

Activation of Students by Immediate-Feedback Assessment

David Wagner

Associate Professor and Director of Graduate Studies (Forestry), University of Kentucky,
Department of Forestry, Lexington, KY 40546-0073, USA, dwagner@uky.edu

Students understand and retain information most effectively when they acquire it actively and when they receive immediate feedback to (1) validate knowledge they understand accurately and (2) correct misconceptions. Consequently, the educational community has developed tools to provide students with immediate feedback regarding their learning. This presentation will demonstrate a system that integrates several such tools, including a “Personal Response System,” scratch-off quiz forms, and a Jeopardy-style game. The system is used at the University of Kentucky in introductory forestry and agriculture courses, as well as in a population genetics course for advanced undergraduates. Classroom time that was formerly spent on lecture presentation of basic facts is freed by the system to help students develop more complex cognitive skills, such as analysis, synthesis, and evaluation. For example, the introductory forestry course now provides classroom time for semester-long, in-depth, guided discussions, including:

- ✓ “What is veneer? How and why is veneer used? How is veneer made? What silvicultural prescriptions enhance the production of trees suitable for high-quality veneer?”
- ✓ “Should U.S. National Forest land parcels be sold to provide funds for rural communities? What information is needed to make this decision? Who should make this decision?”
- ✓ “What questions do you have about forestry? Where would you find the answers? What are the answers?”

Despite spending more time now on higher-level intellectual skills, all material that was taught for many years by lectures in these forestry, agriculture and population genetics courses is still learned by students. This demonstrates that it is possible to help students develop complex cognitive skills, without sacrificing essential factual knowledge.