

MA Biological Sciences 2021-22 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 completed an exit survey that assesses students' confidence in their knowledge of biological theory in their chosen subdiscipline. Surveys were distributed and completed within 30 days of the student leaving the program. Each student completing the survey was 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 were scored on a scale of 1-4, where "4" corresponds to "Very familiar" or "High degree". Scores were added across the respondents and reported as a mean value for each student. The percent of students meeting or exceeding the minimum criteria (3.0) are reported here.

Results

Results here include those for three students who completed the program between May 2020 and May 2022. We included two years of data in this assessment because of the low number of respondents who complete the program; because their focus is on coursework and have somewhat fleeting relationships to faculty, it is often difficult to distribute and collect survey from MA students once they graduate. We include the results for three respondents here.

All three respondents (100%) met or exceeded our minimum criteria for the "Familiarity with current biological theory" question, which exceeds our criteria of 80%. The average score for the question was 3.33. Only one of the three students (33%) found their knowledge of biological theory to have been developed to a high or moderately high degree by the program, which does not meet our minimum criteria. The average score for the "Development of knowledge of biological theory" question was 2.33. Two of the three students (67%) found the program to have improved their knowledge of biological theory to a high or moderately high degree, which does not meet our criteria of 80%. The average score for the "Improvement of knowledge of biological theory" question was 2.67.

Learning Outcome 2 – Mastery of Written Communication

Methods

Data for this assessment includes 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 were scored on a four-point scale (4=outstanding; 3=acceptable, 2=below

average, 1=unacceptable). Writing samples were collected in the winter term of each assessment year; students were queried for samples multiple times during their degree program to compensate for an expected low response rate. The scores from the writing samples were tallied for each student, and the percent of students meeting the minimum criterion for this learning outcome are reported here.

Results

Five student writing samples were collected for the 2021-22 assessment period from five 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 71% (5 of 7 students). Acknowledging a small sample size, four of the five students (80%) 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 3.48.

2022-23 Action Plan

As a consequence of the 2021-22 assessment results, three actions are planned for the 2022-23 academic year:

1. Continue to improve 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. Improve the structure of the program such that students are provided better direction in their biological subdiscipline, with hopes of better developing and improving their knowledge base before graduation. This may involve developing subdisciplinary “tracks” for MA students to follow.
3. Continued coordination with the Graduate Officer to be diligent in collecting writing samples from students during the academic year, given his/her required annual meeting with each student.

Timeline for Action Plan

A timeline for the implementation of the action plan for the 2022-23 academic year follows:

1. An improved database will be developed for tracking current and recent MA students, for implementation beginning in Fall 2022.
2. Specific tracks for MA students will be developed and tested beginning Fall 2022.
3. Expectations for data collection for writing will be clarified with the Graduate Officer during the summer of 2022 with plans for implementation in Fall 2022.