Malcolm X College
Assessment Academy
Student Learning Project

Assessing Critical Thinking

**Track 1 - Design and Implementation**

A common rubric was selected by the Assessment Committee. The rubric included criteria to address the following components of critical thinking:

- Understanding
- Analysis
- Evaluation
- Inference
- Explanation
- Implication

Faculty from the various departments took on the challenge of creating a discipline-specific question, problem, or prompt. Responses were then collected from students in corresponding courses – Chemistry students were asked to respond critically to a Chemistry question, for example.

The sample population included all of the students enrolled in selected sections. Overall fifty-two sections participated in the pre-test data collection: thirty-nine from the General Education division, and thirteen from the Career programs. The total number of students that participated in both the pre- and post-test was 724.

**Track 1 - Results and Analysis**

After all of the necessary computations were done, the results were analyzed and reviewed by faculty. According to these assessment results, students performed exceptionally well during the post test. The findings show that the results are statistically significant in all areas.

Faculty were asked to address the following:

- What strategies did students use to demonstrate critical thinking?
- What specific course content in your department addresses critical thinking?
- How can your course content be modified to better address critical thinking in the future?

Faculty then discussed how they will use the results to improve student learning. Some examples of action steps are: Instructors felt it was important to change course content; Instructors felt courses needed to include new technologies; Instructors felt additional courses needed to be developed for the program.

**Track 2 - Design and Implementation**

For the second phase, “Track 2”, we used a standardized test that we determined would be an appropriate instrument for measuring critical thinking that is valid, reliable, can be graded promptly and promote more demographic information. We hope that these lessons will be useful to the other participants in the HLC Academy as well!

We then set out to measure the critical thinking abilities of students who were new to college to compare with students completing capstone courses. This design was picked so that our data could answer the question: does the students’ experience at Malcolm X College across the years improve their ability to think critically?

Project will be conducted in Fall 2010 using CAAP as our instrument.

**Track 2 – Results and Analysis**

After reviewing the test results, we were concerned about whether or not there was a statistical difference between the score of students in their freshman year and those who were already in higher level courses.

When we compared the scores between the two groups, a difference was evident between the lower classes of the distribution and the higher classes.

Next Steps for Utilizing These Results

The following list is not exhaustive and it only represents some general ideas. Each department/program will develop their own goals and objectives regarding critical thinking and its assessment.

- Examine the curriculum map (General Ed and Careers) to determine where exactly the Critical Thinking student learning outcome is placed.
- Administer assessments in courses that enroll a large proportion of students who have completed critical thinking courses.
- Compare students who have completed the critical thinking curriculum to those who have not.
- Identify strengths and/or weaknesses in specific critical thinking skills (e.g., analysis of arguments, evaluation of arguments, and extension of arguments).
- Determine the actions to be taken for curriculum development and improvement.
- For continuous improvement, establish test administrations that target specific level gains and develop an action plan to achieve this goal.