

## **UWF/ALC TIP SHEET #5**

### **Capturing Students' Critical Thinking Skills**

#### ***Frequently Asked Questions***

#### ***What did the State of Florida Department of Education have in mind when they made critical thinking a requirement in the Academic Learning Compact mandate?***

The state has not specified what “critical thinking” entails nor have they specified how the SUS member institutions should proceed in building assessment plans that address critical thinking skills. You might think that missing detail is frustrating, but we think that lack of specificity is a *good* thing. It gives departments and their institutions much more latitude to define critical thinking in the way that makes the most sense to them. The literature in critical thinking suggests that, although there is often some overlap in the basic skills entailed in critical thinking, disciplines tend to define critical thinking in distinctive ways.

#### ***How will we collectively approach critical thinking in our programs at UWF?***

We want to approach the definition of critical thinking very broadly because of the different focus in the varying majors. For example, in the sciences, critical thinking probably looks a lot like sophisticated, discipline-based problem-solving. In the humanities, greater emphasis might be placed on skills of analysis and criticism. In the arts, critical thinking as expressed in creativity might be the emphasis. In programs with a professional training emphasis, there may be elements of all of those skills. Therefore, how your program addresses critical thinking very much depends on what you expect from your students in the way of cognitive “complexity” before they graduate.

#### ***How do critical thinking and content outcomes differ?***

It may help to rely on the distinctions that Bloom and his colleagues originally developed in their taxonomy of learning over half a century ago. Content outcomes emphasize “lower level skills” such as *remembering, recognizing, recalling, and even applying*. These lower level abilities fit very well with learning contexts that are lecture-based and require students to take multiple-choice exams to “cover the content” of the course. You may want to review the last Tip Sheet #4 to see the flavor of lower-order thinking outcomes.

Critical thinking skills focus on greater involvement from the students and greater sophistication in how they interact with material. Critical thinking challenges encourage students to grapple with the material and bring something of themselves forward as they try to construct more complex understandings of the material using this active approach. Bloom and his colleagues would stress *analyzing, synthesizing, creating, integrating, and evaluating* as overarching terms that try to get at this greater complexity of cognitive demand.

***What kinds of outcomes should we identify at the program level to satisfy the ALC?***

The best way to answer this question is to encourage you to examine the kinds of activities that already exist in the advanced courses in your program and extract how these learning demands reflect critical thinking in your major. It may help you to identify the overall nature of critical thinking skills in your discipline. Does your program emphasize problem-solving, analysis and critique, creativity, or some unique combination of those approaches?

***What if our program emphasizes problem-solving skills?***

Here are some possibilities. As you read the following examples, think about the way in which advanced projects in your major express any of the following components:

- Observes target events/phenomena at an appropriate level of detail.
- Recognizes and defines problems.
- Selects and applies appropriate method to answer questions.
- Develops and executes appropriate strategies to solve discipline-based problems.
- Justifies selection of one approach over others.
- Designs and uses proper measurement strategies.
- Uses data appropriately to come to defensible conclusions.
- Identifies advantages and limitations of using a specific method.
- Formulates criteria to determine when a solution is successful.

Are there some bullets that are most relevant for your students' problem-solving skills? Would you be able to give them feedback about their level of mastery in the criteria you select? Are there other related criteria that are even better tailored to the kind of problem-solving your discipline promotes?

***What if our program emphasizes analysis and critique?***

Here is a similar generic list that might help you target the specific outcomes that make the most sense in majors that have a greater analysis/criticism emphasis. Think about how advanced projects in the major might express any of these components:

- Observes essential elements in a work to promote effective analysis.
- Selects and applies relevant disciplinary frameworks and theories in analysis.
- Compares and contrasts theoretical perspectives.
- Incorporates contextual factors as part of analysis.
- Evaluates quality of analytic conclusions.
- Evaluates the achievements and shortcomings of a given work.
- Expresses insight into personal biases that might influence critical abilities.
- Enriches personal opinions with disciplinary concepts.
- Uses discipline-based criteria to form judgments about quality.

Notice that some of the criteria appear to be overlapping. We include a variety of ways to get at the essential aspects of conceptualizing in this list; however, not all of the bullets may directly apply to the nature of critical thinking that you require of your students in advanced courses.

***How about programs that emphasize artistic development?***

This may be the most difficult emphasis to capture in behavioral criteria. However, think about the following components as they might be exhibited in students' advanced work in the creative majors.

- Produces original work that expresses individual perspective.
- Explains process by which the original work was conceived.
- Discusses historic or cultural influences that contributed to the creation.
- Justifies the larger artistic context in which the original work vies for attention.
- Speculates about the intended impact on the audience member.
- Evaluates the achievements and shortcomings of a given work.
- Articulates the distinctive worldview expressed in a given work.

Do your students have an exit performance that could provide evidence of how well these criteria could be achieved? What other criteria might apply to a portfolio of creative student work?

***Can a program mix and match criteria from the various categories?***

Of course. For example, programs that have a professional training emphasis might try to capture the exit behavior that is desirable in a way that cuts across problem-solving, analysis, and creativity. The key to success is choosing or creating criteria that accurately express what your students learn to do in their hands-on experiences in the advanced part of your curriculum. Are there some criteria that stand out for you because they so obviously express the distinctive characteristics of thinking in the major? What does it mean to demonstrate critical thinking in your discipline?

***I've heard that there are critical thinking tests that we might be able to import into our plan to measure student growth. Is that a good idea?***

Probably not. The critical thinking tests that have been developed to date were not created with the objective of measuring student change over time attributed to a specific undergraduate program. In general, importing a test for such a specific purpose is probably going to produce disappointing results since the focus of the test may be minimally related to the kind of critical thinking that you and your students promote in your students. And such an approach would be very expensive in dollars and time.

***The boundary line between content and critical thinking seems really fuzzy. Must these areas be assessed in two separate processes?***

No. In fact, the most successful, efficient assessment designs are ones that will incorporate criteria that cut across the five UWF domains in our ALC proposal. For example, a student delivering an address in a Literature seminar

as an exit performance could get feedback on her management of the content, her ability to think critically like someone schooled in literature, the quality of the communication of her ideas, the presence of the steps she took to ensure integrity, and the quality of her project management. This integrated design is one of the reasons we consistently advocate for a capstone experience in the major to give you an opportunity to see how well students can pull all these domains together just as seasoned professionals routinely do.

***This approach feels very complex. Can you provide any help to simplify?***

1. Consider that students are newcomers in the field where you have developed significant expertise. They are *novices*; you are the *experts*. In a four-year program, your goal is not to make them experts to the same level of sophistication you show. Your job is to help them move along the novice-expert continuum at the level that seems reasonable following the completion of a four-year program.

2. Think about your target being an expectation for what an average student in your major should be able to do. Do not base your program outcomes on the stellar students. Think about what a reasonably motivated student should be able to accomplish at the end of the program and design your criteria to capture that level of accomplishment.

3. Reflect on the kinds of things you are inclined to say about students in letters of reference for employers or graduate school. The characteristics that you are inclined to talk about in this unrestricted format tend rather naturally to gravitate toward the essentials that represent the heart of your major. If you can distill and extract what characteristics are most important to report to that next level of engagement for the student, you may be able to come up with the program outcomes that are well tailored for the work you and your students do together.

*Tip Sheet #6 will explore COMMUNICATION outcomes.*