21st Century Learning Spaces
Making Your Dreams Come True

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Workshop Timeline

• **1:00** Introduction, Videos & Reflection (Curriculum, Vision of Students)
• **1:30** Introduction to Design Project MJGM, MJ
• **1:50** Tops & Flops Introduction
• **2:00** Gallery Walk/Photo examination
• **2:20** Experiential Group (25 mins)
• **2:45** Break (15 minutes)
• **3:00** Group report out
• **3:30** Prototypical Design Challenges
• **4:00** Conclusion Questions and Answers, Consultation
Videos

• What repercussions for learning space design does this video bring to mind?

• How does this change the way you look at designing classroom spaces?

Curriculum 2.0  Vision of Students Today
Connecting

• Twitter: #iel09designing

• Web: http://wallenberg.stanford.edu/conferences/
Next: Designing Learning Spaces
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Overview

• **Classroom Design:** *Incubator Classroom Project in ASC*

• **Design Goals:** *Prototype to advise future build outs by creating an experimental formal/informal learning space*
San José State University

- Public university in California, largely a commuter campus
- 32,000 students, 1800 faculty
  - Average class size: 26 students
  - Student to faculty ratio: 18:1
  - Average undergraduate age 26
- Provides more engineering, science and business graduates to Silicon Valley than any other university
- No cultural or ethnic majority
Campus “Snapshot”

- Very outdated infrastructure on 150 year old campus
- Freshman retention problematic
- Low faculty “uptake” or utilization of technology
- Traditional faculty development falls short
Problem - a new space with the opportunity to do something different

- Coming-in stakeholders had tunnel vision
- Each group wanted to recreate their silo operation in the space
- Planning committee of 17 met for one year
- No Progress
- Learning: Tried to do it on our own by brainstorming, goal setting, project design = unsuccessful
- Outcome: Hired design firm IDEO
THE POWER OF DESIGN

A tiny firm called IDEO redefined good design by creating experiences, not just products. Now it’s changing the way companies innovate.

BY BRUCE NUSSEBAUM (P. 86)
IDEO Research Methods

- IDEO team spent several days on campus observing and talking with students and faculty to better understand the University from their perspective

Interviews
- Professors
- Students
- Student Support
- Man-on-the Street

Group Discussion
Campus Tour
Fly-on-the-wall
Analogous Observation
Internal “What do you know’
The IDEO Way

RAPID PROTOTYPING

REFINING

BRAINSTORMING

IMPLEMENTATION

Shadowing

Unfocus Groups

Storytelling

Extreme User Interviews

Consumer Journey

Behavioral Mapping

Observation

Scil

Stanford Center for Innovations in Learning

Academic Success Center
San Jose State University
Results of IDEO Discovery Process: THE HUB became the Academic Success Center

- The space should be a starting point - a hub that connects the various campus resources
- Provides student with
  - Support
  - Information
  - Inspiration
  - Connection
Responses

- Want material to be **relevant** to their lives
- **Media**-rich environment
- Utilize **technology** in the teaching and learning process
- Provide places that are **flexible** (work how we do: *eat, drink, access to resources*)
Project Goals in 07 - ongoing

- **Build** learning spaces to promote student engagement
- **Create** a classroom environment that is flexible and adaptable
- Provide students and faculty with **access** to tools they require to be successful
- **Redefine** campus learning environments
- **Explore** new technologies
Academic Success Center – What is it?

• Opened Fall 2006 on the first floor of renovated library
• 10,000 square foot facility
  – 10 FYE classrooms
  – 4 student conference rooms
  – computer lab (the stage)
  – informal learning spaces (booths, mobile easy chairs w/tablets arms, standing check-in stations, bar stools and raised cocktail tables
• Incubator Classroom
• Incubator Conference Room
• University Help Desk (the HUB) open on all sides
• 6 Storefronts- Library Outpost, Writing Center, Career Center, Advising Center, Peer Mentor Center
Serenipitous Successes

- Co-Location of Instructional Designer and Instructional Support Technician with server in space separated by wall with large glass viewing window

- Stackable chairs, folding, easily movable tables

- Break Room/Storage room adjacent to IC
Next: **Navigating the Maze**
Navigating the Maze

Moving from concept to utilization in the Incubator classroom

Menko Johnson
Stanford University
You planned it...
lost sleep over it...
survived construction...

The doors are open...
People have arrived...
But is your puzzle complete?
Forces at Work

San Jose State's Incubator Classroom
Step 1: New Learning Space

- The physical surroundings are the “container” that makes it possible

- New **Space**, **Students**, **Technology**, **Teaching Methods**

- **Pedagogical Changes** create difficult challenges
Shift in **Physical Design**

- **Lecture hall**: focus on information delivery
- **Incubator Classroom**: built for interactivity
Shift in Pedagogy

Information-oriented
Faculty as Performer, 1-person “show”
Student as Observer | Passive Learning

Process/Task oriented
Faculty as Facilitator
Student as Participant | Active Learning
New Classroom Concept: collaborative environment infused with technology
Implementation
Bridging the Gap
Key Classroom Features

- **Flexible furniture** to promote interactive group work
- **3-Screen** Environment
- **Video Conferencing** System
- **Switched AV** control system
- **IP based** collaboration infrastructure
3 Screens
Video Conferencing
Laptop Integration
Flexibility
Millennial Students

- **Students are changing**, and faculty and spaces need to change too
- **Connectivity** means students are no longer a captive audience
- Tomorrow’s student lives a **technology-mediated life**

“[Millenials] rarely read newspapers — or, for that matter, books. They are impatient and goal oriented. They hate busywork, learn by doing, and are used to instant feedback. They want it now... They want flexibility — in the classroom and in their lives... To get this generation involved, you have to figure out a way to engage them and make their learning faster at the end of the day,”

The “Millennial” Faculty Member

- Required to have expertise in **Content**, **Pedagogy** and **Technology**

- Learning is a process that involves all three

TPCK Diagram from [www.tpck.org](http://www.tpck.org)
Each group needs a different type of professional development and support.

Types of Faculty

- Early Adopters: 10%
- Innovators need spark: 30%
- Faculty that need guidance: 60%
Teaching Methodologies

Large Lecture
Listen only

Small Group Interaction
Some 2-way comm.

Constructing Knowledge
Peer-centered
Change requires risk
Faculty Support

- Formal spaces are focused on Faculty development

- What support do faculty need?
  - Technology Support
  - Instructional Design support
  - Best Practices for Technology Integration
  - Exposure & Inspiration: community of users

- Faculty innovate their teaching in different ways

- Environment promotes change
Flexible Space + Supported Faculty + Innovative Technology = Meaningful, impactful learning experience
Student Impact

- **76%**: Enjoyed learning in the Incubator vs. regular classroom

- **81%**: Instant digital sharing enabled them to engage with course

- **69%**: More engaged because of the technologies present in room
Student Reactions

• “The Incubator Classroom really stimulates our initiative to learn; thank you all who made it available for us.”

• “It’s rooms like this that make being an adult learner worth the effort! Thanks”

• “Wonderful space! Allowed professor to teach more effectively and efficiently.”

• “This room not only offers the latest technology to enhance learning but it also was a great atmosphere that enabled class activities to be fun and interactive”
Thank you

Questions?
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In this “Tops & Flops” activity, you will view a collection of photographs of learning spaces taken at universities across the United States including San José State University, Stanford University, San Diego State University, and Emory.

- Choose and assume the role of a particular stakeholder perspective/persona:

- Critique each learning space photograph and identify your 2 “tops” and 2 “flops” (from your stakeholder perspective).

Be prepared to debate your position/decision in your small group. Once you have decided on the role that you want to assume for today, please write the title on your table card and use that “lens” as you view and critique the informal and formal learning space pictures.
Tops & Flops Topics

- Fixed vs. Moveable Furniture
- 1, 2 or 3 screens
- Audio/Video Webconferencing ability
- Document camera
- Fixed or Moveable Podium
- Room Control
Roles

- A tech-savvy faculty member
- A "Millennial" or "Net-Gen" student
- Faculty Developer/ Instructional Designer supporting teaching in the space
- Audio-visual/ instructional technology staff
- Facilities staff (electrician, carpenter, plumber, HVAC, etc.)
- Telecommunications staff (phone/ data)
- Academic leadership/ administration
- An AT/ IT technician who needs to purchase and support the equipment for the class

*more roles available on your workshop handout*
Tops & Flops Group Work

- Critique each learning space photograph and identify your 2 “tops” and 2 “flops” (from your stakeholder perspective).

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- Fixed vs. Moveable Furniture
- 1, 2 or 3 screens
- Audio/Video Webconferencing ability
- Document camera
- Fixed or Moveable Podium
- Room Control
15 minutes remaining
5 minutes remaining
1 minute remaining
Tops & Flips Topics

- Fixed vs. Moveable Furniture
- 1, 2 or 3 screens
- Audio/Video/Webconferencing/Second Life ability
- Fixed, Moveable or No Podium
- Room Control
Group 1:

- Flops
- Tops
- Discussion
Group 2

- Tops
- Flops
Group 3

- Tops
- Flops
Group 4

- Tops
- Flops
Student

- Mobile, multiple means of access to information, review it when I want it.
- Level of engagement: how to increase.
- Difference between #19 (less involved) & #11 (intensive collaboration/engagement). How do you promote these pedagogies in faculty? Net Gen Faculty.
- Meet students on their grounds/using “their” tools, presents challenges for utilizing technology effectively vs. distraction.
- Access for good or evil? Can they multi-task effectively? Or is it multi-distraction?
- Ramifications of mobile technology, condensation of the “personal” device—owning it means they need to be able to manage it (applications) vs. application servers with data on personal device.
How flexible can you be?

- Too much flexibility leads to doing nothing exceptionally.
- Can & how can applications become distributed instead?
- Making a lab more available to non-lab courses?
- Class-specific images on computers. Setup costs and time?
Student Success

- How is it measured
- How do you justify existence of programs/technology