

# **Making Assessment Make Sense**

## **Producing and Using Sound Data**

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CSU San Bernardino &  
The Institute for Evidence-Based Change

# Presentation Outcomes

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This presentation will enable participants to:

- ▶ Define, differentiate, and use different types of SLOs;
- ▶ Map curricula to locate gaps in a program's design;
- ▶ Gather a variety of types of data to inform programs and to prompt meaningful change;
- ▶ Work within existing structures to develop productive assessment procedures.



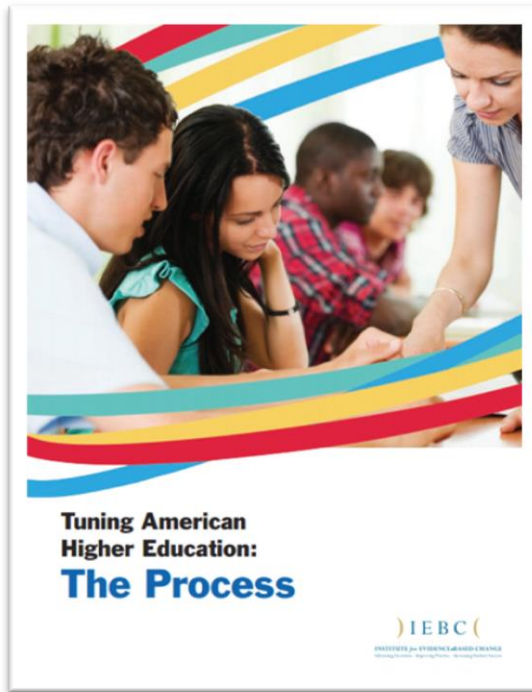
# Some Context: (Inter)National



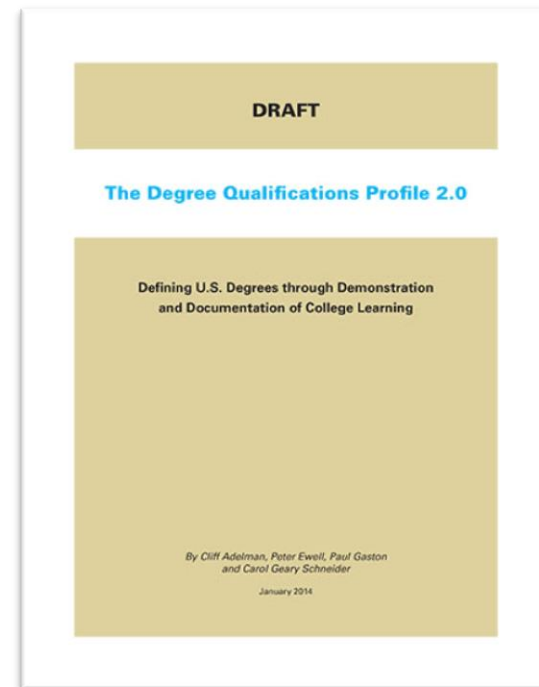
# Some Context: (Inter)National

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## TUNING

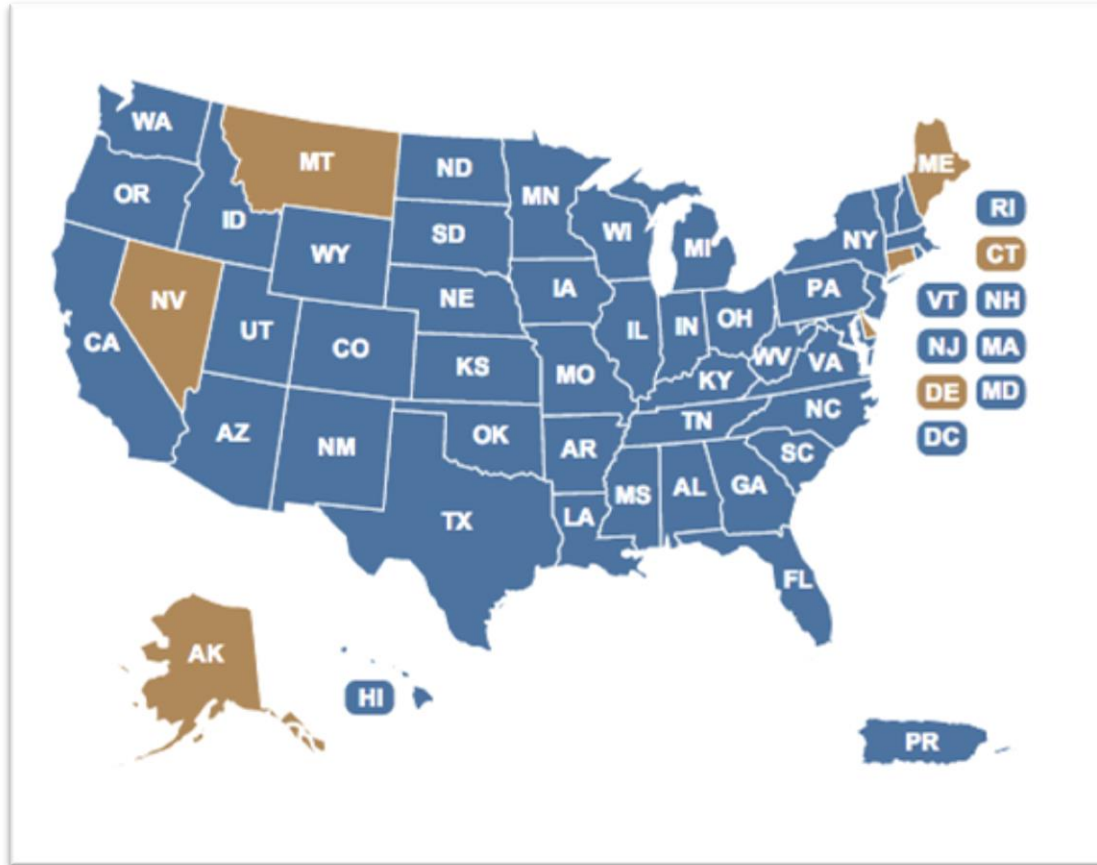


## DEGREE QUALIFICATIONS PROFILE



# Some Context: (Inter)National

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# The Problem We Face

**Making Assessment Make Sense**

# The Assessment Cycle

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# Perception of the Assessment Cycle

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

## The Culture of Compliance

Students become unimportant elements of the assessment process



# The Yield

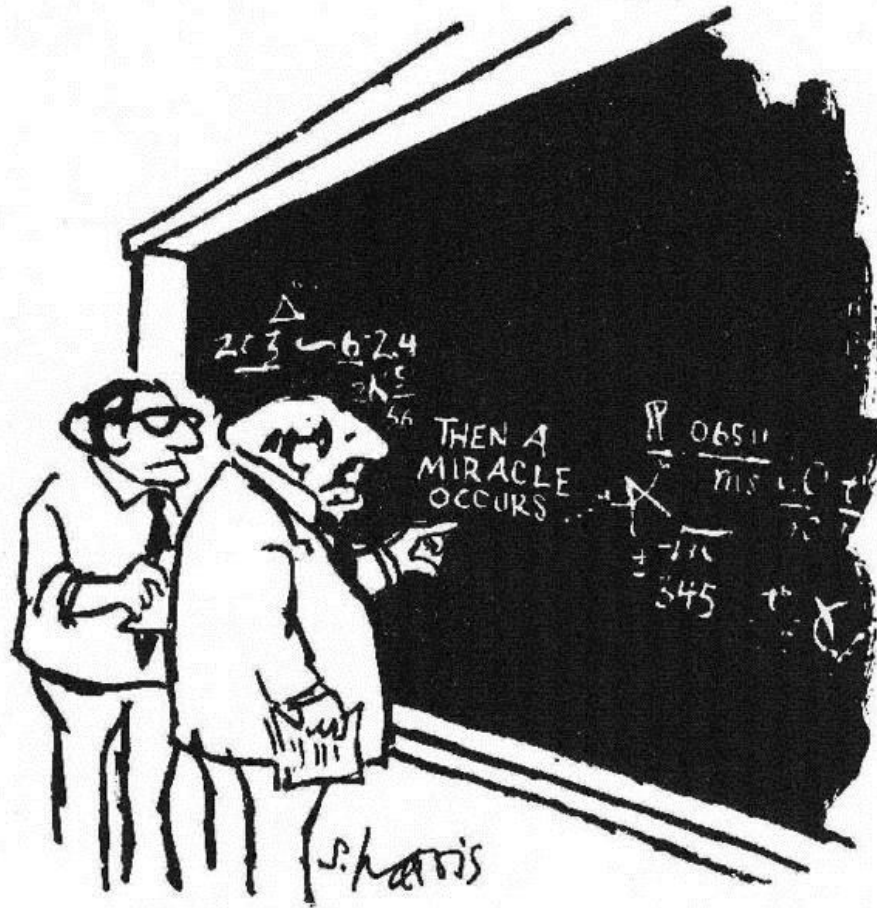
Mathematics Department  
Program SLO Quantitative Data

Academic Year 2011-12

Program SLO Name	Program SLO	Course ID	% Students Achieving 'Mastery'	% Students Achieving 'Some Understanding'	% Students Achieving 'No Understanding'
Summary of all PROGRAM SLO outcomes					
		SLO1	49.63	18.04	32.30
		SLO2	49.63	18.04	32.30
		SLO3	49.63	18.04	32.30
Average %s for all PROGRAM SLOs			49.63	18.04	32.30
Average %s from previous Academic Year			N/A	N/A	N/A
PROGRAM SLO1	Engage in logical and critical thinking.	MAT104	47.00	12.00	41.00
		MAT104	47.00	15.00	38.00
		MAT104	53.00	9.00	38.00
		MAT104	59.00	9.00	31.00
		MAT107	44.00	25.00	31.00
		MAT107	63.00	12.00	25.00
		MAT107	69.00	12.00	19.00
		MAT107	75.00	6.00	19.00
		MAT107	88.00	0.00	12.00
		MAT154A	13.00	26.00	61.00
		MAT154A	30.00	52.00	18.00
		MAT154A	39.00	26.00	35.00
		MAT154A	43.00	22.00	35.00
		MAT154A	13.00	26.00	61.00
		MAT154A	30.00	52.00	18.00
		MAT154A	39.00	26.00	35.00
		MAT154A	43.00	22.00	35.00
		MAT201	15.00	35.00	50.00
		MAT201	30.00	10.00	60.00
		MAT201	35.00	15.00	50.00
		MAT201	40.00	20.00	40.00
		MAT201	75.00	5.00	20.00
		MAT204	40.00	20.00	40.00

# The Problem

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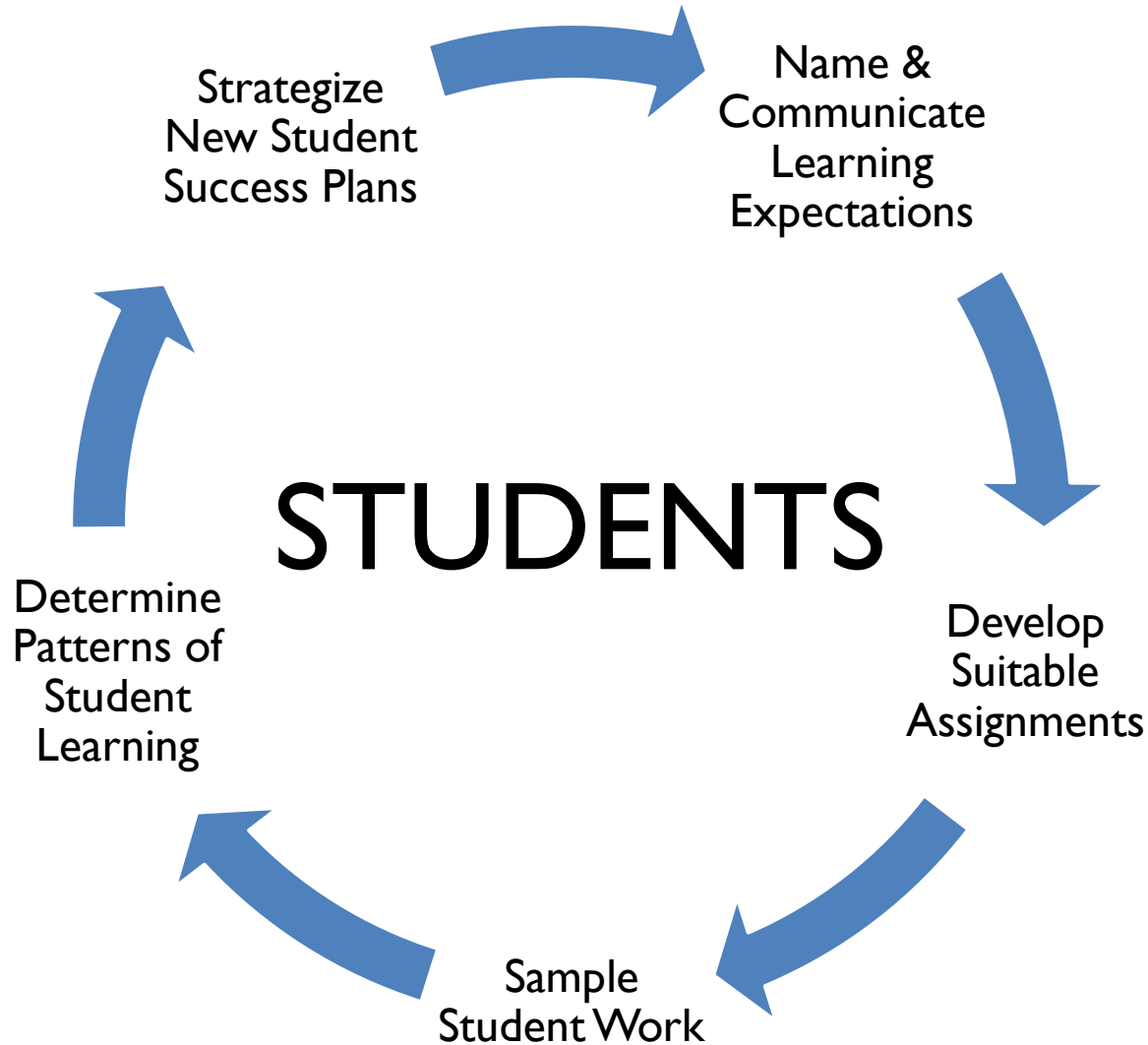
"I think you should be more explicit here in step two."

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# The Trend Towards Intentionality

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- ▶ Is student learning-centered
- ▶ Seeks information about how well students are learning
- ▶ Reflects on what we teach and how we teach it
- ▶ Accepts (some) responsibility for student learning
- ▶ Experiments with new strategies for student success

## **The Culture of Intentionality**

Students become the primary focus of the assessment process



# The Core: Student Learning Outcomes

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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

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*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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(Suskie, 2009).



- ▶ Focus on learning, not processes or assignments
- ▶ Avoid vague verbs (*know, understand, demonstrate*)
- ▶ Use action verbs (Bloom's taxonomy)
- ▶ Use verbs that reflect the level of learning
- ▶ Ensure that outcomes are observable and measurable
- ▶ State what students do (not what instructors do)

## Features of Effective SLOs

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



# Relating SLOs

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# Building with SLOs

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# Connecting SLOs

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## Example 1: Content

Demonstrate knowledge of major psychological theories, concepts, testing and assessment strategies, research methodologies and therapeutic techniques, and their development over time.

## Example 2: Skill

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.

## Differentiating Outcome Types

### Program Level

#### Outcomes:

Broadly inclusive statements that might be considered areas of competency within a given discipline or general areas of competency within a GE program





## Example 1

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

## Example 2

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

## Example 3

Analyze the results of two different kinds of personality tests and birth order for college age adults especially introversions versus extraversion.

## Differentiating Outcome Types

### Student Learning

#### Outcomes:

Specific statements that identify student responses to learning experiences and thereby indicate what learning looks like within a discrete area of a program



# Differentiating Outcome Types

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## PLO: 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.

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

**SLO 1.2:** Analyze the results of two different kinds of personality tests and birth order for college age adults especially introversions versus extraversion.



# Differentiating Outcome Types

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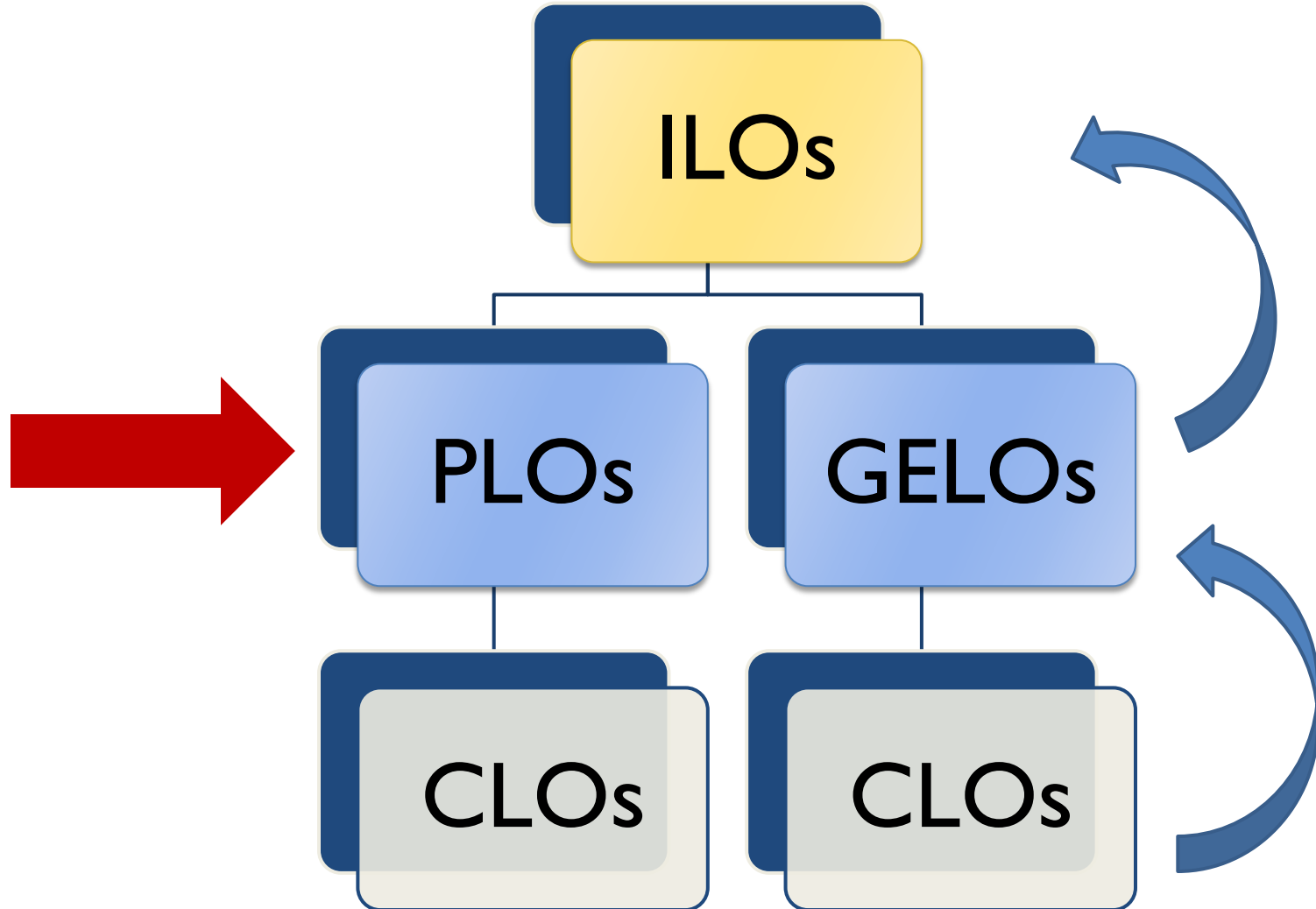
SLO 1.1: Faculty identify for their own classes.

SLO 1.2: Faculty identify for their own classes.



# An Overarching Structure

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# “Assessment” of What?

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## ACCJC Standard II.A.1.c

The institution identifies student learning outcomes for courses, programs, certificates, and degrees; assesses student achievement of those outcomes; and uses assessment results to make improvements.



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## ACCJC Standard II.A.1.c

The institution identifies student learning outcomes for courses, programs, certificates, and degrees; assesses student achievement of those outcomes; and uses assessment results to make improvements.

## ACCJC Standard II.A.2.h

The institution awards credit based on student achievement of the course’s stated learning outcomes. Units of credit are consistent with institutional policies that reflect generally accepted norms or equivalencies in higher education.

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# “Assessment” of What?

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## Assessment of Student Learning

Who: for students

What: how much students have learned

When: throughout each semester

Where: in classes

How: using assignments in which students demonstrate their learning

Why: to evaluate whether students have gained proficiency that prepares them to advance to a next course

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## Assessment of Program Effectiveness

Who: for ourselves

What: how much we have taught or how successful programs are

When: each year, selectively

Where: in (not) academic/technical units


How: using direct & indirect data (assignment results & surveys)

Why: to evaluate the extent to which our curricula, pedagogies, activities, and support systems are encouraging student success

ACCJC Standard II.A.1.C





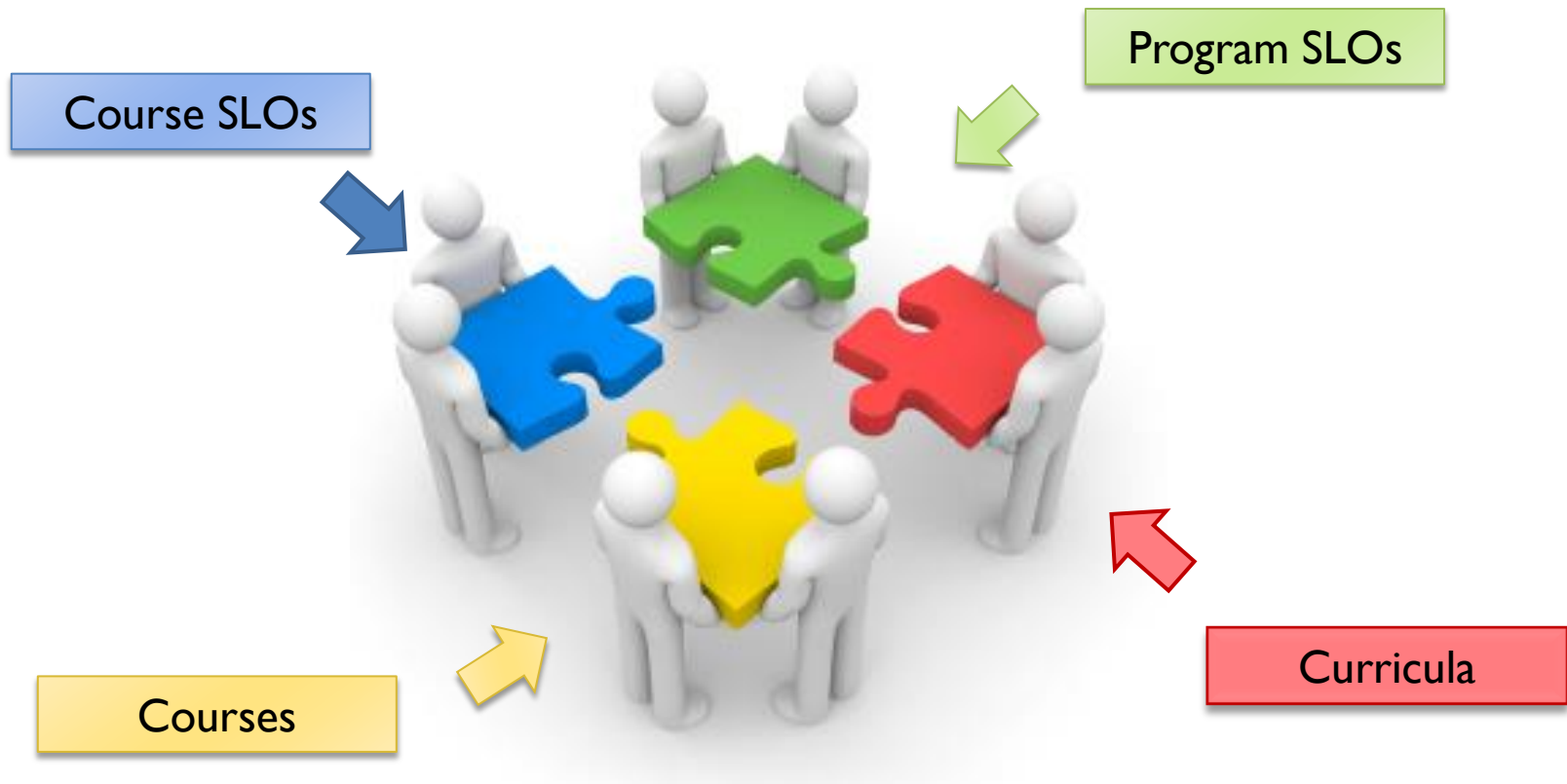


# Defining What We're Working With

**Making Assessment Make Sense**

# Pulling it Together

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# Pulling it Together

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1. Are the PLOs clear and appropriate to the program?
2. Are the courses the right courses for achieving the program goals?
3. Are the CLOs clear and appropriate?
4. Are the CLOs and PLOs aligned to each other?
5. Are the courses sequenced appropriately for our program?

## Topics to Investigate



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## Topics to Investigate





# Pulling Program Assessment Together

## PLO/SLO-Curriculum Map

I = introduced D=developed M=mastered	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.	CLO 2.1	CLO 2.2
Course 1	I			
Course 2		I		
Course 3	D	D		
Course 4	M	M		




# Pulling Program Assessment Together

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## PLO/SLO-Curriculum Map

I = introduced D=developed M=mastered	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	I	
Course 2		I
Course 3	D	D
Course 4	M	



Course Level Outcomes  
Referenced On Course  
Outlines

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# Pulling Program Assessment Together

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## PLO/SLO-Curriculum Map

I = introduced D=developed M=mastered		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.	<b>PLO 2</b>
Course 1	CLO 1	I	
	CLO 2		I
Course 2	CLO 1	D	D
	CLO 2	M	



- ▶ Assembles all program information in one space
- ▶ Enables visualization of program structure
- ▶ Relates all components of program design
- ▶ Reveals gaps in program design

## Benefits



# Planning to Assess Program Effectiveness in Student Learning

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- ▶ **Direct assessment**  
embeds artifacts in practice (assignments in classes)
  - ▶ Student essays, exams and presentations
  - ▶ Case studies and field work
  - ▶ Group projects and service learning
  
- ▶ **Indirect assessment**  
seeks opinions of student learning
  - ▶ Student meta-cognitive reports
  - ▶ Internship supervisor reports
  
- ▶ **External assessment**  
uses outside exams
  - ▶ Non-degree standardized tests

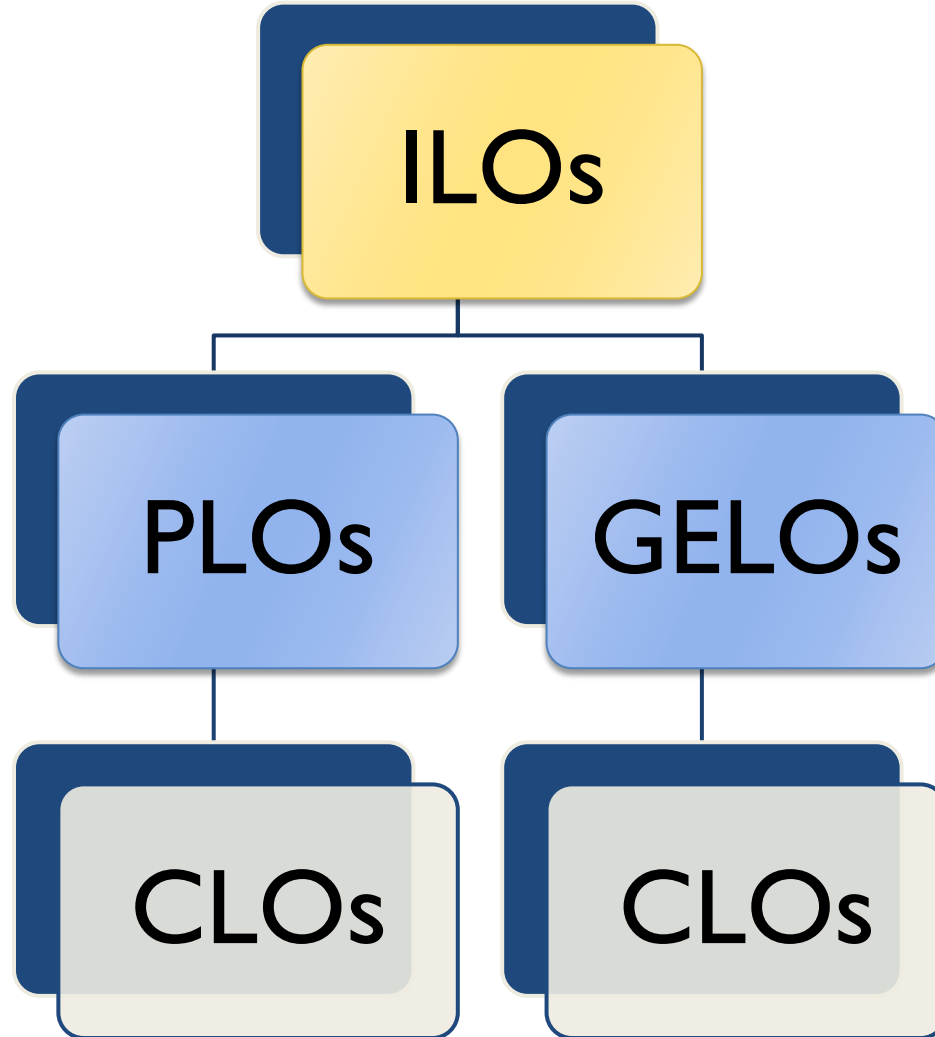
## Defining Assessment Strategies

What will we use to evaluate learning?



# An Overarching Structure

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- ▶ **Sampled student work?**
  - ▶ Requires advanced planning for designating assignments and collection procedures
  
- ▶ **Portfolios of student work?**
  - ▶ Requires advanced communication to students about portfolio contents
  - ▶ Best coupled with student reflective essay
  
- ▶ **Course-based SLO summary sheets?**
  - ▶ Depends on alignment of PLOs and SLOs
  - ▶ Requires advanced notice to instructors

## Defining Assessment Strategies

What will we look at for our assessment?





## General Question: Who is responsible?

- ▶ Faculty reading group?
  - ▶ Perhaps talk to administration about designating FLEX day for this purpose
- ▶ Individuals submit summary sheets?
  - ▶ But—summary needs to be object of collective reflection and conversation

## Defining Assessment Strategies

How will we review the materials we collect?



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

## How do we know how well they learned?

Two challenges confront conscientious educators who have developed outcomes and seek to assess their programs



# 3 Tips for Smaller Piles

- ▶ Assess a subset of the PLOs and their SLOs each year in an annual and consistent cycle
- ▶ Draw direct assessment samples from selected classes or portfolios
- ▶ Collect a representative, random sample of work from across sections

## Managing the Data

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



# Managing the Data

I = introduced D=developed M=mastered	<b>PLO1:            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.</b>		
	<b>SLO 1.1:            Identify major writers, periods, and genres of British &amp; American literature</b>	<b>SLO 1.2:            Explain the use of genres within the literary culture of a given period of British &amp; American literature</b>	<b>SLO 1.3:            Comparatively interpret authors' use of genre in works from two periods of British &amp; American literature</b>
British Literature I and II	I Objective Exam	I Course Essay	
Studies in a Literary Period	D Wiki Project	D Group Project	I Essay Exam
Studies in a Literary Theme		M Analytical Paper	D Analytical Paper
Culminating Course	M Research Paper		



# 3 Steps for Simple Evaluation

1. 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 1: 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	1-Below Expectations
Demonstrates evidence of problem solving skills.	Identifies the problem & contributing factors and poses solution that addresses each factor	Identifies the problem and proposes an adequate solution	Fails to identify 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



PLO I: Apply critical thinking within the context of professional work practice			
ARTIFACT: GOAL:		Student case presentation 85% meet or exceed expectations	
Student . . .	3-Exceeds Expectations	2-Meets Expectations	1-Below Expectations
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## What Are We Looking For?

Patterns of strength and weakness in student learning.



# The Trend Towards Intentionality

**SLO Assessment Data Collection Sheet**  
*(Due to the Division Office each semester by Final Grade Submission Date)*

Faculty Name:	Course:
Department:	Section:
Semester/Year Assessed: Fall 13	Units:

Outcomes	
Assessment Methods	
Criteria – what is "good enough"?	

<i>Draft: Generic Rubric for use if Departmental or Faculty Rubric is Not Available.</i>	Total number of students enrolled in the class	Number of students who met the SLO	Number of students who did not meet the SLO	Number of students who did not assess
SLO 1				
SLO 2				
SLO 3				

<p>Reflect and comment on the successes and challenges in this class. Did you:</p> <ul style="list-style-type: none"><li>• Try new strategies?</li><li>• Add content?</li><li>• See notable improvement in class performance?</li><li>• Identify any learning gaps?</li></ul> <p>In future will you</p> <ul style="list-style-type: none"><li>• Try new strategies</li><li>• Make recommendations for content, assessment, or SLO modification</li></ul>	
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Describe & attach the rubric to inform completion of the numerical data table below

Numerical Data for tracking longitudinal performance

Space to track instructor strategies as well as **trends in student strengths and weaknesses**



- ▶ What do YOU want to know?
- ▶ What do THEY need you to report?

-O-

- ▶ How will YOU learn what you want to know?
- ▶ How can you report to THEM what they need to know?

-O-

- ▶ What is the best way for YOU to record your discoveries?
- ▶ How does that fit with what THEY need you to report?

**Work With Your  
Assessment Office**



# Using What You Learn

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## If student learning for an outcome meets expectations at the standard:

- ▶ Take no action
- ▶ Identify this area as a program strength
- ▶ Consider increasing expectations outlined in SLOs
- ▶ Raise the standard of attainment
- ▶ Consider surveying students about their experience of the program

## Responding to the Results

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



- ▶ If student learning does not meet expectations at the standard, consider:

## Curricular Issues

- ▶ Ensure PLOs/SLOs are clear and aligned with expectations
- ▶ Review and revise teaching & learning methods used by faculty
- ▶ Review and revise course content
- ▶ Revise or establish pre-requisites
- ▶ Review and revise course sequences

## Responding to the Results

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



- ▶ If student learning does not meet expectations at the standard, consider:

## Structural or Administrative Issues

- ▶ Develop advising systems for students
- ▶ Appoint coordinators for multi-section courses
- ▶ Establish guidelines for multi-section courses
- ▶ Build systems for communicating expectations to students

## Responding to the Results

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





Thank you

**Making Assessment Make Sense**