



# DESIGNING COURSE-EMBEDDED MEASURES

Or leveraging your CPGEs

# Assessment & Student Learning

“Assessment is viewed as part of an integrated, collaborative learning experience.

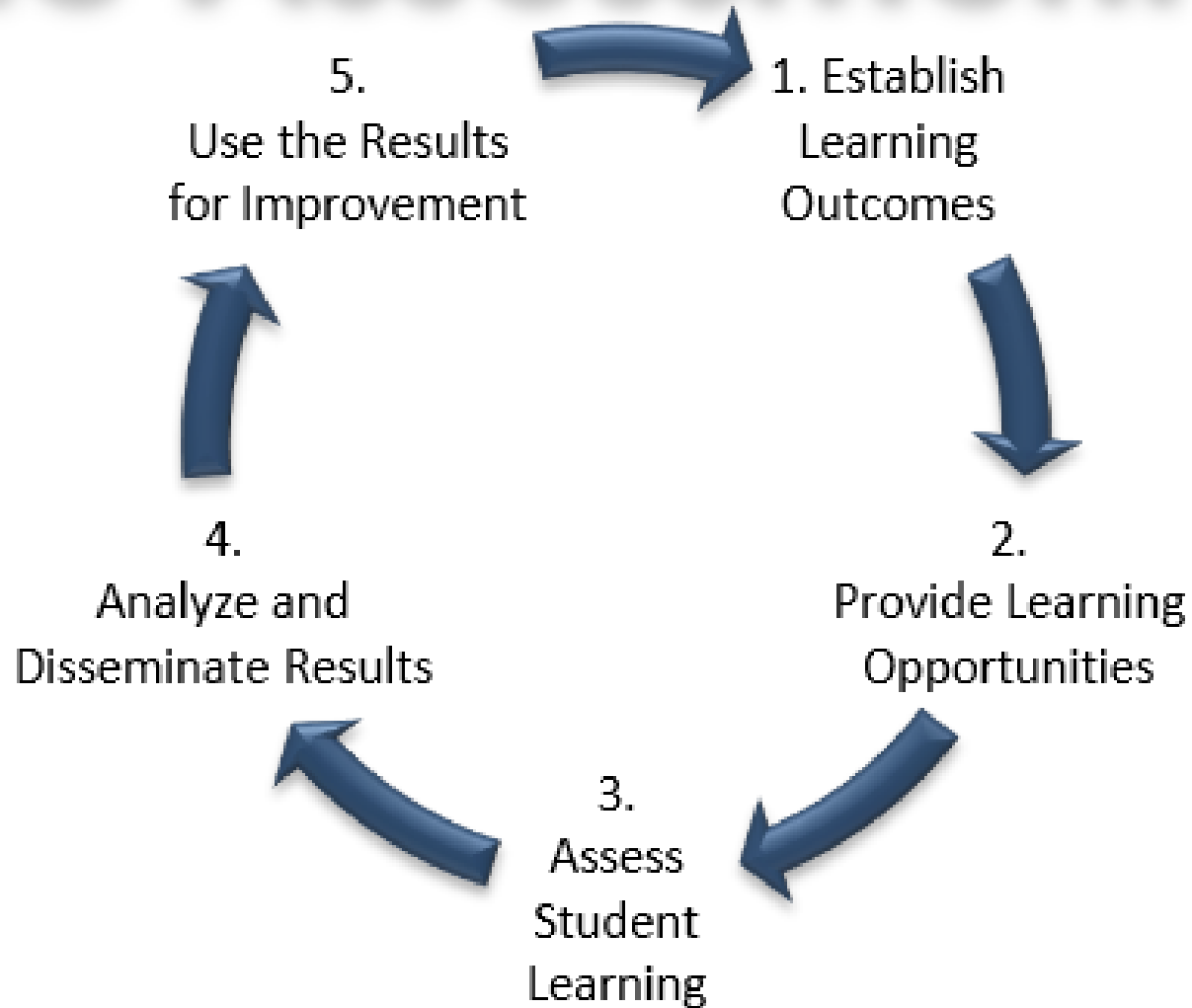
Students learn better when their college experiences are not collections of isolated courses and activities, but are purposefully designed as coherent, integrated learning experiences in which courses and out-of-class experiences build on and reinforce one another.”

(Maki, P.L., 2010, p. 4)

# Learning Outcomes for this Workshop

- The learner will:
  - *express increased confidence in determining the best means of assessing their departmental/program level student learning outcomes.*
  - *be able to articulate three types of course-embedded assessments for use in measuring program level student learning.*
  - *express an increased commitment to conducting valid program level student learning assessment by designing/editing at least one student learning outcome statement and a course-embedded assignment, exercise, or activity that measures student learning of that outcome.*

# The Assessment Cycle



1. Mission & Learning Outcomes
2. Mapped Curriculum & Learning Opportunities
3. Methods of Data Collection
4. Analysis of Results
5. Action Taken to Improve Student Learning

# Outcome-based Curriculum Map

Req. Courses	Outcome 1	Outcome 2	Outcome 3	Outcome 4
ET 101	I		I	
ET 120	R	I		I
ET 201		R	R	R
ET 253	R			R
ET 310		R	R	
ET 355	R		R	R
ET 411	M			
ET 495		M	M	M

# Definition

- **Embedded assessments** are assignments, activities, or exercises that are done as part of a class, but that are used to provide **assessment** data about a particular learning outcome. The course instructor and/or other evaluators can evaluate the student work, often using a rubric.

# Course-Embedded Assessment

- Takes place in a class or a group of classes
- Determines whether students are learning program level learning outcomes
- Takes advantage of class level motivation to capture program level data
- Assesses what is actually taught in a program's courses
  
- Illustrated through use with ATU Gen Ed and known as CPGE (Course, Program, and Gen Ed)

# Direct vs. Indirect measures





# Direct Methods

“... require a student to represent or demonstrate their learning or produce work so that observers can assess how well students’ work or responses fit institution- or program-level expectations.”

(p. 158, Maki, P.L, 2010)

# Types of Direct Measures

- Examinations or **specific questions on exams**
- Common questions on exams across multiple course sections
- Research Papers and Projects
- Field Experiences, Lab Reports and Internships
- Pre/Post Comparisons
- Student Portfolio
- Capstone Evaluation
- Course Matrix
- Performance Assessment
- Service-learning

# Indirect Methods

“ ... such as inventories, surveys, questionnaires, interviews, and focus group meetings, capture students' perceptions of their learning and the efficacy of educational practices and the educational environment that supports that learning ...”

(p. 158, Maki, P.L, 2010)

# Types of Indirect Measures

- Surveys
- Interviews
- Focus Groups
- Documents and records

## Various CATs (Classroom Assessment Techniques)

- Assessments of course-related knowledge (minute papers, etc.)
- Process analysis (asks students to keep a log of the steps they take on an assignment)
- Assessments of students' reactions to various aspects of instruction (class activities, assignments, and materials). Mid-course evaluations are an excellent way to assess student learning and improve classroom teaching.

# Audience Examples

- What are some course-embedded techniques that you are using in your program, department or college?
- What are the advantages/disadvantages of your technique?

# Assignment Templates

- For effective determination of student competence, some sort of standardized guide to expected competence should be provided to the student. Assignment templates might include
  - 1) *the central task that must be completed and the competence it is addressing*
  - 2) *a description of how the task should be achieved and its results communicated; and*
  - 3) *and indication of how much evidence is expected in the response*

# Assessment Resources

- Rubrics
- Project Briefs
- Checklists

National Institute for  
Learning Outcomes Assessment  
Making Learning Outcomes Usable & Transparent

[www.learningoutcomesassessment.org](http://www.learningoutcomesassessment.org)

# VALUE RUBRICS



Association of American Colleges & Universities  
A VOICE AND A FORCE FOR LIBERAL EDUCATION IN THE 21ST CENTURY

The VALUE (Valid Assessment of Learning in Undergraduate Education) rubrics include:

- Inquiry and Analysis,
- Critical Thinking,
- Creative Thinking,
- Written Communication,
- Oral Communication,
- Quantitative Literacy,
- Information Literacy,
- Reading,
- Teamwork,
- Problem Solving,
- Civic Knowledge and Engagement – Local and Global,
- Intercultural Knowledge and Competence,
- Ethical Reasoning and Action,
- Global Learning,
- Foundations and Skills for Lifelong Learning, and
- Integrative Learning.



# CRITICAL THINKING VALUE RUBRIC

for more information, please contact [value@aacu.org](mailto:value@aacu.org)



## Definition

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

*Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.*

	Capstone 4	Milestones		Benchmark 1
		3	2	
<b>Explanation of issues</b>	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
<b>Evidence</b> <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
<b>Influence of context and assumptions</b>	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
<b>Student's position (perspective, thesis/hypothesis)</b>	Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.
<b>Conclusions and related outcomes (implications and consequences)</b>	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

# Shudder! Banner Gives Me the CPGEs

- **C**ourse, **P**rogram, **G**eneral **E**ducation
- Our own homegrown embedded outcomes assessment
- Can be used for assessment in all three (courses, programs, or gen ed courses)

Arkansas Tech University  
Academic Program  
Criteria for CPGE Assessment

Complete Sections A through E, complete form for each course in program assessment plan.

- A. List Degree Program, level of degree, degree title and academic department.  
(Example, BS Professional Studies, Department of Professional Studies)

**Degree Program:**

Program Student Learning Outcomes: add additional rows if needed.
1.
2.
3.
4.
5.
6.
7.

- B. List the Course, Course Outcome and CPGE related assessment objectives, add rows if needed.

**Program Course:**

Course Outcome and Program Learning Outcome Number	CPGE Objectives

- C. Describe the Criteria for Success preferred scale to be used to record results in the CPGE's, i.e., grades (A, B, C, D, or F), categories (Exemplary, Satisfactory, Unsatisfactory, and so on), ~~likert~~ likert scale (1, 2, 3, 4, and 5). Note: The scale can be different for different objectives, just note which scale is to be used for which course objective if there are differences.

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- D. List Course Outcome (same as in B.) and correlating Means of Assessment (Direct and Indirect Measures- exams, exam questions, essays, survey, presentation, etc.)

Course Outcome	Means of Assessment

- E. What year/semester do you want to activate this course in the CPGE system?

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# Task

- At each table,
  - *Identify one General Education learning outcome that each program represented at the table might contribute to. I suggest either Communicate Effectively, Develop Ethical Perspectives, or Think Critically*
  - *Design one course embedded approach to assessing this outcome that could be shared by the variety of disciplines at the table. Would it be an assignment, a shared question, etc.?*
  - *What percentage of correct answers constitutes 'mastery' or 'competence' at the program level.*

# References

Maki, P.L. (2010). *Assessing for learning*. Sterling, VA: Stylus Publishing, Inc.

Suskie, L. (2009). *Assessing student learning: A common sense guide*. San Francisco: Jossey-Bass.