Education Seminar # 1: Lesson Planning and Article Publication

Speaker: Dr. John Breiner, Associate Professor of Chemistry, University of Cincinnati, University of Cincinnati
Dates: June 29, 2010
Times: 11:00 AM to 12:00 Noon
Venue: 757 Baldwin Hall

Prepared by:
Ms. Sara Bagley, Erpenbeck Elementary School, Florence, KY
Mr. Scott Ketcham, Pre-Service Teacher Student, College of Education, Criminal Justice, and Human Services, University of Cincinnati, OH

This seminar was coordinated by Dr. Jonathan Breiner (with support from Andrea Burrows, Grant Coordinator and doctoral candidate). Dr. Breiner is an Associate Professor of Chemistry and Teacher Education, Department of Chemistry (College of Arts & Sciences) and Division of Teacher Education in CECH at University of Cincinnati. After receiving his Ph.D. in 1996, Dr. Breiner spent 7 years teaching predominantly at-risk students. In 2003 he received a joint appointment with the College Arts and Sciences and CECH with the primary duty of improving science education for pre-service and in-service teachers. Dr. Breiner has extensive experience creating workshops and courses centered at achieving this primary duty. He has created forensic chemistry workshops based on academic content standards for in-service teacher professional development and most recently created a two-quarter chemistry sequence geared specifically for pre-service teachers. Additionally for the past six years, he has developed workshops and programs for inner-city middle school students as part of the GEAR-UP initiative.

This first educational seminar was targeted to make the teachers understand about the expectations as far as classroom implementation plan concerned from the summer RET experience. What expectations the NSF has for the lessons produced by the RET programs was also explained. Most importantly, the final product should be a lesson plan or series of lesson plans centered on a research topic from the RET program and have a strong connection to the Ohio Academic Content Standards.

In this session, the group also spent some time discussing writing of articles on the RET experience for dissemination. Articles and lessons may include using open-ended inquiry, clearly presented demonstrations, and activities that get kids interested and engaged in the content material. Through the group discussions, it came to light that the participants feel that this experience as a whole will better prepare them to create real life connections to content material for their students.

The teachers also discussed using the Backward Planning Design to create lesson plans. In this model, one first decides what the desired outcome is. After the outcome is established, it is necessary to determine what learning opportunities can be presented to help students achieve the desired outcome. Finally it is determined what content standards the lesson will address. Some of the more experienced teachers commented that based on their own experiences with planning effective lessons, they have found this model to be the most helpful in creating great learning experiences for their

students. A good lesson plan should include the overview/purpose, content standards, goals and objectives, student and teacher guide, assessment tools, and resource materials. A template for the RET lessons was distributed, which was open to modification with suggestions from the teachers.