Critical Thinking Assessment

Spring 2018

Method:

Critical Thinking was assessed through the collection of samples of student work. Seventeen courses were chosen for the assessment (see Table 1), which comprised 129 individual classes. These courses were selected for inclusion by the College-Wide Assessment Committee (CWAC) based upon course outcome mapping to the Critical Thinking General Education Outcome, or course outcomes having relevance to critical thinking. For one of the courses, BIOL 102, only lecture course sections, and not lab sections, were included in the assessment. Three students from each of the included classes were randomly selected for assessment, for a total of 387 students.

Instructors were initially notified of their class's inclusion in the assessment with an email sent within the first three weeks of the semester. This notice informed the instructors of the outcome that was to be assessed, and that they would be asked to submit a sample of student work that demonstrated the skills represented in that outcome. They were further asked to await specific instructions in an additional, forthcoming email notice. The second notice was sent approximately three weeks following the initial email and contained instructions for submitting the pieces of student work along with the names of their selected students. A reminder email that again contained the instructions and student names was sent approximately two weeks before the submission due date. On the day before the submission due date, a second reminder was sent to instructors whom had not yet made a submission.

Instructors were asked to send samples of work from the selected students that demonstrated the ability to generate a new idea or artifact by combining, changing, or reapplying existing ideas or products. Attached to the second email notification was a copy of the rubric that would be used in the assessment to better assist instructors in selecting appropriate pieces of student work. Work could be submitted electronically or in paper form. If work could not be submitted, instructors were asked to indicate the reason for the lack of submission, such as the student dropped the course or did not complete the selected assignment. Instructors were also asked to submit a copy or brief description of the assignment in order to assist the assessors in evaluating

the student work. Both digital and paper artifacts submitted by faculty members were collected by the Office of Institutional Research and Assessment. All artifacts were logged and anonymized upon submission.

At the conclusion of the semester of this assessment, the use of the Tk20 assessment software was discontinued by the College. Therefore, the evaluation of the artifacts could not be conducted in the Tk20 juried assessment function in the manner of previous assessments. Instead, a juried assessment of the artifacts was conducted in a shared Google Drive folder, with each jury member recording scores for their pool of assigned artifacts in an Excel file.

Table 1. Courses selected for assessment of Critical Thinking

Course	Number of Classes
ART 105	4
BIOL 102	10
BUSI 201	10
CHEM 101	7
CIS 135	5
CJ 240	5
CNT 120	7
CPS 161	1
CULI 113	2
CVT 215	1
EDUC 111	4
ENGR 214	2
GIS 205	1
HIST 201	4
HUMS 215	2
PSYC 101	59
WEB 110	2

Results:

Artifacts were submitted for 195 students (51.5%). Artifacts could not be collected from 50 (13.2%) of the selected students because the students either dropped the course or did not turn in the assignment chosen for assessment. The remaining missing artifacts (134 (35.4%)) could not be accounted for.

Each of the 195 submitted artifacts were assigned to two of the seven assessors in the jury pool for assessment, resulting in an expected total of 390 scores. However, one of the jury members did not complete any assessment scoring, greatly reducing the number of scores for analysis. Rubric scores for the assessed students are shown in Table 2.

Table 2. Frequency table of rubric scores for all assessed students

Criteria	4-Expert Proficiency	3-Proficiency	2- Some Proficiency	1-Limited Proficiency	0-No Proficiency	NA	Mean (SD)
Identification	10(3.01%)	123(37.05%)	55(16.57%)	10(3.01%)	1(0.30%)	133(40.06%)	2.66(.68)
Method(s)	11(3.31%)	120(36.14%)	59(17.77%)	22(6.63%)	1(0.30%)	119(35.84%)	2.55(.77)
Alternate Points of View	5(1.51%)	26(7.83%)	34(10.24%)	35(10.54%)	16(4.82%)	216(65.06%)	1.73(1.09)
Integration	13(3.92%)	96(28.92%)	76(22.89%)	21(6.33%)	5(1.51%)	121(36.45%)	2.43(.84)
Conclusions, Solution(s)	15(4.52%)	98(29.52%)	60(18.07%)	34(10.24%)	1(0.30%)	124(37.35%)	2.44(.87)

Note: NA responses are not included in criteria mean calculations

Mean scores for four of the five criteria fell between the "some proficiency" and "proficiency" score categories. Of these, the mean for the Identification criterion was the highest, with a mean of 2.66 (.68). The mean for the Alternate Points of View criterion was the lowest, falling between "limited proficiency" and "some proficiency". This criterion also had a large standard deviation.

A significant limitation for this assessment was the large number of Not Applicable scores given to all criteria. Not Applicable scores were given to over a third of all artifacts across criteria. In fact, for the Alternate Points of View criterion 65.06% of scores given were Not Applicable. An additional limitation was the 58 unassessed assigned artifacts, which resulted in a large number of artifacts receiving only one assessment instead of two and reduced the reliability of the scores.