From the Ground Up: Encyclopedia of Assessment Methodology

Thomas Nelson Community College
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Subtitled

Everything You Need to Know to do Good Assessment

Presenters

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Participants Will Be Able To

- Explain the alignment between mission, goals, outcomes, & measures
- Write measurable student learning outcomes (SLO)
- Write measurable program objectives
- Identify appropriate measures of student learning
- Evaluate their assessment plans and reports using a rubric

Free Write

When I say “assessment” what thoughts come to mind?

What is Assessment?

“Assessment is the ongoing process of:

- Establishing clear, measurable expected outcomes of student learning
- Ensuring that students have sufficient opportunities to achieve those outcomes

Suskie, p. 4
What is Assessment?

"Assessment is the ongoing process of:

– Systematically gathering, analyzing, and interpreting evidence to determine how well student learning matches our expectations.

– Using the resulting information to understand and improve student learning.”

--Suskie, p. 4

Assessment is not …

Research designed to test theories – assessment informs practice

Evaluation designed to determine the quality of a program – assessment focuses on improvement

Grading students

Drivers of Assessment

A revolution in education: the learning-centered paradigm

Calls for accountability

Federal requirements for regional accreditation

Disciplinary accreditation

Supports for faculty and students to improve their performance
SACS/COC – Institutional Effectiveness

“The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes; and provides evidence of improvement based on analysis of the results in each of the following areas:
– Educational programs, to include student learning outcomes...."
Assessment Plan

TNCC Mission & Goals

Program Mission & Goals

Student Learning Outcome #1

Measure #1 = Target

Student Learning Outcome #2

Measure #2 = Target

Student Learning Outcome #3

Measure #3 = Target

Assessment Report

Student Learning Outcome #1

Measure #1 = Target

Finding for SLO #2

Action Plan for Improving for SLO #2

Student Learning Outcome #2

Measure #2 = Target

Finding for SLO #2

Student Learning Outcome #3

Measure #3 = Target

Finding for SLO #2

Rubric for Evaluating Assessment Reports

Finding for SLO #2

Action Plan for Improving for SLO #2

Rubric for Evaluating Assessment Reports
Goals express…

- Goals are broad and abstract statements that flow out of the mission
- Goals indicate the destination in which we are headed, not the path by which we get there
- Goals are typically not measurable

Where Do I Begin?

- Think about your program’s mission and goals.
  - What do you want to communicate to students? Parents? Community?
- EXAMPLE: Criminal Justice
  - With 19 faculty members of diverse interests and backgrounds, the Department of Sociology and Criminal Justice offers its students a great opportunity to develop a strong background in the areas of sociology and criminal justice. The Department is committed to providing students with a quality liberal arts education. Furthermore, students will gain an appreciation of their role as criminal justice professionals and as contributing members of society.
Criminal Justice Goals

- Effective Communication
- Understand Theory/Theories
- Develop a strong background in the areas of sociology and criminal justice. Students will gain an appreciation of their role as criminal justice professionals and as contributing members of society.
- Appreciate professional role

AS in Social Science

“The degree is designed for students who plan to transfer to a four-year college or university to complete a bachelor’s degree in social sciences. By guiding students to an appreciation of many different fields of knowledge, the Social Science Program attempts to educate the whole person and to increase students’ awareness of themselves, their fellow men and women and the world around them” (Thomas Nelson 2014-15 Catalog, p. 80).

AS in Social Science

The goals of the AS program in Social Science are to prepare students:
- to transfer to a four-year institution and major in Economics, Geography, History, Political Science, Psychology, or Sociology
- to think critically about the impact of various events on society from several perspectives represented by these disciplines
- to consider the impact not only on themselves but also on other people and institutions in society and the world in which they live
- to base their observations and discussions about social issues on the scholarly literature in these disciplines
- to communicate both orally and in writing about current social issues facing society
Your Turn:
Think about your program

- Review your program’s mission and goals

- What knowledge, skills and abilities will students learn throughout the program?
Assessment Cycle

Goals

Improvements - Action Plans

Outcomes / Objectives

Findings

Measures & Targets

Do your learning outcomes contain any of the following?

- know
- familiarize
- gain knowledge of
- comprehend
- study
- cover
- understand
- be aware of
- learn
- appreciate
- become acquainted with
- realize
- develop a working understanding of

Bloom's Taxonomy of Cognitive Development

Evaluation
Synthesis
Analysis
Application
Comprehension
Knowledge
Learning Outcomes

A Learning Outcome is a written statement of the measurable achievement a participant will be able to demonstrate as a result of participation in a learning activity.

SWBAT

“Students will be able to (insert concrete action verb and a KSA or behavior students will perform).”

Students will be able to synthesize evidence from a variety of scholarly resources.
Examples of Learning Outcomes – ABET

(a) to apply knowledge of mathematics, science, and engineering
(b) to design and conduct experiments, as well as to analyze and interpret data
(c) to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d) to function on multi-disciplinary teams
e) to identify, formulate, and solve engineering problems …

Examples of Learning Outcomes

Students will relate ideas, knowledge, and modes of thought across traditional academic disciplinary boundaries in relations to the experiences of people of African descent.

Students demonstrate mastery of knowledge of a particular period and place, or of a particular historical theme.

At the end of the program the graduate will demonstrate the principles of leadership to maintain group effectiveness, communicate professionally, demonstrate accountability and competence adhering to legal and ethical leadership principles

Characteristics of a Learning Outcome

It is always expressed in terms of the student.

It is precise and supports only one interpretation.

It describes an observable behavior.

It specifies conditions under which the behavior is performed.

It specifies criteria for accomplishment.
Examples of Program Outcomes

- Students who complete the A.S./A.A. will successfully transfer to a 4-year institution
- Students will be satisfied with instruction and KSA attained in the program
- Program will maintain or grow enrollments

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Criminal Justice Outcomes

- Identify and explain an issue, in an oral presentation
- Write an essay with clearly stated objectives, demonstrating logical consistency
- Apply sociological theories of crime to a problem, question or topic
- Compare and contrast sociological theories of crime

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Your Turn:

What Are the Outcomes of Your Program?

- Think about what students will be able to do at the end of the program.
- What skills or abilities will they have and be able to demonstrate?
**Assessment Cycle**

- Goals
- Outcomes / Objectives
- Measures & Targets
- Findings
- Improvements - Action Plans

**Unit of Analysis**

- Is NOT the faculty member
- Is NOT the student
- Is the PROGRAM

**Grading vs. Assessment**

- Grading and assessment criteria appropriately differ (e.g., attendance)
- Grading standards may be vague or inconsistent (or, at best, idiosyncratic)
- Grades alone may give insufficient information on student strengths and weaknesses
- Grades do not reflect all learning experiences (whole curriculum)
Common Course / Program Assessments

- Portfolios / ePortfolios
- Capstone Experiences
- Performances (Rubrics)
- Embedded Assignments
- Classroom Assessment Techniques
- Local Tests
- Commercial Tests
- Course Management Systems (Blackboard)

WHAT TYPES OF MEASURES ARE YOU USING?

Assessment Methods

- Assessment tools must be compatible with the domain being assessed:
  - **knowledge** typically assessed using appropriate written and oral examinations as well as direct observation;
  - **skills & abilities** typically assessed by direct observation of student performances (written, oral, visual);
Assessment Methods

Assessment tools must be compatible with the domain being assessed:
- **attitudes** typically assessed by interviews, observations, or evaluations with peers, supervisors, faculty, and co-workers and their families;

Models of Assessment

- **Standards (competency) based** – set a standard and assess the extent to which students achieve it
- **Benchmarking** – assess how well your students achieve compared to other students at peer institutions
- **Value-Added** – assess your students at entry and at a later time (end of second year; graduation) and compare the differences (pretest – posttest)
- **Longitudinal** – assess students in each successive class and compare the differences between classes

Good assessments…

- Measure what we intend to measure (validity)
- Give us *useful, reasonably accurate* information
- Yield *results specific to the learning outcomes* so that improvements can be made
Good assessments…

- Yield consistent results across administrations (reliability)
- Are systematized
- Are ethical and protect the privacy and dignity of those involved
- Are cost effective, yielding value that justifies the time and expense we put into them

Good assessments…

- Can be:
  - Direct or Indirect
  - Objective or Subjective
  - Quantitative or Qualitative
  - Formative or Summative
  - Embedded in courses

Types of Evidence

**Direct**
- Tangible, visible, observable, self-explanatory
- Quality and quantity of student learning is concretely exhibited

**Indirect**
- Signs, indicators, less convincing – “tell us about . . .”
- Results may be consistent with student learning, but do not solicit specifics
Common Direct and Indirect Measures of Student Learning

**Direct**
- Test grades
- Rubrics
- Portfolios of student work
- Capstone projects
- Field supervisor ratings
- Employer ratings
- Scores and pass rates on licensure exams

**Indirect**
- Course grades
- Surveys
- Focus Groups
- Course evaluations
- Admission to graduate school
- Student self-ratings
- Student / alumni satisfaction with learning
- Honors, awards, and scholarships

Types of Assessment

**Objective**
- No professional judgment to score correctly – usually one correct answer
- Multiple-choice test
- Matching items
- True-false questions

**Subjective**
- Need professional judgment to score – many possible answers of varying quality
- Essays
- Performances

Subjective Assessments…

- Assess many important skills that objective tests cannot.
- Assess skills directly.
- Promote deep, lasting learning.
- Allow for nuances in scoring.
- Can capture a lot of information on a broad range of learning goals in a relatively short time.
## Types of Assessment

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Quantitative</th>
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<tbody>
<tr>
<td>Flexible, naturalistic methods that are usually analyzed by looking for recurring patterns and themes</td>
<td>Structured, pre-determined response options that can be summarized into meaningful numbers and analyzed statistically</td>
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<tr>
<td>Often underused, underappreciated</td>
<td>Some audiences find quantitative results more convincing</td>
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<td>Can give fresh insight and help discover problems and solutions</td>
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## Reasons for Assessment

<table>
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<th>Formative</th>
<th>Summative</th>
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<tbody>
<tr>
<td>Improve teaching and learning (or service and satisfaction)</td>
<td>Document learning or service and satisfaction</td>
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<tr>
<td>Used while learning is taking place</td>
<td>Occur at the end of the course or service period</td>
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<td>Focus on feedback and adjustment</td>
<td>Focus on sum/total, with little feedback</td>
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## Course Embedded Assessments

- Developed and implemented within the context of individual course(s)
- Required courses in the major, capstone course ideal
- Completion of assessment measures part of course grades
- Contrast to separate session assessment – issues of motivating students to complete assessment
PRESUMPTION IS THAT, AT ALL TIMES, EFFORTS ARE BEING MADE TO ENSURE THAT MEASURES ARE VALID AND RELIABLE

Criminal Justice Measures

Your Turn…

Think about the courses students take and the assignments they complete.
Where can you measure learning outcomes?
Program objectives?
Appendix

SAMPLE ASSESSMENT TOOLS

http://www.odu.edu/assessment

Sample Assessment Tools: Tests

- Direct measure of student learning
- Typically quantitative; essay questions may be qualitative
- Objective if multiple choice / subjective if essays
- Published / normed vs. locally developed

Sample Assessment Tools: Rubrics & Prompts

- Direct measure of student learning
- Qualitative
- Subjective – professional judgment required
- Multiple raters – calibrated
- If appropriately developed, can result in consistent results (inter-rater reliability)
Sample Assessment Tools: Rubrics & Prompts

Examples:
– Critical Thinking
– Oral Communication
– Assessment of a musical performance or work of art
– Student teaching, practica and internships, supervisor / employer ratings
– SAT writing sample

Other examples???

Sample Assessment Tools: Portfolios

Direct measure of student learning
Qualitative
Subjective – professional judgment required
A rubric can be used to evaluate a portfolio

Sample Assessment Tools: Portfolios

Examples:
– Art samples
– Writing sample portfolio to evaluate for value added in writing skills over completion of program

Other examples???
Sample Assessment Tools: Surveys

- Indirect measure of student learning
- Typically quantitative; essay questions may be qualitative
- Subjective – require professional judgment

Additional Common Assessments

- Focus Groups
- Metrics
- Data base queries

Sample Assessment Tools: Focus Groups

- Indirect measure of student learning
- Qualitative
- Subjective – require professional judgment
Sample Assessment Tools: Focus Groups

Examples:
- Assessed knowledge, skills, & abilities of PT graduates from employers perspective
- Assessed development of residential community for Student Affairs
- Helped ODU President develop a common vision of the University and complete SWOT analysis for strategic plan

Other examples???

Sample Assessment Tools: Metrics

Direct measure
Quantitative
Objective
Unobtrusive
Often system / computer generated

Examples:
- Computer up time
- Books checked out
- Applications / admits / enrolled

Other examples???
Sample Assessment Tools: Data Base Queries

- Direct measure
- Quantitative
- Objective
- Analyses run against Banner or other data base using a software package

Examples:
- Weekly enrollment reports
- Academic performance, retention, and graduation rates
- Major counts

Other examples???
References

