United States University

2014-2015 Critical Thinking Assessment Report

April 2015

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United States University
Critical Thinking Outcomes Assessment Report and Results
April 2015

Overview of Assessment at USU

United States University's eight Institutional Learning Outcomes (ILOs) express a shared, university-wide articulation of expectations for all degree earners:

1. Written and Oral Communication: Communicate clearly and effectively through writing, speaking and using technology.
2. Quantitative Reasoning: Apply quantitative reasoning to address complex challenges.
3. Information Literacy: Effectively gather, analyze and integrate information from a variety of sources.
4. Critical Thinking: Apply critical thinking in the research and problem-solving processes.
5. Ethical Reasoning: Demonstrate ethical reasoning and actions to provide leadership as a socially responsible citizen.
6. Diversity: Work effectively across race, ethnicity, culture, religion, gender, and sexual orientation.
7. Collaboration: Work collaboratively as members and leaders of diverse teams.
8. Mastery of Knowledge: Exhibit mastery of knowledge and skills within a discipline.

The first four ILOs align with the Western Association of Schools and Colleges (WASC) five core competencies: written and oral communication, quantitative reasoning, information literacy, and critical thinking (2013 Handbook, CFR 2.2a). The second four ILOs have been chosen by the university as suitable goals for the 21st-century society and workplace.

Each of the Colleges at USU (Arts and Sciences, Business and Management, Education, and Nursing) has created Program Learning Outcomes (PLOs) for each or its degree programs that align with the ILOs but express the expectations for all the degree-earners of that particular academic program. For each degree program, the PLOs are charted out across a curriculum map, which identifies which courses carry the responsibility for teaching and assessing the specific skills associated with those PLOs. As part of that identification, each of the courses chosen for the particular outcome indicates the level at which it will be addressed and assessed: Introduced (I), Developed (D), or Mastered (M). At a glance, these maps show the progression of learning across the curriculum.

At the class level, an individual course in a program's curriculum is constructed around a set of Course Learning Outcomes (CLOs), which are aligned with its program's PLOs (and thus with the ILOs of the university). These CLOs are then associated with particular course assignments, the student work from which can be assessed as a measure of student and programmatic achievement of the learning outcome.

A key component of ensuring the quality and integrity of USU's degrees is assessment of student learning. The ILOs, PLOs, CLOs, and Curriculum maps allow for one systematic measure of student performance in relation to learning outcomes. USU has developed a five-year cycle of outcome assessment:

Year 1: Critical Thinking
Year 2: Quantitative Reasoning & Information Literacy
Year 3: Written and Oral Communication & Mastery of Knowledge
Year 4: Diversity & Collaboration
Year 5: Ethical Reasoning

After Year 5, the cycle will begin again with Year 1. Although the focus of the major assessment activity of each year will be its indicated ILO(s), the teaching and in-course assessment of the other ILOs continue throughout the cycle. Results from the assessments of these ILOs may affect many areas impacting student learning and success, including curriculum and course design, budgeting, faculty training, and student support.

History of Critical Thinking Assessment at USU

2013-2014 First Attempt

The first year of the assessment cycle was the 2013-2014 academic year. In the fall, a modified version of the Association of American Colleges and Universities' VLUE rubric for Critical Thinking was chosen as the assessment tool. One course per program of study was identified from the curriculum maps and the student work from those courses were collected. Faculty volunteers were put through an inter-rater reliability process with a sample essay. As agreement was difficult to come by, rather than assigning student work to individual faculty to assess, the work was assigned to pairs of assessors instead. In the spring, the assessment teams rated the student work using the rubric and the results were collected and analyzed with much discussion between the team members about the process, the rubric, and the students' performance.

The results of the 2013-2014 attempt were determined to be unusable as a measure of the students' critical thinking ability. However, the effort produced useful information in other ways: the rubric was determined to be too vague as it addressed composition and information literacy skills as well as critical thinking; the assignments were determined not to be a good measure of critical thinking as they were generally final term papers and thus focused on research rather than on critical thinking; and the activity of assessing the student work was made more difficult by the length and complexity of both the rubric (vague language and number of criteria) and the student papers. Based on these results, it was decided to re-run the Critical Thinking assessment in the 2014-2015 year with a different approach.

2014-2015 Second Attempt

For this second attempt, the College Deans proposed 80% as the goal for student achievement of the learning outcomes and that the goal would be aligned to the course level (so an Introduce course would have the goal of a rubric score of "1" on the assessment rubric , a Develop course a score of "2," etc.). In the summer of 2014, the faculty assessment committee met multiple times 1) to discuss and approve the new 80% goal and rubric/level alignments, 2) to decide what critical thinking skills were important for USU students and 3) to design of a new Critical Thinking rubric focused specifically on those skills (the committee also did the same for the Quantitative Reasoning and Information Literacy outcomes). The faculty assessment committee also decided to use the same rubric for undergraduate and graduate assessment, with the course faculty charged with providing significantly more challenging assignments for the graduate-level courses.

In the fall, the courses were identified from the curriculum maps and the faculty of those courses worked with the Director of Outcomes Assessment to create or modify assignments to specifically address critical thinking skills; the rubric was also supplied to the students. The score sheets for the faculty assessors this time also included commentary boxes for feedback on the rubric and the assignment design, which played a useful role in analyzing the results. In late fall and through the spring, the student work was collected from those courses and the results will be detailed below. Overall, the results from this second attempt were significantly more usable, indicating the university is on the right track in its assessment approach, though there were still issues with the specifics of the rubric and the course assignments to address for the future.

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University-Wide Results for Critical Thinking 2014-2015

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Note on Sample Size

Before detailing the results of the 2014-2015 Critical Thinking Assessment, attention must be drawn to the small numbers involved in the project at this point. Eight courses were assessed (7 degree program courses and one GE course), with the number of students (and thus student samples) from those courses ranging from 2 to 18, for a total of 51 student assignments assessed. As enrollment grows and courses are repeated through the cycle, the sample size for the next cycle of assessment will be significantly larger. Although the results are limited by the small sample size, they still provide a great deal of information suggesting possible improvements to curriculum, faculty training, and the assessment tools (rubric and assignments).

Note on Assignment Design

Another factor to consider when analyzing the following results is the faculty assessor feedback on the design of the assignments given to students. Although this assessment was more successful than the previous years, 3 of the assignments were reviewed as poor matches for the assessment of the learning outcome (NUR360, FNP533, and MAE595). Two of the assignments were also judged not to directly

assess the "Analysis of Point of View" criterion on the rubric (MGT310 and MAED595) by the assessors, so those portions of the rubric were not scored for those two course and the student averages were adjusted accordingly so as not to unfairly lower those students' scores.

All-Student Results

Goals

As noted above, the assessment target goal is 80%: for each course's designated assignment, 80% of the course's students should "meet" the score designated by the course's assessment level as indicated by its position on the curriculum map (the rubric scores range from 0 to 3 with Level 1 ("Introduce") courses targeting scores of "1," Level 2 ("Develop") courses a score of "2," etc.).

If a student in a Level 1 course earns an average score of 1 or more on the four criteria of the CT assessment rubric, then that student counts as "meeting" the assessment goal for that course. For a level 2 course, the student must score an average of 2 or more on the 4 criteria of the CT rubric to meet the goal for that level. For a level 3 course, the student must score an average of 3 on the 4 criteria of the CT rubric to meet the goal for that level.

The major assessment evaluation will be at the course level: the % of students in the course whose average rubric score meets or exceeds the course's target score.

Percentage of Students Meeting Course Target Goals

Eight sets of student work assessed, one per program: General Education (GE), Bachelor of Science in Health Sciences (BSHS), Master of Science in Health Sciences (MSHS), Bachelor of Arts in Management (BAM), Master of Business Administration (MBA), Accelerated Bachelor of Science in Nursing (ABSN), Master of Science in Nursing (MSN), and Master of Arts in Education (MAED).

Of these sets, four were Level One courses (Introduce) and four were Level Two courses (Develop). No Level Three (Master) courses were selected for this round of assessment.
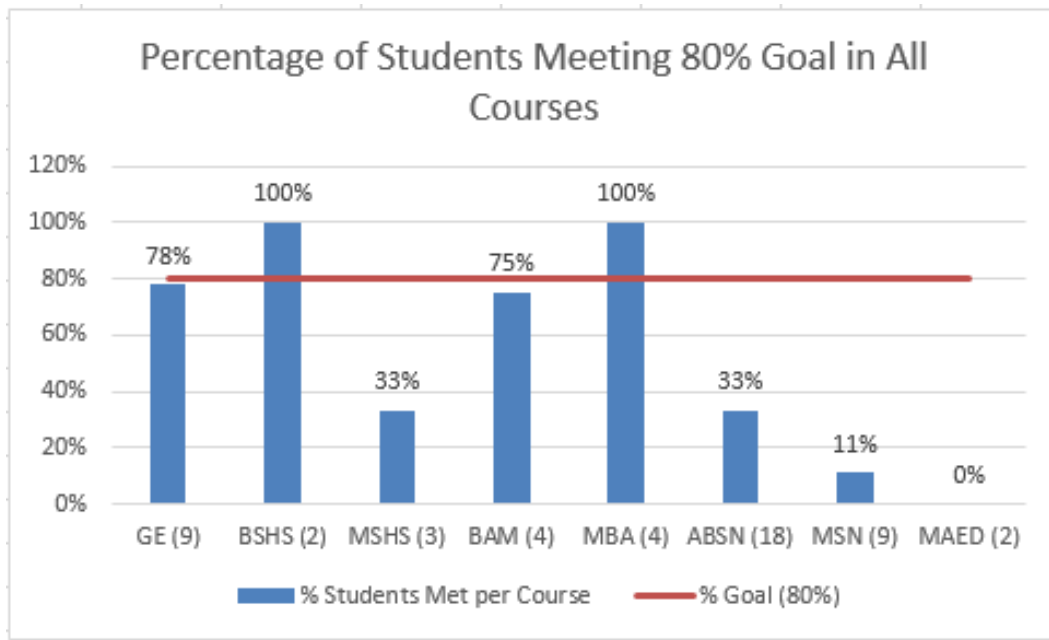
Level One Courses (Program: # of Students):
- ENG130 (GE: 9)
- BIO252 (BSHS: 2)
- MGT310 (BAM: 4)
- MGT500 (MBA: 4)

Level Two Courses (# of Students):
- MHS512 (MSHS: 3)
- NUR360 (ABSN: 18)
- FNP533 (MSN: 9)
- MAE595 (MAED: 2)

Percentage of Students Meeting Goal in All Courses
(Based on each student's average rubric score of ≥ 1 or ≥ 2 depending on course.)


At the course level, the overall results were mixed, with 4 courses meeting or almost meeting (75% and 78%) the 80% goal. The 4 other courses did not come close to meeting the goal, with all 4 under 40%, one with a 0% score. (Note that 3 of the 4 under-performing courses received "poor assignment design" feedback: ABSN, MSN, and MAED).

Individual Scores in Relation to Target Goals

To get a more nuanced sense of how these students, especially the under-performing ones, are actually doing, their specific individual average rubric scores can be viewed as opposed to the more blunt met/not met measure. This approach reveals a range of performance that appears more promising for this learning outcome.

Student Individual Numerical Average Rubric Scores in All Courses
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)
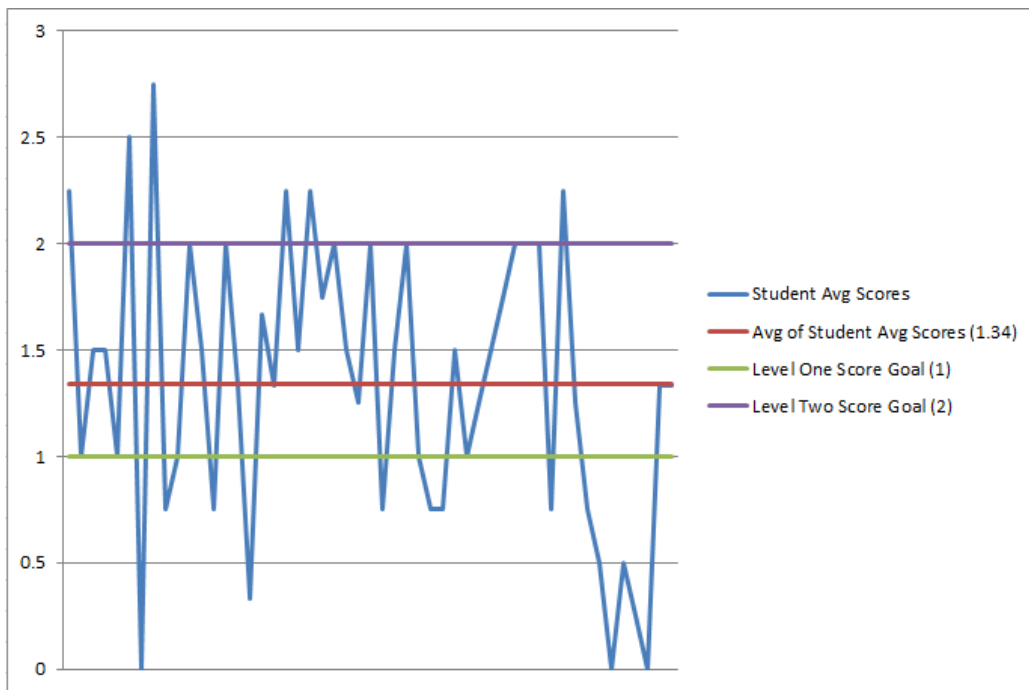
Overall, the 51 students averaged a score of 1.34, comfortably between the level one target (1) and the level two target (2). The graph also reveals that most of the students did score in between those two goals (and thus, are at least scoring at the "Introduce" level and not below that). There are 6 students scoring higher than 2 and 11 scoring less than 1.

Individual Rubric Criteria Scores

A third way to examine the overall results is to look at the four rubric criteria separately (rather than averaged) to see particular strengths/weaknesses and potential places for assignment and course design intervention.

Disaggregated Numerical Scores Averaged Across All Students
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
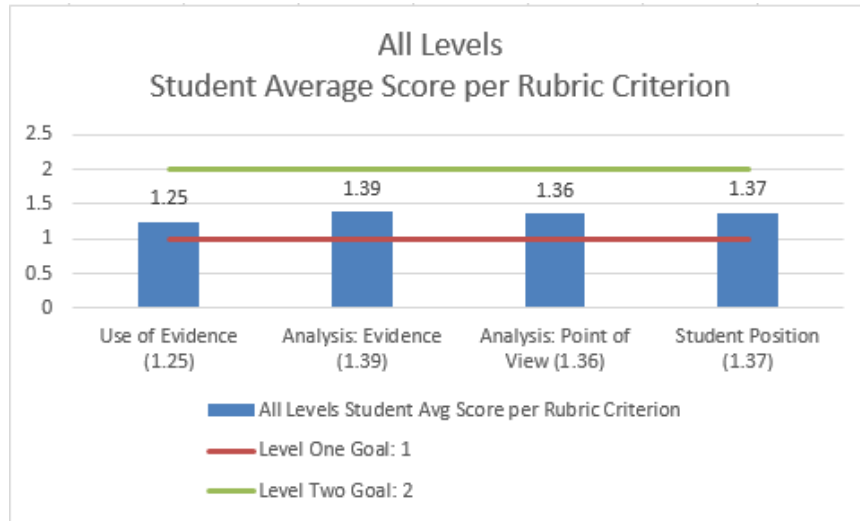
The overall disaggregated rubric scores are fairly even, with only "Use of Evidence" scoring noticeably lower (1.25 versus, 1.36, 1.37, and 1.39). Students are more consistent in analysis and articulating a position.
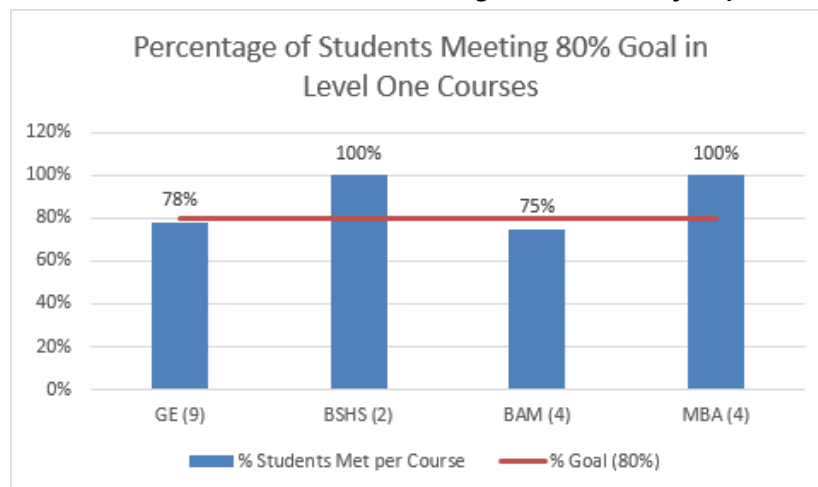
Level One Course Results

When the courses are separated by target levels (Introduce (1) versus Develop (2)), more information emerges.

Level One Overall Met/Not Met Measure

For the met/not met measure, the 4 higher scores were from Level One courses: ENG 130 (GE (9 students)), BIO252 (BSHS (2 students)), MGT310 (BAM (4 students)), and MGT500 (MBA (4 students)).

Percentage of Individual Students Meeting Goal in Level One Courses
Based on each student's average rubric score of ≥ 1)

These results tentatively indicate overall success in courses in which the learning outcome achievement is expected to be at the introductory level: ENG130 (GE), BIO252 (BSHS), MGT310 (BAM), and MGT500 (MBA).

Level One Individual Scores in Relation to Target Goals

The individual overall rubric averages for Level One students provides more information about the higher and lower scorers.
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Student Individual Numerical Average Scores for Level One Courses
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)
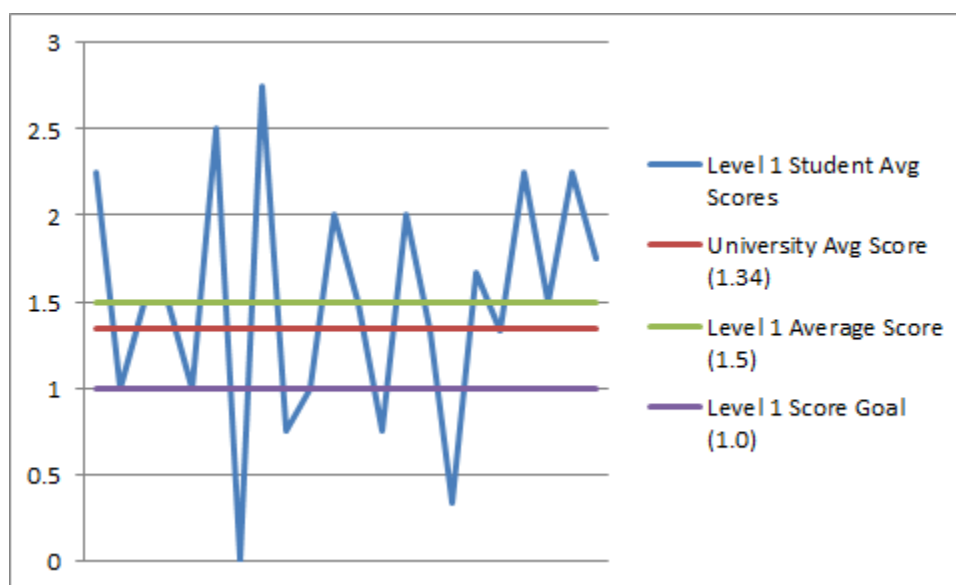
Most of the Level One students are above or well above the target goal. The average for this group is 1.5, higher than the average for Level Two students (see below)) and the average for the university as a whole (1.34). Only 4 level one students scored below the target score (1) while 7 scored at or above the Level 2 target score (2). A further breakdown by course is available in the *Results by College* sections below.

Level One Individual Rubric Criteria Scores

The individual rubric criteria scores generally echo the strength of the Level One students shown in the first two measures.

Disaggregated Numerical Scores Averaged Across All Students in Level One Courses
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
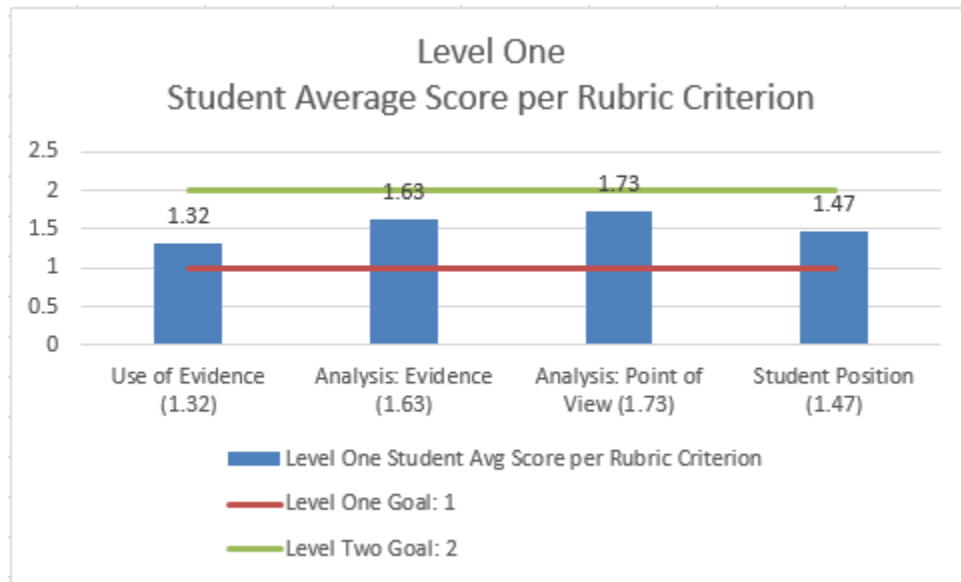
Level One students show a greater range of criteria scores than the all-student results, with "Use of Evidence" (1.32) again the lowest, then "Student Position" (1.47), followed by the much higher "Analysis: Evidence" (1.63) and "Analysis: Point of View" (1.73) noticeably higher.
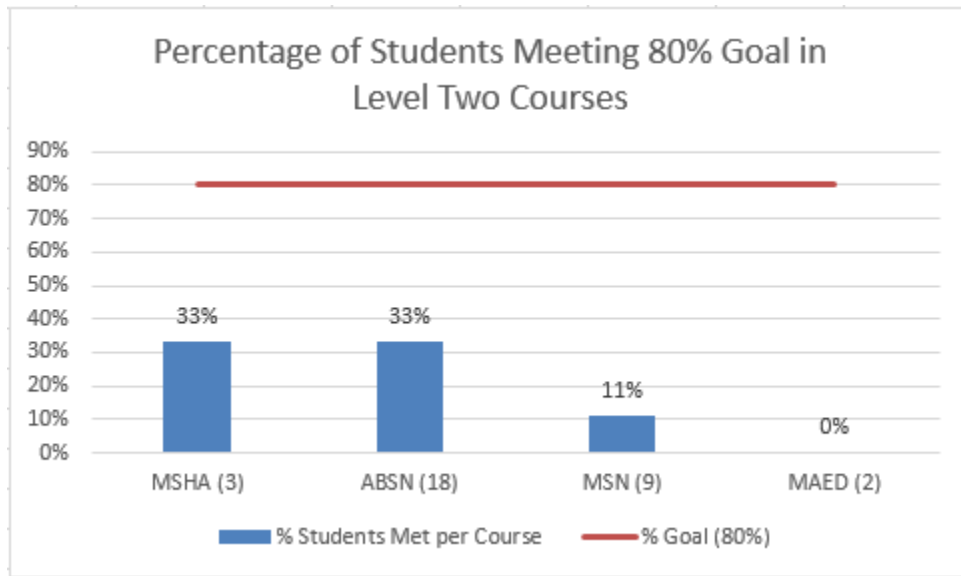
Level Two Course Results

Separating out the Level Two course results allows a focus on the more troubling results of the assessment.

Level Two Overall Met/Not Met Measure

For the met/not met measure, the 4 lower scores were from Level Two courses: MHS512 (MSHS (3 students)), NUR360 (ABSN (18 students)), FNP533 (MSN-FNP (9 students)), and MAED595 (MAED (2 students)).

Percentage of Individual Students Meeting Goal in Level Two Courses
(Based on each student's average rubric score of ≥ 2)


These results indicate possible problems with the more advanced critical thinking skills expected of "Develop" level courses with no Level Two courses scoring above 33% (MSHS and ABSN), one scoring 11% (MSN-FNP) and one scoring at 0% (MAED).

Level Two Individual Scores in Relation to Target Goals

The individual numerical averages of the Level Two students shows once again that the lower performances are not as drastic as they appear in the more blunt measure.

Student Individual Numerical Average Scores for Level Two Courses
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)
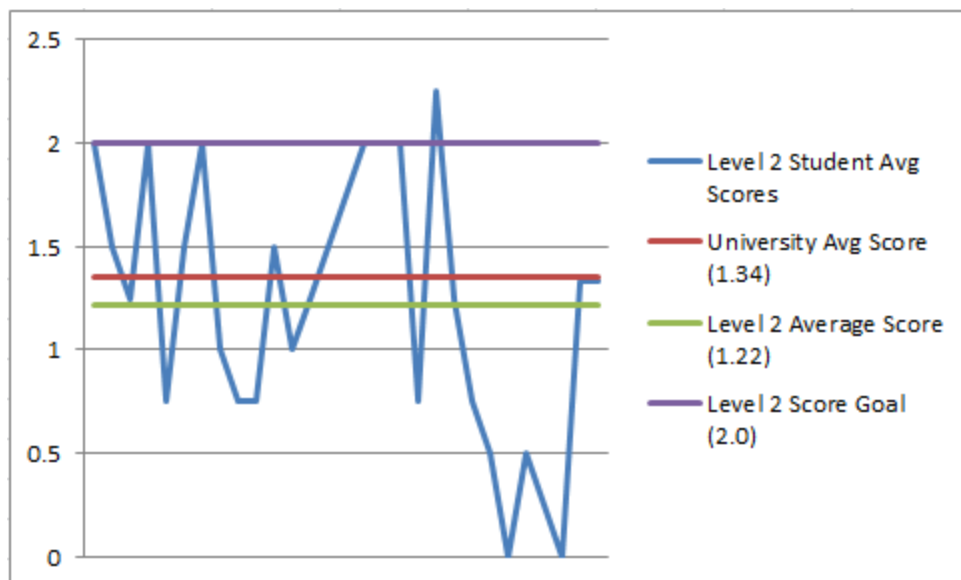
The Level Two student average scores show fewer students between 1 and 2 than the all-student average and more definitely below 1 (7) or above the 2 (6) score. The extremely low scores are from the "poor assignment design" FNP course.

Level Two Individual Rubric Criteria Scores

The averaged individual rubric criteria scores for Level Two courses show what appears to be a uniformity of performance belying the more radical placements on the chart above.

Disaggregated Numerical Scores Averaged Across All Students in Level Two Courses
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
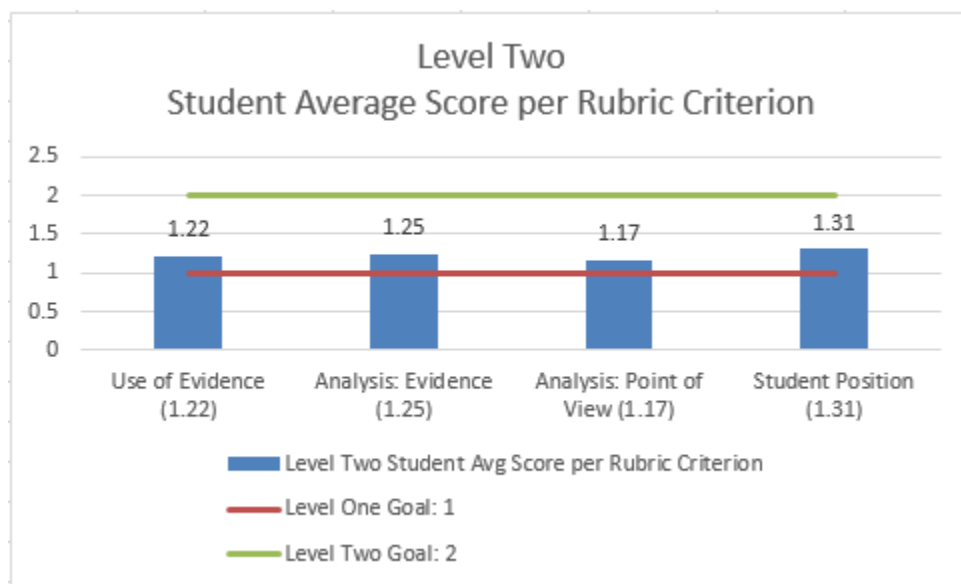
Level Two students show a smaller range than the Level One group with "Analysis: Point of View" (1.17) clearly the lowest score and "Student Position" (1.31) the highest. All are far from the 2.0 score needed for this course level. The seeming disagreement between the individual numeric scores and the rubric criteria scores will be resolved when looking at the course-by-course breakdowns of this set of course; the strengths of one class balanced out the weaknesses of another, leaving the oddly level averages above.
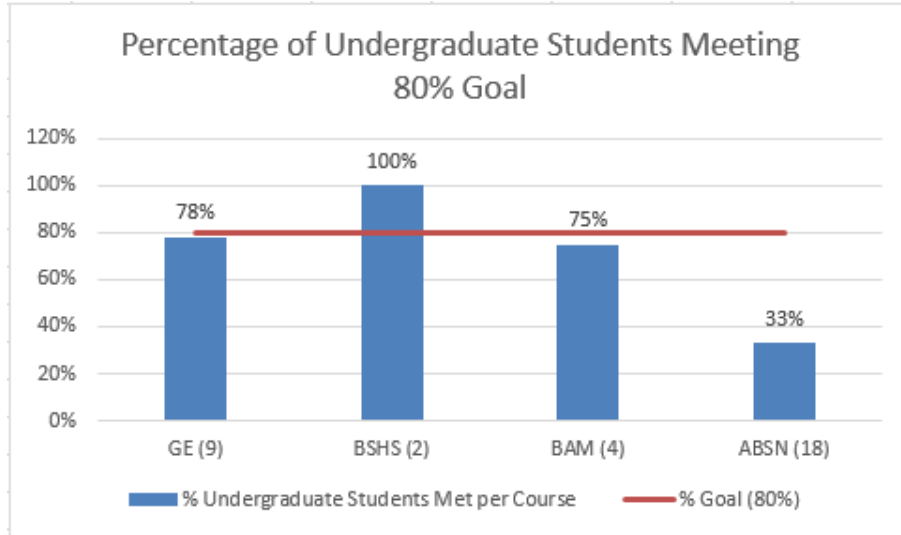
Undergraduate Results

In looking at the results through the undergraduate/graduate lens, the results are initially similar.

Undergraduate Met/Not Met Measure

The four undergraduate courses (ENG130 (GE), BIO252 (BSHS), MGT310 (BAM), and NUR360 (ABSN)) partially map onto the Level One courses. Only NUR360 is a Level Two Course.

Percentage of Individual Students Meeting Goal in Undergraduate Courses (Both Levels)
(Based on each student's average rubric score of ≥ 1 or ≥ 2 depending on course.)

Aside from the ABSN (33%) course, a Level 2 course with a problematic assignment, the undergraduate results are promising (78%, 100%, 75%).

Undergraduate Individual Scores in Relation to Target Goals

Student Individual Numerical Average Scores for Undergraduate Courses
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)


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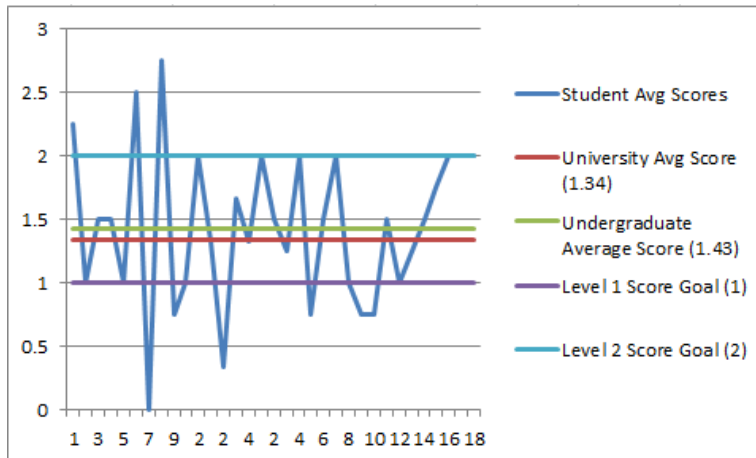
Even with the "poor design" ABSN course, the undergraduate individual average scores are promising (with an average of 1.43). The majority of scores fall between the 1 and 2 score level with only 6 not meeting at least a "1" score. The average undergraduate score is 1.43, which is above the University average (1.34).

Undergraduate Individual Rubric Criteria Scores

The scores for rubric individual criteria averages show a similar uniformity:

Disaggregated Numerical Scores Averaged Across All Undergraduate Students
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
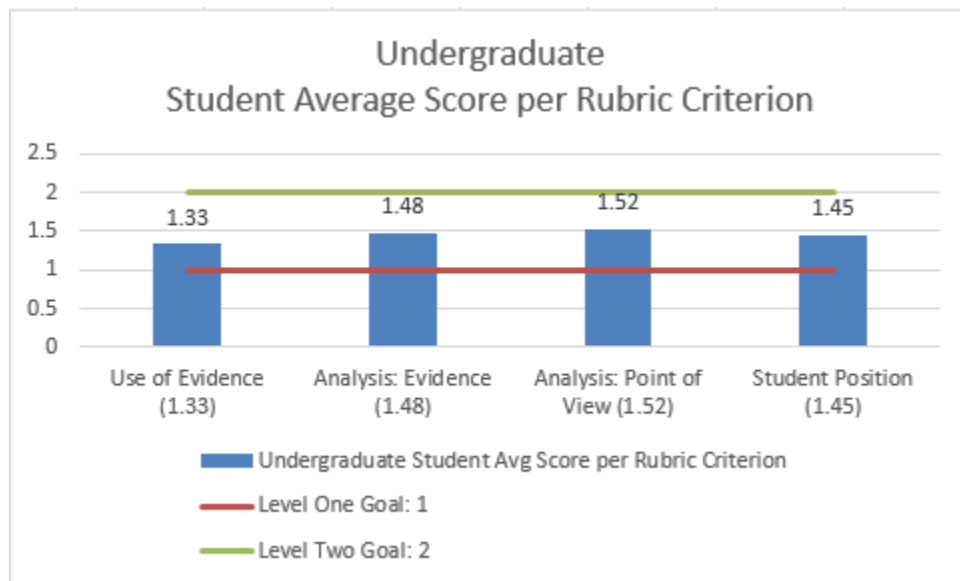
For the undergraduates, the "Analysis: Point of View' criterion score is the highest score (1.52) with "Analysis: Evidence" (1.48) and "Student Position" (1.45) close behind. "Use of Evidence" (1.33) is the lowest criterion score, echoing the all-student and Level-One results.
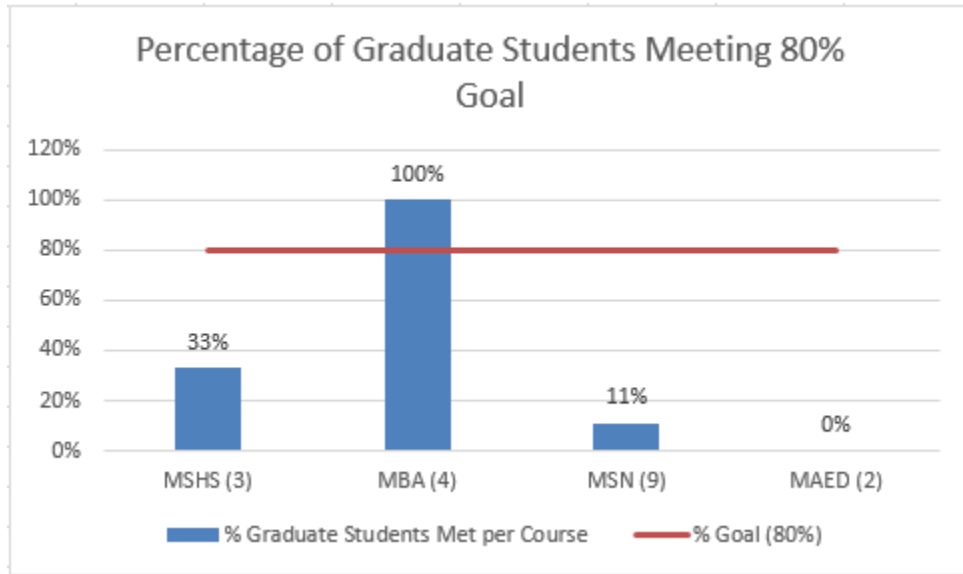
Graduate Results

The graduate results show more variation as they include the highest scoring course and three of the four lowest scoring courses.

Graduate Met/Not Met Measure

The four graduate courses (MHS512 (MSHS), MGT500 (MBA), FNP533 (MSN-FNP) and MAE595 (MAED)) partially map onto the Level Two courses. Only MGT500 is a Level One Course.

Percentage of Individual Students Meeting Goal in Graduate Courses (Both Levels)
*(Based on each student's average rubric score of ≥ 1 or ≥ 2 depending on course.)*

Aside from the MBA course, the graduate results are troubling, with only the Level One course (MGT500 at 100%) meeting the target goal. The Level Two courses fall drastically behind: MSHS at 33%, MSN at 11%, and MAED at 0%.

Undergraduate Individual Scores in Relation to Target Goals

The individual averages show a set of graduate scores all over the map (or graph):

Student Individual Numerical Average Scores for Graduate Courses
*(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)*
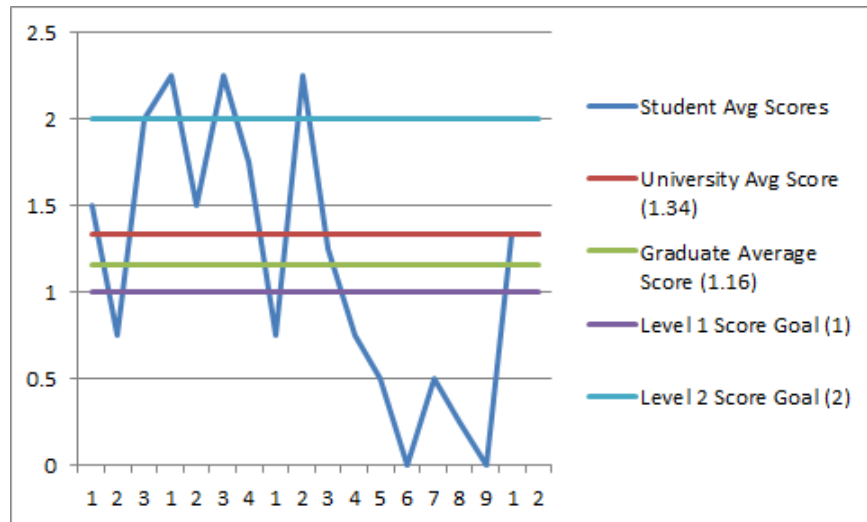
The graduate individual average is the lowest of the groupings at 1.16. The "poor assignment design" issues may be playing a large role here.

Graduate Individual Rubric Criteria Scores

The scores for rubric individual criteria averages show an initially similar uniformity as the other groupings:

Disaggregated Numerical Scores Averaged Across All Graduate Students
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
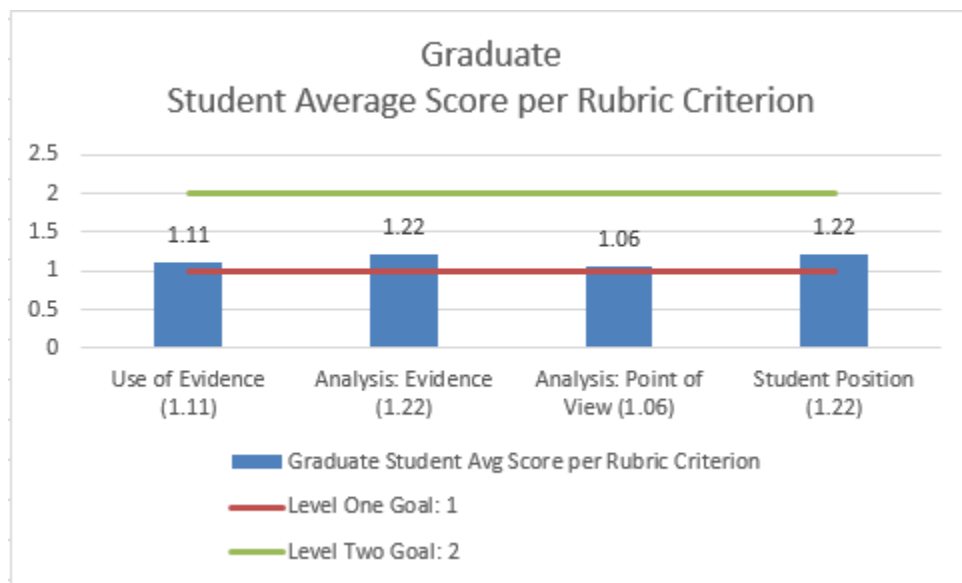
For the graduate students, "Analysis: Point of View" is the clear low score (1.06) with "Use of Evidence" (1.11) following that and "Analysis: Evidence" and "Student Position" scoring noticeably higher (both at 1.22).

Preliminary Observations based on University-Wide Results:

The higher "analysis" and lower "evidence" and "position" scores for students in lower-level courses (Level 1) or earlier in their academic careers (Undergraduate) might possibly be attributed to their lack of experience in academic writing/composition where thesis and support are taught and reinforced. The reverse appears to hold for the graduate/level two students.

The low (at least in comparison) analysis scores for the Graduate/Level Two students is troubling as analyzing/evaluating data/arguments is the core of critical thinking.

Results for Critical Thinking by College 2014-2015

This next section provides the results broken down by College and Course.

College of Arts and Sciences

Student work from three courses was assessed from the College or Arts and Sciences: ENG130 (General Education), BIO252 (BSHS), and MHS512 (MSHS). The first two courses are Level 1 ("Introduce") while the third is Level 2 ("Develop"). The student sample for this group is 14.

Overall Results for College of Arts and Sciences:

Percentage of Individual Students Meeting Goal in Arts and Sciences Courses
(Based on each student's average rubric score of ≥ 1 or ≥ 2 depending on course.)
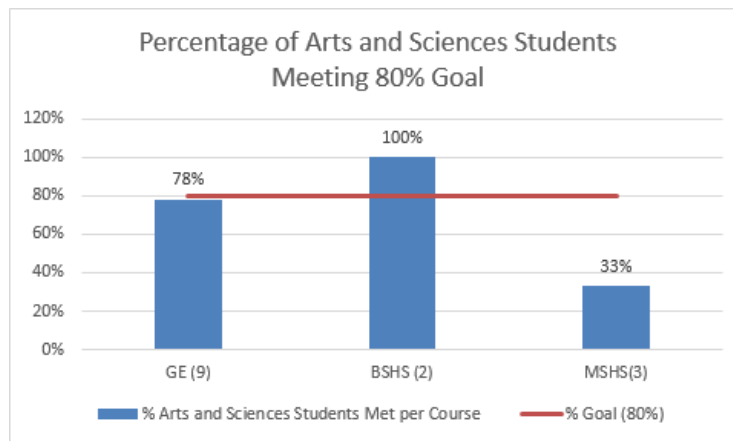
The met/not met results for the College of Arts and Sciences were good for the two undergraduate courses with the GE course almost meeting its goal (78%) and the BSHS course meeting its goal (100%), but the graduate result indicated a problem (33%).

Arts and Sciences Individual Numerical Average Scores in Both Level One and Two Courses
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)
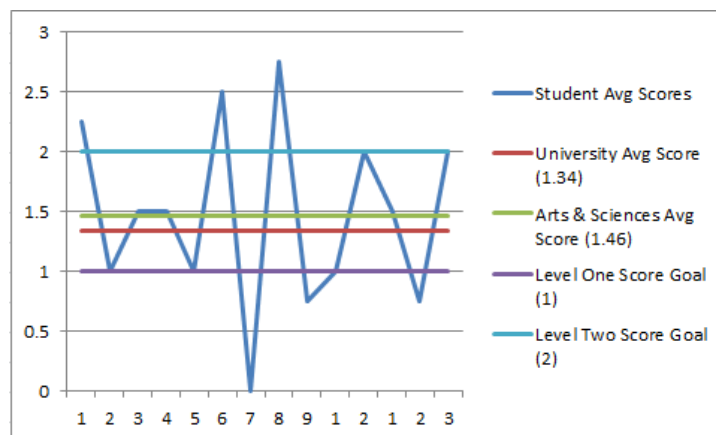
The individual average scores from the students reveal that only 3 students scored lower than at least the Level One target (1) while the same number (3) scored above the higher Level Two target (2). The other 8 scored at or between the two target goals for an average College score of 1.46 (above the University average of 1.34). The lowest score (0) was a student in ENG130, the first-year composition course.

Detailed Results for the College of Arts and Sciences:

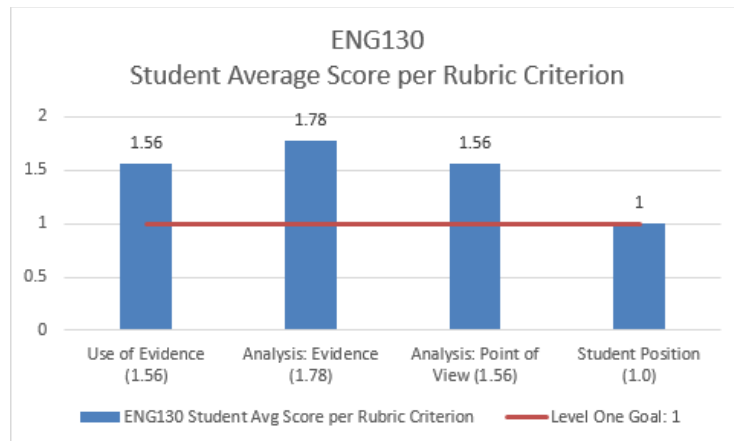Looking first at the average scores for the individual rubric criteria:

Disaggregated Numerical Scores Averaged Across All Arts and Sciences Students
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
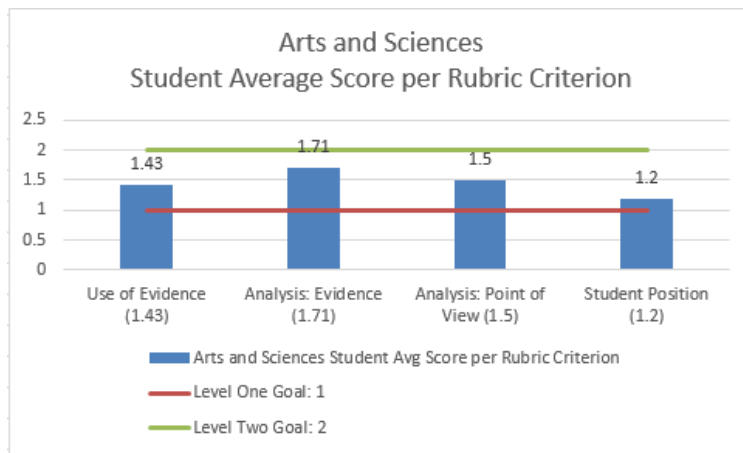
The two "analysis" criteria are the strongest (1.71 and 1.5) while "Student Position" is the weakest (1.2).

The breakdown by course is more revealing:

Disaggregated Numerical Scores Averaged Across All Students in ENG130
(Based on each student's individual numerical score for each of the 4 rubric criteria.)

The 9 ENG130 students scored very well for a Level 1 course on all three of the first criteria (1.56, 1.78, and 1.56) but just "met" the goal for the last one, "Student Position" (1.0).

The assessor feedback on this assignment did indicate that it did not adequately prepare the student to score well on this criterion as a student position was not explicitly (or implicitly) asked for.

Disaggregated Numerical Scores Averaged Across All Students in BIO252
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
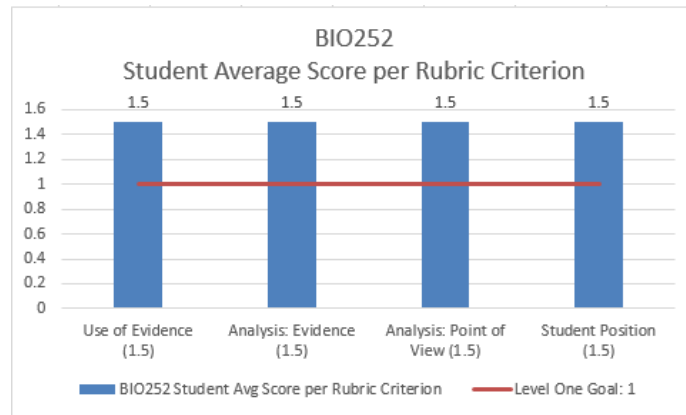
The 2 BIO252 students scored very well for a Level 1 course on all four of the rubric criteria on average (1.5 each). As there were only two students, however, an even closer look reveals that one student scored a 2 on each criteria while the second scored a 1. The small sample size (2) clearly played a role in the results.

The assessor feedback on this assignment indicated that it could have focused more clearly on critical thinking skills rather than research skills by instructing students not to research the topic but to use just the evidence provided in the prompt. The prompt also used a graph as part of the supplied evidence and so verged on a quantitative reasoning assignment.

Disaggregated Numerical Scores Averaged Across All Students in MHS512
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
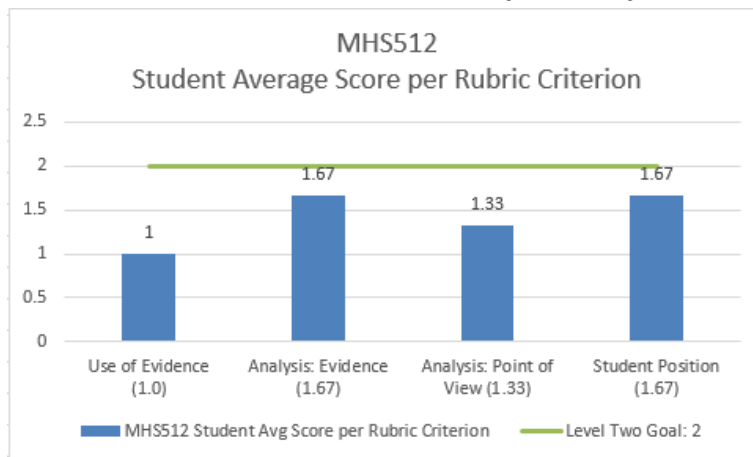
The 3 MHS512 students did not meet the Level Two target score (2) on any of the 4 rubric criteria. All would have met the Level One score (1) if that had been the course level. The strongest criteria were "Analysis: Evidence" and "Student Position" (both 1.67), with "Analysis: Point of View" (1.33) and "Use of Evidence" (1.0) significantly lower. The "Use of Evidence" score (1.0) was unusually low compared to the graduate level average (1.11) while the other three scores were well above the average. The small sample size (3) clearly played a role in the results.

The assessor feedback on this assignment indicated that it could more clearly directed the students toward more analysis (limitations of their own position, an analytical position on the two other options) and could have been expanded to provide more of an opportunity for the students to provide evidence.

College of Business and Management

Student work from two courses was assessed from the College or Business and Management: MGT310 (BAM) and MGT500 (MBA). Both courses are Level 1 ("Introduce"). The student sample for this group is 8.

Overall Results for the College of Business and Management:

Percentage of Individual Students Meeting Goal in Management Courses
(Based on each student's average rubric score of ≥ 1.)
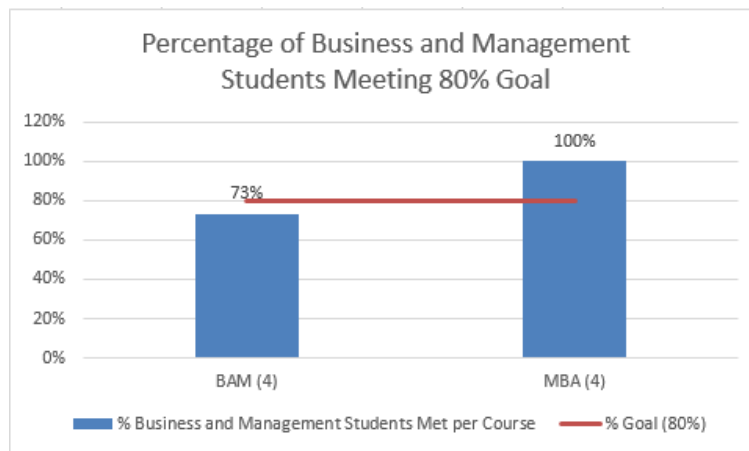
The met/not met results for the College of Business and Management were both promising, with the BAM course very close to meeting the goal (75%) and the MBA course exceeding its goal (100%).

Management Individual Numerical Average Scores (Both Courses Level One)
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)
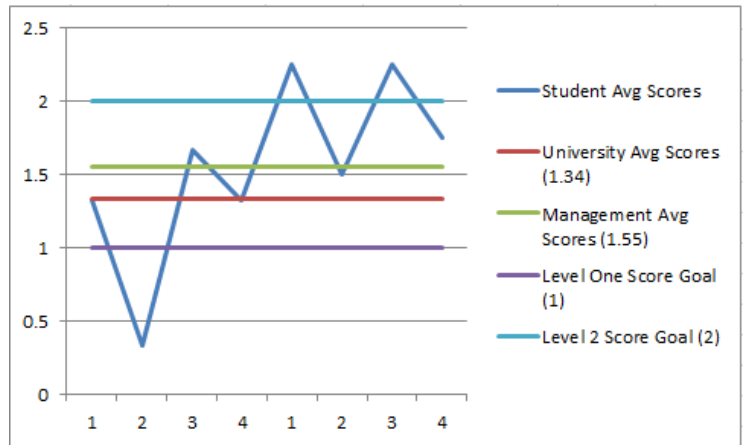

The individual average scores from the students reveal that only 1 student scored lower than at least the Level One target (1) while two scored above the higher Level Two target (2). The other 5 scored between the two target goals for an average College score of 1.55 (above the University average of 1.34). The lowest scoring student (.33) was in the MGT310: Introduction to Business course, which is the first course in the BAM course sequence.

Detailed Results for the College of Business and Management:

Looking first at the average scores for the individual rubric criteria:

Disaggregated Numerical Scores Averaged Across All Management Students
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
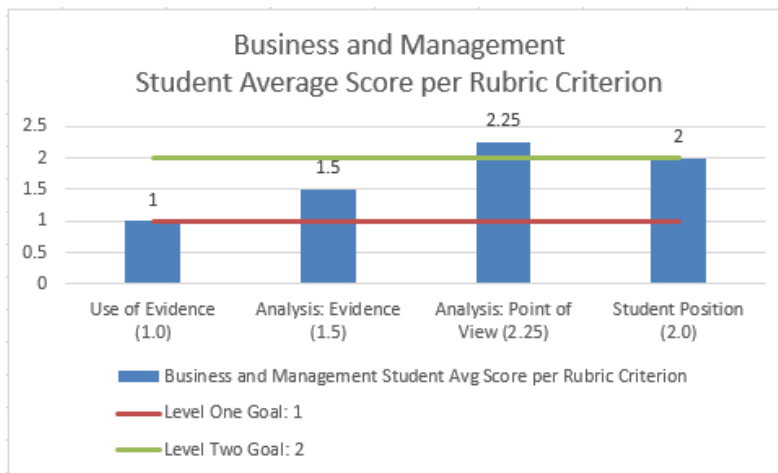
The "Analysis: Point of View" criterion is exceptionally strong (2.25) with "Student Position the second strongest (2.0). "Analysis: Evidence" is respectable (1.5), but "Use of "Evidence" is only just at the Level

One target (1.0), which is odd for the College with the strongest overall performance. The breakdown by course is more revealing:

Disaggregated Numerical Scores Averaged Across All Students in MGT310
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
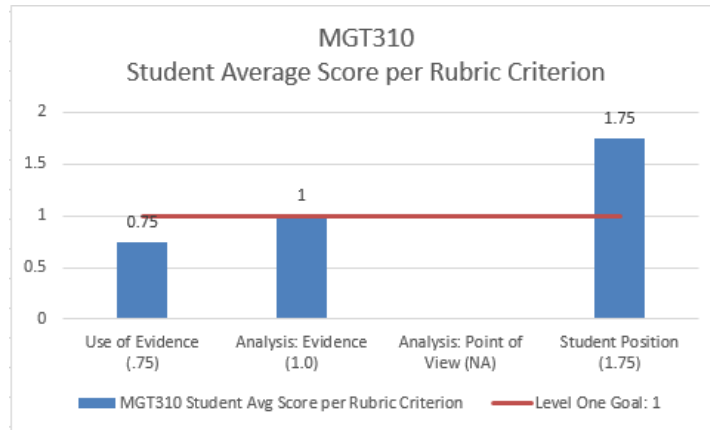

The 4 MGT310 students scored very well for a Level 1 course on "Student Position" (1.75), but in comparison only "met" the target goal (1) for "Analysis: Evidence." The "Use of Evidence" average did not quite meet the goal (.75). The "Analysis: Point of View" criterion was not used as part of the assessment (see below). This is one of the few cases for this study in which the detailed disaggregated analysis revealed more possible problems than the overall scoring.

Taking a closer look at the individual scores, 1 of the 4 students scored 0 on the first two criteria and a 1 on the last, bringing the averages down. The small sample size (4) clearly played a role in the results.

The assessor feedback on this assignment indicated that it did not provide the students the opportunity to provide and analyze evidence due to the brief summaries of several case scenarios. It was suggested that one longer, more detailed case study with questions more related to the rubric (is the case groupthink or not? What is the evidence for your answer? Analyze that evidence. What is the evidence for the opposite answer? etc.) would help focus the students on thinking through the case as opposed to understanding the central concept (groupthink).
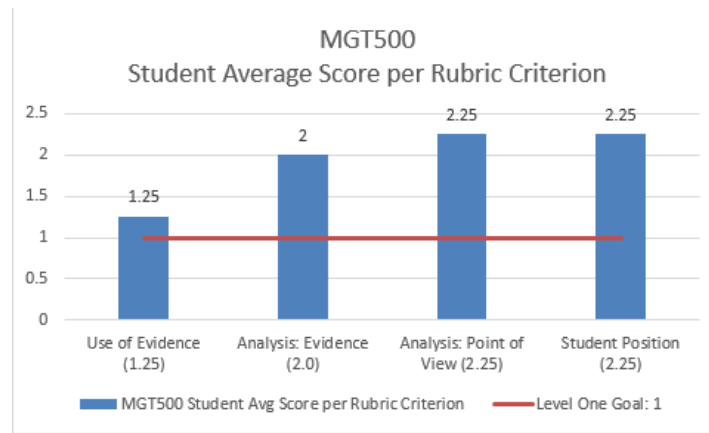
The 4 MGT500 students attained the highest overall average of the 8 courses (1.94), scoring quite high in "Analysis: Point of View" and "Student Position" (both at 2.25) and "Analysis: Evidence" (2.0). As with its undergraduate counterpart, however, the "Use of Evidence" criterion was significantly lower (1.25), the only one of the four that did not "meet' the Level Two target score (2). As this was a Level One course, the students met the expected standard for each criterion, but the disparity in performance should be revisited when preparing the assignment for the future (see below).
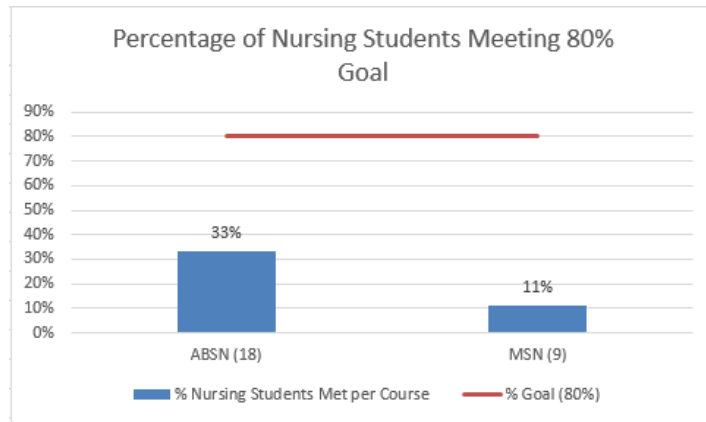
The assessor feedback on this assignment indicated that the instructions could be improved by prompting the students to include evidence in their answers, by discouraging the students from doing additional research but rather analyzing the numbers given. Overall, the assignment could be more specific regarding the nature of the assignment: it should be strictly analysis, not a research paper.

College of Nursing

Student work from two courses was assessed from the College or Nursing: NUR360 (ABSN) and FNP533 (MSN-FNP). Both courses are Level 2 ("Develop"). The student sample for this group is 27, the largest sample in the study.
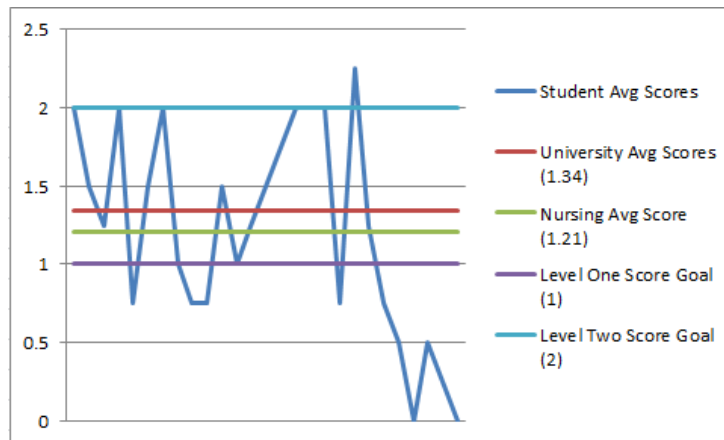
Overall Results for the College of Nursing:

Percentage of Individual Students Meeting Goal in Nursing Courses
(Based on each student's average rubric score of ≥ 2.)

Percentage of Nursing Students Meeting 80% Goal

(Chart: bar graph showing ABSN (18) at 33% and MSN (9) at 11%, with a red line indicating the 80% goal. Legend: "% Nursing Students Met per Course" and "% Goal (80%)".)

The met/not met results for the College of Nursing were low, with the ABSN course scoring 33% and the FNP course scoring 11%.

Nursing Individual Numerical Average Scores (Both Courses Level Two)
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)

(Chart: line graph with Student Avg Scores (blue), University Avg Scores (1.34, red), Nursing Avg Score (1.21, green), Level One Score Goal (1, purple), Level Two Score Goal (2, cyan).)

The individual average scores from the students reveal that aside from 4 students, most of the students in the College of Nursing sample scored near or around the 1 to 2 score spread, with 6 scoring at or above the target goal of 2 for both classes. The four lowest scorers were at .5 (two students) and 0 (two students). The poorest performance was in the FNP course.

Detailed Results for the College of Nursing:

Looking first at the average scores for the individual rubric criteria:

Nursing
Student Average Score per Rubric Criterion
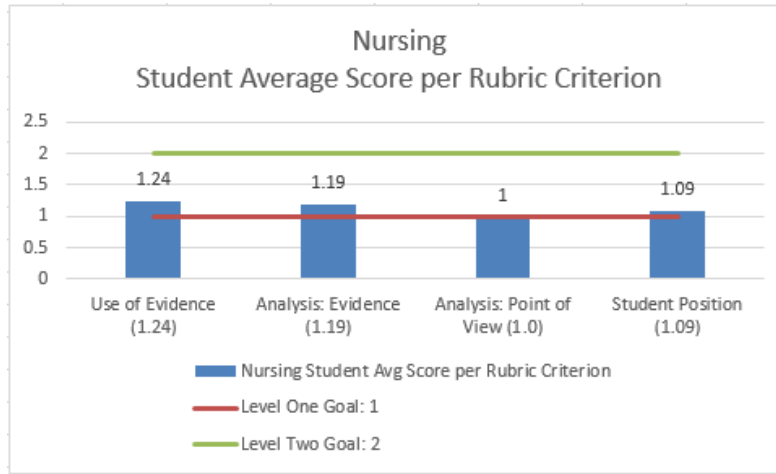
The average rubric criterion scores for the College of Nursing would meet the target goal if this were a Level One course. As it is a Level Two course, however, the scores are uniformly low, with "Use of Evidence" scoring the highest (1.24, "Analysis: Evidence" close to that (1.19), but "Student Position" (1.09) and "Analysis: Point of View" (1.0) even lower.

The breakdown by course is more revealing:

Disaggregated Numerical Scores Averaged Across All Nursing Students in NUR360
(Based on each student's individual numerical score for each of the 4 rubric criteria.)

NUR360
Student Average Score per Rubric Criterion
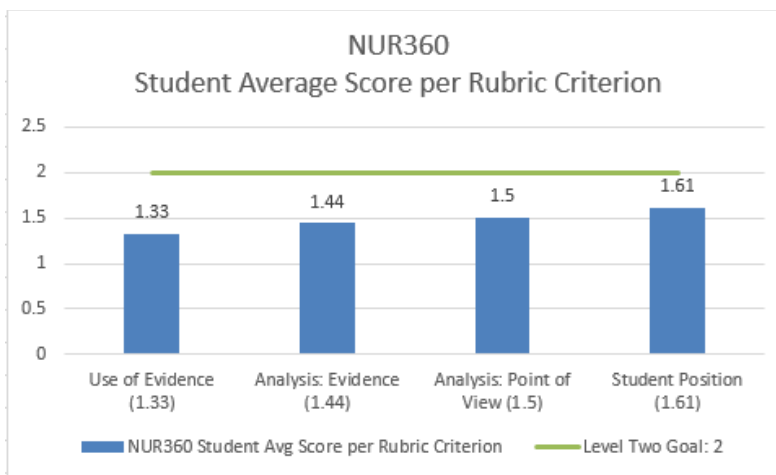
The 18 NUR360 students attained the higher of the overall rubric criteria averages for the two Nursing courses (1.47), scoring highest in "Student Position" (1.61) and "Analysis: Point of View" (1.5) followed by "Analysis: Evidence" (1.44) and "Use of Evidence" (1.33).

The assessor feedback on this assignment indicated that there was a mistake in the prompt and it could be more specific such as asking students to list examples.

Disaggregated Numerical Scores Averaged Across All Nursing Students in FNP533
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
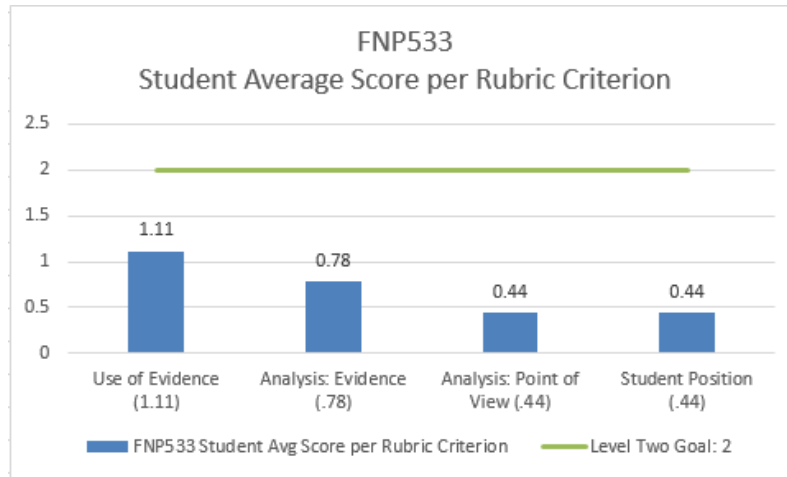
The 9 FNP533 students attained the lowest overall rubric criteria average for the eight courses (.96), scoring highest in "Use of Evidence" (1.11), the only criterion to pass at least the Level One target score (1) with "Analysis: Evidence" (.78) following that and "Analysis: Point of View" (.44) and "Student Position" (.44) considerably lower. This pattern is the opposite of the ABSN one. On the individual rubrics, two of these students scored 0 in all four rubric criteria, another one scored 0 on three of the criteria, while two others scored 0 on two of the criteria and 1 on the other two. This set of lower scores brought down the overall averages. This was one of the most problematic of the assignments in the assessment.

The assessor feedback on this assignment indicated that the assignment was a discussion board, which encouraged neither full and complete nor individual original responses to the prompt. The assignment could have been better designed to match the measurements expected according to the rubric.

College of Education

Student work from one course was assessed from the College or Education:MAE595, a Level 2 ("Develop") course. The student sample for this group is 2, the smallest sample in the study.

Overall Results for the College of Education:

Percentage of Individual Students Meeting Goal in Education Courses
(Based on each student's average rubric score of ≥ 2)

Percentage of Education Students Meeting 80% Goal
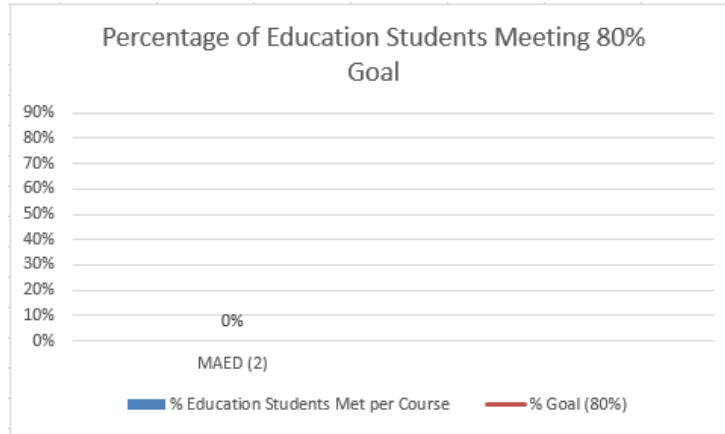
The met/not met results for the College of Education were not good (0% met). The sample size of 2 and the course level (also 2) were significant in this result. The individual scores (as opposed to the blunt met/not met standard) are not as startling.

Education Individual Numerical Average Scores (Course is Level Two)
(Based on each student's individual numerical average of the scores for the 4 rubric criteria.)
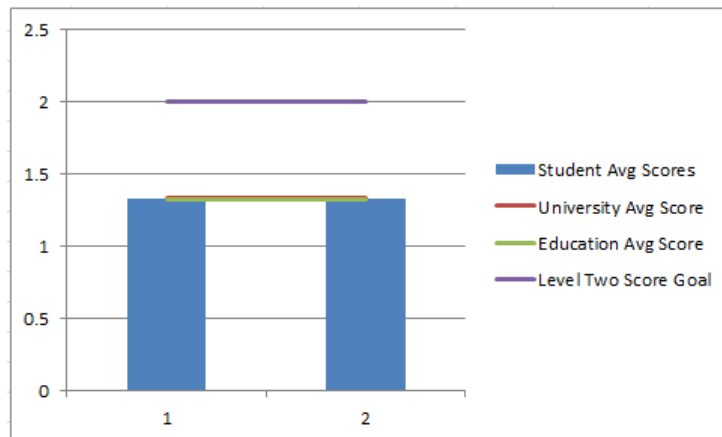
The individual average scores from the 2 students reveal that both scored between the Level One (1) and Level Two (2) target goals, both scoring an overall average of 1.33. This average is closer to the "Introduce" expectation than the "Develop" one, but it is clearly not the non-performance indicated by the first graph (or the 0% not met indicator).

Detailed Results for the College of Education:

Disaggregated Numerical Scores Averaged Across All Education Students
(Based on each student's individual numerical score for each of the 4 rubric criteria.)
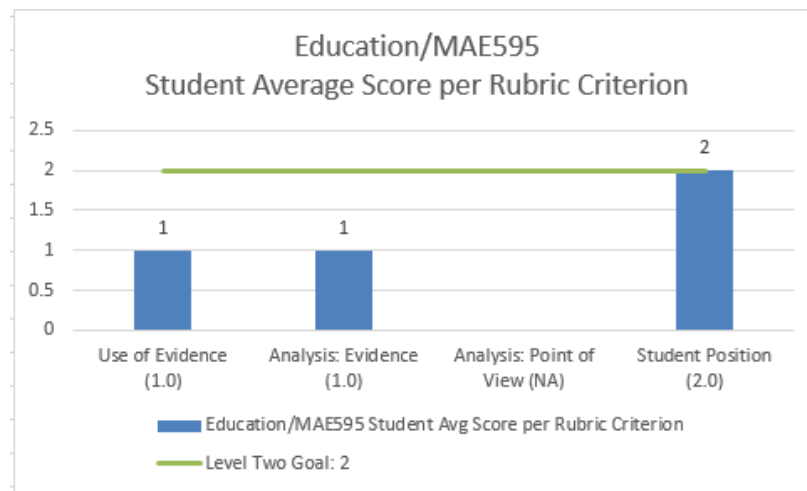
From the rubric criteria average scores, the 2 MAED595 students did meet the Level Two target score (2) for "Student Position" (2.0). For "Use of Evidence" and "Analysis: Evidence," they would have met the Level One score (1) if that had been the course level. The small sample size (2) clearly played a role in the results. The "Analysis: Point of View" criterion was not used as part of the assessment (see below).

The assessor feedback on this assignment indicated that its questions/scenario could have been more clearly set up to assess the skills referenced in the rubric. The repeated "What would you do differently?" question did support the "Student Position" criterion, but the "Explain your reasons" instruction was not as effective in eliciting "Evidence" or "Analysis of Evidence," especially for the level of the course. The "Analysis: Point of View" criterion was not clearly addressed by the assignment.

Summary and Action Plans

In summary, the 2014-2015 Critical Thinking assessment was significantly more successful than the 2013-2014 attempt in that it resulted in useful data and confirmed that the new approach/process is on the right track. The small samples sizes and difficulties with assignments clearly affected both the general target results and the detailed performance results as revealed in the individual rubric scores and averages. As a whole, the results showed that the students in the "Introduce" level course performed close to, at, or above expectations while those in the "Develop" level courses did not perform as well. Based on these results, three preliminary suggestions

1. Critical Thinking Faculty Training: Perhaps the most important conclusion drawn from the study was the need for additional faculty training in Critical Thinking. This learning outcome is perhaps the most challenging of the eight ILOs.
    a. Assessment will be one of the topics at one of the upcoming faculty retreats. Critical Thinking in particular will be part of this training.
    b. A Critical Reasoning course for faculty is in development in the College of Education.
    c. Additional materials on all 8 of the ILOs (including the rubrics and sample assignments) will be provided in the revised faculty orientation process and in a faculty resources shared drive.
2. Changes to Critical Thinking Assignments and Rubric: With increased training, faculty can participate more effectively in both the teaching and the assessment of Critical Thinking, first by improving the outcome assessment assignments (guided by feedback from the assessment team) and by scaffolding additional preparatory work leading up to that assignment.
    a. More time will be spent in future cycles on the assignment development process.
    b. The Nursing Dean in particular will participate earlier in the process, assisting her faculty in the design of the outcomes assessment assignments.
    c. The rubric will also be modified again before 2015-2016 to reorganize and clarify expectations.
3. Changes to Program Curriculum: Given the Level Two scoring deficits, even considering the assignment and sample size issues, attention should also be given to strengthening Critical Thinking across the program curricula, with these thinking skills addressed more directly and consistently in the courses.
    a. Improvements to courses will occur on a course-by-course basis as the results are digested by the faculty.
    b. These results (and the results of future assessments) will also be included and considered in the program reviews of the college degree programs.