

# Trialing the Personal Response System

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Price Chair  
Teaching Improvement Grant

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Funds Requested: \$4,000

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Alan Randall, Chair AEDE

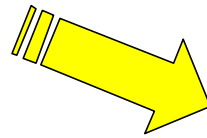
## Concept

The Personal Response System (PRS) will be tested in two classes, AEDE 500 (WI'04) and AEDE 200 (SP'04), to determine student interest and involvement along with the impact on grades and attendance. The system provides for *immediate response* to several question-answer formats (typically true-false, multiple choice or team-based assignments) through the use of personal "clickers"—hand-held infrared numerical keypads similar to TV remote control devices. A receiver is connected to a computer to permit student responses to become instantly available for display. Individual answers can be linked to a computer spreadsheet for use in assigning grades. The PRS question sessions provide an *active learning* environment and a *change of pace* not provided by traditional written in-class quizzes.

## Integrating the Technology: How does this Work?



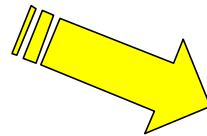
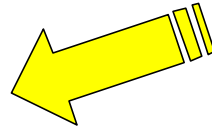
A PRS "Clicker"



A Professor  
A question



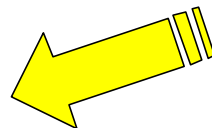
Students working  
in a group (or individually)



Just like a game show  
Students see their answers on a screen!



Answers available instantly  
delivered to your laptop



Pictures courtesy of Richard Rogers

### Timeline

Prof. Hooker will lead AEDE 500 (WI'04). This class is a core requirement of the Agribusiness and Applied Economics degree and is traditionally taken by majors in their junior year. The class is structured in a lecture style (no lab.) and has previously used up to 5 in-class quizzes and several team-based numerical problems during the quarter to "promptly" assess student comprehension. The class has between 40 and 50 students each quarter.

Prof. Roberts will lead AEDE 200 (SP'04). This class is the starting point in the Agribusiness and Applied Economics degree as well as a CFAES Social Sciences general requirement. It is traditionally taken by students in their freshman or sophomore year. The class is structured in a lecture style (no lab.) and has previously had attendance taken and used in-class quizzes. The class has between 70 and 90 students each quarter.

### **Assessing the Experiment**

An ad-hoc advisory panel (Professors Bernie Erven and Carl Zulauf) will help the instructors develop and independently assess the PRS experiment. Mid-quarter surveys and additional questions delivered along with SEIs will determine students' interest, concerns and recommendations for improving the process. Descriptive statistics for these responses can be (anonymously) compared to grades received from the in-class portion of the courses and overall letter grades assigned upon the completion of the classes.

### **Extending the Experiment**

Following the two-quarter experiment in AEDE, the system can be made available to instructors in other CFAES departments for evaluation in non-social science environments. We intend to provide evidence to our fellow instructors of how we have best integrated PRS into AEDE classes and learn from our colleagues alternative uses of the system.

We are contacting 3-4 key innovative instructors in several CFAES departments to investigate their interest in extending the experiment into the AU'04 quarter. The intent is to have these instructors test the PRS for two weeks each in divergent class environments. We will assist in these trials and collect data on student reactions (and grades) to prepare a final report for presentation to the college upon conclusion of the trials.

If more broadly adopted by instructors, students could eventually check out the PRS clickers at the Agricultural Library for use in any PRS-enabled course (or portion thereof). This will provide "buy-in" and "ownership protection." To date no instructor has used PRS at OSU, we plan to lead the way!

Once in place the technology has research and extension/outreach applications including real-time surveying for large groups and adaptive presentations based on audience interest.

### **Pitfalls or Possible Problems**

Technology malfunctions – hardware and software – could jeopardize the experiment, but will be minimized through company support provided by EduCue who distribute PRS.

Learning curve issues – for instructors and students alike – will hopefully be minimized by borrowing from the experiences of successful current adopters of the technology. Prof. Richard Rogers - Faculty Advisor to the Provost for Undergraduate Education, University of Massachusetts-Amherst has extensive first-hand knowledge in the successful use of PRS in agricultural economics courses and has volunteered support as required (see <http://www.umass.edu/cft/prs/> for detailed information on the U.Mass. experiences with PRS).

### **Budget**

A total budget of \$4,000 is requested in two payments of \$2,000:

In December, 2003 a lecture pack (see attached brochure) containing 50 clickers and two receivers, all software and cables will be purchased to permit testing in the classroom environment prior to Winter quarter, for a sum of \$2,000.

Based on a successful first phase of the experiment, \$2,000 is requested in March, 2004 to replace any lost or broken units and purchase additional clickers and receivers for use in the larger format class (AEDE 200) in the Spring quarter.