

Core Objective Assessment and Excellence Course

Module 2: Assessment Rubrics and Signature Assignment Design

Applying VALUE Rubrics to Signature Assignments

Office of Institutional Effectiveness and Reporting

The University of Texas at Arlington

Core Objective Assessment and Excellence Course

Assessment Rubrics and Signature Assignment Design

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This module covers understanding assessment rubrics and designing signature assignments. Signature assignments are substantial coursework that requires students to demonstrate mastery of a core objective. Each assignment typically focuses on assessing one objective, such as Critical Thinking or Communication.

Your course addresses multiple core objectives, but a single signature assignment assesses one objective thoroughly.

The AAC&U rubrics are the standardized assessment tools UTA uses for evaluating signature assignments. Understanding these rubrics is essential to designing assignments that work.

Understanding AAC&U VALUE Rubrics

Valid Assessment of Learning in Undergraduate Education

Learning Outcome → **QUANTITATIVE LITERACY VALUE RUBRIC**
for more information, please contact rubric@aacu.org

Performance Levels →

	4	3	2	1
Interpretation Ability to explain information presented in mathematical form (e.g., equations, graphs, diagrams, tables, words).	Provides accurate, complete, and detailed explanation of quantitative information presented in mathematical form. For example, accurately explains the trend line shown in a graph and makes reasonable predictions regarding what the data suggest about future trends.	Provides accurate explanation of quantitative information presented in mathematical form. For example, accurately explains the trend line shown in a graph.	Provides accurate, but incomplete explanation of quantitative information presented in mathematical form. For example, makes minor errors related to interpretation of trends. For instance, accurately explains trend line shown in a graph, but does not mention the slope of the trend line.	Provides incomplete explanation of quantitative information presented in mathematical form. For example, attempts to explain the trend line shown in a graph, but fails to accurately interpret the nature of the trend, perhaps by confusing positive and negative trends.
Representation Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words).	skillfully converts relevant information into an equivalent mathematical presentation in a way that reflects a deep or deeper understanding.	Competently converts relevant information into an appropriate and desired mathematical presentation.	Converts information of information but resulting mathematical presentation is only partially appropriate or accurate.	Converts information of information but resulting mathematical presentation is inappropriate or inaccurate.
Calculation	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented clearly (tidily, correctly, etc.).	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.	Calculations attempted are either correct or not, but only a portion of the calculations required to comprehensively solve the problem.	Calculations are attempted but are both unsuccessful and are not comprehensive.
Application / Analysis Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, and recognizing the limits of the analysis.	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing logical, carefully qualified conclusions from the work.	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from the work.	Uses the quantitative analysis of data as the basis for workable (but not inspired or accurate) judgments, drawing plausible conclusions from the work.	Uses the quantitative analysis of data as the basis for mediocre, basic judgments, although is hesitant or uncertain about drawing conclusions from the work.
Assumptions Ability to make and evaluate important assumptions in situations, modeling, and data analysis.	Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that evidence on hand is limited by the accuracy of the assumptions.	Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.	Explicitly describes assumptions.	Attempts to describe assumptions.
Communication Presenting quantitative evidence in support of the argument or purpose of the work, in terms of what evidence is used and how it is formatted, presented, and communicated.	Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explains it with consistently high quality.	Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explanation may be uneven.	Uses quantitative information, but does not effectively connect it to the argument or purpose of the work.	Presents an argument for which quantitative evidence is presented, but does not provide adequate evidence to support the argument. Uses quantitative words such as "many," "less," "increasing," "small," and the like in place of actual quantities.

Dimensions → **Performance Descriptions**

☒ Nationally Validated

 Faculty-Developed

 Tested Across Institutions

The rubrics we use are adapted from AAC&U's VALUE initiative: Valid Assessment of Learning in Undergraduate Education. These aren't arbitrary scoring guides. They're nationally validated tools developed by faculty experts and tested across hundreds of institutions.

While there is no requirement for you to use these rubrics to score signature assignments for the purpose of your course, it is strongly recommended to maintain consistency and support students working on signature assignments. By design, these rubrics are meant to be adapted to fit your discipline, course context, and assignment expectations.

Anatomy of a Rubric

Critical Thinking Rubric

CRITICAL THINKING VALUE RUBRIC
for more information, please contact raim@uta.edu

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 grade to any work sample or collection of work that does not meet benchmark (all ones) level performance.

Five Dimensions

- Explanation of Issues –**
Stating the problem
- Evidence –** Selecting information
- Context & Assumptions –**
Recognizing perspectives
- Student's Position –**
Defending a stance
- Conclusions –** Logical reasoning

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Explanation of issues	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.
Evidence <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 coherent 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.
Influence of context and assumptions	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. Maybe 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.
Student's position (perspective, thesis/hypothesis)	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.
Conclusions and related outcomes (implications and consequences)	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.

UTA

Let's examine the Critical Thinking rubric in detail to understand how these work.

The rubric has five dimensions:

Explanation of issues - Can the student clearly state and describe the problem?

Evidence - How well does the student select and use information?

Influence of context and assumptions - Does the student recognize different perspectives?

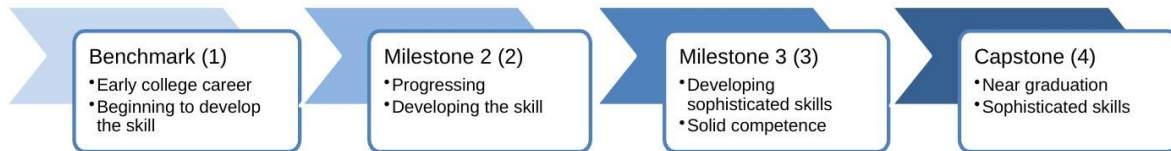
Student's position - Can the student take and defend a position?

Conclusions and related outcomes - Are conclusions logical and well-reasoned?

Let's look at "Evidence" across all four levels....

Understanding AAC&U VALUE Rubrics

Four Performance Levels



UTA benchmark: 2.0

A mean score of 2 on each dimension of the respective rubric



Every VALUE rubric uses the same four-point scale:

Benchmark, with a score of 1, which represents skills we expect from students early in their college career. they're just beginning to develop these abilities.

Milestone 2, with a score of 2, which shows progression. Students are developing the skill. But they haven't reached solid competence of sophistication

Milestone 3, with a score of 3, which indicates approaching sophistication with the skill. The student demonstrates solid competence.

Capstone, with a score of 4, which represents what we expect from students at or near graduation, demonstrating sophisticated, well-developed skills.

For core curriculum courses, which are lower division level, UTA's benchmark for meeting expectations is a mean score of 2 on each dimension of the respective rubric, which means expecting most students to perform at least at the Milestone 2 level.

Assessing core curriculum objectives is an exercise in determining areas of improvement in student learning within the core curriculum. Mean scores below 2 indicate areas for seeking improvement.

Anatomy of a Rubric

Critical Thinking Rubric

CRITICAL THINKING VALUE RUBRIC <i>for more information, please contact rubric@aacu.org</i>				
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. <i>Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (all one) level performance.</i>				
	Capstone 4	Milestones 3 2		Benchmark 1
Evidence <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.

Expert evaluation ← Coherent position ← Some analysis ← No interpretation



Benchmark: Information is taken from sources without interpretation. Student treats all sources as equally valid.

Milestone 2: Information is taken from sources with some interpretation. Student shows awareness that not all sources are equal.

Milestone 3: Information is taken from sources with enough analysis to develop a coherent position. Student examines source credibility.

Capstone: Information is taken from sources with thorough analysis. Student questions thoroughly and evaluates evidence expertly.

As you can see each level builds on the previous one, adding sophistication and depth. In the absence of the particular skill demonstration, reviewers are encouraged to assign a score of zero.

Now that we've reviewed how the AAC&U rubrics evaluate student work, let's look at what signature assignments are and how they're structured to elicit that evidence.

Understanding Signature Assignments

What Is a Signature Assignment?

Definition

Substantial student work that demonstrates the knowledge and skills central to course objectives. Distinctive to the course while structured so it can be evaluated across course sections..

Examples:

- Lab reports with data analysis and interpretation
- Case studies with problem-solving components
- Creative works with analytical artist statements
- Policy briefs with evidence-based recommendations
- Presentations supported by written documentation
- Research papers with clear argumentation

Key Characteristics:

- **Authenticity** — Connects learning to real-world application
- **Substantiality** — Represents ~10–15% of course grade
- **Clarity** — Expectations defined through detailed rubrics
- **Assessability** — Can be evaluated across disciplines
- **Focus** — Addresses one or more core mapped core objectives



Signature assignments are substantial works that best display the knowledge or skills essential to your course objectives. They're called "signature" because they're distinctive to your course while still being assessable across course sections.

Examples include:

Research papers with clear argumentation

Lab reports with data analysis and interpretation

Case studies with problem-solving components

Creative works with analytical artist statements

Policy briefs with evidence-based recommendations

Presentations with written documentation

What are the key characteristics of signature assignments?

Authenticity: they connect to real-world applications.

Substantiality: they represent at least 10-15% of the course grade

Clarity: students understand expectations through detailed rubrics.

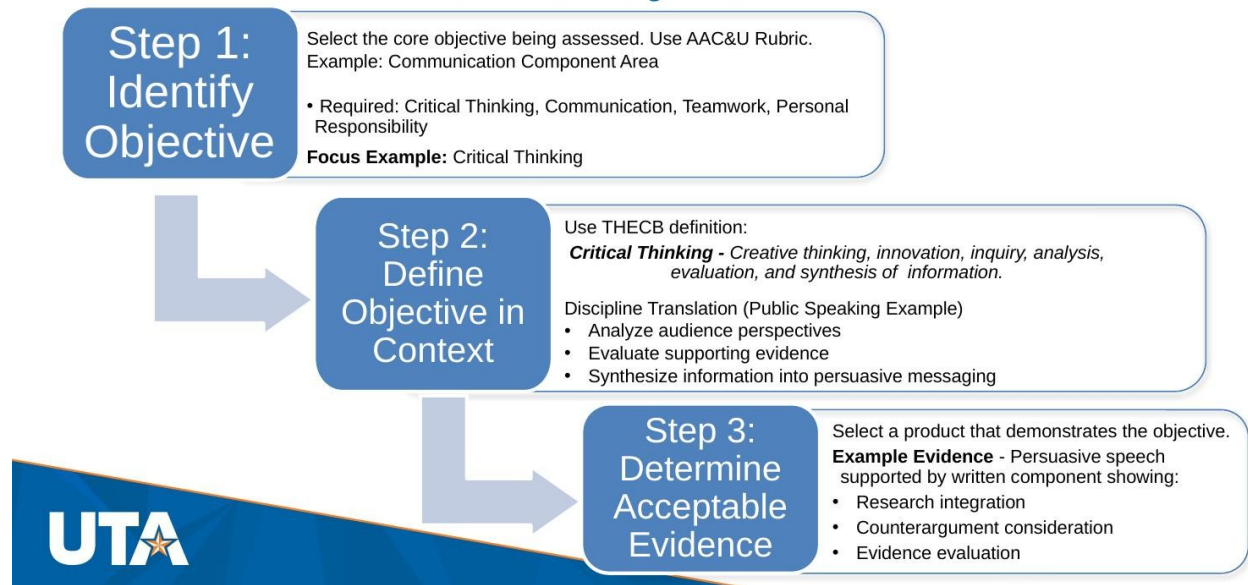
Assessability: faculty from other disciplines can evaluate them.

And finally, Focus: they have to focus on one or more core objectives that are mapped to the course.

Students understand expectations through detailed rubrics or grading criteria.

Understanding Signature Assignments

Backward Design Process



Let's design a signature assignment using backward design principles, ensuring alignment with THECB requirements.

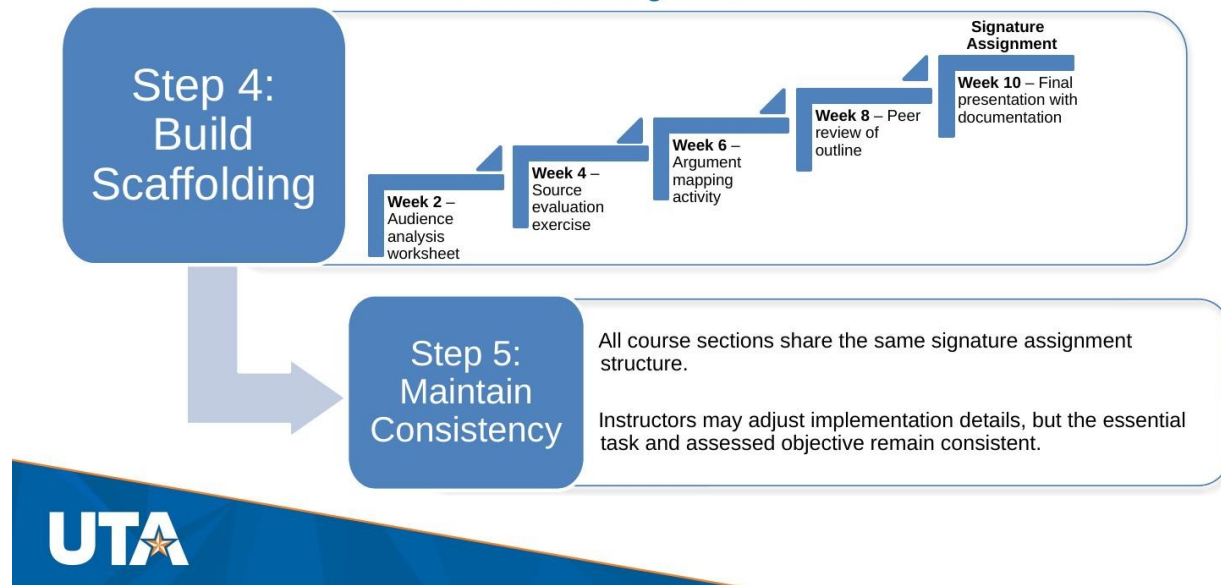
Step 1: Identify which objective you're assessing. Let's say your course is in the Communication component area, which according to THECB must address Critical Thinking, Communication, teamwork, and personal responsibility. For the purpose of this activity, We are going to focus on Critical Thinking. The AAC&U Critical Thinking rubric will guide your assignment design.

Step 2: Define what Critical Thinking looks like in your discipline using the THECB definition: "creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information." In a public speaking course, it might mean analyzing audience perspectives, evaluating evidence for arguments, and synthesizing information into persuasive presentations.

Step 3: Determine acceptable evidence. What product will demonstrate these skills? Perhaps a persuasive speech with a written component showing research, counterargument consideration, and evidence evaluation

Understanding Signature Assignments

Backward Design Process



Step 4: Build scaffolding. Students can't jump straight to complex work. Create preparatory assignments:

Week 2: Audience analysis worksheet

Week 4: Source evaluation exercise

Week 6: Argument mapping activity

Week 8: Peer review of speech outlines

Week 10: Final presentation with written documentation

Step 5: Ensure consistency. If you have multiple sections, all must use the same signature assignment structure and rubric. Individual instructors can vary implementation details, but the fundamental task remains consistent.

Understanding Signature Assignments

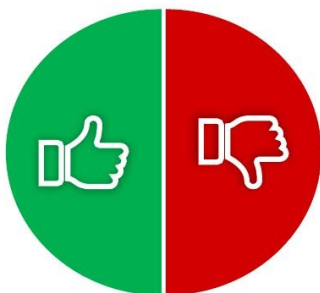
Making Assignments Assessable



Signature assignments are evaluated by faculty outside your discipline. They must be understandable and assessable without specialized subject knowledge.

DO

- ✓ Provide clear context in assignment prompts
- ✓ Include background that allows evaluation of student thinking
- ✓ Require tangible artifacts documenting reasoning
- ✓ Connect requirements to core objectives



DON'T

- ✗ Depend on discipline-specific jargon or expert knowledge
- ✗ Assume reviewers share subject familiarity
- ✗ Use assignments assessable only in real time
- ✗ Treat participation alone as a signature assignment



Your signature assignments will be scored by faculty outside your discipline. This means they need to be understandable and assessable without specialized knowledge.

Let's go over some Do's and Don't's

DO include clear context in your assignment prompts. If students are analyzing a chemical reaction, (next do) include enough background that a non-chemist can evaluate the critical thinking involved from the resulting student artifact.

DON'T rely solely on discipline-specific jargon or concepts that require expert knowledge to assess. (next don't) And don't assume reviewers share subject familiarity

DO require production of tangible artifacts. Even for presentations or group work, require written components that document the thinking process. (next do) Ensure that you connect the requirements to the corresponding core objectives.

DON'T create assignments that can only be understood in the moment. "Class participation" isn't a signature assignment (next don't) - don't treat participations alone as a signature assignment.

Using these guidelines as a framework, we can evaluate how assessability appears in an assignment prompt.

Sample Signature Assignment Prompt (Example)

Persuasive Speech Assignment

In this assignment, you will write and deliver a 6–8 minute persuasive speech addressing a contemporary issue relevant to your audience. Your goal is to examine the issue thoughtfully, analyze available information, evaluate differing viewpoints, and present a well-supported position.

This assignment is designed to develop your critical thinking skills, including inquiry, analysis, evaluation of evidence, and synthesis of information into a persuasive argument.

Instructions

- Select a focused topic appropriate for a general audience
- Locate and use at least four credible sources
- Write and submit your speech. Include:
 - thesis statement
 - main points
 - supporting research
 - discussion of at least one opposing viewpoint
- Include brief notes explaining how you determined the credibility of your sources
- Deliver your speech during your assigned presentation session

How Your Work Will Be Evaluated

Instructor will examine how effectively you

- analyze and explain information related to your topic
- evaluate the quality and relevance of evidence
- consider alternative perspectives
- integrate ideas into a coherent argument
- draw logical conclusions and discuss their implications

Course Context

This assignment occurs near the end of the semester after completing activities on audience analysis, source evaluation, and argument development. Students submit both a presentation and written speech.

Annotations:

- Clear connection to the core objective being assessed.** (Points to the assignment description and the list of critical thinking skills.)
- Specific requirements and expectations** (Points to the Instructions section.)
- Context that helps students and faculty understand the task** (Points to the Course Context section.)
- Aligned with AAC&U Critical Thinking Rubric Dimensions** (Points to the rubric table.)

Explanation of issues
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>
Influence of context and assumptions
Student's position (perspective, thesis/hypothesis)
Conclusions and related outcomes (implications and consequences)

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Building on the persuasive speech example introduced earlier, the following sample illustrates how core objective alignment, expectations, and reviewer context can be embedded directly into an assignment description.

Your assignment prompt should include:

Clear connection to the core objective being assessed

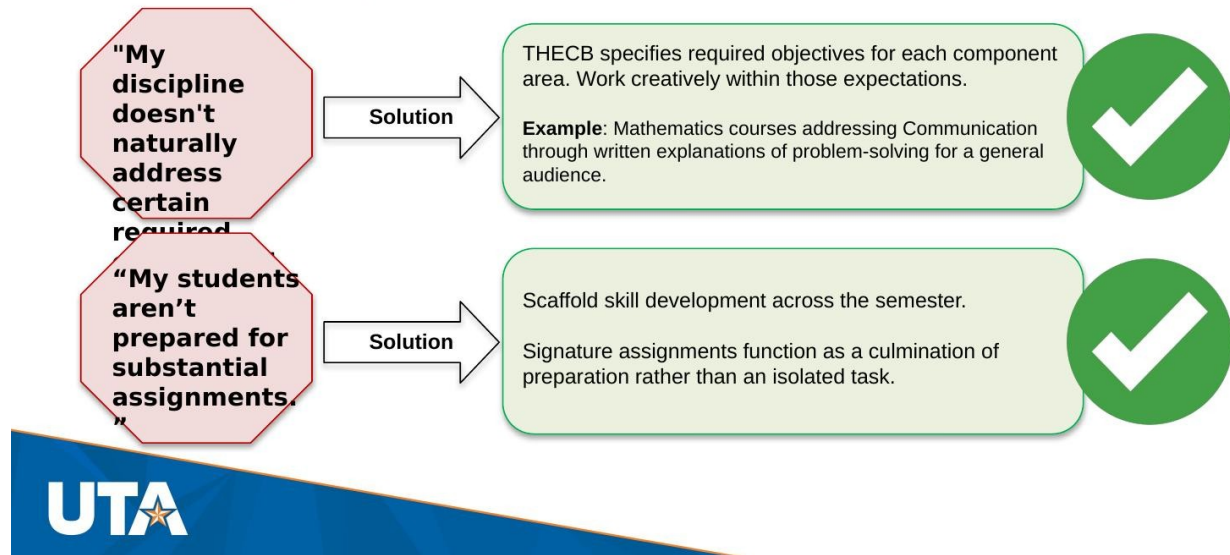
Specific requirements and expectations

Evaluation criteria that align with the corresponding standardized AAC&U rubric

Context that helps students and faculty understand the task

Common Challenges and Practical Solutions

Navigating Core Objective Alignment Requirements



Let me address common challenges faculty face.

Challenge: "My discipline doesn't naturally address certain required objectives."

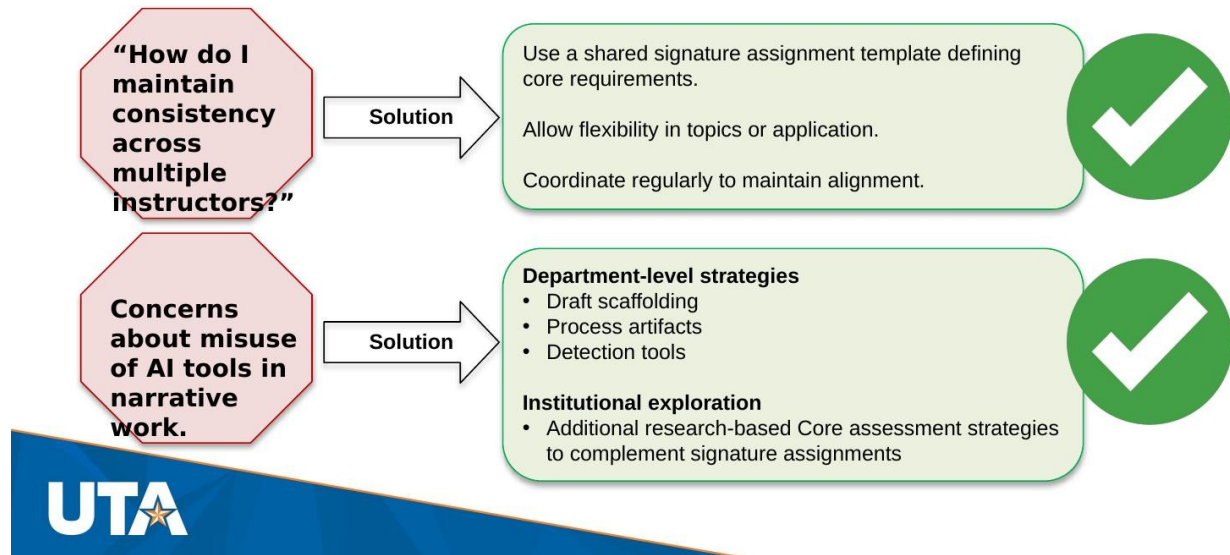
Solution: Remember that THECB requires specific objectives for each component area. Think creatively within those requirements. For instance, all Mathematics courses must address Communication. Consider having students write explanations of their problem-solving process for a non-mathematical audience.

Challenge: "My students aren't prepared for such substantial work."

Solution: This is where scaffolding becomes essential. Skills should be developed throughout the semester so students are building toward the signature assignment gradually. In this way, the assignment becomes the culmination of their learning rather than an unexpected challenge at the end of the course

Common Challenges and Practical Solutions

Instructional Coordination and Student Preparation



Challenge: "How do I maintain consistency across multiple instructors?"

Solution: One effective approach is to develop a shared assignment template that establishes core requirements across sections. Within that structure, instructors can still allow flexibility in topics or specific applications that fit their teaching style. Regular coordination meetings also help maintain alignment and keep expectations consistent.

Challenge: Faculty also express concern about academic integrity, particularly with the increasing use of AI tools in narrative assignments.

Solution: At the department level, guidelines can help minimize misuse. These may include the use of plagiarism or AI detection tools, scaffolding drafts, or requiring process artifacts that document student work. At the institutional level, UTA is actively exploring additional assessment strategies, including third-party, research-based evaluations of Core objectives, to complement signature assignments in the future.

Recognizing these challenges (and practical ways to address them) helps strengthen both assignment design and institutional assessment.

Resources

Effective signature assignments support both student learning and Core Curriculum assessment.

They are substantial enough to matter, clear enough to assess, and authentic enough to engage.

Resources:

- IER Signature Assignment Repository (contact IER for access)
- Core Assessment Resources, such as the AAC&U Value Rubrics, available on the IER website
- Links provided in course resources



Well-designed rubrics and signature assignments work together. Rubrics convey clear expectations to students and provide detailed feedback on their work. Signature assignments are the vehicle through which students demonstrate learning on those rubrics.

Effective signature assignments are substantial enough to matter, clear enough to assess, and authentic enough to engage.

Rather than starting from scratch, learn from colleagues who have already created effective assessments. The IER maintains a repository of signature assignments from various disciplines, and core assessment resources are available on the IER website. Links to both are provided in your course materials.