

AAC&U VALUE ADD (Assignment Design and Diagnostic) Tool - Critical Thinking

A key finding from research resulting from AAC&U's VALUE (Valid Assessment of Learning in Undergraduate Education) Project is that what faculty ask students to do in class assignments strongly affects how well they do it (Sullivan & McConnell, 2018). With that recognition in mind, this Assignment Design and Diagnostic Tool is intended to help you and your colleagues develop and/or revise an assignment designed to produce student work which develops and accurately demonstrates students' critical thinking abilities. When using this tool, the goal is to ensure that the *structure* and *expectations* of your assignment *align* with the outcomes you are trying to achieve.

Backward Design

This larger notion of instructional alignment is central to most instructional design models and is on display in the "backward design" method of planning pedagogical and assessment activities. Backward design (McTighe & Wiggins, 2012) suggests a three-stage process where you first determine the learning outcomes you aspire for your students. You then develop the assessments/assignments you will give your students; the learning artifacts produced by students in response to your assignment will provide you with evidence regarding how well your students have achieved the learning outcomes you defined. With learning outcomes and the associated assessments/assignments clearly defined, you would then move to engage in planning the teaching and learning experiences you will provide to enable your students to complete the assignment successfully and to the best of their ability.

Purpose

The purpose of AAC&U's VALUE ADD Tool series, developed with guidance from an international panel of experts, is to help you intentionally create clear and effective assignments designed to specifically evoke evidence of the learning outcomes you have identified for your students. In short, this tool will help you ensure your assignment aligns with your learning outcomes. That then also should guide your teaching as you help your students learn what they need to in order to complete the assignment. This VALUE ADD Tool is for those who have identified critical thinking as a learning outcome for their students, is aligned with AAC&U's Critical Thinking VALUE Rubric, and has three parts. Part One offers a "Cover Sheet" to enable you to reflect upon your students and your goals for them with this assignment. Part Two encourages you to reflect upon structural elements of an effective assignment. Part Three provides an opportunity to reflect upon the range of critical thinking tasks you may ask your students to perform in addition to how well they are articulated in the assignment itself.

How to Proceed

Your first step as you begin to use this tool is to reflect upon your assignment's instructional context and your students via the tool's "Cover Sheet" (Part One). As some assignments are intended to be broad or narrow in scope, the "Cover Sheet" provides an opportunity to articulate the parameters for the work you envision for your students. **For a new assignment**, you might use this tool to draft and refine your assignment, possibly using the elements in Part Two and Part Three as a checklist of items to consider as you craft your assignment. **For existing assignments**, you may choose to use this tool to reflect upon your own or a colleague's assignment, to discern opportunities for revision, or to affirm decisions you have made regarding the assignment. You may also find it helpful to have students provide you with feedback on an assignment by using this tool. When sharing an assignment with a colleague, it will be helpful if you complete and share the "Cover Sheet" in advance. Assignment design is an iterative process, and you may find yourself returning to this tool as you revise. A glossary is provided on the next page to clarify key terms used within the VALUE ADD Critical Thinking Tool.

Glossary

Analysis (see Part Three) – Refers to exploring relationships within information and data.

Describe (see Part Three) – Refers to explaining the issue and calls for the student to provide a clear and comprehensive description of the issue/problem to be critically considered.

Evaluation Criteria – Refers to how you will be grading the student’s work, including performance standards and expectations as well as how various elements of an assignment are weighted in the grading process.

Learning Outcomes – Statements that describe the knowledge, skills, and/or abilities students should acquire and be able to demonstrate by the end of a particular assignment, class, course, or program of study.

Position/Argument (see Part Three) – Refers to the perspective, thesis, or hypothesis presented by the student.

Use Evidence (see Part Three) – Refers to selecting and using information to investigate a point of view or conclusion or to develop a comprehensive analysis or synthesis.

VALUE – VALUE (Valid Assessment of Learning in Undergraduate Education) is a campus-based assessment approach developed and led by AAC&U.

VALUE Rubrics – Tools developed by AAC&U to assess students’ own authentic work, produced across students’ diverse learning pathways, fields of study and institutions, to determine whether and how well students are meeting graduation level achievement in learning outcomes that both employers and faculty consider essential.

References

McTighe, J., & Wiggins, G. (2012). *Understanding by Design Framework*. Alexandria, VA: ASCD.

Sullivan, D., & McConnell, K. D. (2018). It’s the assignments – A ubiquitous and inexpensive strategy to significantly improve higher-order learning. *Change: The Magazine of Higher Learning*, 50(5), 16-23.



PART ONE - Cover Sheet

Who is the audience for this assignment (course, course-level, etc.), and what is the context of the assignment (when is it assigned and why)?

What assumptions are you making regarding your students and their knowledge and skills as they begin this assignment?

What does not need to be explicitly stated in this assignment, given what your students already know via other aspects of the course or the curriculum (syllabus, earlier instruction, previous assignments, etc.)? Explain.

As you reflect upon your assignment, check the critical thinking components below that you expect your students to perform as part of this assignment. These would also be things you would anticipate seeing in the final artifact produced by your students:

- Summarize information or an argument, explain an issue, put something in context
- Distinguish between empirical questions and value judgments
- Pose a question or identify a topic for research
- Design a strategy to answer a question or conduct a research study
- Gather relevant information/sources/data to use in support of an argument, position, or explanation of an issue
- Evaluate the quality of information/sources/data and make selections among possible sources
- Analyze information (or a text, work of art, etc.)
- Make connections between ideas or information; or apply ideas or knowledge to a new context
- Apply ideas or knowledge to a new context
- Draw a conclusion, linked to evidence
- Interpret and critique someone else's work, and/or identify their assumptions and biases
- Critique one's own work, and/or identify one's own assumptions and biases
- Construct an argument, or take a position on an issue
- Explain why something is important, or discuss its implications
- Other (please describe):



PART TWO – Assignment Design Elements

Well-designed assignments typically clearly specify each of these structural elements.

STRUCTURAL ELEMENTS This assignment articulates/explains...	Not specified	Partially specified – incomplete or vague instructions	Clearly specified
The purpose of/rationale for the assignment (i.e. what learning outcome(s) is the assignment meant to address and what products do you expect to be produced?)			
The assignment’s relationship to intended course and/or program learning outcomes			
The assignment genre (research paper, reflection, lit review, group presentation, etc.)			
The required formatting, length, citation style, source and grammatical expectations, etc.			
The intended audience for which the student is writing			
The evaluation criteria that will be applied to grade the student’s work			
The roles and expectations for individual group members, including how group members will be assessed**			

** Applies only to group projects

PART THREE – Critical Thinking Elements

Well-designed critical thinking assignments may or may not include all of these components; some components may not be relevant for every assignment (refer to the checklist in Part One and note the selections in column one below). In addition, a well-designed critical thinking assignment (particularly one designed for advanced students) might deliberately *not* make a component explicit if the intention is to assess whether students can use or apply that component unprompted.

The following section has been tailored to the Texas A&M University Core Curriculum Critical Thinking Rubric. The components are not exhaustive but are meant to provide options and examples for assignment design. Not all categories will be applicable for each discipline, but ideally the assignment will include at least one component per rubric category.



Intended? Yes / No	CRITICAL THINKING COMPONENTS	Not relevant	Not present	Explicit but vague or unclear instructions	Explicit and clear instructions
	RUBRIC CRITERION: EXPLANATION OF ISSUE/PROBLEM				
	Summarize information or an argument, explain an issue, put something in context				
	Pose a question or identify a topic for research				
	Set up a problem to be solved				
	RUBRIC CRITERION: EVIDENCE				
	Gather and employ relevant information/sources/data				
	Evaluate the quality of information / sources / data and make selections among possible sources				
	RUBRIC CRITERION: ANALYSIS				
	Analyze information (or a text, work of art, etc.)				
	Make connections between ideas or information; or apply ideas or knowledge to a new context				
	Interpret and critique someone else's work, and/or identify their assumptions and biases				
	Critique one's own work, and/or identify one's own assumptions and biases				
	Apply relevant and appropriate formulas to solve a problem				
	RUBRIC CRITERION: CONCLUSION				
	Draw a conclusion, linked to evidence				
	Construct an argument, or take a position on an issue				
	Explain why something is important, or discuss its implications				
	Present solution to a problem				
	RUBRIC CRITERION: INNOVATIVE THINKING (OPTIONAL CATEGORY)				
	Create a novel idea, format, or product				
	Solve or approach an issue/problem in an innovative way				

