Designing an Active Learning Classroom for Local and Distant Students

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Genesis of Idea for Active Learning

• University of Minnesota video / Notre Dame
• 30 years experience with delivery of video lectures at UF
• World-class business faculty willing to innovate
• Physical space impact on virtual space
• Phil Donahue show
Inside Active Learning Classrooms

Inside Active Learning Classrooms

[Image: TILE Teaching Strategies]

[Image: TEAL classroom supporting team engagement]

[Image: TEAL classroom layout, top view]

Inside Active Learning Classrooms

[Image: SCALE-UP]

Inside Active Learning Classrooms

[Image: Active Learning Classrooms (2012)]
Guiding Principles

- Increase access
- Influence teaching practices
- Use innovative and engaging instructional methods
- Improve teaching effectiveness
- Increase student knowledge retention
Seeking Funds

• UF technology fee
  – Round 1 – draft proposal
  – Round 2 – refined proposal

• Development office
  – Donor presentation
  – Faculty participation
  – Venue: Collaborative Room
Conceptual Testing

• Experimenting with team size
  – SCALE-UP: 3 teams of 3
  – Team-based learning: 6-7 per team

• Practicing the pedagogy
  – Adding discussions
  – Moving around the room / changing the focus
Brainstorm

• Requirement to retain capacity: 40 seats
• Moving the instructor console to center
• Allowing for instructor circulation
• Supporting various teaching activities
• No “cheap seats”
  – See anyone / anything
  – Projected images always large enough
Round Tables!

- 2 groups/table
- 4 students/group in room
- Shared monitor for each group
Prototype

Local students:
• Half of 7’ round table
• PC
• 27” monitor with integrated webcam
• Speakers

Distant students:
• Laptops
• iPads

Instructor:
• PC & Monitor
• Wireless Document Camera

Host:
• Cameras and Mics
• PC
  – Capture Hardware
  – Adobe Connect
Round Tables
Round Tables

Video Console
48\" x 24\"

Instructor Console
72\" x 36\"

AV Closet

Storage
Brainstorm

• Extended hybrid software design process
  – Scenarios
  – Usability focus
  – Diverse participant skills
• End result... Adobe Connect
• Insufficient time, resources for custom software
Phases of Implementation
Phase 1: Renovation

- Room remodel
- Fewer chairs
- Update carpet, paint
- Changing teaching strategies (easing in)
  - Instructor as facilitator
  - Team-based activities
Phase 2: Getting Started

- Round tables and teams
- Team computers connected
- Dual projectors/whiteboards
- Schoolvue/Doceri
- Team-based learning
- All students in-room
Phase 3: Full AV System

- Crestron Digital Media
- Inputs
  - Instructor console
  - Team computers
  - Student laptops
    - 2 VGA, 1 HDMI per team
  - Capture HD
- Any input to any output
Phase 4: Adding Remote Students

- **In-room video**
  - Four HD PTZ cameras
  - HD video switcher
  - Integrate to Crestron
- **Remote student capability**
  - Adobe Connect
Next Steps?

- Herman Miller Learning Studio Research program data collection and analysis
- Heavener Hall Undergrad School of Business
- Scholarship in Teaching and Learning (encouraging faculty research)
- Share results and lessons learned
Lessons Learned

• Involve faculty
• Involve administrators
• Value of prototyping
• Software design process delayed the project
So you want to do this?

Classroom

– Beware asbestos! $6,500
– Renovations $38,000
– Whiteboards $4,000
So you want to do this?

Furniture

- 7’ round tables $1,500 each
- Chairs $165 each
- Instructor table $1,300
- Host table $600
So you want to do this?

AV

- Projectors $8,000 each
- Screens $1,200 each
- Digital Media and automation *highly variable*
So you want to do this?

Instructor HW & SW

– PC $975
– Wireless Doc Cam $700
– SchoolVue $32 plus $8/yr maintenance
– Doceri $30
– Adobe Connect $150/yr
So you want to do this?

Student PCs

– PC $975 each
– 27” monitor $325 each
– SchoolVue $32 plus $8/yr maint per PC
– AC Power
– Networking
THANK YOU