Frequency
- Student Touchpoints
- Unique or Average Students
- Other Attendees
- Personnel and Financial Costs
- External and Internal Partners

Developing a Key Program Area Map

- Creating a comprehensive picture of programs and services
- Aligning learning outcomes with programs and activities
- Determining program impact based on participation and cost

Part 4:

Timelines and

Next Steps

Developing a Realistic Timeline

- Consider the best time to collect the data you need
 - Start with your deadline and work backwards
 - Allow enough time to:
 - develop and execute methodology
 - develop assessment tools
 - analyze/interpret results
 - write the report
- **Keep in mind time parameters of fellow faculty/staff and other partners**

Project Planning

It is important to think about all elements of the plan

- Developing the question
- Choosing an appropriate methodology
- Communicating your results
- Being realistic about your timeline

Recommended Next Steps

- Let the assessment question drive the method
- Consider how to integrate data collection into existing structures
- Consider what other metrics would be helpful to collect
- Keep going!



Questions and Contact Information

- Ellen Meents-DeCaigny,
Assistant Vice President for Student
Affairs, DePaul University
emeentsd@depaul.edu

Resources

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