

UNIVERSITY OF WASHINGTON

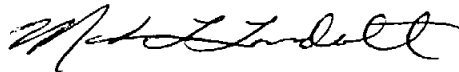
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July 15, 1998

To: Lee L. Huntsman
Provost

From: Marsha L. Landolt
Dean



Re: Master of Arts for Teachers in Biological Sciences 10-year review

Recommended Action: At its meeting of May 7, 1998, the Graduate School Council recommended continuation of the authorization to offer the Master of Arts for Teachers in the Biological Sciences for 10 years. I concur with this recommendation.

The review committee strongly endorsed the program and noted the high quality of both the students and the faculty. This program is a model of outreach from the University to the K-12 community. Consideration should be given to expanding the program to encompass other fields of science.

The self-study, the report of the review committee and the program's response to the report are attached.

Background. The primary objective of this program is to allow professional educators to gain a better appreciation of the field of biology and the scientific process through a combination of course work and laboratory research in a non-thesis master's program. The program seeks to enroll full-time experienced teachers of high school (the more common) and community college biology. The program's defining features are that it is interdisciplinary in the biological sciences, includes a project in a research laboratory and does not require courses in pedagogy or educational psychology.

The program requires a minimum of 36 credits of coursework in biology (broadly defined) and 6-9 of 600-level research. Some courses in the teaching of science are allowed, but the purpose and focus of the program is in advanced education in the biological sciences. Enrollment is in the range of 10-15 students who take a mean of 12 quarters to complete the program. The program graduates approximately 2 students per year.

Students in the program are highly motivated. The review committee remarked on the unanimity of the faculty regarding the focus and need for the program. Faculty are uniformly supportive of continuing the program in its present form, including the laboratory component. The faculty feel that they are making a difference in science education by developing in teachers an appreciation that science is a process as much as it is a body of knowledge. They provide an opportunity for high school teachers to participate in cutting edge laboratories and experience the excitement of the quest and discovery.

Two individuals, Professor John Edwards and Ms. Helen Buttemer manage the program. Each is highly dedicated to the program. The committee noted that the program has a forward-looking vision (as expected from a faculty of active scientists). Contemporary instructional technology is used and the program offers its students a room with appropriate resources to prepare lessons. The program encourages students to attend and participate in scientific conferences and professional organizations.

Weaknesses of the program include its small size. Although the review committee did not think it possible to increase the size of the program with the present budget, those involved in the review as well as the Graduate Council were enthusiastic about the program and felt that the University and the K-12 educational community would be well served if the program were to grow. However, it was apparent from comments at the meeting of the Graduate Council that Professor Edwards was not particularly interested in increasing the size of the program. The committee also thought that the program does not have adequate recognition among the client community. The program needs to make better use of electronic communications, including email and developing a web page. Interactions with the College of Education, while not at all problematic, could be improved.

The committee had several recommendations to strengthen the program, including earlier appointment of student supervisory committees, recruitment of new faculty, development of a course in biology pedagogy along the lines of the physics education program and adding lectures specifically directed toward MAT students to courses offered on videotape.

Recommendations to the University include investing in the growth of the program, reconsidering its relationship to the Program in Biology and marketing it more effectively as part of the K-12 initiative under the direction of Louis Fox. It may be possible to better use these teachers as TAs in Biology with the dual benefits of effective undergraduate education and providing support so that these students could complete their degrees in a more timely fashion.

The Graduate Council and the Graduate School are impressed with the interest and commitment of the faculty of the University in general to programs such as this. It was suggested that the University encourage the growth of discipline-based teaching programs in other sciences. Faculty in the sciences generally feel that education at the primary and secondary level could be improved substantially and would like to participate in an organized effort to do so. The strength and success that the University has already been shown in programs such as this suggests that the University could be a national leader in this field. We could also boost education in the areas in which the future of the State's economy lies. Effective promotion of programs such as this would enhance the image of the University in the general community as having an impact "whether you go there or not".

Enclosures

- c. John S. Edwards, Professor of Zoology and Director, Biology Teaching Program
- David C. Hodge, Acting Dean, Arts and Sciences
- Frederick L. Campbell, Dean, Undergraduate Education
- Debra Friedman, Associate Provost
- Gary D. Christian, Divisional Dean, Arts and Sciences
- George S. Bridges, Associate Dean, Undergraduate Education
- John T. Slattery, Associate Dean, Academic Programs
- Ms. Helen A. Buttemer
- Biology Teaching Review Committee
- Graduate School Council
- Ms. Linda K. Richter