

MA Biological Sciences 2020-21 Learning Outcome Assessment Report

Learning Outcome 1 – Mastery of Current Biological Theory

Methods

Following either completion of the MA program or upon leaving the program for another graduate or professional program, students will complete an exit survey that will assess students' confidence in biological theory in their chosen field. Surveys will be distributed and completed within 30 days of the student leaving the program. Each student completing the survey will be evaluated individually using their self-assessed scores and the percent of students meeting the minimum criteria reported.

Survey questions include the following:

- How familiar are you with current biological theory in your chosen subdiscipline?
- To what degree did the MA program develop your knowledge of current theory?
- To what degree did the MA program improve your knowledge of current theory?

Survey responses will be scored on a scale of 1-4, where "4" corresponds to "Very familiar" or "High degree". Scores will be added across the respondents and reported as a mean value for each student. The percent of students meeting the minimum criteria will be reported.

Results

As last year, only one student completed the program during the assessment period, and thus this learning outcome was not assessed for this year. The learning outcome will be assessed once at least three students are administered the survey.

Learning Outcome 2 – Mastery of Oral Communication

Methods

All students in the MA of Biological Sciences program are required to take BIO 8995 (Seminar in Biological Sciences), which requires students to attend the departmental seminar, read papers by the speakers each week, and lead discussions of the assigned readings. Student success in these courses is in part based on leading the discussions. Final grades for students taking BIO 8995 during the academic year (either Fall or Winter semesters) will be utilized for this assessment. The number of students earning a letter grade of "A-" or higher will be tabulated, and the percent of students meeting this minimum criteria for this learning outcome will be reported.

Results

During the 2020-21 assessment period, four MA students completed BIO 8995, and all earned a letter grade of "A-" or higher. While this exceeds our stated goal of 90%, it also suggests that the metric is probably not useful for assessing mastery of oral communication and should be replaced in future assessments.

Learning Outcome 3 – Mastery of Written Communication

Methods

Data for this assessment will include a score for each student for a writing assignment from a course selected by the student as part of their curriculum in completing the MA program. Writing samples will be scored on a four-point scale (4=outstanding; 3=acceptable, 2=below average, 1=unacceptable). Writing samples will be collected in the winter term of each assessment year; it is important that students are queried for samples multiple times during their degree program to compensate for an expected low response rate. The scores from the writing samples will be tallied for each student, and the percent of students meeting the minimum criterion for this learning outcome will be reported.

Results

Six student writing samples were collected for the 2020-21 assessment period from six different students. Writing samples included three short papers, two summary abstracts, and a set of exam essay questions. The response rate for the set of MA students in our program considered active was 46% (6 of 13 students). Acknowledging a small sample size, five of the six students (83%) earned a score of 3 or higher for the writing samples, which falls just below our stated goal of 85%. The average score for the four students was 3.33.

2021-22 Action Plan

As a consequence of the 2020-21 assessment results, three actions are planned for the 2021-22 academic year:

1. Improved tracking of MA students who leave the program, either upon completion or when leaving for other programs. This will remain a constant struggle given the current structure of the program.
2. Development of a standard methodology to assess students' ability to lead discussions in the BIO 8995 course, given the course has a different instructor virtually every time it is offered.
3. Coordination with the Graduate Officer to be diligent in collecting writing samples from students during the academic year, given his required annual meeting with each student.

Timeline for Action Plan

A timeline for the implementation of the action plan for the 2021-22 academic year follows:

1. An improved database will be developed for tracking current and recent MA students, for implementation beginning in Fall 2021.
2. A standard methodology to assess students' ability to lead discussions in the BIO 8995 course will be developed beginning in Fall 2021 and implemented no later than Winter 2022.

3. Expectations for data collection for writing will be clarified with the Graduate Officer during the summer of 2021 with plans for implementation in Fall 2021.