

## **PROMOTION RECOMMENDATION**

### **The University of Michigan-Dearborn School of Education**

Gail R. Luera, assistant professor of education, School of Education, is recommended for promotion to associate professor of education, with tenure.

#### **Academic Degrees:**

B. A.	California State University, Dominguez Hills, English
Credential	California State University, Long Beach, Elementary Education
M. S.	Northern Illinois University, Carbondale, Outdoor Teacher Education
Ph. D.	University of Michigan-Ann Arbor, School of Natural Resources, Environmental Education

#### **Professional Record:**

1998 to present	Assistant Professor of Science Education, School of Education, University of Michigan-Dearborn
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#### **Summary of Evaluation:**

**Teaching:** The School of Education rates Professor Luera's teaching as excellent. Her students have consistently rated her as excellent to outstanding. Students see Professor Luera as being a very knowledgeable and caring instructor. They note consistently how she models the methods as she teaches those methods to them as well as her concern for their understanding. Her work has brought her in regular contact with the math and science faculty of the College of Arts, Sciences, and Letters, and she has been engaged as well with Henry Ford Community College faculty who participate in the School of Education's Inquiry Institute. She is a valued collaborator as well with the faculty and staff of the Environmental Interpretive Center.

**Research:** The School of Education evaluates Professor Luera's research and scholarship as excellent. She has distinguished herself as a respected scholar in science education. She has published in highly respected journals at both the state and national levels. Since joining the faculty she has published eleven articles in respected refereed journals and is the first author on seven of them. In addition, she has presented papers related to her scholarship at prestigious conferences. The major focus of Professor Luera's work has been to study the effectiveness of reform efforts in science teacher education at the University. Her work has been disseminated in the most prestigious journals and conferences and supported by a \$350,000 FIPSE grant from the U. S. Department of Education. It is also notable that she has been able to collaborate with colleagues from not only the School of Education but also the Department of Natural Sciences. Each of the reviewers lauded her for these collaborations. Her scholarship, which integrates with her teaching, is the epitome of a teacher/scholar. Every one of the reviewers also mentioned this point in their review of Professor Luera. In addition, it should be noted that she regularly involves her undergraduate students in action research and each year sponsors student presentations at the Meeting of the Minds with undergraduates from UMD, UMF, and Oakland University as well as the Michigan Undergraduate Research Forum (MURF) in Lansing.

### **Recent and Significant Publications:**

- Everett, S., Luera, G. & Otto, C. (in press). Linking research to practice: Examining a pre-service elementary teachers' practicum experience. Michigan Association of Teacher Educators Journal.
- Luera, G. & Otto, C. Development and evaluation of an inquiry-based elementary science teacher education program reflecting current reform movements. Journal of Science Teacher Education, August 2005.
- Luera, G., Moyer, R. & Everett, S. What type and level of science content knowledge of elementary education students affect their ability to construct an inquiry-based science lesson? Journal of Elementary Science Education. 17(1), 12-25, 2005.
- Luera, G., Otto, C. & Zitzewitz, P. A conceptual change approach to teaching energy and thermodynamics to pre-service elementary teachers. Journal of Physics Teacher Education Online. 2(4), 3-8, 2005.
- Burke, C., Luera, G. & Moyer, R. Preparing pre-service elementary school teachers to teach science: An evaluation of the development and implementation of a reformed program at the University of Michigan-Dearborn. Michigan Association of Teacher Educators Journal 1(2), 2005.
- Luera, G., Otto, C. & Zitzewitz, P. (in press). Use of thermal concept evaluation to focus instruction. The Physics Teacher.
- Duran, M., Fossum, P. & Luera, G. (in press). Technology and pedagogical renewal: conceptualizing technology integration into teacher preparation. Computers in the Schools.
- Everett, S. & Luera, G. (in press). Using unifying themes in a science capstone course for elementary education majors. Michigan Association of Teacher Educators Journal.

**Service:** The School of Education rates Professor Luera's service excellent. Her record of service reveals contributions to her unit, to her campus, to her university and to her profession. Within the School of Education, Professor Luera has served as the UM-D COATT (Consortium for Outstanding Achievement in Teaching with Technology) representative and contact person, and as a member of the Science Curriculum Restructuring Committee. At the campus level, Professor Luera has served on the Environmental Interpretive Center Advisory Board, as a member of the Environmental Program Committee, and as a member of the Science Building Renovation Core Committee. At the university level, Professor Luera's contributions include membership on the UM-D Meeting of Minds planning committee and her representation of the UM-D campus as a member of the University of Michigan Faculty Senate. Professor Luera has also begun to contribute to her professional field by serving as a reviewer for the prestigious Journal of Research on Science Teaching.

### **External Reviewers:**

Reviewer (A)

"...I was impressed with her vita and the overall contributions that she has made to the field of education. It appears that she has successfully integrated her research and development activities with her teaching and service... I feel this type of integration is a very important way to strengthen one's research focus...I feel she has a focused research agenda and, at this point, her work has made significant contributions to the field of science education. ... I see every reason

to believe that she will continue to be a very productive member of the science education community.”

Reviewer (B)

“One could argue that the biggest contributions Dr. Luera has made is her work with scientists. It is traditionally difficult to get university level science professors to change the way they teach and the way that they think about teaching. To move professors from a “telling” model of instruction towards a more interactive, inquiry based model of instruction is no small feat. It is clear from her presentations, papers and grant work that this is something that Dr. Luera has done. She has presented and published with her science colleagues at science conferences and in science journals, not just science education...”

Reviewer (C)

“All of Dr. Luera’s work is of high quality when considered purely as research. However, its true importance comes from the quality of the course structure that is now in place for pre-service elementary school teachers at UM-D. I know of very few institutions where future elementary teachers are getting such a strong grounding in science and pedagogy.”

Reviewer (D)

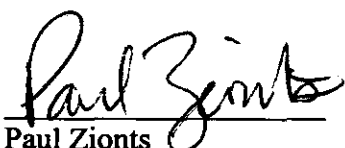
“What is particularly noteworthy, though, is the extensive degree of collaborations with various practitioners, educators, and scientists that Dr. Luera has so successfully managed to nurture over the years .... such collaborations are tremendously demanding in terms of time, effort, flexibility, ability to hear other professionals’ ways of thinking and doing, negotiating skills, and other interpersonal strength. The fact that Dr. Luera has so beautifully succeeded to work with, design programs with, write with, and teach with so many other colleagues speaks, I believe, of her talents and abilities to conduct engaged scholarship.”

Reviewer (E)

“...as someone who is in the process of re-considering how to revise a pre-service teacher program in environmental science education, I found this series of publications extremely useful. These particular works clearly show the value of integrating research and evaluation into not just teaching but curriculum design and implementation.”

**Summary of Recommendation:**

Professor Gail Luera is a highly valued member of the School of Education and is a vital contributor to the efforts of the science education community both within the School as well as in the Natural Sciences Department in CASL. She is an outstanding teacher, curriculum developer, scholar, and colleague. We are very pleased to recommend, with the strong support of the School of Education Executive Committee, Gail Luera for promotion to associate professor of education, with tenure.



Paul Zions  
Dean  
School of Education



Daniel Little  
Chancellor  
University of Michigan-Dearborn

May 2006