

AEE 4202 Emerging Technologies: Preparing Our Agricultural Educators for Today's Technology

Sharon M. Spann
Rick D. Rudd
University of Florida

Introduction

Today's students have grown up in a world where they live and learn interactively. They can build entire civilizations on their computer (Sim Farm ©), access millions of databases from home (the internet) and learn about science, history, social structure and art just by watching television (Miller, 1998). This scenario presents a new challenge to today's teachers. If students learn with this technology at home, how can we possibly hold their attention in the classroom?

The University of Florida's Department of Agricultural Education and Communication has begun the process of training future agricultural educators to teach in this world of emerging technologies through a new course for pre-service teachers, AEE 4202: Emerging Technologies in Agriculture. This course was designed to introduce pre-service agricultural education teachers to new and emerging areas of emphasis in the agricultural industry. Emphasis is placed on appropriate teaching methods and techniques, curriculum applications and classroom resources. It has been determined that when these technologies are carefully implemented into a student's curriculum the learning process is positively affected (Pedretti, Mayer-Smith & Woodrow, 1999).

Methodology

AEE 4202 is taught during the six-week internship block prior to student teaching. This class meets once a week, all day, with guest speakers from many departments within the University of Florida's College of Agricultural and Life Sciences. The speakers conduct sessions on various technologies emerging in their respective fields. These sessions are often presented in the form of lab experiments that the student teachers will be able to use in their own classrooms in the near future. Examples of these workshops include: bottle biology, food science experiments, biological science applications in agriculture, physical science applications in agriculture, floral art and aquaculture. In addition to these weekly sessions students also participate in "The Agricultural Education Road Show". This tour includes visiting various agricultural education programs state wide that have shown increased use of technology in their curriculum. The tour takes place over three days and includes approximately six agricultural education programs.

The course grade was determined through various assignments that were collected during the six-week internship block and during the student teaching experience. After each class session one-page abstracts are collected. These abstracts include a brief description of the activity, an analysis of how the activity "fits" in agricultural education curriculum and how the student plans to infuse the information and techniques during their student

teaching experience. This critical thinking method of writing is also used in the four emerging technology article critiques. The final aspect of the student's grade is the emerging technology unit. The student prepares a unit of instruction based on one or more of the emerging technologies presented during the class. The unit is comprised of four separate lessons and requires at least ten hours of instruction.

Results

Through AEE 4202 students are introduced to emerging technologies in agricultural industry and agricultural education. Students are provided with materials and methods to teach these emerging technologies to middle school and secondary agricultural education students. They are also able to identify and secure the educational resources to use emerging technologies in their curriculum. Students are then able to identify materials that are appropriate for the student audience and are able to develop and teach a unit of instruction based on the emerging technologies presented in the course. Upon completion these students are able to determine how and where these emerging technologies fit into the Florida agricultural education curriculum framework.

Plans

In an effort to prepare our future agricultural educator's in the field of technology, AEE 4202 will continue to be a required course during the six week internship block prior to student teaching.

Costs/Resources Needed

The costs associated with this course are encountered in the form of materials needed for the various experiments. Many of the departments that conduct seminars provide the materials needed. Those seminars conducted through the department of Agricultural Education and Communication cost the department roughly \$200 for ten students. In addition faculty time needs to be taken into account.

References

Miller, Nancy N. (1998). The technology float in education today. Lesson Demonstrations at the National Teacher Training Institute for Math, Science, and Technology. Science Activities. 35(2).

Pedretti, E., Mayer-Smith, J., & Woodrow, J.E. (1999). Teaming Technology Enhanced instruction in the science classroom and teacher professional development. Journal of Technology and Teacher Education. 7(2).