

Report and Recommendations of the Critical Creative Thinking Student Learning Outcome Assessment Discovery Committee

Submitted: Dr. Mike Russell, Committee Chair

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Background

The Critical Creative Thinking Student Learning Outcome (CCT SLO) Assessment Discovery Committee was formed and met during the Fall 2012 semester. The committee was chaired by Dr. Mike Russell and composed of the following thirteen (13) individuals:

- Matt Arterburn (Biology)
- Melanie Burdick (English)
- Karen Camarda (Physics)
- Russ Jacobs (Philosophy)
- Dan Petersen (SAS)
- Tom Prasch (History)
- Mike Russell (Psychology)
- Shaun Schmidt (Chemistry)
- Sharon Sullivan (Theater)
- Mary Sundal (SO/AN)
- Jennifer Wagner (Math)
- Kelly Watt (Art)
- Roy Wohl (Kinesiology)

The committee had broad representation primarily in the College of Arts and Sciences, which is almost exclusively responsible for teaching general education courses. A large number of individuals on the committee represented departments that offer general education courses that primarily involve critical and/or creative thinking.

The task of the committee was, by the end of the Fall 2012 semester, to recommend one or more instruments that assess critical and/or creative thinking. It was noted that the selected instrument would be used to assess the critical and creative thinking abilities of exiting students – the end product of a Washburn University education. It was further noted that only a sample of the graduating student body would be assessed. The committee was told that an assessment instrument could take the form of an assignment that could potentially be included in a University requirement course (EN 300). The committee was also told to consider assessment instruments that take the form of a standardized test. While the committee was instructed to consider assessments of any format, they were told that they must recommend an assessment instrument that allows the obtained results to be compared against those of peer institutions and/or national norms. This was a mandatory requirement for all recommended assessment instruments.

It was also mentioned that it would be preferential if all recommended instruments were high in reliability (i.e., is indifferent to factors that may affect a student's performance) and high in validity (i.e., accurately measures student capability). The committee was informed that they should not attempt to create an assessment instrument. There already exist a number of instruments that purportedly assess critical and creative thinking so the feeling was that there was no need to create a new one. In addition, the need to compare the performance of Washburn University students against those of other institutions requires an instrument that is employed by other colleges and universities.

The committee members were told to consider the following in their selection and recommendation of an assessment instrument:

- The assessment instrument will not be used to evaluate students every semester or every year. Rather, the selected instrument will be used to assess student capabilities about every 3rd year.
- It would be advantageous if an assessment instrument required no longer than 50 minutes to complete. This would allow every course to be a viable venue for administering the assessment instrument. Instruments requiring 50 – 75 minutes to complete would also be beneficial.
- Instruments that could be used to assess multiple student learning outcomes (e.g., critical and creative thinking plus written communication) would be considered an asset.
- The costs (in terms of money or faculty time) associated with an assessment instrument should not be considered a determining factor.
- It is acceptable to recommend one (or more) assessment instruments for critical thinking and one (or more) additional assessment instruments for creative thinking.
- Committee members may wish to consider the issue of whether assignments or standardized tests are better. It can be expected that students will more seriously consider an assignment that is part of a course grade than a standardized test. Conversely, a standardized instrument would permit objective scoring and may more accurately reflect student capabilities and, thus, may result in a more accurate evaluation of our students.
- When contemplating instruments, committee members were asked to recommend the assessment instrument(s) that best reflects our student population, our institution, and the University's approved definition of critical and creative thinking.

Committee members tended to be primarily concerned with either critical thinking or creative thinking. For that reason, it seemed prudent to partition the committee into two subcommittees. The creative thinking subcommittee was composed of the following 6 individuals:

- Melanie Burdick (English)

- Karen Camarda (Physics)
- Dan Petersen (SAS)
- Mike Russell (Psychology)
- Sharon Sullivan (Theater)
- Kelly Watt (Art)

The critical thinking subcommittee was composed of the following 7 individuals:

- Matt Arterburn (Biology)
- Russ Jacobs (Philosophy)
- Tom Prasch (History)
- Shaun Schmidt (Chemistry)
- Mary Sundal (SO/AN)
- Jennifer Wagner (Math)
- Roy Wohl (Kinesiology)

Committee members were informed that they should forward to the entire group any instrument that assesses both critical and creative thinking or that assessed the area of interest of the other subcommittee.

On the afternoon of Tuesday, November 13th, the two subcommittees met independently. The task of that meeting was to review every assessment instrument the committee members discovered and believed worthy of consideration.

Critical Thinking Assessment

The Critical Thinking Student Learning Outcome Assessment Discovery subcommittee recommended five (5) assessment instruments. Those instruments are:

- Ennis-Weir Critical Thinking Essay Test
- Critical Thinking Assessment Battery (CTAB)
- Collegiate Learning Assessment (CLA)
- AACU rubric
- Critical Thinking Grid

To determine the extent to which non-committee faculty members preferred one or more of the assessment instruments, two focus groups (one morning, one afternoon) were held during the week of December 3rd, 2012. The entire faculty body was encouraged to attend. Following the presentation and discussion of the various assessment instruments, those in attendance were asked to report (in writing) whether each assessment instrument should be adopted. More specifically, participants were requested to select one of the following response options for each instrument: (1) “yes” – the assessment instrument

should definitely be considered for adoption, (2) “maybe” – possibly adopt the instrument, or (3) “no” – definitely not adopt the instrument.

Faculty preference for a particular assessment instrument was determined in three ways. First, the total number of “yes” votes was determined. This number is believed to reflect the number of individuals who have a strong preference for a particular assessment instrument. Second, the total number of favorable ratings was calculated. This was calculated by summing the number of “yes” and “maybe” votes. The favorable rating is thought to provide a general measure of approval. Third, a preference score was calculated for each assessment instrument. In short, the higher the score, the more favorable a particular assessment instrument was perceived. The range of possible values is from 0 (no support at all) to 1 (complete support). A value of 0.50 suggests that an instrument was viewed as neither positive nor negative.

The following results are based on a total of 35 votes.

Results

The results revealed that the faculty largely rejected both the Critical Thinking Assessment Battery (CTAB) and the Collegiate Learning Assessment (CLA) instrument. The CTAB received a total of 10 (29%) “yes” votes, 16 (46%) favorable votes, and a preference score of only 0.35. Similar results were obtained for the CLA. There were only 9 (26%) “yes” votes, 17 (49%) favorable votes, and the preference score was 0.37.

Those in attendance seemed ambivalent about the Critical Thinking Grid. The votes were almost even between “yes” (10), “maybe” (13), and “no” (12). There were quite a number of favorable votes (N = 23; 66%). However, the preference score was only 0.47.

To the contrary, the faculty showed a definitive preference for the Ennis-Weir Critical Thinking Essay Test and the AACU rubric. The Ennis-Weir received 16 (46%) “yes” votes, 28 (80%) favorable votes, and the preference score was 0.63. For the AACU rubric, there were 20 (57%) “yes” votes, 26 (74%) favorable votes, and the preference score was 0.66.

Based on the results, it is recommended that either the Ennis-Weir Critical Thinking Essay Test or the AACU rubric be adopted.

Creative Thinking Assessment

Two additional and independent focus groups were held during the week of December 3rd, 2012. These meetings involved discussion of committee recommended creative thinking assessment instruments. The format of those meetings (presentation, discussion, voting) was identical to the previously mentioned focus groups. Four (4) creative thinking assessment instruments were presented and discussed. Those four instruments were:

- College Outcomes Measures Program (COMP)
- Consensual Assessment Technique
- Torrance Tests of Creative Thinking
- AACU rubric

The following results are based on a total of 22 votes.

Results

The faculty largely rejected the Consensual Assessment Technique. That instrument received 6 (27%) “yes” votes, 6 (27%) “maybe” votes, and 10 (46%) “no” votes. The total number of favorable votes was 12 (54%), which suggests only a slight preference for the instrument. However, the preference score was only 0.41.

Almost equally favorable ratings were given to the College Outcomes Measures Program (COMP) and the AACU rubric. With regard to the COMP, there were 11 (50%) “yes” votes, 19 (86%) favorable votes, and the preference score was calculated to be 0.68. With regard to the AACU rubric, there were 12 (54%) “yes” votes, 19 (86%) favorable votes, and the preference score was 0.70.

The Torrance Tests of Creative Thinking was preferred to the greatest degree. There were a total of 14 (64%) “yes” votes. The number of favorable votes was 19, identical to the number of votes for the COMP and AACU rubric. The preference score was 0.75.

The results revealed that the Torrance Tests of Creative Thinking was preferred to a greater degree than the other four instruments. However, it is clear that the preference for the Torrance was *not* notably greater than that for the COMP and AACU rubric. Therefore, it is recommended that the Torrance Tests of Creative Thinking, the College Outcomes Measures Program (COMP), or the AACU rubric be adopted.