

### **Education Seminar # 1: Lesson Idea Collaboration Group Discussion**

Speakers: Dr. Glenn Markle and Dr. Jon Breiner from College of Education, Criminal Justice, and Human Services (CECH), University of Cincinnati

Date: June 26, 2009

Time: 3:00 to 5:00 p.m. (2 hours)

Prepared by:

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This seminar was jointly coordinated by Drs. Glenn Markle and Jon Breiner from College of Education, Criminal Justice, and Human Services (CECH), University of Cincinnati on June 26, 2009 in 643 Baldwin Hall from 3:00 to 5:00 p.m.

Dr. Glenn Markle is Professor of Science Education in CECH at University of Cincinnati. He has over thirty years experience working with science teacher preparation and licensure. He has served as Head of the Division of Teacher Education and as Director of Preparing Future Faculty, a University-wide program for doctoral students with aspirations to teach at the university level. Dr. Markle teaches graduate-level courses on instructional methods and educational research. He has conducted research on effective classroom instructional practices, participated in the field testing of BSCS curriculum materials for middle school students, was the Co-PI on an NSF grant to develop a biology course for pre-service teachers and PI on an NSF Noyce grant to prepare science and mathematics teachers. From 2005 to 2007 he served as a Program Officer at the National Science Foundation on a IPA Loan assignment.

Dr. Jon 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 around 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 recent learning theories, and how that relates to effective instruction. This 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.

One of the teacher commented: *"I enjoyed this educational seminar and I am looking forward to this experience again as the RET program progresses. It provided an opportunity to brainstorm with more experienced teachers. I can rely on their expertise and classroom experience to help me gauge if ideas that I have will be a success or a flop when they are implemented in the classroom. As a pre-service teacher this is very helpful for me and will help me to feel more comfortable as I enter my student teaching experience this August."*