

Planning Process

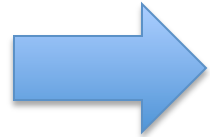
Focus Groups

- Undergrads
- Graduate Students
- Faculty

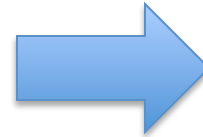
Data and Statistics

- Subject Evaluation
- OCW

Literature Review
And Environment
Scan



Scenarios



Opportunities



Experiments

Student Focus Groups: Highlights (1)

- “Chalk”
 - “By writing it down you can see [the professor’s] thought process” (as against Powerpoint)
- Educational technologies are useful if they are thoughtfully/effectively integrated in the curriculum and course delivery...
 - “focus on teaching the material. Not an emphasis on technology...”

Student Focus Groups: Highlights (2)

- *“Smaller classes that are more interactive should have less technology”*
- *“Technology is about execution”*
- *“Any [technology] that makes collaboration better”*
- Regarding experiments:
“Student memory is long, and is passed on from year to year, so even if it now ‘works’, you’re fighting a number of years of bad ‘press’ ”

Faculty Focus Groups: Highlights

"Chalk"

- A large part of an MIT education is around interactions with students
- Think about using face-to-face time with students effectively
 - Whether lectures in well configured classrooms, or small group activities
- Make it easy to do innovative things
 - Support for sustainable use, and “edge cases”

“Whatever we do, I think we should strive to really capture the imagination and excitement of our student population and the larger global community, and have some high risk high payoff ideas on the table.”

– CET Member
November 2010



Key Considerations for Initiatives

- Have *synergy* with value that both faculty and students put on *faculty/student interactions*
- Explore *prudent blending* of technology, virtual and situated learning *for transformation* and NOT move away from or substitute for MIT learning experiences
- Provide a *compelling case* for meaningful funding leading to *“irreversible”* change...
 - With the potential to be transformative of an MIT education, particularly undergraduate education
 - Lead to change that will be a huge benefit to our students

Opportunities with “High” Interest

- **Learning Styles:** Allow several different styles of learning going through MIT with deeper and more refined contact with individual students
- **Pre-preparation:** making lab time more efficient
- **More Interaction:** More personalized interaction with other students and a faculty mentor around learning objectives
- **Global Interaction:** Interactive virtual learning environment facilitating global interactions with faculty and students from different universities around the world
- **Dynamic Curriculum:** where the concept of curriculum shifts from static to dynamic, evolving and personalized built of small chunks
- **Redefine Experience:** Put independent learning and research at the center of the undergraduate experience by increasing the role of self-study and advanced standing examinations for "training" material
- **PBL with Analytics:** More project based learning mixing analytic-action-review/reflect learning modes

Educational Technology Initiatives

	Educational Value / Opportunity	Potential Value / Impact
<u>TEAL</u> (<u>8.01, 8.02</u>)	Create an active learning environment for large lecture classes	Cost effective TEAL model for other departments, Virtual TEAL
<u>iLab</u>	Expand range of experiments available for students via remote access to labs	Online lab courses, significantly more lab experiences, more sophisticated labs (utilization of high cost/rare equipment)
<u>Mathlets</u> (18.03, 8.07, 16.90)	Interactive applets to promote deeper understanding of mathematical concepts (relevance to systems behavior; transference)	Utilization by other departments, create additional Mathlets, implement concept with other content areas
<u>STAR</u> (<u>7.012, 7.03</u>)	Bring research software into the classroom bridging research and education	STAR resources enriching online courses
<u>OpenCourseWare</u>		
<u>HyperStudio</u> (Metamedia, Cultura)	Tools to support language and culture education	Flexible online collaborative environments

Educational Technology Initiatives

	Educational Value / Opportunity	Potential Value / Impact
<u>NB</u> (2.003, 24.02)	Collaboratively annotate and review documents and problem sets	Online discussion of problem sets, exams, solutions; enable interaction around OCW PDFs
<u>SpokenMedia & Greenfield</u>	Automatically transcribe lecture videos and experiments with OCW content	Enhance use of existing OCW videos and other MIT video content; explore other use of OCW materials
<u>Math CI</u>	Online community where instructors of communication-intensive courses in mathematics can share materials and actively discuss teaching ideas. of communication-intensive courses; Promote pedagogical knowledge sharing;	Being used by the entire Math Department ; Possible use at other MIT departments and beyond (w/ ongoing NSF-funded effort to develop a more generic system)
<u>Video Services Portal</u>	Info on video services for teaching, learning, research and outreach	Coordinating video services
Experimental Learning Environments	Classrooms to support faculty experiments, T/L Innovations, e.g., Project-Based Learning	Continuous curriculum improvement
Athena Clusters	Contemporary learning spaces; student community spaces	Support new collaboration forms ⁹