Assessment: Planning and Strategies

A CLAS Workshop

November 12 & 13, 2024

LOYOLA UNIVERSITY CHICAGO

AGENDA

- Introduction: Welcome and Context reminder
- Assessment Strategies
  - Adding to your toolbox - examples
  - What works for you? -discussion
- Assessment planning
  - Essential components
  - Using your map to get started
  - Planning template - worktime
- Activity: Work on your own Assessment Plan
- Continuing Support

CONTEXT OF HIGHER EDUCATION

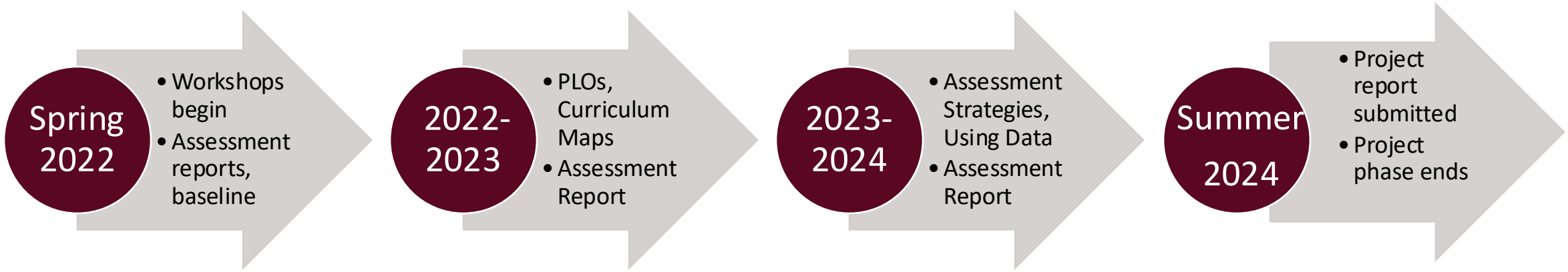
We are likely to experience some changes in Higher Education in the coming few months/years. We will need to be prepared ...

- To justify the work we do in general
- To demonstrate that our work has value
- To demonstrate that our work has impact

What role can the work we do here play in this?

Project evolution

FROM PROJECT TO INSTITUTIONALIZED PROCESS



Coordinated Learning and Assessment means:

All of us can…

- Identify and describe student learning related to knowledge and skills
- Measure this learning so that we know what they have learned and can do
- Use this information to improve student learning and experiences in academic programs

Project evolution

WHAT DID WE LEARN FROM 2023 AAARS

Loyola University Chicago
CLAS
Coordinated Learning and Assessment Supports

Student Artifacts (% complete)

- 69% collected
- 51% corresponded to target PLO
- 35% provided # of students the data represents

Methods

- direct/embedded 63%
- 40% evaluated with rubric/tool (>21% absent)

Results reporting

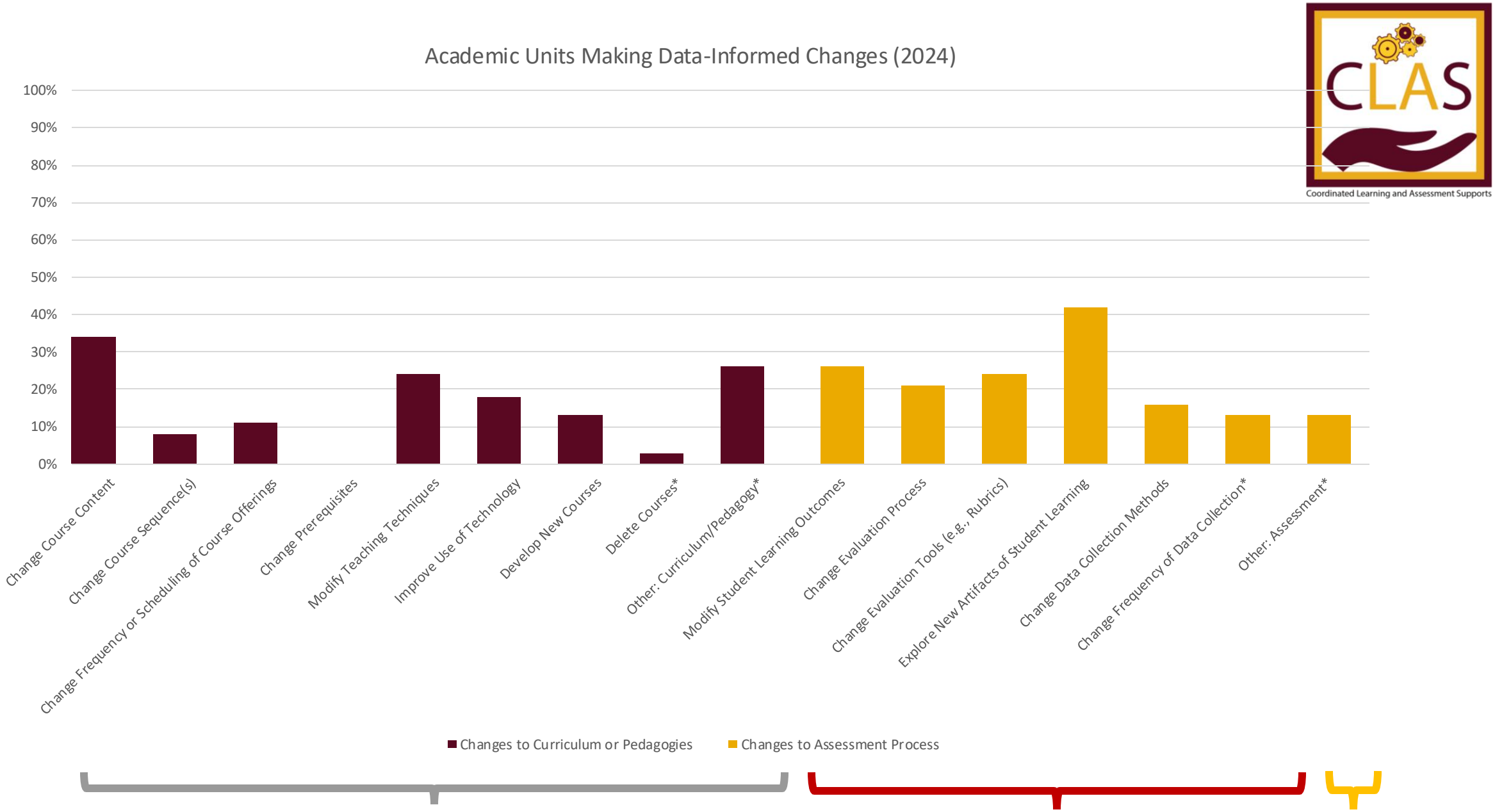
- 55% provided context (who/when assessed)
- 45% provided quant info *(>24% absent)*

Collaboration

- 68% collective input from multiple faculty
- 61% data is shared among faculty

Use of data

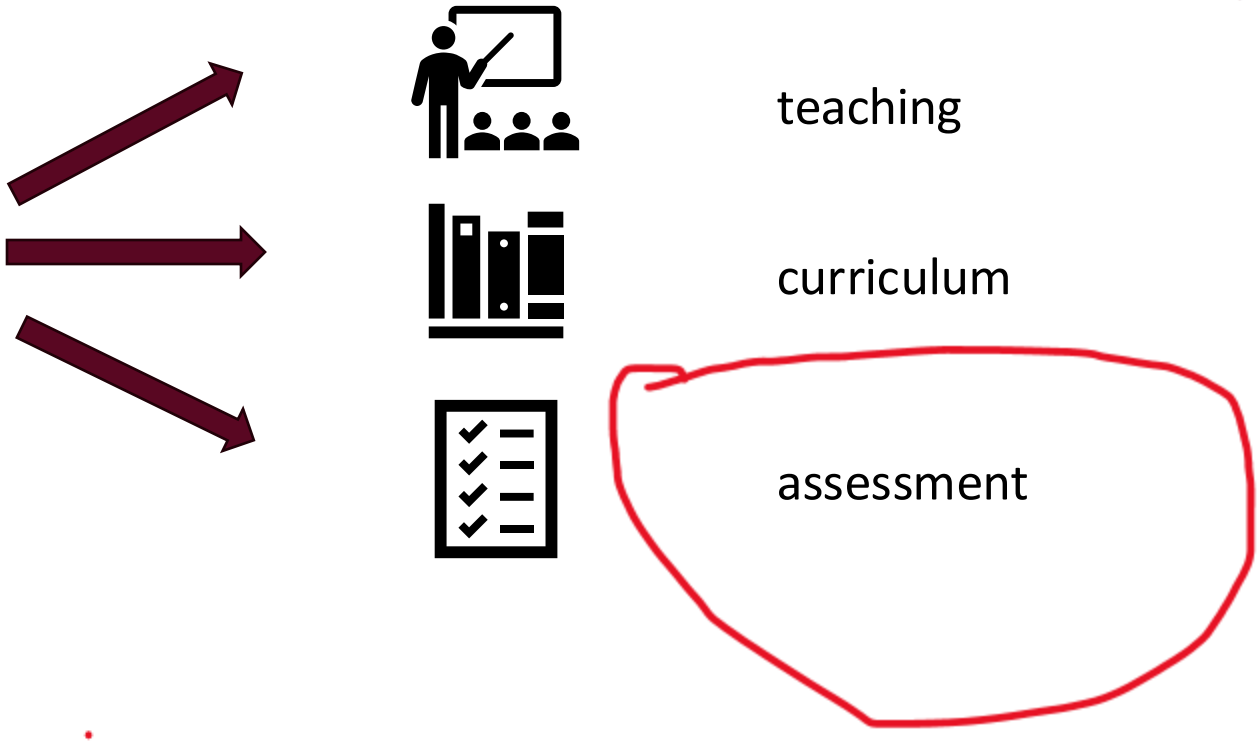
- 50% Intentions for specific use of data
- 44% actions tied to results of assessment



CLAS
Coordinated Learning and Assessment Supports

PLOs are the starting point for everything

Program Learning Outcomes



Assessment Overview

Our Focus so Far...

- Develop clear and measurable PLOs
- Map PLOs to your curriculum

How does this work directly relate to implementation of assessment?

Assessment expectations

- An output of our work:
  - https://www.luc.edu/clas/aboutclas/assessmentexpectations/
- Each unit should report on 1-2 programs, 1-2 outcomes in these programs, annually
- All program PLOs are continually assessed
- All program PLOs should be reported on within 5 years

Resources are Available

Friendly reminder—there are many resources available on the CLAS website!

https://www.luc.edu/clas/projectsupports/resources/

Assessment myths

Assessment is often construed as…

- ✓… something to finish just before the final deadline.
- ✓… *that* person's job.
- ✓ … not important.
- ✓ … imposed by accrediting agencies.
- ✓ … additional work.
- ✓ … not a rational investment towards tenure and promotion.

But we can fully realize it as

- ✓ … something to finish just before the final deadline.
  - … an ongoing process that is shared regularly so decisions to improve student learning and success can be made
- ✓ … *that* person's job.
  - … a process involving all faculty through a collaborative commitment to improving student learning and degree integrity
- ✓ … not important.
  - … vital for programs to provide evidence of needed improvement and to demonstrate educational responsibilities
- ✓ … imposed by accrediting agencies.
  - … an evidence-based means to demonstrate degree value
- ✓ … additional work.
  - … a core component of good pedagogy
- ✓ … not a rational investment towards tenure and promotion.
  - … demonstrates commitment to teaching effectiveness through evidence; part of the scholarship of teaching and learning (SoTL)

San Diego State, https://caa.sdsu.edu/assessment/mythbusters

This is who we are!

"Taken together, these processes of taking action based on what we have learned while evaluating the effect of our experience and action on ourselves and those around us are in continual interaction with one another, demonstrated by the overlapping circles. The glue that forms and informs those connections is the practice of **reflection**, shown in our model as the overlain center of the IPP, and the center of Ignatian education."

https://www.luc.edu/fcip/ignatianpedagogy/whatisignatianpedagogy/

Coordinated Learning and Assessment Supports

PROGRAM ASSESSMENT STRATEGIES

Many strategies to choose from

Coordinated Learning and Assessment Supports

We will walk through a few:

- Let the (Bloom's) verbs in your PLOs guide you
    - Program lens and course lens (rubric examples)
- Using Portfolios
- And more

Assessment Strategies

- How are you going to assess?
  - Tie back to PLOs (condition, audience, behavior, achievement)
  - Behavior is a helpful guide; recall Bloom's categories
  - Verb + statement of what student will be able to know/value/do
    - Remember
    - Understand
    - Apply
    - Analyze
    - Evaluate
    - Create

Bloom's Taxonomy verbs imply assessment activities

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	Remember	Understand	Apply	Analyze	Evaluate	Create
Learning Activities	• Flashcards • Highlight key words • List • Memory activities • Reading materials • Watching presentations and videos	• Case studies • Concept map • Demonstrations • Diagrams • Flowcharts • Group discussions • Mind map • Matrix activity • Play/sketches • Summarize • Think-pair-share	• Calculate • Case studies • Concept map • Creating examples • Demonstrations • Flipped classroom • Gallery walk • Gamification • Group work • Lab experiments • Map • Problem-solving tasks • Short answers • Role play	• Case studies • Compare and contrast (with charts, tables, Venn diagrams) • Concept map • Debates • Discussions • Flowchart • Graph • Group investigation • Mind map • Questionnaires • Report/survey • Think-pair-share	• Debates • Compare and contrast (with charts, tables, Venn diagrams) • Concept map • Journal • Pros and cons list • Mind map • Review paper	• Brainstorm • Decision-making tasks • Develop and describe new solutions or plans • Design project • Performances • Presentations • Research projects • Written assignment
	• Clicker questions • Fill in the blanks • Label • Match • Multiple choice • Quizzes • True and false questions	• Concept map • Create a summary • Essay • Diagrams • Infographics • Matrix activity • One-minute paper • Presentation • Provide examples • Quizzes • Short answers	• Discussion board post • E-portfolio • Lab reports • One-minute paper • Presentation • Problem-solving tasks • Short answers	• Analysis paper • Case study • Evaluation criteria • Critique hypothesis, procedures etc. • Muddiest point • One-minute paper • Research paper • Review paper	• Argumentative or persuasive essay • Debates • Discussions • Presentation • Provide alternative solutions • Report	• Develop criteria to evaluate product or solution • Grant proposal • Outline alternative solutions • Research proposal

Developed by the Centre for Teaching Excellence, University of Waterloo

References: Anderson, L., & Krathwohl, D. A. (2001). *Taxonomy for learning, teaching and assessing: A revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
IUPUI Center of Teaching and Learning. (2006). Bloom's Taxonomy "Revised" Key Words, Model Questions, & Instructional Strategies. Retrieved from: www.center.iupui.edu/ctl/idd/docs/Bloom_revised021.doc

PLOs and CLOS

Coordinated Learning and Assessment Supports

COURSE LEARNING OBJECTIVES

- Can be *very specific*
- Can be focused on skills and/or content

PROGRAM LEARNING OBJECTIVES

- Can be more *general*
- Typically focuses on broad skills

Make sure to note how this makes assessment easier and more clear

PLOs and CLOS – an example pairing

Coordinated Learning and Assessment Supports

COURSE LEARNING OBJECTIVES

Students will evaluate a metagenomic research topic of interest, retrieving the raw underlying data from the literature, build a pipeline for processing, and perform a bioinformatic metanalysis using current best-practices to evaluate the studies' findings that are presented to the class as a final project presentation.

PROGRAM LEARNING OBJECTIVES

PLO2: Students will be able to retrieve, synthesize, and critically evaluate scientific literature.

PLO3: Students will be able to communicate (orally and in writing) results and interpretation of scientific research.

PLO4: Students will be able to design and implement experiments that test predictive hypotheses, analyze data, report results, and interpret the significance of these experiments.

PLOs and CLOS – Rubric for assessment

Criteria	Exemplary (3)	Proficient (2)	Developing (1)	Beginning (0)
Introduction & Data Overview	Clearly introduces the topic and purpose; provides a comprehensive overview of the data, including specifics on where it came from and its relevance.	Clear introduction and purpose; provides a general overview of the data, though some details may be lacking.	Basic introduction; provides limited information on data origin or relevance.	Topic and purpose are unclear; little to no information on data origin or relevance.
Methods	Thoroughly explains the pipeline and methods used to evaluate the data, with a clear rationale for each step and adherence to best practices.	Provides a clear description of methods and pipeline; rationale is given but could be more detailed.	Brief or unclear description of methods; lacks rationale or adherence to best practices.	Methods are poorly explained or missing; lacks rationale and adherence to best practices.
Results & Analysis	Presents results clearly and concisely, with accurate analysis and insightful interpretations; uses visuals effectively to enhance understanding.	Results are mostly clear; analysis is accurate, though interpretations could be deeper; visuals are helpful but limited.	Results are presented but lack clarity; analysis may contain minor inaccuracies; visuals are minimal or confusing.	Results are unclear or incomplete; analysis is inaccurate or missing; visuals are absent or poorly done.
Implications & Future Directions	Provides a well-rounded discussion of the study's implications, limitations, and future directions; demonstrates critical thinking and insight.	Discusses implications and limitations; identifies future directions but lacks depth in critical analysis.	Limited discussion of implications and future directions; lacks depth or clarity.	Minimal to no discussion of implications, limitations, or future directions.
Presentation Style & Organization	Highly organized and engaging presentation with logical flow; explanations are clear, concise, and effectively guide the audience through each step.	Presentation is organized with logical flow; explanations are mostly clear but could be more concise or engaging.	Somewhat organized but lacks clarity and logical flow; explanations are unclear at times.	Disorganized, difficult to follow; explanations are unclear or missing in several sections.
Visual Aids & Supporting Material	Excellent use of visuals and supporting materials that enhance understanding; all visuals are relevant and professionally presented.	Uses visuals and materials that support understanding; some visuals could be more polished or relevant.	Limited visuals or supporting materials; some visuals may be confusing or irrelevant.	Little to no visuals or supporting materials; visuals, if present, do not aid understanding.
Response to Audience Questions	Responds thoughtfully and accurately to questions, demonstrating thorough understanding and critical insight into the topic.	Answers questions adequately, showing good understanding, though some responses may lack depth.	Struggles with some questions; responses indicate limited understanding.	Unable to answer questions effectively, demonstrating minimal understanding of the topic.

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Results & Analysis	Presents results clearly and concisely, with a[illegible]	Results are mostly clear; analysis is	Results are presented but lack clarity;	Results are unclear or incomplete;
Implications & Future Directions	Pr[illegible]			
Presentation Style & Organization	H[illegible]			
Visual Aids & Supporting Material	Ex[illegible]			
Response to Audience Questions	R[illegible]			

Thoroughly explains the pipeline and methods used to evaluate the data, with a clear rationale for each step and adherence to best practices.

PLOs and CLOS – an example pairing

Coordinated Learning and Assessment Supports

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STEM Program Example: Chemistry

CHEM240 – CHEMICAL REACTIVITY II CLOS AND PLOS

- Qualitatively and quantitatively describe and explain how molecular structure and stability changes
- over time in chemical reactions.
- Draw and interpret multiple representations of structures depicting reactivity.
- Predict and draw reaction products.
- Propose and draw logical reaction mechanisms.
- Quantify relationships between variables controlling chemical systems.
- Differentiate among closely related factors, categorize problem types, and select appropriate tools to solve these problems.
- Apply chemical principles to explain natural phenomena.
- answer knowledge and comprehension type questions related to fundamental chemical concepts and demonstrate fluency with basic facts, terminology, and principles in the various subfields of chemistry.
- understand and describe the chemical basis of life, our natural resources and environments, and the universe.
- retrieve, research, synthesize, and critically evaluate scientific literature.
- design and implement experiments that test predictive hypotheses, gather relevant data, analyze results, and interpret the significance of these results.
- operate state of the art equipment used by chemists and biochemists.
- engage in scientific reasoning with claims based on supported evidence and communicate effectively results and interpretations of scientific research.

Assessment Strategies – Chemistry Comprehensive Objective Mastery

	CO Mastery				CO Total (Mastery + Proficiency)	Reaction Writing	Quizzes	WileyPlus
	Synthesis	Mechanism	Spectroscopy	Total Mastered				
A	≥7	≥7	≥7	≥22	≥23	≥3	≥8	≥90
A-	≥6	≥6	≥6	≥20	≥23	≥3	≥8	≥90
B+	≥5	≥5	≥5	≥18	≥21	≥2	≥8	≥80
B	≥4	≥4	≥4	≥16	≥21	≥2	≥8	≥80
B-	≥3	≥3	≥3	≥14	≥19	≥2	≥7	≥80
C+	≥2	≥2	≥2	≥12	≥19	≥1	≥7	≥70
C	≥1	≥1	≥1	≥10	≥17	≥1	≥7	≥70
C-	≥1	≥1	≥1	≥6	≥16	≥1	≥6	≥70
D	0	1	2	≥3	≥9	≥0	≥4	≥50

Assessment Strategies

Direct Evidence of Student Learning

- Grades are tied directly to COs
- COs can be tied to PLOs
- Each of these are assessed throughout the semester as well as in a program-wide common final exam

Assessment Strategies

Portfolios as a tool for assessment

A portfolio is a systematic collection of student work that represents student activities, accomplishments, and achievements over a specific period of time in one or more areas of the curriculum. Examples:

- First year review
- Internship conclusion portfolio
- Program completion portfolio

- Students can write reflective essays or introductory memos to explain the work and reflect on how the collection demonstrates their accomplishments, explains why they selected the particular examples, and/or describes changes in their knowledge/ability/attitude.
- Programs can build PLOs into portfolio requirements.

https://manoa.hawaii.edu/assessment/resources/using-portfolios-in-program-assessment/

Assessment Strategies

Portfolios as a tool for assessment

- by establishing a set of criteria of evidence each student is required to submit, evaluators can measure what concepts students have mastered and where they are falling short.
- can be used as formative assessments (throughout students' course of study) or as summative evaluations (at the end of the standard degree program).
- advantages: students often can select what they feel is their best representative work and can include multiple formats, including multimedia.

https://www.luc.edu/celts/programs/learningportfolio/

An example from Classical Studies

PLO: Upon successful completion of their program, Greek students will formulate interpretations based on textual evidence and current scholarly practice

rubric:

Classical Studies-Research Paper

	value: 1.00	value: 2.00	value: 3.00	value: 4.00	Score/Level
Definition and development of a topic for investigation	Student's submitted work demonstrates an inability to define a topic appropriate to the level of the course and/or the length of the assignment; that topic remains undeveloped or the development is completely disorganized	Student's submitted work demonstrates a topic which is defined too broadly or aims much too low; the development of the topic is incomplete or disorganized	Student's submitted work demonstrates a strongly defined topic OR aims slightly too high or too low; the development of that topic has some flaws in thoroughness or organization	Student's submitted work demonstrates a strongly defined topic appropriate for the level of the course and the length of the assignment; that topic is fully developed in a tightly organized paper	
Engagement with relevant published scholarly work and primary sources	Student's submitted work is severely lacking in relevant published scholarly work and primary sources	Student's submitted work demonstrates shallow engagement with relevant published scholarly work OR barely uses it; primary sources are used rarely	Student's submitted work demonstrates thoughtful engagement with some relevant published scholarly work; primary sources are included, but the emphasis is on secondary works OR some relevant types of primary sources are not used	Student's submitted work demonstrates thoughtful engagement with a variety of the relevant published scholarly work; primary sources of all relevant types are included	
Critical analysis	Student's submitted work demonstrates no critical analysis and interpretation	Student's submitted work demonstrates superficial critical analysis and interpretation	Student's submitted work demonstrates a satisfactory level of critical analysis and interpretation	Student's submitted work demonstrates the highest level of critical analysis and interpretation	
Argumentation, including use of evidence	Student's submitted work demonstrates insufficient argumentation or no evidence	Student's submitted work demonstrates argumentation that lacks care and rigor	Student's submitted work demonstrates solid argumentation; arguments miss opportunities to use some forms of evidence OR fall slightly short in logic	Student's submitted work demonstrates cogent argumentation; arguments are thoroughly supported using a variety of appropriate evidence (primary and secondary) and avoid logical fallacies	
Writing style and mechanics	Student's submitted work demonstrates poor writing that undermines the content	Student's submitted work demonstrates acceptable but occasionally problematic writing	Student's submitted work demonstrates formally and grammatically correct writing	Student's submitted work demonstrates formally and grammatically correct writing; prose style is mature, clear, and enhances the content in every way	

PLO: Upon successful completion of their program, Greek students will formulate interpretations based on textual evidence and current scholarly practice

Rubric:

	value: 1.00	value: 2.00	value: 3.00	value: 4.00
Engagement with relevant published scholarly work and primary sources	Student's submitted work is severely lacking in relevant published scholarly work and primary sources	Student's submitted work demonstrates shallow engagement with relevant published scholarly work OR barely uses it; primary sources are used rarely	Student's submitted work demonstrates thoughtful engagement with some relevant published scholarly work; primary sources are included, but the emphasis is on secondary works OR some relevant types of primary sources are not used	Student's submitted work demonstrates thoughtful engagement with a variety of the relevant published scholarly work; primary sources of all relevant types are included

Strategies – Your thoughts

- What strategies have worked for you?
- Where in the process are you "stuck"?
- How did you develop strategies that worked for you?
- What new strategies might you try?

In Teams site: look at Teams (UAL Channel)> Assessment strategies, planning and use> Assessment strategies and planning_Fall 2023-Fall 2024>

rubric examples

PLANNING FOR ASSESSMENT

Assessment Plans

A program assessment plan should provide answers to these three questions:

Learning goals and objectives

- **What** should the students completing our program or major know, value and/or be able to do?

Methods of assessment

- **How** can we determine if our students know, value and/or can do what we intend?

Timeline

- **When** are we going to assess each PLO within a 5-year time frame?

Reminder: NOT every student, every course, every outcome, every semester

PLOs and the curriculum

Coordinated Learning and Assessment Supports

Your map guides your assessment plan

Program level student outcomes

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLO 1	I			I	I		I			I	I			I	I		I	
PLO 2	I	D		P														
PLO 3			I		I		I			D	D			D		D	P	
PLO 4	I			I			D	D		D		D			D		P	
PLO 5		I															P	
PLO 6	I			I			D			D						P		P
PLO 7	P		P			I		D			D						P	P

I = Introductory
D = Developing
P = Proficiency

Note: once you create a rubric to address a PLO, it can be modified for different assignments/assessments in different courses

Let's Try It!

Download the template if you want to work on a "fresh copy" here:

https://www.luc.edu/media/lucedu/clas/Assessment%20Planning%20Template_v2.docx

OR find the one from your unit in this folder: Assessment Plans from 2024 AAAR

1. Sit with colleagues from your academic unit
2. Look at the plan from your unit
3. Does it make sense, or are revisions required?
4. If you do not see a plan from your program, how does what you see help you develop one?
5. Remember to use your curriculum map (or at least think about your curriculum) to guide you

From Program Plan to Unit Plan

Academic units vary in size/# of programs

- How to help academic units get a big picture of all the assessment work they do?

From Program Plan to Unit Plan

Academic Program X			
PLO #	Will be assessed when	Committee will review when	Will report in Semester/Year
Academic Program Y			

Would this be a useful tool? Or something different?

Aspiration: ALL PROGRAMS IN ALL UNITS HAVE ASSESSMENT PLANS BY 2027

Take Home Message

- Assessment plans were a required component of 2024 AAAR and will continue to be required.
- Each time you report on a different program, you will need to provide an assessment plan
- Plans for different programs within a unit may have overlap!

  - What concerns do you anticipate, how can we better support?

Speaking of Support

Assessment Fellows are here for you:

- Michael Burns mburns16@luc.edu
- Eilene Edejer eedejer@luc.edu
- Laura Gawlinski lgawlinski@luc.edu

On the CLAS website: https://www.luc.edu/clas/projectsupports/resources/

In Teams site: look at Teams (UAL Channel)> 2024-25 Workshops> Assessment strategies, planning and use & rubric examples

Asynchronous modules coming soon!

Next Steps and Thank you!

What else can we do to support you?

- Asynchronous modules initial release this month
- Preparing to score AAAR 2024
- Expect feedback by the beginning of the spring semester, at the latest
- Next AAAR August 1, 2025
- Fellows are reaching out for meetings, contact them if you would like a consult
- Remember this is not only one person's job!
  - People in place?
  - Time to work on this scheduled?

Please complete this workshop evaluation by scanning this code