



## Moving to the Next Level: Using Course Management Systems Effectively for Traditional Undergraduate Classes

Otterbein College

June 13, 2000

## Why This Topic?

- August 1999 Planning Results
- What do faculty need to know about the use of the use of technology for teaching and learning?
  1. Effective Pedagogical Knowledge of Digital Practices
  2. Examples of Effective Practice
  3. Knowledge of Digital Tools' Possibilities

## Why This Topic?

- What do independent colleges need to do to enable faculty to develop and use this expertise with their students?
  1. Pedagogical Support
  2. Tech Support
  3. Faculty Development Program
  4. IT Stuff That Works (Infrastructure)

## Why This Topic?

- In what areas should we focus our attention over the next two years in the OFIC/Ameritech Project?
  1. Access to Pedagogical Expertise
  2. Workshops
  3. Strategic Partners
  4. On-Line Resources

## Results

- Focus on Course Management Systems
- Focus on pedagogically effective practices in the use of CMS
- Web site for collection of examples & resources

## Results

- Regional Workshops on theme
- Identify campus Instructional Support Leaders (ISLs)
- Provide curriculum for faculty development for use by ISLs
- Emphasize local campus development and support



## Faculty Frustrations

- Students are unprepared for class
- How do I get my students to spend enough time in the class material?
- How do I get them to read the text?
- How do I help them apply the content?
- If I use active learning strategies, how do I get in all the content?

## My Frustration

- Students don't seem to be "getting it"
- The "tyranny of the lecture"

## Two Converging Trends



Change in Educational Philosophy

From the "Sage on the stage to the Guide by the Side."

This slide features a dark blue background with a wavy, textured pattern on the left side. The title "Two Converging Trends" is centered at the top in white. Below the title, on the right, is a small photograph of a woman and a man looking at a computer monitor. To the left of the photograph, the text "Change in Educational Philosophy" is written in white, with a blue arrow pointing from the bottom left towards it. To the right of the photograph, the text "From the 'Sage on the stage to the Guide by the Side.'" is written in white.

## Two Converging Trends

Change in Educational Philosophy

Introduction of New Instructional Technologies

This slide features a dark blue background with a wavy, textured pattern on the left side. The title "Two Converging Trends" is centered at the top in white. Below the title, there are two text elements in white. On the left, "Change in Educational Philosophy" is written, with a blue arrow pointing from the bottom left towards it. On the right, "Introduction of New Instructional Technologies" is written, with a blue arrow pointing from the bottom right towards it.

## The question

- How can college professors teaching face-to-face courses use these technologies to transform their classrooms?

## A suggested answer

Bring the pedagogical and technological trends together

Change teaching and learning in the traditional undergraduate classroom



## Assumption

- New information technologies
  - provide lecture content
  - open up time for active learning

## Goals

- Find an approach to move from “sage” to “guide”
- Reduce time spent on lecturing
- Open up class time for active learning

## Goals

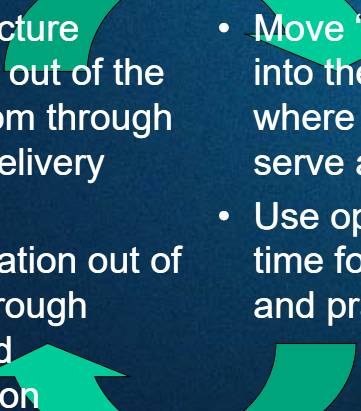
- Focus more on understanding and application than on recall . . .
- . . . while not sacrificing presentation of the factual base
- Provide students with more control over their own learning

## Goals

- Give students a greater sense of responsibility for their own learning
- Provide students with more opportunities to learn from their peers



## The Classroom Flip

- 
- Move lecture material out of the classroom through online delivery
  - Move “homework” into the classroom where faculty can serve as guide
  - Use opened up time for application and practice
  - Extend conversation out of class through threaded discussion

## CMS Components

- “Lectures”
- Threaded discussion
- Quizzes
- Student Presentations

## Classroom Changes

- Time for Active Learning
- Structure for class:
  - Clarify
  - Expand
  - Apply
  - Practice

## Online “Lectures”

- Features
  - Web pages delivered in CMS
  - Multiple media sources available
  - Student use is recorded
  - Can link to
    - Objectives
    - Student notes
    - Discussion area

## Online “Lectures”

- Benefits
  - Not restrained by class time
  - Can link to extra resources
  - Statistics on student use available
  - Student accountability
  - Increased time in-class for application and discussion

## Online “Lectures”

- Example from
  - Graphic Design



## In-Class Discussion

The screenshot shows an interactive presentation interface. At the top, it says "Click on any button for product information". Below this are four colored buttons: "Optical Disc" (pink), "Audio" (blue), "Print" (black), and "Packaging" (yellow). In the center is a black crosshair. Below the crosshair, it says "Click on the crosshair for information on Eva-Tone". To the right is a video player showing an aerial view of a building, with standard video controls below it. At the bottom are four buttons: "Play Entire Video", "Click here for more information", "Forms Menu", and "Quit". The background of the interface is orange with a repeating "EVA-TONE" watermark.

## Online Discussion

- Types of Discussion
  - Synchronous (Chat Rooms)
  - Asynchronous (Threaded Discussion)

## Online Discussion

- Features
  - Automatically created by CMS
  - Messages archived
  - Public/Private
  - With names/Anonymous

## Online Discussion

- Benefits
  - 100% participation
  - “Voice” to the silent students
  - Thoughtful, articulate responses
  - “Time on task” with content
  - Use for student presentations with Q&A
  - Transcript available for review

## Online Quizzes

- Types of items:
  - True-False
  - Multiple Choice
  - Matching
  - Short Answer
  - Calculated
  - Paragraph Answer (Essay)

## Online Quizzes

- Features
  - Set time available
  - Generate quiz from pool of questions
  - Automatic grading
  - Set feedback based upon response
  - Allow multiple attempts



## Online Quizzes

- Benefits
  - Holds students accountable for reading
  - Saves class time
  - Provides immediate feedback
  - Can repeat for mastery
  - Can be used for practice tests

## Student Presentation

- Features
  - Area for students to upload material
  - Can be divided into groups

## Student Presentation

- Benefits
  - Place for introductory personal information
  - In-class presentation available for review
  - Place for posting student projects

## Faculty Assessment


- Cheryl Irish
  - Special Education
  - Small class (10)
  - Used online discussion
- Susan Warner
  - Marriage and the Family
  - Large lecture class (58)
  - Used online discussion



**Goal:  
Open up Class Time**

**Goal:  
More Active Learning**


Cheryl Irish  
Education



“I can now use class time for discussions and learning activities I didn’t have time for before. I was frustrated with the short amounts of time I had in the past for these important experiences, but with WebCT for the concrete activities, we’re able to focus on higher levels of learning in class.”

**Goal:  
Student sense of  
responsibility for  
learning**


Cheryl Irish  
Education



“WebCT provides me with a mechanism for holding students accountable for reading assignments. They read the assignment and then take quizzes and participate in small group discussions over the reading material while in WebCT. This leaves class time for expanding on the topics and discussing them at a deeper level because they have been prepared before coming to class.”



Susan Warner  
Sociology



**Goal:  
Opportunities to  
learn from peers**

“I was concerned my students have an outlet to be able to discuss relevant issues that surfaced during class discussion. So I divided them into group of approximately eight students. Each group had its own private bulletin board where they could post their reactions. They would often talk about their own families in ways they would not in class.”

## Student Assessment

- Baldwin-Wallace student survey

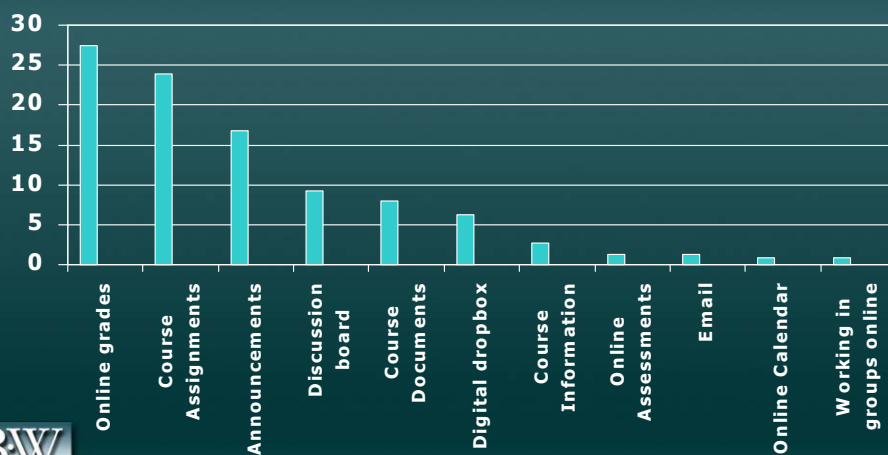
## Population

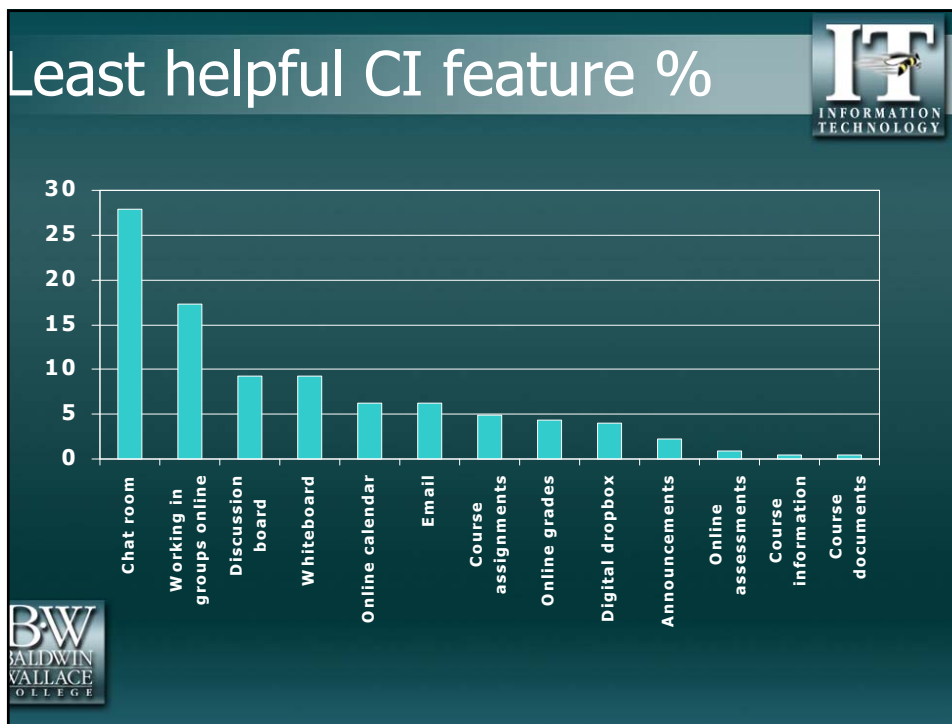


- Fall Semester 1999
- 226 students (~15% of total enrolled in CI) chose to respond to a voluntary survey-web based link in CourseInfo
- Respondents: majority from Education, Computer Science and English departments



## Most helpful CI feature %





## Student Assessment

- Survey of Six Web-enhanced Classes
  - Range of Sizes: 9-58
  - Mean Class Size: 21.3
  - Students in-tab: 128
- Survey of Four Lecture Classes
  - Range of Sizes: 13-33
  - Mean Class Size: 22
  - Students in-tab: 88



**Student Assessment**  
Statements with strongest positive ratings  
(Strongly Agree = 1)

**Goal:  
Opportunities to  
learn from peers**

The class encouraged me to spend more time collaborating with other students than I typically do in other classes. (Graphic Design 1.3; All Web-enhanced 2.73, Lecture 3.23, p<.002)

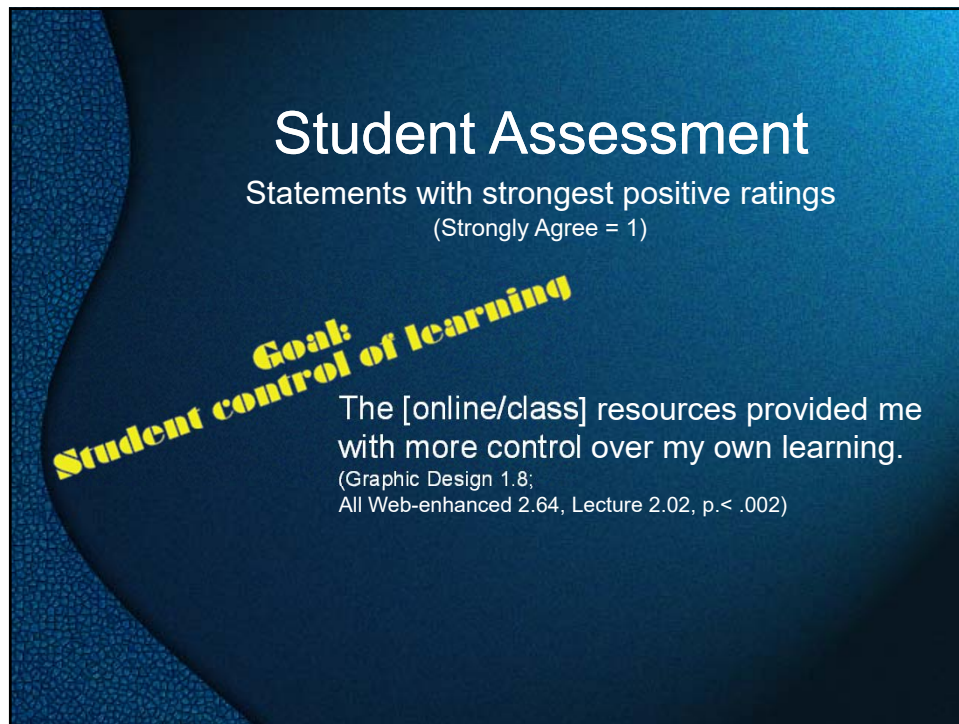
I feel I learned from my fellow students through their presentations and comments in class discussion. (Graphic Design 1.7; Comm in the Info Age 2.3; All Web-enhanced 2.05, Lecture 2.8, p<.003)

**Student Assessment**  
Statements with strongest positive ratings  
(Strongly Agree = 1)

**Goal:  
Focus on Understanding  
and Application**

Class discussion encouraged critical thinking. (Graphic Design 1.4; Comm in the Info Age 1.8; All Web-enhanced 2.08, Lecture 2.14, p<.246)

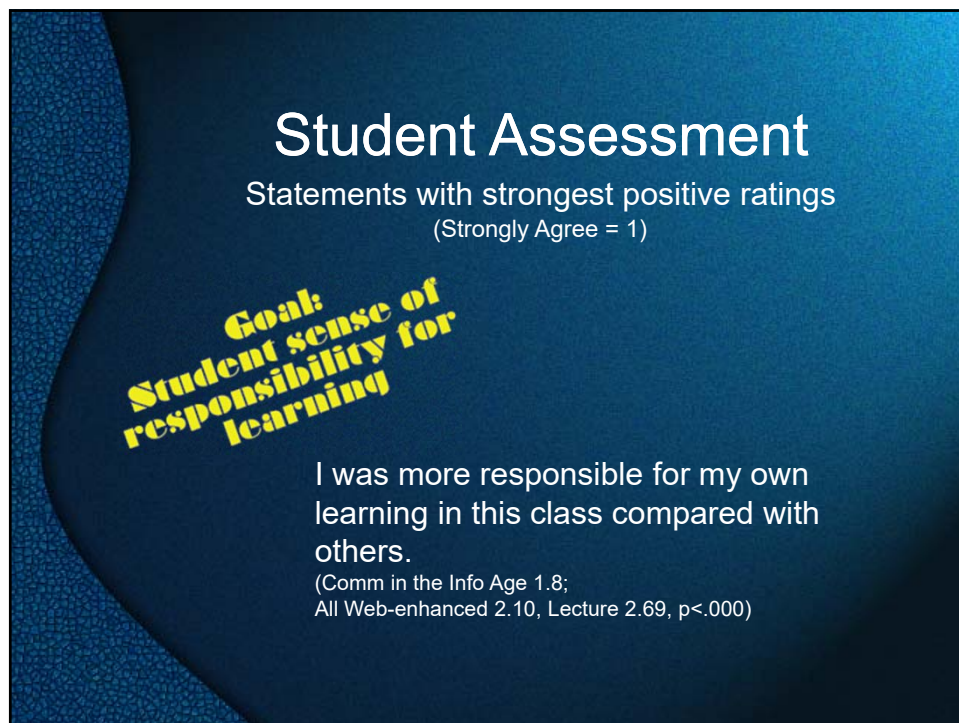
In-class time was spent more in discussing implications than in presenting facts. (Graphic Design 1.8; Comm in the Info Age 1.8; All Web-enhanced 1.89, Lecture 3.1, p<.000)



**Student Assessment**  
Statements with strongest positive ratings  
(Strongly Agree = 1)

**Goal:  
Student control of learning**

The [online/class] resources provided me with more control over my own learning.  
(Graphic Design 1.8;  
All Web-enhanced 2.64, Lecture 2.02, p.< .002)



**Student Assessment**  
Statements with strongest positive ratings  
(Strongly Agree = 1)

**Goal:  
Student sense of  
responsibility for  
learning**

I was more responsible for my own learning in this class compared with others.  
(Comm in the Info Age 1.8;  
All Web-enhanced 2.10, Lecture 2.69, p<.000)



## Student Assessment

Statements with strongest positive ratings  
(Strongly Agree = 1)

**Goal:  
From Sage to Guide**

The online material and in-class discussion made the course more of a forum than a lecture. (Comm in the Info Age 2.1; All Web-enhanced 2.05, Lecture 3.3,  $p < .000$ )

## Conclusions

- CMS provide an integrated environment for class enhancement
- Automatically generates features most desired by faculty
- Students gain familiarity with system
- Provides data on student use
- Benefits both in and out of the classroom



