

Evaluating an Interactive Instructional Resource Approach to Greenhouse Education

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Utilizing an interactive approach to instructional and student resources in greenhouse education, collaborators from Arizona, Florida, Ohio, and Vermont have been able to offer a truly unique set of tools to be used in and outside of the classroom.

The Course

These tools were utilized for the first time this winter in PSS 127, Greenhouse Operations and Management taught at the University of Vermont. Learning assessment tools based on numerical self-evaluation and verification narratives were used in conjunction with the multimedia tools to determine the success of the materials as used in the greenhouse classroom. A pre-test/ post-test of course competencies was evaluated. Of student participants 62.5% were male and 37.5% were female.



Results

Of participants 62.5% were male and 37.5% were female. The following expert developed competencies were tested and found to have increased after material use.

- Greenhouse Structures and Glazing Materials
- Greenhouse Environmental impacts on Plant and Growth Development
- IPM
- BMP/Environmental Impact of Greenhouse Production*
- Plant life Cycle
- Root Substrates
- Plant Nutrition
- Irrigation
- Packing and Post Harvest Operation*
- Regional/National/International Industry Differences

* While all showed an increase in competency knowledge, these were not significant at the alpha .05 level.

The Materials

Over three hours of individual video segments based on nine topics covering everything from computers, structure, plant life cycle, to labor; as well as an interactive Flash-based greenhouse environment simulator, which is nearly complete; and a searchable digital repository are available to participants via the online project website. A database of all the greenhouse courses at 1862, 1890, and 1994 institutions was also developed in hopes to build a community of teachers that will utilize and contribute to the multimedia greenhouse collection.

