

**Chabot College Critical Thinking Pilot Study**  
**December 2008 meetings about results**  
**Meetings: Dec 10, 2008**

*Attended Meeting 1:* Scott Hildreth, Dennis Chowenhill, Adrian Estepa, Wayne Phillips, Carolyn Arnold

*Attended Meeting 2:* Anita Wah, Ming-Lin Ho, Patti Keeling, Steve Woodhams, Michelle Sherry, Kathy Kelley, Jason Ames, Desmond Chun, Carolyn Arnold

**Topics:**

**Results**

What were the results? What do you think about them?

Do you have some interpretations of what occurred in your class?

**Rubrics**

What was your experience using the rubric you did?

Did it help or hurt your ability to assess? Would you use it again, or recommend it?

**Meeting 1 discussion**

**By Scott Hildreth, Dennis Chowenhill, Adrian Estepa, Wayne Phillips, Carolyn Arnold**

There was general surprise that so many students were still at the developing level, needing more hand holding. The group work that one class used for this assignment actually seemed to narrow the solutions considered by the group, rather than expand them.

The detailed rubric is good in that it lets you narrow in on a skill and pinpoint it. However, it would be a lot of work to use the detailed rubric for all assignments. Some assignments might lend themselves more to using different criteria and it may make sense to focus more on those criteria. For others, the holistic is better.

Faculty who had done the assessment early and later in the semester saw students move up one level on the rubric – this was very satisfying, and wanted to see that again. The averages across classes were not that meaningful, because they included some before's, after's, and one-times.

Students did well if they came in with good critical thinking skills. This was a snapshot, and their learning is really cumulative and incremental across many courses. They learn a bit in each course that they may apply in the next course.

Student progress really varied based on the level they came into the class with. Can we follow a cohort of students through several classes to see their individual improvement? This would show us how each course contributes to the learning of this college-wide learning outcome.

**Suggestion:** science literacy and scientific method should be a common SLO across campus.

**Meeting 2 discussion**

**By Anita Wah, Ming-Lin Ho, Patti Keeling, Steve Woodhams, Michelle Sherry, Kathy Kelley, Jason Ames, Desmond Chun, Carolyn Arnold**

**Patti/Speech 1:** This made me look at the steps involved in teaching and learning critical thinking, so I could write it down for them and lead them through it. Assessing before and after was valuable. I really saw an improvement.

**Kathy/ECD 51:** The rubric gave me a new filter through which to see where students were learning critical thinking or not. It was a framework. I was discouraged at the low level of critical thinking that they demonstrated, after much instruction.

**Jason/Speech 46:** I found that the holistic rubric was too general. I wanted to identify, or distinguish what they did well and what they did not. Next time, I will use a detailed rubric.

I was assessing them on their third debate, and these were highly cognitive skills built on top of Speech 1. However, this was a high level debate in which they had to apply everything they understood so far. They were not able to demonstrate it with much success. Next time, I will also do a before and after assessment, to see their improvement. It did give me a hint about how the in-class activities contribute to their learning, and how to modify to give them the practice they need. [Later, others suggested that the *next, fourth* debate might really show their improvement, after they have had the third debate to practice and integrate.]

Another result of doing this project is that Patti and Jason had good conversations about how to improve the assessing or approach in these courses, since they both teach both. They learned from the experience of each other.

**Michelle /ECD 91:** The rubric was a tool for myself to break down the aspects of critical thinking. However, the holistic rubric was not specific enough. Next time, I want to use the detailed rubric. Even though I assessed 3 assignments, they all scored high, so this might not have been the best assignment to assess critical thinking. However, it did help me reflect on my own criteria. It helped me break down the process, and what they do and don't know.

**Desmond/CSCI 7&14:** This reinforced what I already knew. I feel I'm already doing as much as I can to teach and help them learn, by providing lots of teaching aids with Blackboard, lecture notes, examples, templates, etc. However, I am not seeing enough students with enough motivation and preparation to take advantage of the teaching/learning support I am offering. [Group discussion about whether critical thinking can really be taught if they have not learned the components of it earlier]

**Anita/Math 54L:** The detailed rubric (she used 4 out of 5 criteria) really helped to break it down. I could see how they analyzed- whether they got the information correct in the first place, and then whether they could apply, and set up the equation correctly, and here I saw that they were just grasping formulas to plug in without understanding them. In terms of drawing conclusions, they are not usually asked to verify their conclusions, and say whether it makes sense.

NOTE: Retention rate is going up in (this class? All Math classes?) due to new Math EXCEL (not the spreadsheet) computer program, which shows them how to do problems and shows them similar problems, so they learn incrementally by mimicking solutions. They can learn to apply this knowledge at a higher level.

In one assignment, it was hard to look at all the criteria, because some of them depend on the students moving through the earlier steps and criteria. It was very difficult for some students to get very far.

**Steve/English 7:** He realized that when someone thinks there is one right way, this is the opposite of critical thinking. He liked the holistic rubric because it allowed him to see the words that described the categories that he was already using, and he found that most of the words really did describe what he was looking for.

He found that the Accomplished level meant they had really done something special, and only 3-4 earned this. There were 8 who were Competent, and he was surprised to have so many earn this level. The rubric helped him see the differences between the levels. It helped him see the positive aspects in the Beginning and Developing levels – to see what they *have* done, rather than what they have not.

He noted that students learn each instructor's 'way,' and they all try and play the game to pass the class. The English instructors have agreed that no one can pass a class without writing the essays, so students try to do things that will get them some credit on all essays.

We don't have control over the process. He sees a correlation between thinking and writing.

***Group Discussion:***

The question is can you teach someone from competent to accomplished? It seems that students can be moved from beginning to developing to competent levels, but the accomplished level students usually come in with it. Anita said that actually teaching critical thinking is hard - it is a long process to learn it.

Anita believes in not asking them to apply new things in a timed situation, but to ask for new applications in an unpressured situation. Jason said that in Speech, there are high withdrawal rates, and lots of pressure, because students are forced to achieve since a debate is so public, and that this works well for the students who stay. The group thought that we might be talking about transfer students vs basic skills students. Basic skills students may have plateaued at their highest level already, but even transfer students may need intensive interventions and conversation.

***NOTES for next time (and the group wanted to do it again):***

There was a suggestion to always assess critical thinking before and after in the same class, to see how much is learned. Also, control for class size.

We needed a consistent rule for zero (0) on the rubric – include those not reporting, or just those who did badly?