

Making Assessment Meaningful

**Turning Assessment Into
More Than Numbers**

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Overview

- ▶ **Facing the Right Way**

Participants can explain a purposeful rationale for assessment

- ▶ **Two Cultures: A Contrast in Emphasis**

Participants can explain the distinct approaches to assessment and their ramifications

- ▶ **Evaluating Program Effectiveness**

Participants can evaluate their own programs' readiness for assessment and apply principles of authentic assessment to their own programs

- ▶ **Authentic Assessment's Payoff**

Participants can pursue program improvement as a result of authentic assessment



Looking at the (W)hole

A Diagnostic Exercise

Intentionality: A Process of Questions

Research Questions

1. What do we want students to know, understand, and be able to do?
2. Where do students learn what we expect them to learn?
3. How well did students learn what we expected them to learn?
4. How do we know how well they learned what we expected them to learn?
5. What does our evidence tell us? How can we use what our evidence tells us to make appropriate decisions?

Program activity

1. Operational Learning Outcomes
2. Curriculum/Program Mapping
3. Assignment/Outcome Alignment
4. Rubrics and Evaluation
5. Analysis of Results and Causes



1. To what extent do you think your course and program-level outcomes are operational and appropriate?
2. To what extent are your courses (and their outcomes) aligned to the program (and its overarching outcomes)?
3. To what extent are assignments aligned clearly to the outcomes you want to assess?
4. To what extent are expectations held in common and defined for review of students' assignments?
5. To what extent are you able to interpret data in ways that lead to well-defined courses of action?

Self-Diagnostic

Take 20 minutes to discuss with your colleagues the degree of your satisfaction in each of the five areas of intentional education.



Given your answers to the preceding questions:

1. What steps need to be taken to put your program in a stronger position to engage in meaningful assessment?
2. Who needs to be involved to make that work most efficacious?
3. Who else might be able to help you?
4. When might that be done?

Self-Diagnostic

Take 10 minutes to discuss with your colleagues the degree of your satisfaction in each of the five areas of intentional education.



Evaluating Outcomes

Building a Plan

- Does it begin with the end in mind?
- Does it state, *exactly*, what you want your students to be able to do?
- Does it state, *exactly*, what you want your office, department, or program to do with regards to administrative process or procedure?
- Does it accurately reflect the end you have in mind?
- Does it utilize operational verbs that clearly articulate the expected action?
- Is it specific?
- Is it measurable or observable?

Are Outcomes Clear & Strong?

Unclearly written outcomes can cause very different perceptions of meaning and result in confusion about assessing the outcomes.

Subject

Who

Verb

will do

Object

what?



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- **Is it specific?**
- Is it measurable or observable?

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Subject

Who

Verb

will do

Object

what?



- Do they begin with the end in mind?
- Do they state, *exactly*, what you want your students to be able to do?
- Do they state, *exactly*, what you want your office, department, or program to do with regards to administrative process or procedure?
- Does your outcome accurately reflect the end you have in mind?
- Does it utilize operational verbs that clearly articulate the expected action?
- Is it specific?
- **Is it measurable or observable?**

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Subject	Who
Verb	will do
Object	what?



Verbs describing student acquisition and preparation of tools, materials, and texts of various types (including digital and archival)	Verbs indicating what students do to certify information, materials, texts, etc.	Verbs indicating the modes of student characterization of the objects of knowledge or materials of production, performance, exhibit	Verbs describing what students do in processing data and allied information
access, acquire, collect, accumulate, extract, gather, locate, obtain, retrieve	cite, document, record, reference, source	categorize, classify, define, describe, determine, frame, identify, prioritize, specify	calculate, determine, estimate, manipulate, measure, solve, test
Verbs further describing the ways in which students format data, information, materials	Verbs describing what students do in explaining a position, creation, set of observations, or a text	Verbs falling under the cognitive activities we group under "analyze"	Verbs describing what students do when they "inquire"
arrange, assemble, collate, organize, sort	articulate, clarify, explicate, illustrate, interpret, outline, translate, elaborate, elucidate	compare, contrast, differentiate, distinguish, formulate, map, match, equate	examine, experiment, explore, hypothesize, investigate, research, test
Verbs describing what students do when they combine ideas, materials, observations	Verbs that describe what students do in various forms of "making"	Verbs that describe the various ways in which students utilize the materials of learning	Verbs that describe various executive functions students perform
assimilate, consolidate, merge, connect, integrate, link, synthesize, summarize	build, compose, construct, craft, create, design, develop, generate, model, shape, simulate	apply, carry out, conduct, demonstrate, employ, implement, perform, produce, use	operate, administer, control, coordinate, engage, lead, maintain, manage, navigate, optimize, plan
Verbs that describe forms of deliberative activity in which students engage	Verbs that indicate how students value objects, experiences, texts, productions, etc.	Verbs that reference the types of communication in which we ask students to engage	Verbs that describe what students do in rethinking or reconstructing
argue, challenge, debate, defend, justify, resolve, dispute, advocate, persuade	audit, appraise, assess, evaluate, judge, rank	report, edit, encode/decode, pantomime (v), map, display, draw/diagram, collaborate, contribute, negotiate, feed back	accommodate, adapt, adjust, improve, modify, refine, reflect, review

Do Outcomes Imply Activities?

Operational verbs imply a student response to an experience.

Adapted from Adelman, C. (2015). To imagine a verb: The language and syntax of learning outcomes statements. (Occasional Paper No. 24). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment.

- Does it begin with the end in mind?
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Are Outcomes Clear & Strong?

Take 15 minutes to review, evaluate, and revise your outcome.

Subject Who

Verb will do

Object what?





Aligning Outcomes

Building a Plan

Mapping Up

Microscopy Outcome Set - Google Chrome
https://folio.taskstream.com/Folio/outcomes/view.asp?qyz=1kFENIcBWgpjW00bPX7&gsi_id=pezcz0cez7ethu

Microscopy Outcome Set Show Descriptions

Outcome	Mapped to
Hardware Proficiency Confidently operate a wide variety of optical microscopes, including phase, DIC, and epifluorescence.	Institutional Learning Outcomes: CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY
Software Proficiency Master diverse microscopy software programs.	Institutional Learning Outcomes: CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Specimen Preparation Prepare specimens for optical microscopy.	Institutional Learning Outcomes: CRITICAL THINKING, QUANTITATIVE REASONING
Experimental Design Design experiments, critically analyze data, and report results.	Institutional Learning Outcomes: CIVIC ENGAGEMENT AND ETHICS, COMMUNICATION, CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Troubleshoot Troubleshoot problems with the optics of microscopes.	Institutional Learning Outcomes: COMMUNICATION, CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Critical Thinking for Microscopy Technology Assess and utilize new microscopy technologies.	Institutional Learning Outcomes: COMMUNICATION, CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Competitive Workforce Skills Obtain employment in biotech, high tech, and other growth fields.	Institutional Learning Outcomes: CIVIC ENGAGEMENT AND ETHICS, COMMUNICATION, CRITICAL THINKING

Windows taskbar: Start, File Explorer, Chrome, Outlook, Word, Excel, PowerPoint, OneDrive, Edge, Search, System tray (8:20 AM 8/19/2015)

Mapping Down

PLO/SLO-Curriculum Map

B = beginning D=developing A=advancing	Utilize higher order thinking in applying basic research methods in psychology including research design, data analysis, and interpretation of findings, and, reporting of result both in written and oral forms that are in conformance with APA format.		PLO 2	
	Identify basic research methods and ethical considerations in the study of behavior.	Analyze the results of two different kinds of personality tests and birth order for college age adults especially introversions versus extraversion.	SLO 2.1	SLO 2.2
Course 1	B			
Course 2		B		
Course 3	D	D		
Course 4	A	A		



Mapping Down

PLO/SLO-Curriculum Map

B = beginning D=developing A=advancing	Utilize higher order thinking in applying basic research methods in psychology including research design, data analysis, and interpretation of findings, and, reporting of result both in written and oral forms that are in conformance with APA format.	PLO 2
Course 1	B	
Course 2		B
Course 3	D	D
Course 4	A	



Course Level Outcomes
Referenced On Course
Outlines



Mapping Down

SAO-Activities Map

B = beginning D=developing A=advancing	SAO 1	SAO 2
Activity 1	B	
Activity 2		B
Activity 3	D	D
Activity 4	A	



ACADEMIC PROGRAMS:

1. Is the LO aligned up to either ILOs (if you're working with a PLO) or PLOs (if you're working with a CLO)?
2. Is the outcome aligned down to courses & CLOs and their assignments?

SERVICE AREAS:

1. Is the SAO aligned up to a unit mission statement and/or ILOs?
2. Is the SAO aligned down to particular activities?

THEN:

1. Can you align the outcome up and down yourself?
2. Who needs to be involved to align this outcome both up and down? How can you involve them?

Are Outcomes Aligned?

Take 20 minutes to review your chosen outcome and determine the extent to which it is aligned both up and down.



- ▶ Direct assessment embeds artifacts in practice
 - ▶ Student essays, exams and presentations
 - ▶ Case studies and field work
 - ▶ Group projects and service learning
 - ▶ Journals and article critiques
 - ▶ Performances and artworks

- ▶ Indirect assessment seeks opinions of student learning
 - ▶ Student meta-cognitive reports
 - ▶ Internship supervisor reports

- ▶ External assessment uses outside exams
 - ▶ Non-degree standardized tests

How well did they learn it?

Assessment data is produced all the time in educational practice. Three types are frequent:

1. Direct
2. Indirect
3. External



How well did they learn it?

Outcome

- ▶ Identify & locate specific outcomes

- ▶ Operational Verb

Measure

- ▶ Align assignments/ assessments to the expectations of a given outcome or set of outcomes.

- ▶ Correlating Assignment
-
- 

Where in your unit's activities/courses might be the best possible place(s) to and what assignments/activities can you use to:

- ▶ provide students with opportunities to demonstrate their learning,
- ▶ gather information about what students have taken from an activity,
- ▶ gather information about the extent to which your unit has met goals?

Are Outcomes Aligned?

Take 15 minutes to identify particular assignments or activities that might be used to assess learning or performance.



Assessing Outcomes

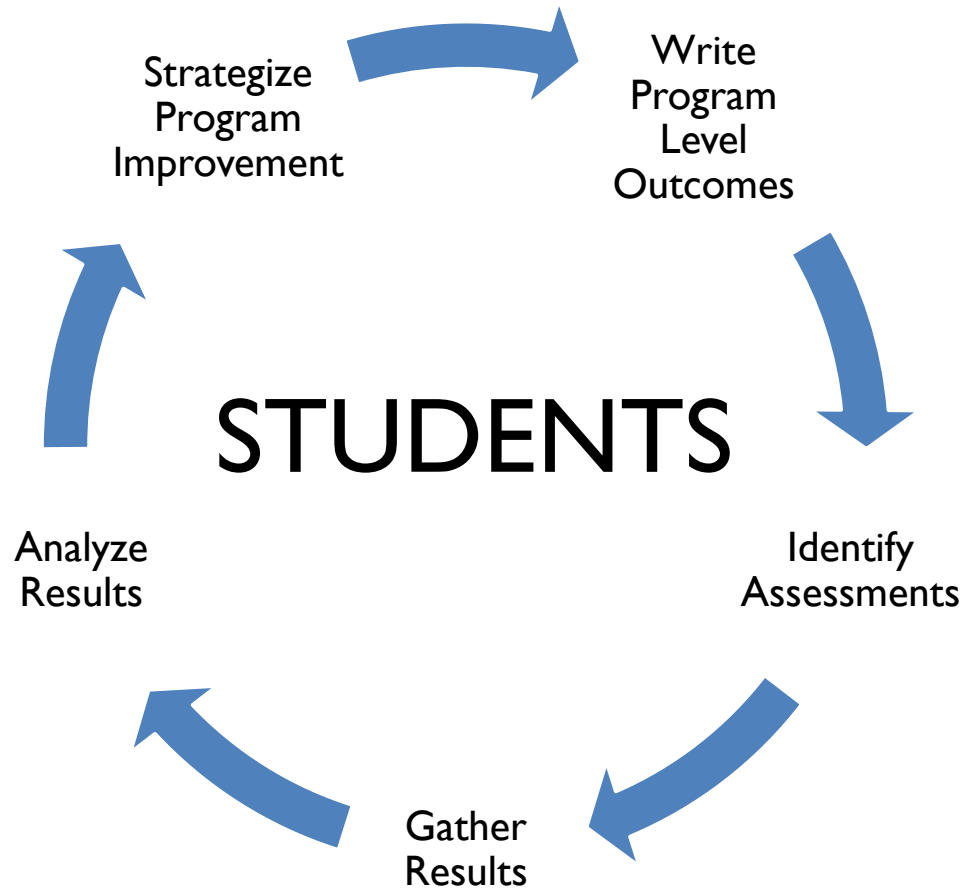
Building a Plan

1. How can you gather results?
2. When will you gather results?
3. Who would you like to participate in reviewing the results?
4. When will that review happen?
5. What support do you need?

How Will You Talk?

Take 20 minutes to discuss a strategy for gathering, reviewing, and responding to results.





Responding to the Results

Students benefit from an institution's thoughtful response to an honestly undertaken attempt to determine a program's strengths and weaknesses in educating them.



Thank You

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