Making Assessment Meaningful

Turning Assessment Into More Than Numbers

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What is assessment for?



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

Facing the Right Way Part I Who are we?

Orienting Ourselves

An Analogy



Those who:
Pray/Teach
Fight/Defend
Farm/Provide Food
Mutuality

Taking the Analogy Too Far





Taking the Analogy Too Far





An approach to activities that uses information about the effectiveness of our activities to implement strategic and targeted revisions towards increased impact of our goals.

Working Toward a Shared Purpose





What hinders your ability to work towards a shared purpose?



Two cultures: A contrast in approaches

Orienting Priorities





- Sees accreditation as an end in itself
- Seeks information on what accreditors want to see
- Worries about whether what is reported matches accreditors' expectations

The Culture of Compliance

Students become unimportant elements of the assessment process

Another View of the Assessment Cycle



Is student-centered

- Seeks information about how well students are learning and/or how well various areas of the college are supporting the student experience
- Reflects on what we teach or do and how we teach or do it
- Accepts (some) responsibility for student learning and the student experience
- Experiments with new strategies for student success

The Culture of Intentionality

Students become the primary focus of the assessment process A student learning outcome...is...defined in terms of the particular levels of knowledge, skills and abilities that a student has attained at the end (or as a result) of his or her engagement in a particular set of collegiate experiences.

(Peter Ewell, 2001)

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Student Learning Outcomes: The Student Perspective

Learning Outcomes are goals that describe how a student will be different because of a learning experience. More specifically, learning outcomes are the knowledge, skills, attitudes, and habits of mind that students take with them from a learning experience.

(Linda Suskie, 2009).

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Facing the Right Way Part II What are we doing?

Orienting Ourselves



Are Outcomes Aligned?

Learning anything about how we're doing depends on having constructed programs to achieve our goals.

Differentiating Outcome Types

PSLO: I

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.

CSLO 1.1: Identify basic research methods and ethical considerations in the study of behavior.

CSLO 1.2: Critique psychological studies and their study design, results and the conclusions reached by the researchers involved.

Objects of Outcomes

Content: facts, concepts, principles/theories

- Skills:
 - Cognitive:

information literacy, thinking strategies, computational skills

Social:

communication skills, collaboration skills, initiative/leadership skills

Aesthetic:

arts appreciation, proficiency in creative procedures, creativity

Values: open-mindedness/love of knowledge, diligence/integrity, social responsibility

- Focus on learning, not processes or assignments
- Avoid vague verbs (know, understand, demonstrate)
- Use operational verbs that imply a student's active response to learning or a service
- Ensure that outcomes are observable and measurable
- State what students do (not what staff or instructors do)

Features of Effective Outcomes

Employ these strategies for writing strong outcomes statements that communicate clearly what students will know and be able to do.

Support for Student Support

Six Success Factors





Do your outcomes represent your goals for students? How well?

Using the SLOs

The Culture of Compliance

- Rarely communicates outcomes to students
- Files outcomes with the appropriate office
- Sticks with what has always been done
- Works on outcome assessment for an accreditation cycle

Using the SLOs

The Culture of Compliance

- Rarely communicates SLOs to students
- Files SLOs with the appropriate office
- Sticks with what has always been done
- Works on SLO assessment for an accreditation cycle

The Culture of Intentionality

- Makes outcomes visible to students
- Incorporates outcomes into faculty practice
- Assesses outcomes appropriately
- Uses outcomes for ongoing conversations about teaching effectiveness

How are you using your outcomes at **Merritt**?



Evaluating **Program** Effectiveness

A Strategy for Meaningful Assessment
Mutuality







Working Toward a Shared Purpose







Instructional Programs

- 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 you expected them to learn?
- 4. How do we know how well they learned what we expected them to learn?

Non-Instructional Programs

- I. What are the intended results of our programmatic, operational, or administrative activities?
- 2. How do we accomplish what we set out to do?
- 3. How well did we do what we intended to do?
- 4. How do we know how well we did what we expected to do?

Instructional Programs

- What do we want students to 1. know, understand, and the become sure and the internation of the state of the internation of to do?
- Where do students learn what 2. we expect them to learn?
- How well did students learn 3. what you expected them to learn?
- How do we know how well 4. they learned what we expected them to learn?

Non-Instructional Programs

- What are the intended results operational, or administrative activities?
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Mapping Up

Microscopy Outcome Set - Google Chrome	
https://folio.taskstream.com/Folio/outcomes/view.asp?qyz=1kFENIcBWgpjW00b	PX7&gsi_id=pezcz0cez7ethu
Microscopy Outcome Set	
	🗷 🕯 Show Descriptions
Outcome	
Outcome	Mapped to
Hardware Proficiency	Institutional Learning Outcomes: CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY
Confidently operate a wide variety of optical microscopes, including phase, DIC, and epifluorescence.	
Software Proficiency	Institutional Learning Outcomes: CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Master diverse microscopy software programs.	
Specimen Preparation	Institutional Learning Outcomes: CRITICAL THINKING, QUANTITATIVE REASONING
Prepare specimens for optical microscopy.	
Experimental Design	Institutional Learning Outcomes: CIVIC ENGAGEMENT AND ETHICS, COMMUNICATION, CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Design experiments, critically analyze data, and report results.	
Troubleshoot	Institutional Learning Outcomes: COMMUNICATION, CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Troubleshoot problems with the optics of microscopes.	
Critical Thinking for Microscopy Technology	Institutional Learning Outcomes: COMMUNICATION, CRITICAL THINKING, INFORMATION AND COMPUTER LITERACY, QUANTITATIVE REASONING
Assess and utilize new microscopy technologies.	
Competitive Workforce Skills	Institutional Learning Outcomes: CIVIC ENGAGEMENT AND ETHICS, COMMUNICATION, CRITICAL THINKING
Obtain employment in biotech, high tech, and other growth fields.	

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Mapping Down

PLO/SLO-Curriculum Map

B = beginning D=developing A=advancing	Utilize higher ord applying basic rese psychology includi design, data analys interpretation of f reporting of result and oral forms that conformance with	er thinking in earch methods in ing research sis, and indings, and, t both in written at are in APA format.	PL	02
	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 I	В			
Course 2		В		
Course 3	D	D		
Course 4	А	А		

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 I	В	
Course 2		В
Course 3	D	D
Course 4	А	

Course Level Outcomes Referenced On Course Outlines

Instructional Programs Non-Instructional Programs

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- 3. How well did students learn what you expected them to learn?
- 4. How do we know how well they learned what we expected them to learn?
- 3. How well did we do what we intended to do?
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<u>Direct assessment</u> 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:

- I. Direct
- 2. Indirect
- 3. External

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How well did they learn it?

Outcome

 Identify & locate specific outcomes

Measure

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



Correlating Assignment

How well did they learn it?

PLO I: Identify the major writers, periods, and genres of British and American literature with sufficiency to explain the importance of works and genres within their historical contexts and over time.

Outcome

- <u>Identify</u> major writers, periods, and genres of British & American literature
- <u>Explain</u> the use of genres within the literary culture of a given period of British & American literature
- <u>Comparatively interpret</u> authors' use of genre in works from two periods of British & American literature

Aligned Measure

Objective Test

Take-home Exam Essay

Researched Paper

Adapted from CSUSB

How well did they learn it?

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D=developing A=advancing	SLO 1.1: Identify major writers, periods, and genres of British & American literature	SLO 1.2: Explain the use of genres within the literary culture of a given period of British & American literature	SLO 1.3: Comparatively interpret authors' use of genre in works from two periods of British & American literature
British Literature I	B	B	
and II	Objective Exam	Course Essay	
Studies in a	D	D	B
Literary Period	Wiki Project	Group Project	Essay Exam
Studies in a		A	D
Literary Theme		Analytical Paper	Analytical Paper
Culminating Course		A Research Paper	

What Information is Helpful?

Letter Grades?

 Assignments often ask students to engage in multiple tasks covered by more than one outcome.

Student Performance Percentages?

 Percentages of students meeting outcomes or not reveals overall performance, but does not highlight HOW students do well or go wrong.

Descriptions of Performance?

 Descriptions of patterns of student strength and patterns of student weakness can be the most revealing information, but percentages can help to define the extent of a particular problem.

Surveys?

Surveys often provide a snapshot or overview of satisfaction or awareness of services, but they rarely provide authentic or direct evidence as to whether learning outcomes have been met or highlight HOW students do well or go wrong.

Instructional Programs Non-Instructional Programs

- I. What do we want students to know, understand, and the become of our programmatic, to do?
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- 3. How well did students learn **GMEASURES** what you expected then to GMEASURES learn? TOOUTCOMAGE do what we
- 4. How do we know how well they learned what we expected them to learn?

4. How do we know how well we did what we expected to do?

- I. Gathering and wading through data
- 2. Knowing what to look for

How do we know how well we've done?

Two challenges confront us when we have developed outcomes and seek to assess our programs



3 Strategies for Smaller Piles

- Assess a subset of the outcomes each year in a consistent annual cycle
- 2. Embed direct assessment assignments in classes or activities
- 3. Collect results regularly for longer term review

Managing the Data

Assess a manageable subset of outcomes and use sampling to gather a reasonable set of data

Managing the Data

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3 Steps for Evaluation

- I. Specify the criteria that will be evaluated in the student's work
 - These can derive from the SLOs under the Program Level Outcome
- 2. Identify the levels of student performance
 - Four levels? (superior, good, adequate, inadequate)
 - Three levels? (above expectations, meets expectations, below expectations)
- 3. Define the standards for the program's success
 - Set what percentage of students will meet or exceed expectations

Knowing What to Look For

We have our student samples to provide data now what?

Define a rubric

Criteria

Levels of performance

Set Standards

How do we know how well they learned?

PLO I: Apply critical thinking within the context of professional work practice

ARTIFACT:	Student case presentation
GOAL:	85% meet or exceed expectations

Student	3-Exceeds Expectations	2-Meets Expectations	I-Below Expectations
Demonstrates evidence of problem solving skills.	Identifies the problem & contributing factors and poses solution that addresses each factor	ldentifies the problem and proposes an adequate solution	Fails to identity the problem or proposes an incomplete solution
Determines appropriate assessment of needs of client population and articulates appropriate resources.	Describes complex assessment of needs and articulates resources for each need identified	Makes an appropriate assessment of needs and identifies at least 3 appropriate resources	Determines an incomplete assessment and articulates inappropriate or less than 3 resources

Adapted from BYUH

ACHIEVED (3)	DEVELOPING (2)	NOT EVIDENT (1)	SCORE
Connection between method and SLO is clear.	Methods are not clearly linked to SLO achievement.	Methods miss outcomes or are not relevant to SLOs.	
Assessment plan is likely to yield information useful for making improvements.	Assessment plan is not specifically targeted toward finding areas of improvement.	Areas of improvement cannot be associated with the assessment plan.	
Evaluation criteria are clear with specific levels of performance required to meet expectations. Rubrics are provided to indicate measures of student performance.	Evaluation criteria are described but not specific. No rubric is provided.	Evaluation criteria are not clearly defined.	
Timeline for implementation is provided and key faculty/staff are identified.	Timeline or key personnel are not identified.	Neither a timeline nor key personnel are identified.	
Comments:		Total Score:	
Comments:	ACCESCMENT ENDIN	Total Score:	
Comments:	ASSESSMENT FINDIN	Total Score:	
ACHIEVED (3)	ASSESSMENT FINDIN DEVELOPING (2)	GS: NOT EVIDENT (1)	SCORE
ACHIEVED (3) Summary of results provides specific data to support student achievement.	ASSESSMENT FINDIN DEVELOPING (2) Some detail is present in analysis but specific data is absent.	GS: NOT EVIDENT (1) Analysis is too general or absent.	SCORE
ACHIEVED (3) Summary of results provides specific data to support student achievement. Reflection of results is thorough and clear.	ASSESSMENT FINDIN DEVELOPING (2) Some detail is present in analysis but specific data is absent. Reflection of results is limited.	GS: NOT EVIDENT (1) Analysis is too general or absent. Reflection of results is superficial.	SCORE
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Home Grown Skill

SLOAC has provided tremendous resources and examples!

What patterns of strength and weakness emerge?

I. What do we want students to know, understand, and be able to do?

- 2. Where do students MAPPING CURRICULUM MAPPING expect them to learn?
- 3. AUGNING MEASURES you TOCOUTCOMES
- 4. How do we know how well they legy CLES & RUBBLES to learn?

A Process of Questions

The Culture of Intentionality's focus on student learning opens a clearer approach to assessment.

- Reveals <u>patterns of student strength</u> and <u>patterns of student weakness</u> that letter grades and percentages can conceal
- Allows faculty & staff to see HOW students are responding instead of simply THAT they are responding
- Indicates the degree to which we succeed in producing the educated, prepared students we desire to produce
- Provides direction when staff & faculty need to make program adjustments to address shortcomings

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Assessment's Payoff: Innovation

Creating Meaningful Change

Innovating Around Success:

- Consider increasing expectations or rigor outlined in outcomes
- Raise the standard of attainment
- Consider surveying students about their experience of the program
- Scale the activity up
- Consider surveying others in the discipline /profession / area

We Did It!

Assessment may find that student learning meets expectations at the determined standard for some outcomes

Innovating to Address Shortcomings:

Curricular Issues

- Ensure outcomes are clear and aligned with expectations
- Review and revise activities and/or teaching & learning methods used by faculty & staff
- Review and revise course / program content
- Revise or establish pre-requisites
- Review and revise sequences

What Happened?

Assessment may find that student learning does not meet expectations at the determined standard for some outcomes **Analysis of Results:** There was considerable overlap between these results: 3 students scored "essentially correct" on all three questions, while another 5 scored "essentially correct" on two out of the three. When the scores were aggregated, 7 students achieved a score of 20/30 or better. I would therefore put the "success rate" of this particular sample at 33%.

Planned Use of Results for Continuous Improvement:

To my knowledge, this is the first documented assessment of Program Learning Outcomes for Math 253 at Merritt College. The sample size is not particularly large, and the department has not established criteria for adequacy of progress at this stage of the Math Program. These results should therefore be considered largely as contributing to a baseline for later comparison.

Nevertheless, based on this execution of the assessment process, I would recommend further discussions in the department concerning the following topics:

- I. Establishing a set of particular topics for PLO assessment.
- 2. Establishing rubrics for grading the particular questions used, esp. the use of "partial credit" scales.
- 3. Establishing thresholds for adequate progress.

With regard to Math 253 in particular, I suspect that the low success rate achieved by this group on the topic of percents may have at least the following two contributory "causes": 1.) the topic comes late in the semester, and most of our students at this level are hard-pressed to maintain concentration for that length of time, and 2.) time spent reviewing the arithmetic of whole numbers and fractions leaves insufficient time to cover percents with the necessary depth. This second factor also holds for Math 250, with the result that percents are never adequately covered in either course. I would therefore strongly recommend that the department consider redistributing the percent time-on-topic values for Math 250 and 253 so that more time can be spent on percents and their applications in Math 253.

Method: Course: Math 253: Prealgebra Lead Instructor: David L. StrohlInstitution level; Direct – Exam

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Results for Final Exam

(Assessment Plan and Assessment Findings; 2014-2015 Assessment Cycle)

Summary of Results: For #1:7 students got full credit which is 7 points

9 students got 5 to 6 points.

7 students got 3 to 4 points.

8 students got 1 to 2 points.

6 students received no credit on this question.

For #2: I students got full credit which is 10 points.

I student got 9 points.

6 students got 5 to 6 points.

7 students got 3 to 4 points.

13 students got 1 to 2 points.

9 students received no credit on this question.

Action details and description: More homework assignments should be given to students from solving logarithmic and exponential equations part so students can practice more.

Implementation Plan (timeline): Spring 2015 Key/Responsible Personnel: Minyoung(Michelle) Lee Expected outcome of this action: 70% of students get 70% for those problems. Budget request amount: \$0.00 Priority: High Results for Final Exam

(Assessment Plan and Assessment Findings; 2014-2015 Assessment Cycle)

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Innovating to Address Shortcomings:

Administrative Issues

- Develop advising systems for students
- Appoint coordinators for multi-section courses
- Review outlines for multi-section courses
- Build systems for communicating expectations to students

What Happened?

Assessment may find that student learning does not meet expectations at the determined standard for some outcomes

A Pragmatic Rationale

Budgeting

ACTION:

Action details and description: I will provide more time in lab class for students to familiarize themselves, individually and/or in groups, with the fossil casts and to handle and observe/compare them. Students will be required (as part of the week's lab assignment grade) to visit the station with the relevant material. As they complete their lab exercises and study sheets they must view and handle the materials rather than rely simply on information from the lab manual and class presentation. Many students are not interested in handling the fossil casts. We also need a chimpanzee skeleton to use in comparison with the fossil hominid and modern human skeletal casts. It is insufficient for students to rely on two-dimensional images in their lab manuals and on PowerPoint slides to identify and compare skeletal remains.

Implementation Plan (timeline): The weekly labs at the end of the semester covering hominid evolution: the last 4-5 weeks of the semester. This lab work prepares students for the final exam.

Expected outcome of this action: Improved ability to identify, classify, analyze, and compare and contrast skeletal remains.

Budget request amount: \$2,000.00

Priority: High

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Budget request amount: \$2,000.00

Priority: High



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.

Please bring or have access to your outcomes

Please sit with colleagues in the same or a similar unit

Questions?

