A Dual Credit Chemistry Class Using a Blended Delivery/Team Teaching Approach

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SOUTHERN STATE COMMUNITY COLLEGE

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Washington High School

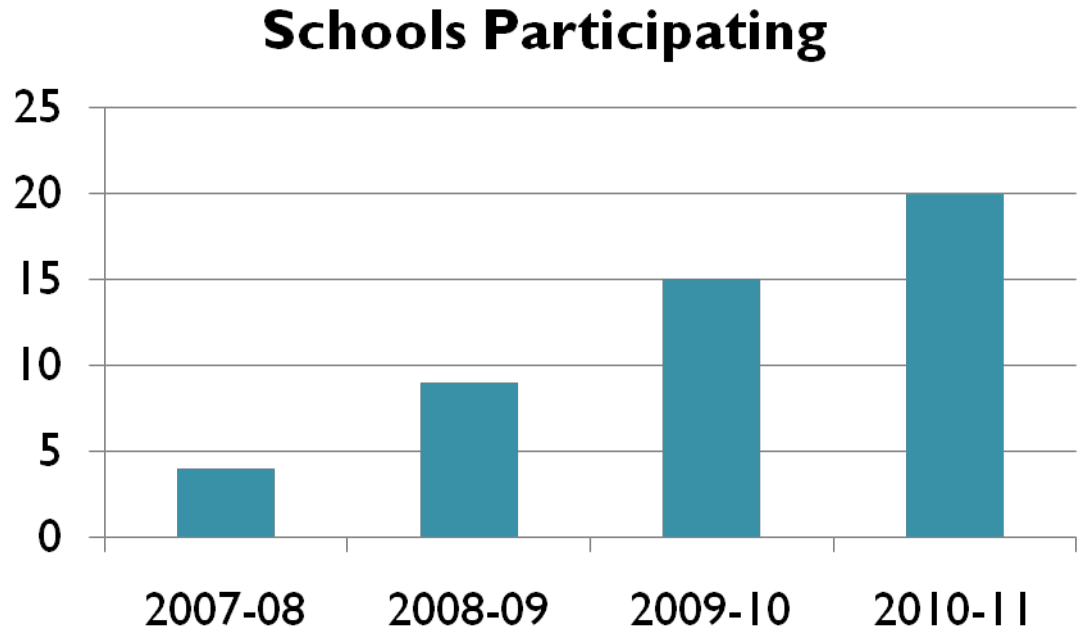
- Located in Washington Court House, Ohio in Fayette County in Southwest Ohio
- 680 Students in high school
- Only 25 % attend college
- 88 % Graduation Rate

SOUTHERN STATE COMMUNITY COLLEGE

- 4 Campuses in Southwest Ohio
- 3000 Enrollment
- 4 of 5 Counties in Service Area are Appalachian

Dual Credit Program in Chemistry

- Is considered to be an on-site PSEO (post-secondary enrollment option)
- Began by awarding *introductory level* chemistry credit



Features of Program

- Initial planning meeting with teacher input
- High school teachers required to attend a workshop
- Students come to college to do advanced lab using spectrophotometers and/or pH meters
- Program provides bus transportation and substitute
- Encourage implementation of final project

Pilot Program (2009-10)

- Offered *college-level* chemistry using a blended delivery, team teaching approach
- Students received dual credit at no cost
- Students met at college 2 days/wk, at the high school 2-3 days per week. Used "flex Fridays"
- Used professor prepared tests
- Most labs occurred at college lab

Used Asynchronous Delivery of Online Portion

- Camtasia® was used to capture lectures:
- Two types of presentations:
  - PowerPoint lectures
  - Example problems
- High school teacher worked with students in recitation.

Problem Solving

Problem 23, page 197

A mixture of $CuSO_4$ and $CuSO_4 \cdot 5H_2O$ has a mass of 1.245 g. After heating to drive off all the water, the mass is only 0.832 g. What is the mass percent of $CuSO_4 \cdot 5H_2O$ in the mixture?

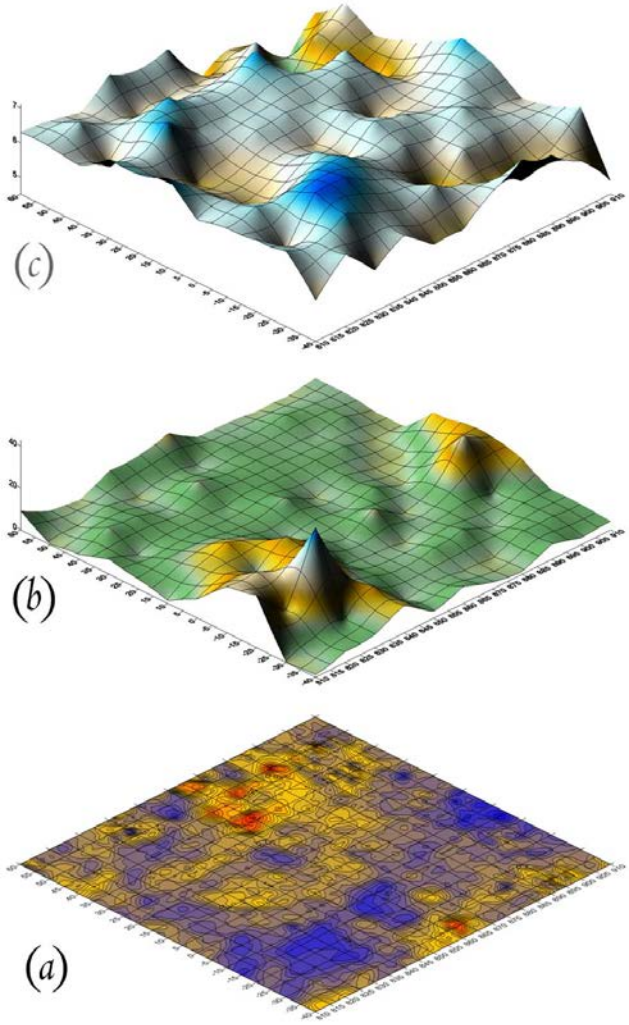
Final Project

- Students completed a final research project that involved analysis of soil samples from archaeological excavations at George Washington's home.

Features of Project

- Students analyzed soils for extractable phosphorus and pH.
- Maintained a laboratory notebook of work.
- Submitted a final written report and an oral report or video documentary

- 3-dimensional graphs of data were created and submitted to the archaeologists at Mt. Vernon



Advantages

- Students received dual credit at no cost
- Increases chances of success in college
  - 88 % vs 50%
- Advantages over AP
- Exposes students to the routine and rigors of college-level work
- Increases student self confidence
- Increases skills in technology
- Develops self discipline

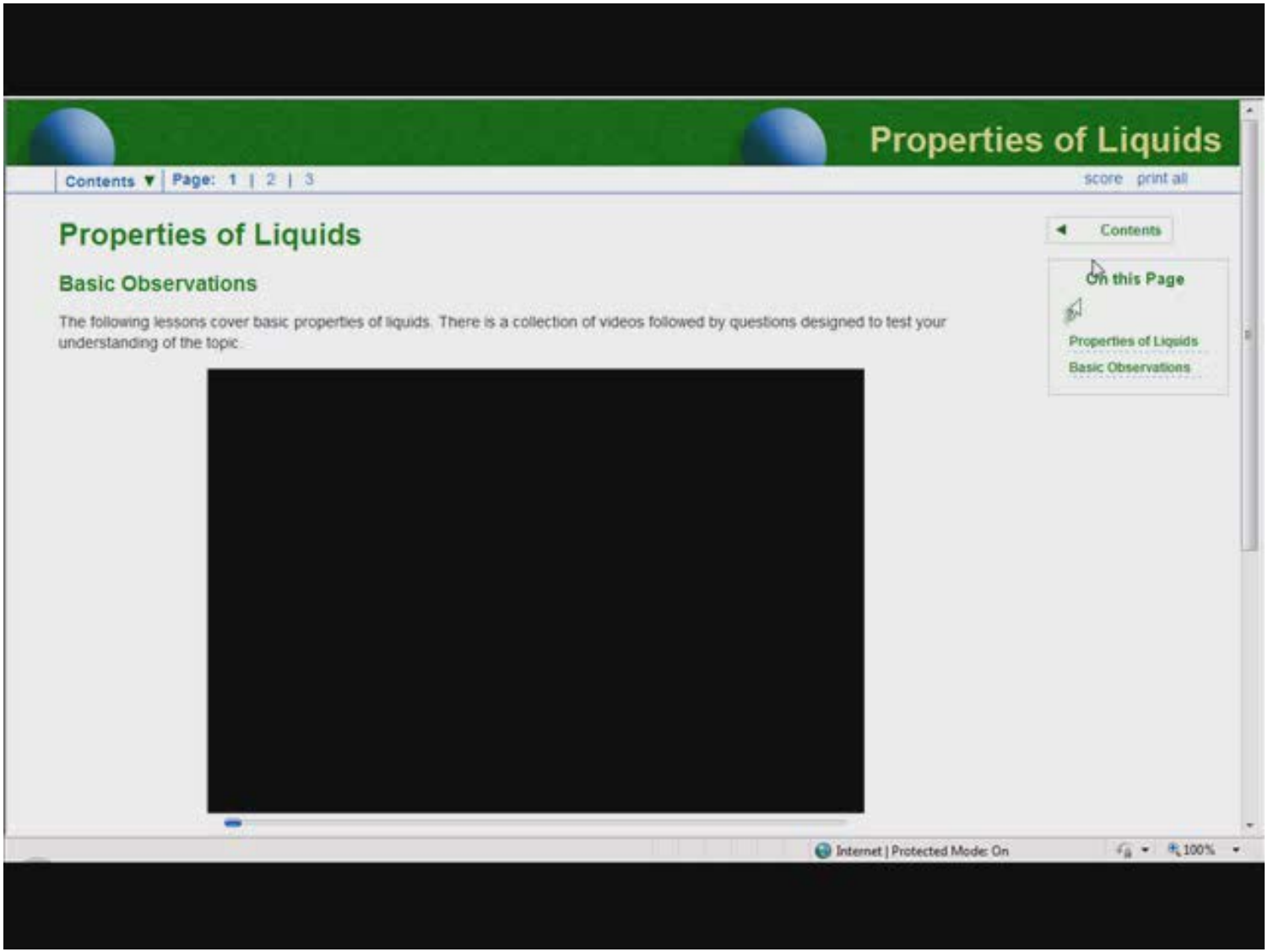
Disadvantages

- Scheduling
- High school teacher "too accessible"
- Distance between high school and college
- Requires maximum flexibility between college and high school instructors
- Role change of high school instructor
- Lab preparation

What's Next?

- Improving quality of online lessons
  - Create interactive lessons using SoftChalk™
  - Allows for the creation of e-learning content without learning HTML

Interactive Lessons



What's Next?

- How do we replicate program with other high schools?
  - Scheduling
  - Instructors
  - Distance
- Have high school teacher perform college-level labs in summer workshop

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