

INTENSIVE WORKSHOP ON DEVELOPING AND ASSESSING PROGRAM LEARNING OUTCOMES

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By the end of today, you will be able to

Write learning outcome statements and performance indicators

Evaluate learning outcome statements

Distinguish among program assessment methods and instruments

Employ program assessment planning and implementation

For our work together. . .

We're all at different stages in our program assessment work

- We are all learners
- Draw from each other's experiences

Embrace any new terminology

We might not have time to finish everything to our satisfaction
– focus on the process

Quick Introductions

30 seconds (or less!)

Name

Institution

Program/Department

Role in Program Outcomes Assessment

“Assessing our program level outcomes provides us with a wonderful opportunity to/for_____.”

What is the Goal of Outcomes-based Practice?

Measuring student learning through the alignment of . . .

- program learning outcomes
- and course learning outcomes

Our Purposes for Program Assessment

Improve student learning

Support renewal of the curriculum so that learning happens as we intend

Provide useful information to students, faculty, administrators, and other stakeholders

A focus on internal accountability and continuous improvement



External Accountability

SACS Principles

3.3 Institutional Effectiveness

3.3.1 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: (**Institutional Effectiveness**)

3.3.1.1 educational programs, to include student learning outcomes

3.3.1.2 administrative support services

3.3.1.3 academic and student support services

3.3.1.4 research within its mission, if appropriate

3.3.1.5 community/public service within its mission, if appropriate

SACS Principles

2.7.3 In each undergraduate degree program, the institution requires the successful completion of a general education component at the collegiate level that (1) is a substantial component of each undergraduate degree, (2) ensures breadth of knowledge, and (3) is based on a coherent rationale. (**General Education**)

3.4.4 The institution publishes policies that include criteria for evaluating, awarding, and accepting credit for transfer, experiential learning, credit by examination, Advanced Placement, and professional certificates that is consistent with its mission and ensures that course work and learning outcomes are at the collegiate level and comparable to the institution's own degree programs. The institution assumes responsibility for the academic quality of any course work or credit recorded on the institution's transcript. (*See Commission policy "Collaborative Academic Arrangements."*) (**Acceptance of academic credit**)

Program Assessment is NOT intended to

To evaluate individual faculty members

To prescribe individual course implementation or pedagogy

*Although assessment should **influence** learning outcomes, curriculum, and pedagogy*

Program Assessment for Learning: Opportunities for Authentic Collaboration

College-wide discussions about teaching & learning

- Supported by real student data
- Focuses on student learning
- Brings college and community partners together

Build/Strengthen “connections” throughout the curriculum and co-curriculum

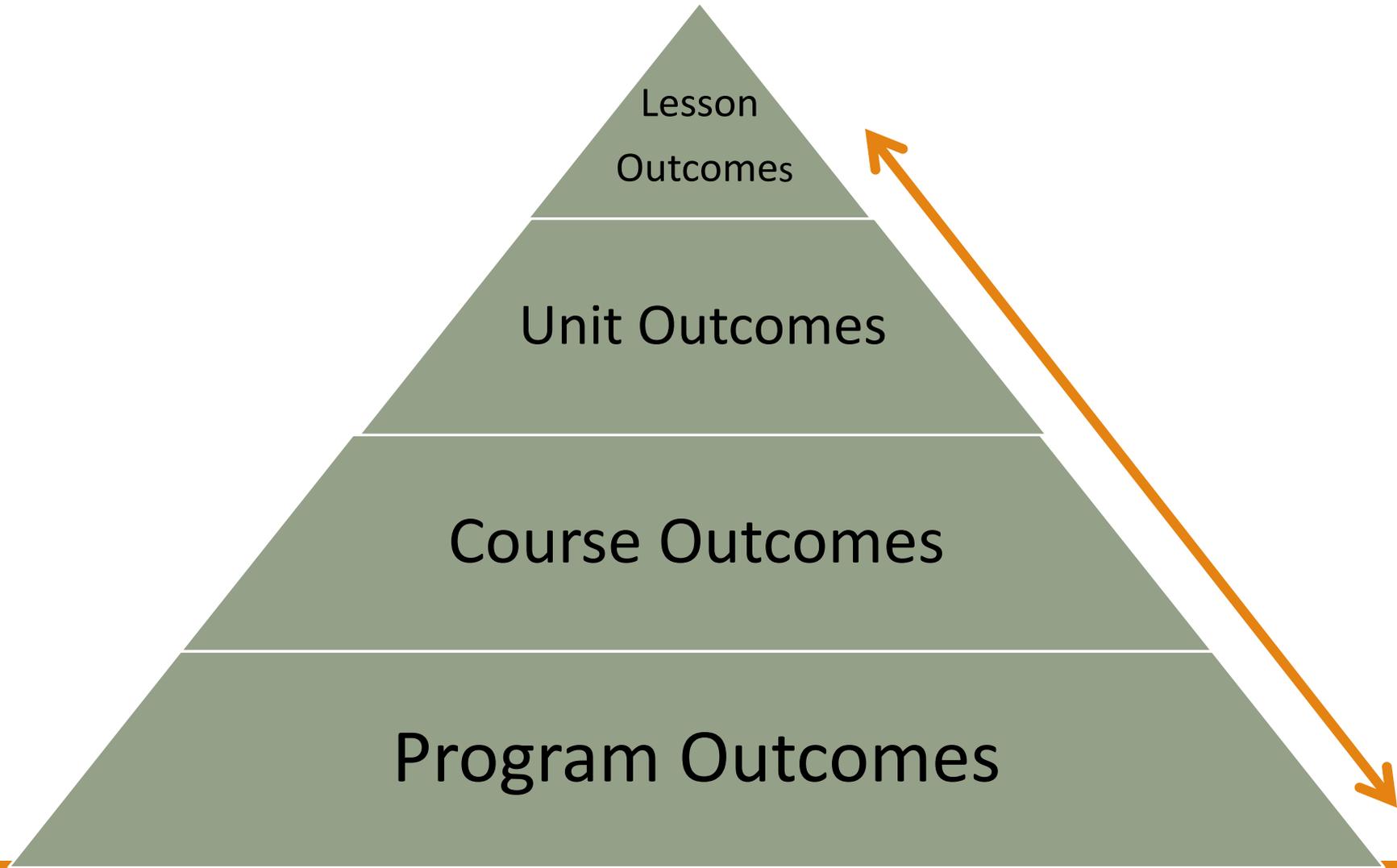
- Alignment and Sequencing

Renewal of curriculum

Faculty development

- Assessment
- Outcomes-based practice
- Learning opportunities

Goal of Learning Outcomes-based Practice



Program Assessment and Teaching & Learning

Key Questions

What should the student know or be able to do at the end of our program?

- Program Learning Outcomes

How will we know?

- Assessment Method, Assessment Instrument

How can we improve to enhance student learning?

- Reflection and Action!

Distinguishing Program-Level & Course-Level Assessment

Course-Level Assessment

Assess student learning outcomes at the end of the course

Assign a grade to individual students

Grading often involves only one faculty member who is teaching the course

Program-Level Assessment

Assess student learning outcomes at the end of the program

Evaluate aggregate student artifacts for purposes of program improvement

Evaluation involves faculty teams across the program/discipline

Assessment for Improvement

Guiding Principles for a Learning-centered Assessment System

Assessment is formative

- Results are intended to improve teaching, learning, assessment, and decision-making

Assessment emphasizes continuous improvement

- Faculty Development is integral

Accountability to each other as colleagues

Assessment for Improvement

Guiding Principles for a Learning-centered Assessment System

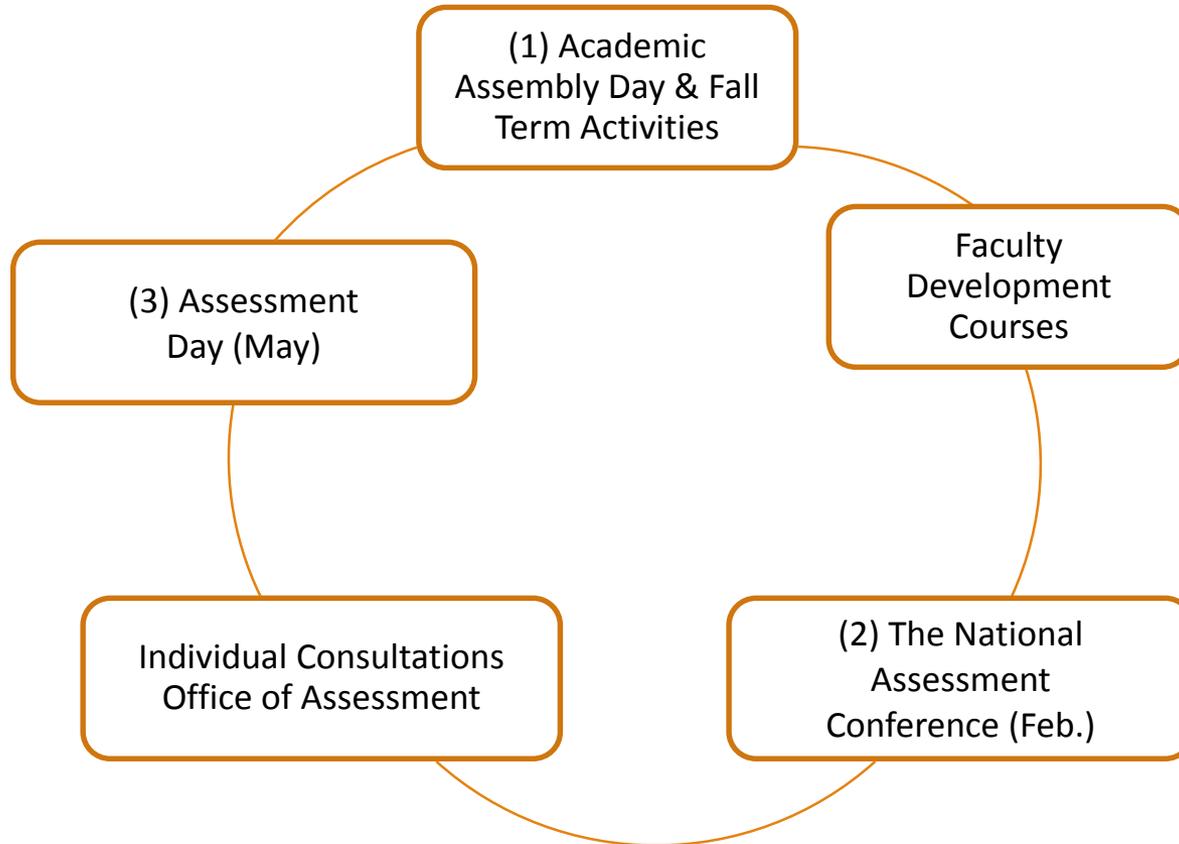
Assessment methods involve the use of multiple curricular-embedded instruments

Evidence is gathered and interpreted by internal practitioners (faculty, staff, and administrators)

- Making meaning of data is a collaborative process

Communication of results emphasize multiple channels of communication to internal audiences

Program Learning Outcomes Assessment (PLOA) at Valencia College Learning Outcomes Leaders + Deans



- All program plans are posted: www.valenciacollege.edu/VIA

Your Assessment System (Pair, think, share)

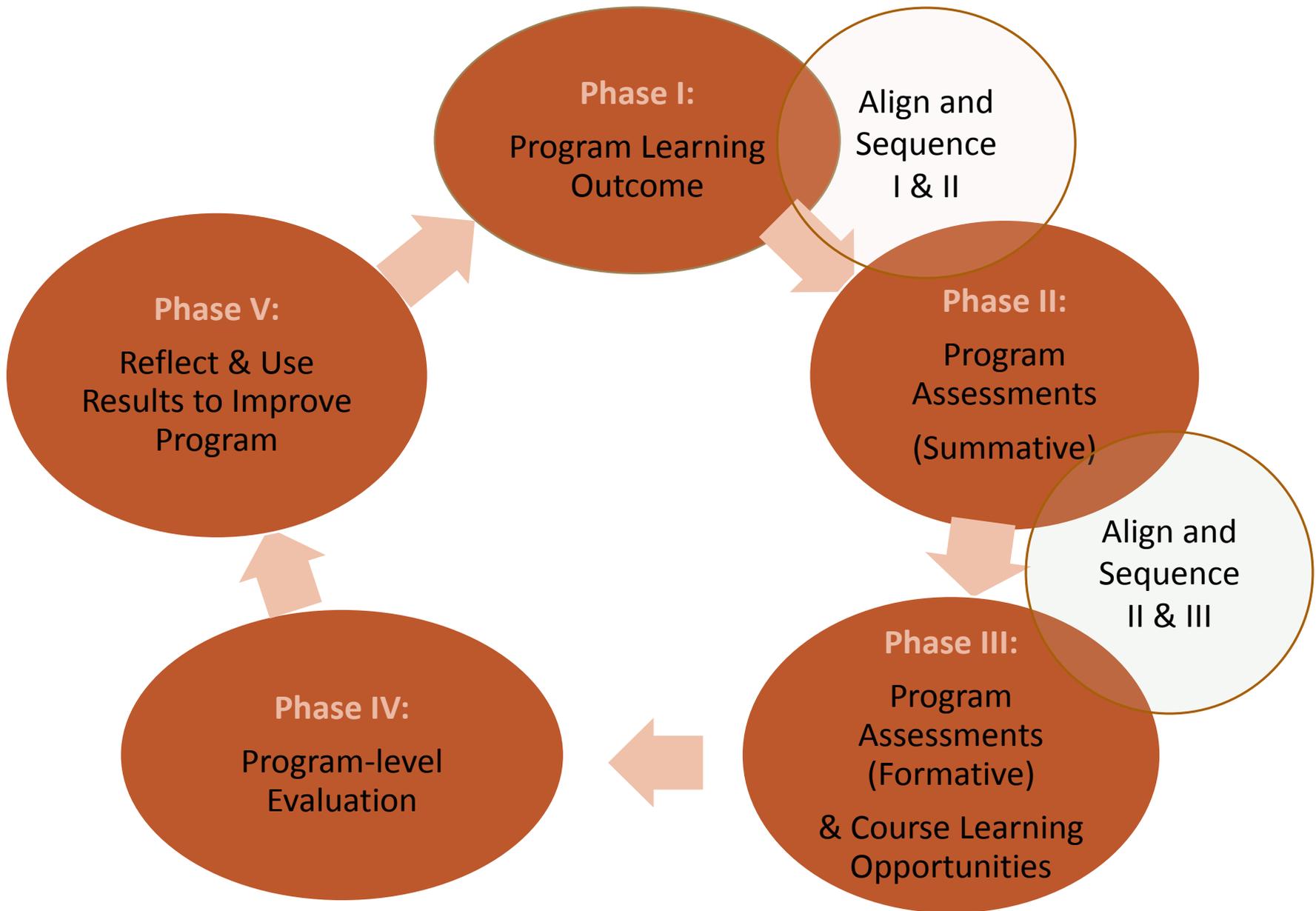
What is one guiding principle for your campus/college assessment system?

What is (or will be) your biggest challenge?

What opportunities exist?

Program Assessment is accomplished in phases

See handout: Phases of Program Assessment



See Handout: *Phases of Program Assessment*

Curriculum Design Terms

Aligning

- Ensuring student learning outcomes, learning opportunities and assessments “match”

Sequencing

- Ensuring student learning outcomes and performance indicators are taught and assessed in a logical and incremental manner

These concepts are applied to both programs and courses.

Important Terms

Formative Assessment (*along the way*)

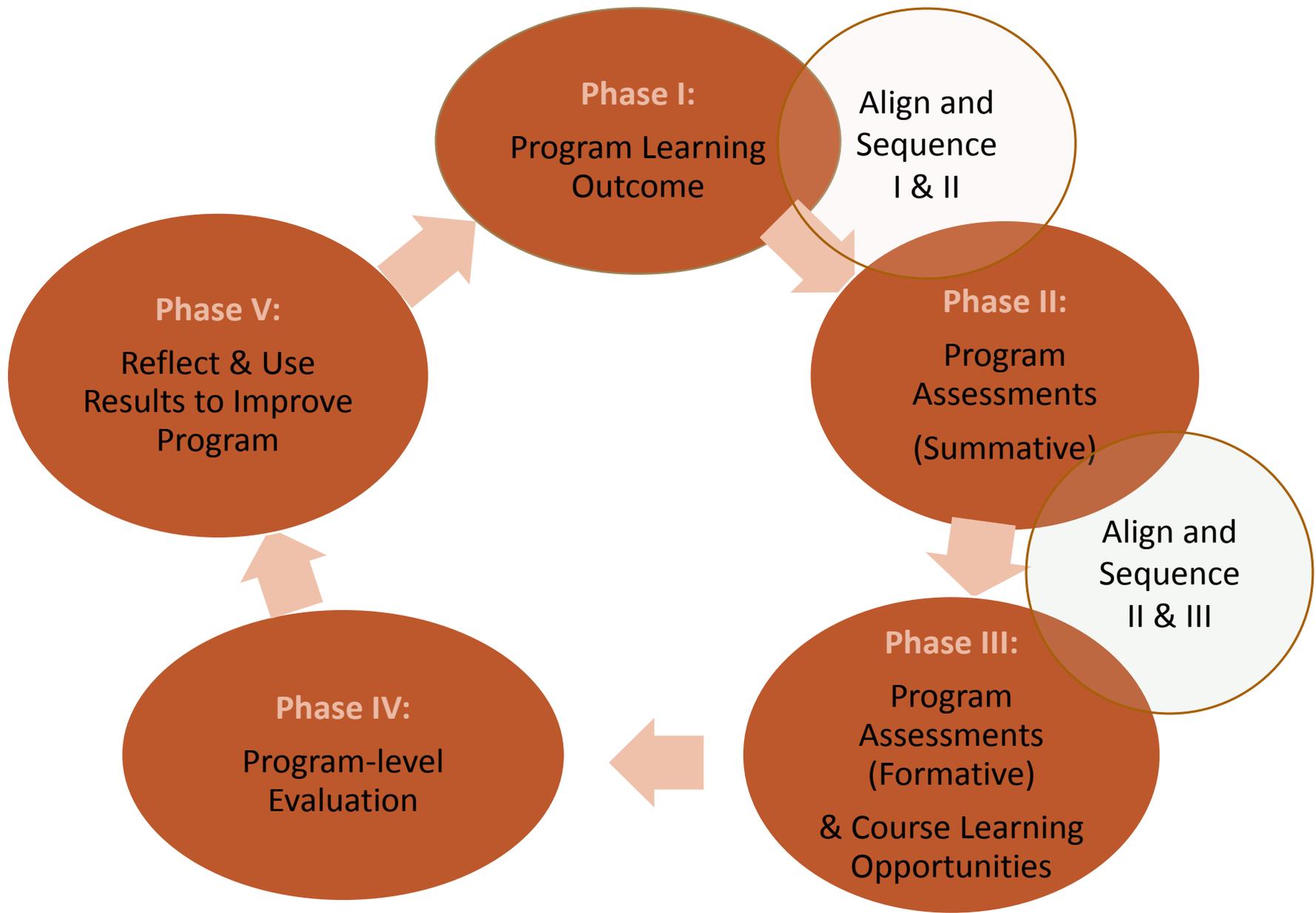
- to measure the students' learning progress (during a lesson, unit, course, program)

Summative Assessment (*at the end*)

- to measure students' mastery of the student learning outcomes (end of a lesson, unit, course, program)

Learning Opportunities

- activities and assignments designed to foster student learning (read, discuss, inquire, question and so on)

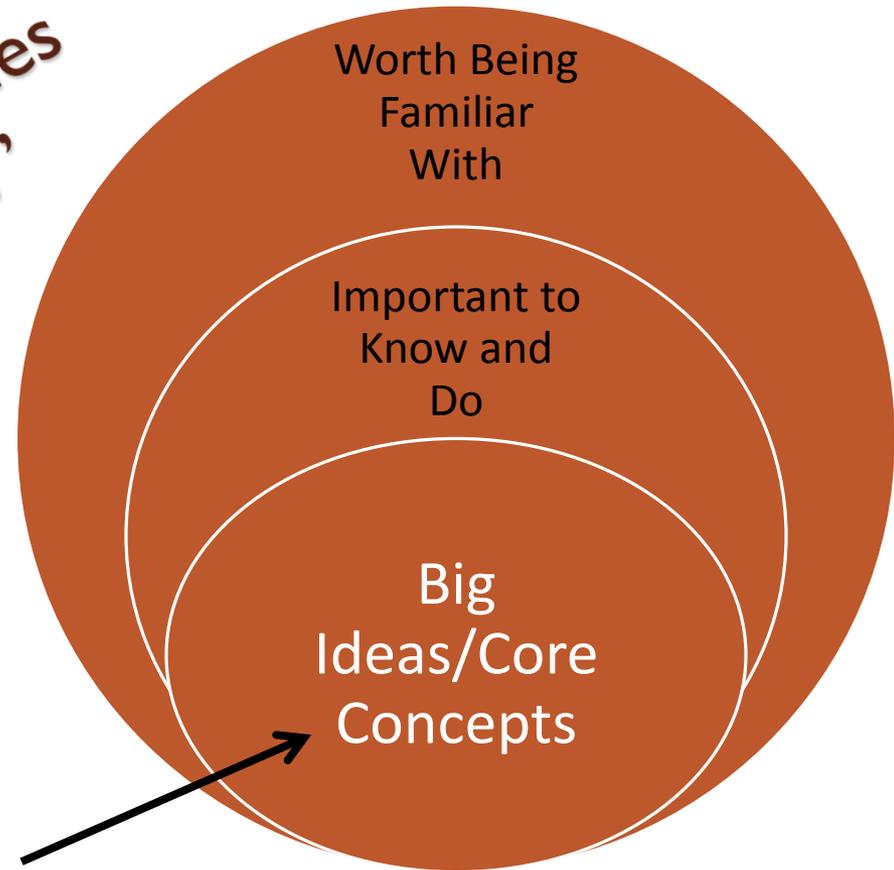


Moving from “Big Idea” to Program Learning outcome

PHASE I

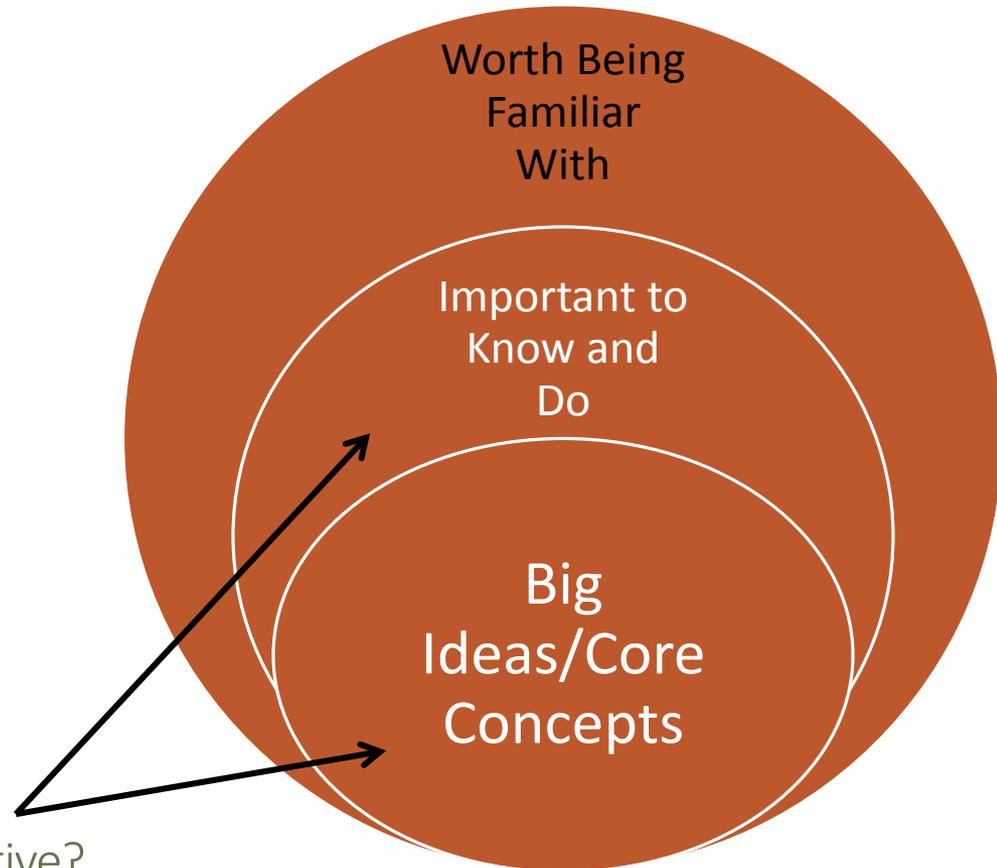
Prioritize Program Concepts

**Programs Learning Outcomes
Emerge from “Big Ideas”**



What do we want our program graduates to know or do 5 years from now?

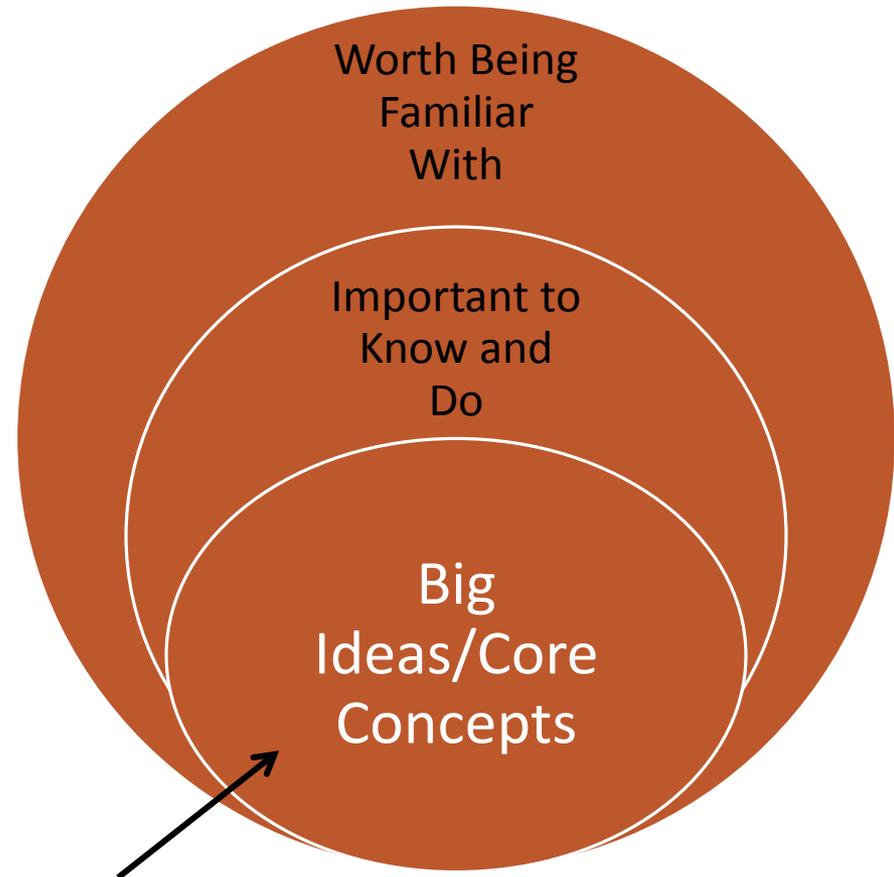
Prioritize Program Concepts



What makes our program distinctive?

What do our stakeholders (credentialing bodies, community partners, workforce, state boards) ask of our program graduates?

Example: Accounting Technology



Business leaders say: “Graduates should be good problem solvers”

So, now we have a big idea.

NEXT, HOW DO WE ARTICULATE A MEASURABLE LEARNING OUTCOME?

Program
Student
Learning
Outcomes

state what a student should
know and/or be able to do

...as a result of what she
has learned in a program

Why are Student Learning Outcomes Important?

Give Students ...

A preview of critical content

What they should know, or be able to do

Student Learning Outcomes (SLO) Encourages Faculty Members to Think About...

The evidence that will demonstrate accomplishment of the SLO

Assessment of students' progress over time, so when students are expected to demonstrate mastery, they have had practice and feedback along the way

Writing Measurable, Assessable Student Learning Outcomes (SLOs)

We use the same principles and techniques when writing a SLO(s) for a program, course, unit or lesson.

SLO Statement Structure

Students will be able to

action verb + **result/trait/product**
(what will be done)

Note: All SLOs (Lessons, Units, Courses, Programs) should be one sentence, with one action verb

Example: Accounting Technology

Big Idea:

“Graduates should be good problem solvers.”

Program Learning Outcome:

The student will be able to **evaluate business and financial information to support internal decision making.**

Criteria for a Measurable Learning Outcome

Describes a Learning Result

A measurable learning outcome specifies what the student will be able to do, not what the teacher does

Specific

A measurable learning outcome addresses no more than one single result/trait/product

Action-oriented

The action verb specifies definite, assessable behaviors

Cognitively Appropriate

The action verb (Bloom's Taxonomy Thesaurus of Verbs) identifies the desired cognitive level of student thinking

Clearly Stated

The meaning of the learning outcome is easily understood by students, administrators and faculty members

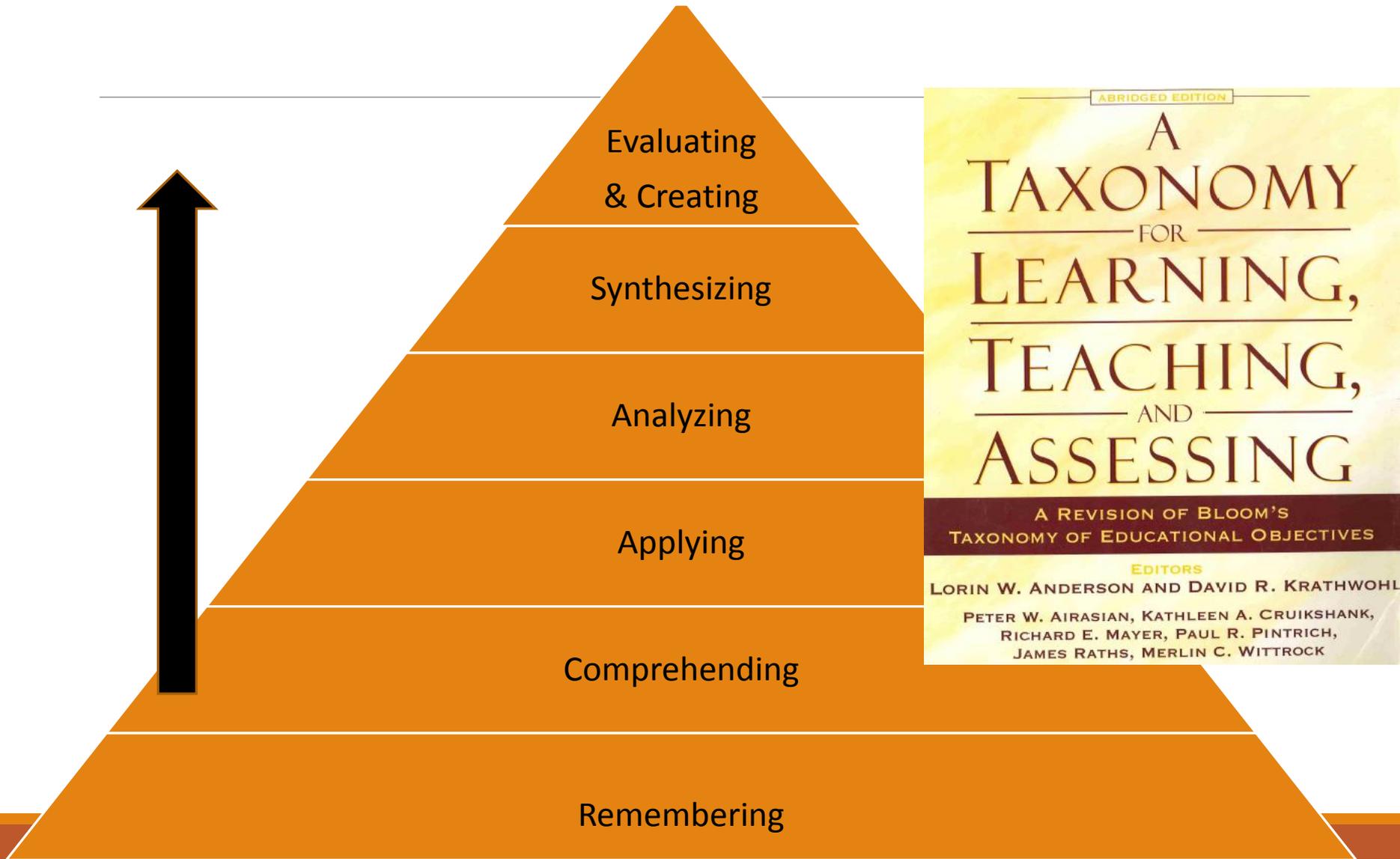
Examples of Program Learning Outcomes

Students + action verb + result/trait /product (what will be done)

1. The student will be able to produce professional quality video projects.
2. The student will be able to estimate the costs for labor, materials, and equipment for a construction project using industry-standard software and procedures.
3. The student will be able to structure a safe environment in the healthcare setting.

✓ Note: One sentence only, with one action verb

Cognitive Levels: Bloom's Taxonomy



Improve this Program Learning Outcome

Think, Pair, Share (4 min)

Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.

Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.

BETTER:

Students will be able to apply *factual information to a problem.*

BETTER BECAUSE:

Learner is directly mentioned

Specific because it measures one result/trait

Measurable because it has only one action-oriented verb

Checking Your Learning Outcomes

Students should be able to **apply** key concepts in cell biology.

The “Look Dad!” Test



Can you see it?

Apply vs. Learn
Explain vs. Know



Types of Outcomes

Cognitive

Intellectual outcomes; from lower-level knowledge outcomes to higher-level intellectual abilities and skills (Bloom et al., 1956)

Affective

Interests, attitudes, appreciation, and methods of adjustment; from receiving stimuli to developing a characteristic set of values that directs behavior (Krathwohl et al., 1964.)

Psychomotor

Concerned with motor skills, and one classification system (Simpson, 1972) ranges from perception of cues to origination of a new movement

National Standards: AAC&U Essential Outcomes (LEAP)

The Essential Learning Outcomes



Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

★ **Knowledge of Human Cultures and the Physical and Natural World**

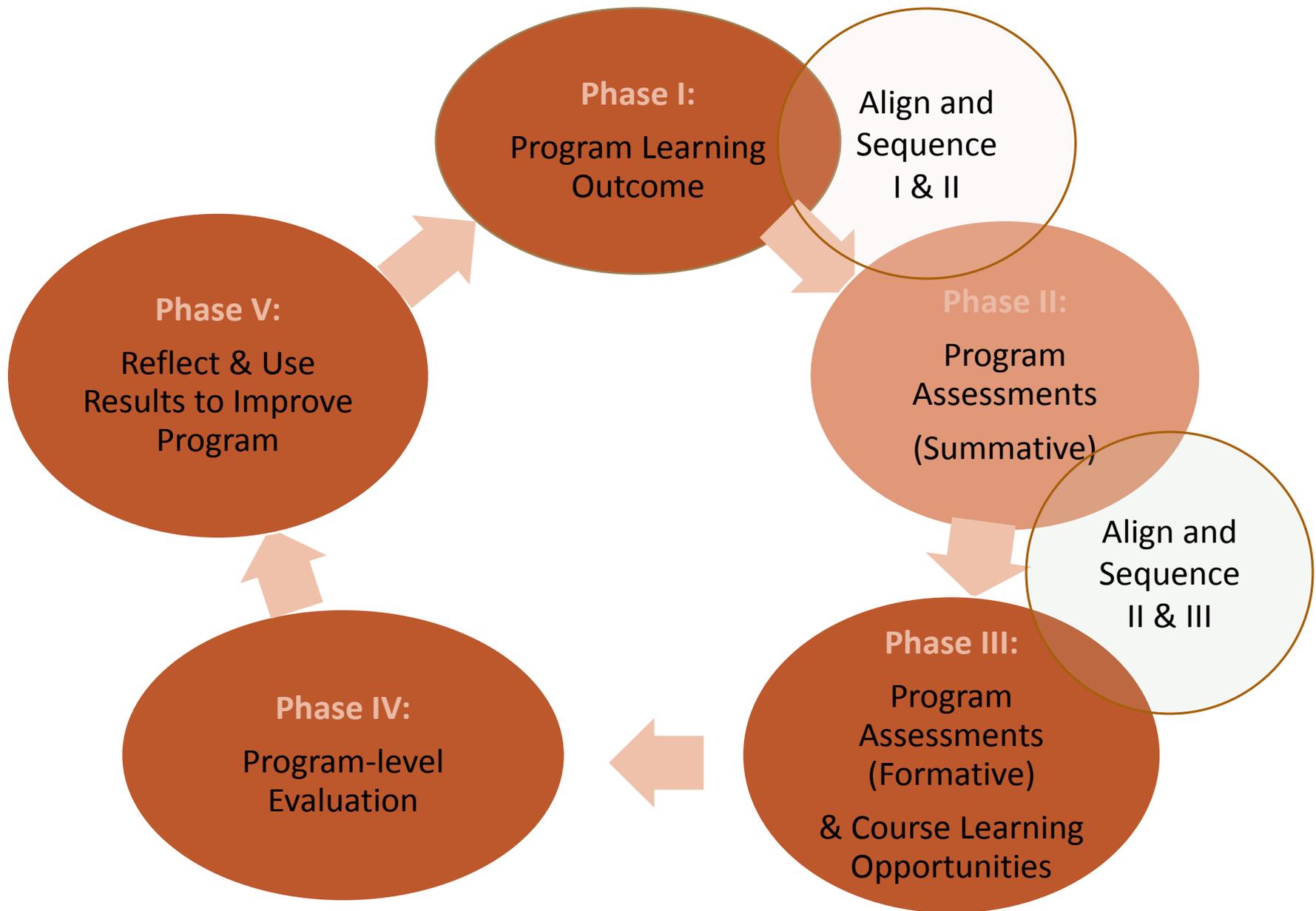
- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

★ **Intellectual and Practical Skills, including**

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy

Questions so far?



Choosing the Appropriate Assessment Method

Indirect Methods

Direct Methods

Indirect Assessment Methods

Capture student or other stakeholder perceptions/reflections of student learning or the learning environment

- Aren't sufficient by themselves to indicate student learning
- Compliment direct methods

Some Examples of Indirect Assessment Methods

Student satisfaction surveys

Alumni and employer surveys

Graduation rates

Licensure rates/placement rates

Focus groups

Direct Assessment Methods

Require students to demonstrate knowledge and skills articulated in program learning outcomes

Some Examples of Direct Assessment Methods

Multiple Choice Tests

Essay Tests

Formal Writing Assignments

Designs, Models, Creative Works

Portfolios

Projects (Team or Individual)

Presentations (Team or Individual)

Internships

Observation/Interviews

Others?

When To Assess?

Course Embedded Assessments

- Connected to the course
- Students are already motivated to perform
- Can be used to enhance individual courses

End of Program Assessments

Pre/Post Program Assessments

Method → Instruments

Many types of instruments to choose from:

- Checklist
- Score card
- Objective questions
- Analytic rubric
- Holistic rubric
- Other?

Each instrument has pros and cons

Question... What will the criteria described in the instrument tell us about student learning? Multiple choice? Essay?

Working Examples

ASSESSMENT INSTRUMENTS

Then: Communicate Analytic Rubric

Rubric for the Assessment of Written Communication

Indicators of Effective Writing	Levels of Achievement			
	Beginning	Developing	Competent	Accomplished
Meaning & Development: ideas, examples, reasons & evidence, point of view	Inappropriate No viable point of view; little or no evidence; weak critical thinking; providing inappropriate or insufficient examples, reasons, or other evidence of support	Appropriate Develops a point of view, demonstrating some critical thinking; may have inconsistent or inadequate examples, reasons, & other evidence of support; support tends towards general statements or lists	Effective Develops a point of view & demonstrates competent critical thinking; enough supporting detail to accomplish the purpose of the paper	Insightful Ideas are fresh, mature & extensively developed; insightfully develops a point of view & demonstrates outstanding critical thinking
Organization: focus, coherence, progression of ideas, thesis developed	Lacking Structure Disorganized & unfocused; serious problems with coherence and progression of ideas; weak or non-existent thesis	Mostly Structured Limited organization & focus; may demonstrate some lapses in coherence or progression of ideas; generally, neither sufficient nor clear enough to be convincing	Structured Generally organized & focused, demonstrating coherence & progression of ideas; presents a thesis and suggests a plan of development which is mostly carried out	Perceptively Structured Thesis presented or implied with noticeable coherence; provides specific & accurate support
Language: word choice, & sentence variety	Inadequate Displays frequent & fundamental errors in vocabulary; sentences may be simplistic and disjointed	Adequate Developing facility in language use, sometimes uses weak vocabulary or inappropriate usage or word choice; sentence structure tends to be pedestrian & often repetitious	Proficient Competent use of language and sometimes varies sentence structure; generally focused	Sophisticated Choice of language & sentence structure; precise & purposeful, demonstrating a command of language and variety of sentence structures
Conventions: grammar, punctuation, spelling, paragraphing, format	Distracting Errors interfere with writer's ability to consistently communicate purpose; pervasive mechanical errors obscure meaning; inappropriate format	Fundamental Errors interfere with the writer's ability to communicate purpose; contains an accumulation of errors; some weakness in format	Controlled Occasional errors do not interfere with writer's ability to communicate purpose; generally appropriate format	Polished Control of conventions contribute to the writer's ability to communicate purpose; free of most mechanical errors; appropriate format

Now: Gen Ed Checklist

Example

General Education - Checklist Items

For each of the items below, please indicate whether the student's writing demonstrates relatively competent mastery of the skills in question. Recognize that this is not an *overall* judgment of competence or a question of whether the student should pass or fail. Evaluate each item individually.

General Education - Checklist Items

For each of the items below, please indicate whether the student's writing demonstrates relatively competent mastery of the skills in question. Recognize that this is not an *overall* judgment of competence or a question of whether the student should pass or fail. Evaluate each item individually.

- Select YES if the student's writing demonstrates competency in the specific skill fairly consistently.
- Select NO if the student's writing does not demonstrate competency in the specific skill at all or is very inconsistent.
- Select N/A (not applicable) if it is unclear whether the assignment called for demonstration of a specific skill.

Overall, this student:		Yes	No	N/A
A1 Critical Thinking - Influence of Context	Examines the relevance of appropriate contexts when presenting ideas.			
A2 Critical Thinking – Bias	Effectively analyzes own and others' assumptions			
A3 Critical Thinking – Use of Evidence	Demonstrates a comprehensive synthesis or analysis of issues, ideas, artifacts, or events.			

Assessment Methods & Instruments: Two Important Considerations

Do the assessment method and instrument measure what we want them to measure?
(validity)

Are the assessment method and the assessment instrument used consistently in multiple uses by varied users? (reliability)

Validity: Program Outcome Assessment

Do the assessment method and instrument measure student learning as articulated in the program learning outcome and performance indicators?

Is the assessment method administered at a time to allow instruction and/or experiences necessary to achieve the program learning outcome?

Reliability: Program Outcomes Assessment

If using papers, portfolios, creative works, or projects, would different evaluators give approximately the same score or rating to the assessment?

- Will you establish common criteria (rubrics) and train evaluators (course faculty or others) in their use?

If using objective examinations, how will you know if your tests are consistent?

- Will you get statistical measures of reliability (test-retest or internal consistency measures)?

Are students familiar with the process and are they assessed under the same conditions?

Data Collection

Collection of Artifacts

- How will student work be collected?
 - Will a collection process be implemented consistently?
- Is anonymity important for faculty or students?
 - If so, how will you ensure it?
- How will you ensure artifacts are submitted?
 - What considerations may there be for faculty or student non-participation?
 - If sampling, will you oversample?

Sampling

It isn't always possible to evaluate the artifacts (products, portfolios, tests, etc) produced by all students in your program.

- What will be your sampling strategy?

If student artifacts are to be collected using a random sample, what characteristics will be important in determining the sample?

How Are We Assessing Student Learning at Valencia?

1. How are we assessing students?

Some are using...

...an embedded assignment	22/64	34%
...a project	12/64	19%
...an exam	11/64	17%
...a presentation	5/64	8%
...a portfolio	5/64	8%

Several others report using artifacts, case studies, and simulations. These reports are also not mutually exclusive.

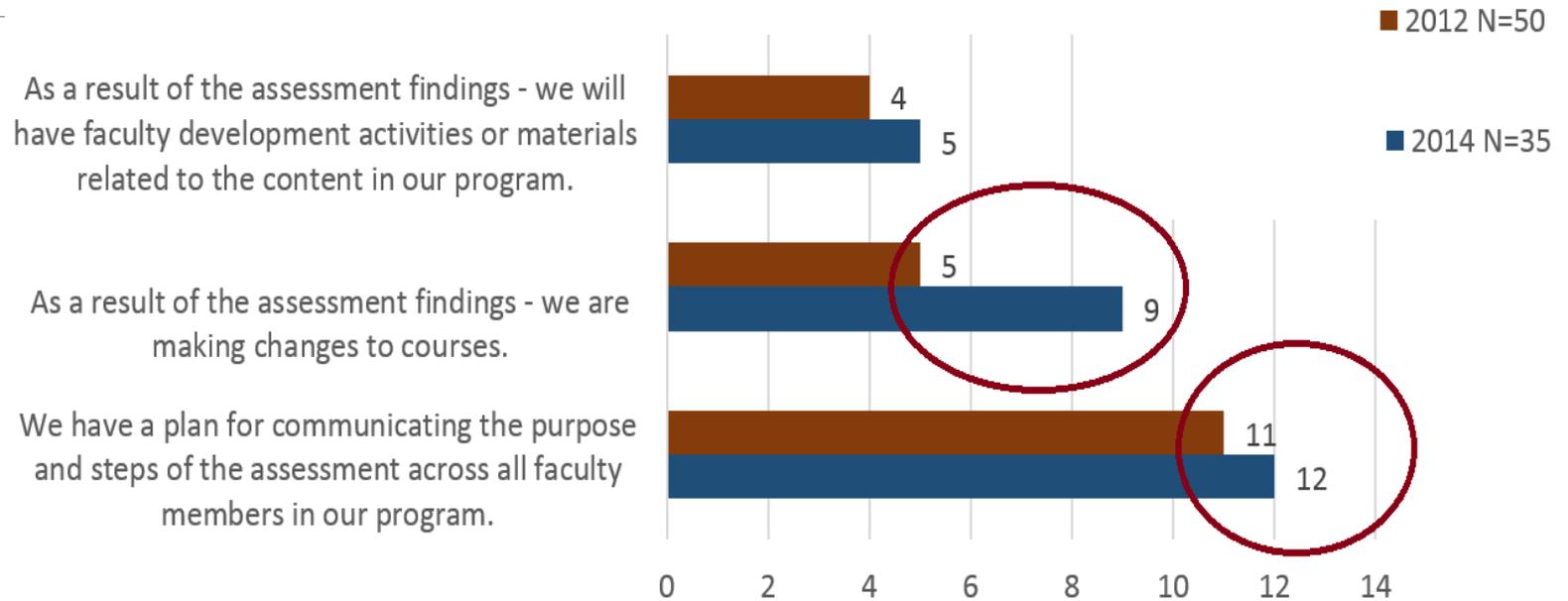
2. What kinds of resources are we using?

Improvement plans documented that we are using...

...internally-developed rubrics	47/64	30%
... <u>external</u> reviewers evaluate student work	9/64	14%
...checklists	6/64	9%
...peer review rubrics for students	4/64	3%

Several report using other methods (reflection, student self-assessment, and externally developed rubrics.) These reports regarding rubrics and related approaches are not mutually exclusive.

Assessment Day Comparison "We have developed this..."



Note: The counts represent programs – the leader for each program took the survey.

Model in Practice: Communicate

General Education Program Learning Outcome: Students will be able to engage in effective interpersonal, oral and written communication.

Target Course: ENC1101-English Composition I

Course Level Performance Indicators:

Students will be able to demonstrate college-level writing.

Implementation: Then & Now

2007 – 2010

Challenges faced by instructors re: sampling and participation

2011

The work was redefined. The random sample was determined to be 100 and 54 essays were returned and assessed by forty-four faculty members. On Assessment Day thirty-three participants voted to improve instruction specific to Information Literacy.

2012

In 2012 again from a sample of 100 and 51 essays were submitted and thirty-three faculty members evaluated the artifacts. Faculty members “agreed to integrate more focus on teaching students how to properly document sources within an essay in MLA format.

The Assessment of Student Learning Outcomes in General Education 2016-2017

General Education Learning Outcomes		Communications			Humanities Assignment with Checklist Randomized Sample Also Exam	Mathematics Exam Randomized Sample	Science Exam All Students	Social Science Exam Randomized Sample Also Exam
		NSE Assignments with Checklist Randomized Sample Course Rubric	English Assignment with Checklist Randomized Sample Comp I & II	Speech Assignment with Checklist Pre Post Assessment				
Critical Thinking								
Quantitative Reasoning						X All Gen Ed. Math Classes		
Scientific Reasoning							X All Gen Ed. Science	
Communications	Written Communication		X		X			X
	Oral Communication	X		X				
	Interpersonal Communication	X		X				
Ethical Responsibility								X
Cultural & Historical Understanding						X All Gen Ed. Humanities Classes		
Information Literacy			X		X			X

Implementation: Then & Now

2013

In 2013 the coordinator received 39 essays from a sample of 100. When faculty members were asked if the students properly documented the sources “of the essays assessed, 60% received an answer of ‘yes’ to the assessment question.”

2014

In 2013 for the first time we worked to define sample sizes using a consistent method for all disciplines – aiming for 5% based on a table of populations, online calculator, and practical considerations.

2015

We began to pilot multiple choice exams alongside the General Education Assessment Checklist, and focused on the Critical Thinking outcome

Response Rates

2015-2016

General Education
Critical Thinking Outcome
Fall 2015 Pilot Project

**Multiple Choice
Question (MCQ)**
Humanities, Science, Social Science

Humanities Response Rates

Total responses to the assessment survey: 1,052

Total students who took 4 minutes or more to complete the assessment: 688

Response rate for those taking 4 minutes or more to complete the assessment: 24%

Number of students originally invited: 2,822

Gen Ed Humanities MCQ all respondents received all 15 questions fall 2015

Science Response Rates

Total responses to the assessment survey: 3,179

Total students who took 4 minutes or more to complete the assessment: 2,230

Response rate for those taking 4 minutes or more to complete the assessment: 70%

Number of students originally invited: 11,442

Gen Ed Science MCQ all respondents received all 4 questions fall 2015

(Each question was paired with a passage to read and interpret).

Social Science Response Rates

Total responses to the assessment survey: 2,990

Total students who took 4 minutes or more to complete the assessment: 2,733

Response rate for those taking 4 minutes or more to complete the assessment: 31%

Number of students originally invited: 8,877

Gen Ed Social Science MCQ respondents received 10 randomized questions fall 2015

Response Rates 2015-2016

- Video Assessment: Speech
- Pre and Post Assessment: Speech
- Embedded Exam Items: Math
- Rubric: New Student Experience (NSE)
- Checklist: Comp I & II Humanities

Speech – Oral Communication Outcome

Number in the sample: 4,939

Number returned (responding): 4,763 (96%)

When: Collected in fall 2015

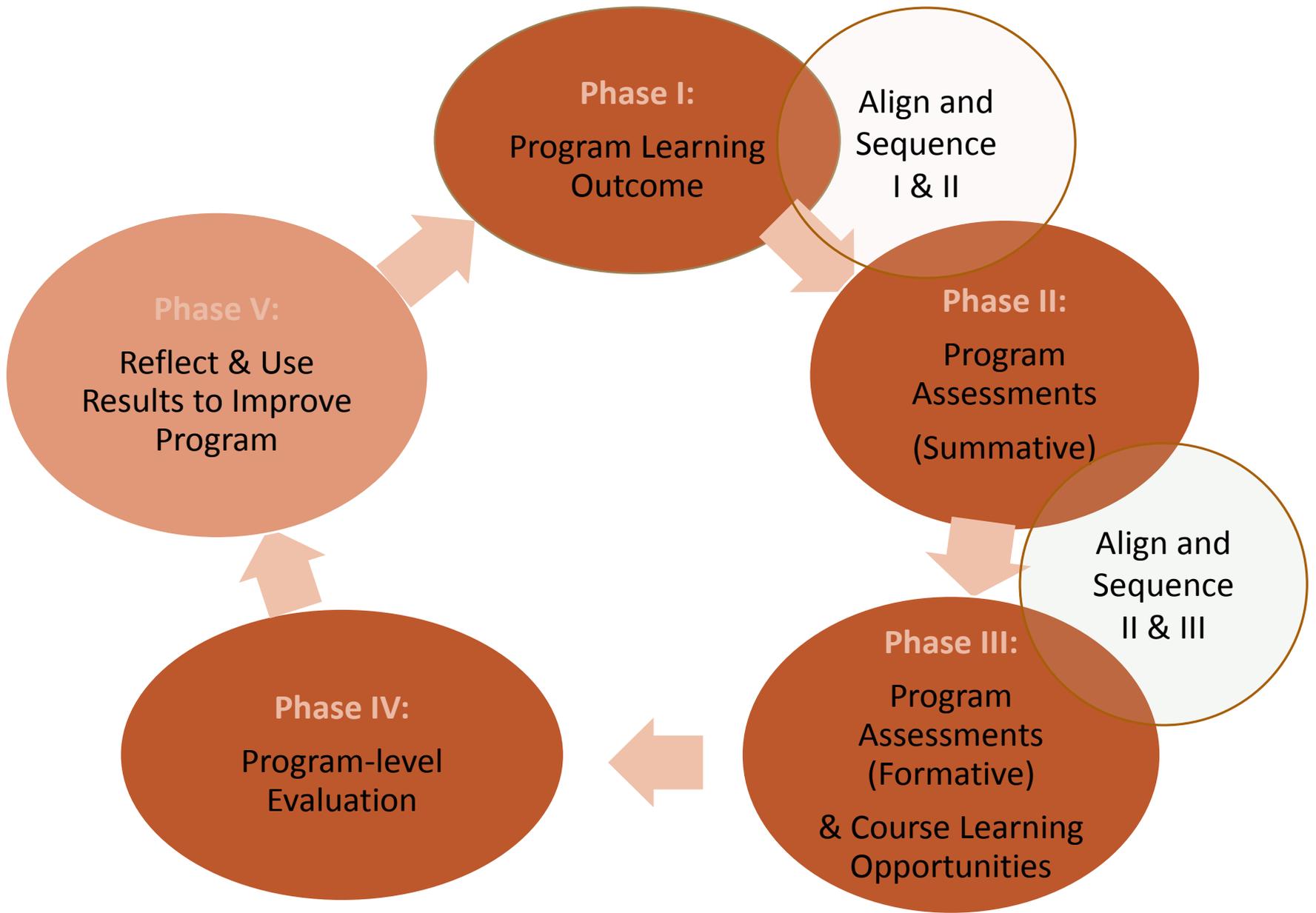
Speech – Interpersonal Communication Outcome

Number in the sample: 1,257 (for post-test)

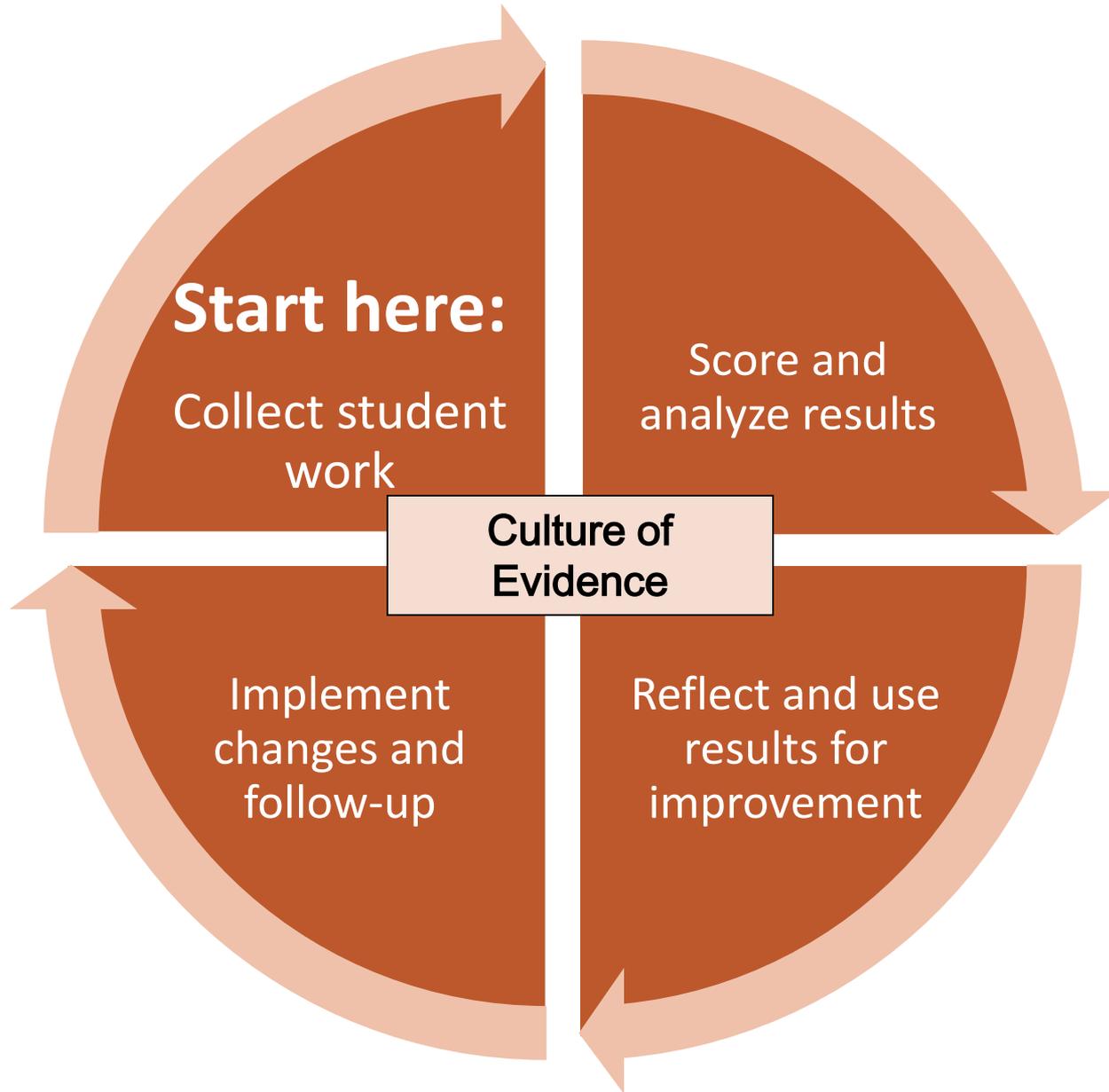
Number returned (responding): TBD

When: Collected in spring 2016 (in progress)

- **Math exam questions:** 250 sampled (100% response rate expected)
- **New Student Experience (NSE) course portfolio rubric:** 3,206 assessed (57%)
- **Comp I & II – Checklist:** Humanities – Checklist: 600 sampled and 375 returned (63%)
- **Humanities – Checklist:** 600 sampled and 300 returned (50%)



Reflecting & Using Results



Questions...

*Some of the Student Models Assessed by
Faculty Alongside Allen Watters and Andy Ray*



Providing More Tools

Valencia Rubrics Library

NILOA

(National Institute of
Learning Outcomes
Assessment)

A Resource from the University of South Carolina



A Faculty and Staff Guide to Creating Learning Outcomes



*Jimmie Gabagan, John Dingfelder,
and Katharine Pei*



**National Resource Center for
The First-Year Experience*
& Students in Transition**
UNIVERSITY OF SOUTH CAROLINA

A joint publication with the University of South Carolina
Office of Student Engagement

Valencia Resources

Valencia Institutional Assessment

- www.valenciacollege.edu/VIA

Valencia Faculty Development

- <http://valenciacollege.edu/faculty/development/>

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