Multimedia Instrument for Greenhouse Education: Designing for User Needs and Higher-Order Thinking

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In the United States, the greenhouse industry covers more than 15,000 acres and is supported by a diverse number of firms with employee expertise in greenhouse manufacturing, engineering, irrigation, horticulture, IPM, sales, marketing, and business management. The greenhouse industry is in need of highly trained undergraduates having higher-order thinking skills. These traits are necessary to integrate scientific and business concepts, potentially yielding a competitive advantage in today’s agricultural marketplace.

Using a multidisciplinary approach, we are creating a multimedia instrument for utilization in a variety of greenhouse related courses. Deliverables on this project include interactive Flash-based greenhouse science modules, user-modifiable website, video collection, and image gallery. This open access repository will be publicly available on the Internet. To ensure the project development vision matched need, greenhouse courses offered at 1862, 1890 and 1994 land grant institutions were identified. Sixty-four instructors located during this review were asked to complete an on-line survey concerning the development of this instrument. Twenty instructors representing approximately 30 courses nationwide completed the survey. Over 50% indicated they would use the site for instructional purposes 5 or more times per year. Eighty percent indicated willingness to submit additional materials to the site if authorship was indicated.