An Interactive and Dynamic Math Classroom...Online!

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All About Me
- 9 years in the classroom
- 6 years in the “virtual classroom”
- Courses taught online:
  - Statistics
  - Business Calculus
  - Calculus (Spring 2008)
- Web “Guru”

All About the College of Southern Maryland
- Four campuses
- No “Virtual” campus - yet?
- 9970 (credit) students
- 11 Online Degree Programs (none in Mathematics), but..............
- WebCT (aka, Blackboard Learning)
More About the College of Southern Maryland

- **Web Course Format**
  - College Wide: 96 courses - 25% of all courses offered
  - Math Department: 13 courses - over 70% of all courses offered

- **Web Hybrid (Blended) Format**
  - College Wide: 34 courses - 6% of all courses offered
  - Math Department: 5 courses - over 25% of all courses offered

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**Web Courses**

*15 weeks of silence*

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**Turn Back the Clock...**

*Business Calculus Course (MTH1560) circa 2003*

- Two exams taken at Testing Center
- Four worksheets (mailed or faxed in)
- Chapter quizzes online (though no answer key)
- Online office hours
- Notes and examples posted online
That was *soooooo* last millennium...

- No way to “write” math online, especially high level
- No way to “visualize” math online (without expensive software - i.e., Maple)
- I have online office hours - but they don’t come! (and then they fail!)

I can’t do online what I do in the classroom 

………..or can I?

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How do we get there?

- What makes my traditional classroom dynamic?
  - Discussions
  - Directed discussions
  - Thinking questions
  - Requiring each student to contribute
  - “Crinkled” brow – when are they “getting it?”

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Here and Now...

*Business Calculus Course (MTH1560) circa 2007*

- Regular discussion posting assignments
- Lesson Sessions
- Outlines posted with directed questions
- Muddiest Points
- Two exams taken “online”
Let’s Start Talking...

The Discussion Board
Let’s Start Talking...

The Discussion Board

- STRUCTURE
- Robust
- Interconnected with lessons and weekly assignments
  - Calendar
  - Lessons

Let’s Start Talking...

The Discussion Board - not just for announcements

- Students post their assignments solutions - no more worksheets!
- Students ask questions particular to chapters
- I post answer keys and general feedback
- Use it the first day

Let’s Start Talking...

The Chat Room
Let’s Start Talking...

The Chat Room

- Lesson Sessions - *directed* Conversations instead of open-ended office hours
- Students sign up for sessions in advance
- Required to attend at least 5 out of 15 offered during the semester*

Let’s Start *Thinking*...

Discussion Assignments
Let’s Start Thinking...

Discussion Assignments

- One question for each person or pair
- Choose a question, then post their solution on the discussion board
- Check answers for two other people/pairs
- Directed questions OR specific problems (the magic of MathType Lite!)
Let’s Start **Thinking**...

Outlines
Let’s Start *Thinking*...

Outlines
- Keeps students *organized*
- Students know what my expectations are for their learning
- Students are thinking beyond the mechanics of their homework problems

Tell me what you’re *really* thinking...

Muddiest Points

Tell me what you’re *really* thinking...

Muddiest Points
- Now – 5 bonus points of online Chapter Quiz (100 points)
- Next Semester – Use the “journal” feature of WebCT, basically a private discussion board
Tell me what you’re really thinking...

Muddiest Points

- Respond to individuals within the quiz (comments section)
- Post generic feedback on the Discussion Board with common “muddiest points”

Tell me what you’re really thinking...

Non-Proctored (Online) Exams

Non-Proctored (Online) Exams

- Online component (mechanics) - 70%
- Short Essay component (thinking) - 30%
- Online Exams count as 20% each (2 total)
- Final Exam is proctored and worth 15%
Here and Now (again)...

Business Calculus Course (MTH1560) circa 2007

- Regular discussion posting assignments
- Lesson Sessions
- Outlines posted with directed questions
- Muddiest Points
- Two exams (maybe all?) taken “online”

How do we do this?

“A [course] barely alive. We can rebuild [it]. We have the technology.”

- paraphrasing the “Six Million Dollar Man”

- WebCT - major leaps and bounds
- Respondus - quickly builds online quizzes
- MathType Lite - free equation editor
- Wimba - let them hear your voice

Comments on Web-Hybrid

What Hybrids are (for the Math Department)

- Meet once a week (instead of twice)
- Students have sections they complete on their own during the week

Issues

- Stay engaged during the week
- Don’t be suckered into teaching 3 hours of material in two hours!
KISS – it IS simple

- It’s not *really* about the technology, it’s about the organization, the components, keeping the students engaged more than just test time.

- Thinking outside the “box” of the classroom

Questions?

Thanks!