CONCLUDING SESSION
Opening - Tom Byers, Stanford
- World turned upside down in last few weeks
- Technology and economic recession
- Global economy under attack
- But this is what we do → we live in an entrepreneurial driven economy
- This is an opportunity not to be missed
- Inspired to be here- the Cornell mission statement sums it up well

“Short attention span” version of each of the sessions

Session A (Built to Last) - John Jaquette, Cornell
Building a Successful Program
1) Funding
2) Leadership
3) Funding
4) Academic Credibility
5) Funding
6) Funding

Figure 5 Classifying Entrepreneurship Programs (available on Cornell website)

Breakout Questions
1) How do you get culture of university to accept program?
2) Academic acceptance
3) Funding

1) Campus culture
2) Find your levers
   a. Alumni
   b. University administrators
   c. Dean/Dep’t Chair
   d. Student demand

About getting faculty engaged: adjunct and tenure track professors, how do you deal with spread of teaching?

Donor Issues
- Competing with other schools and departments
Even with full funding, outside funding is still important to establish credibility with students, faculty and outside community.

Essential to have university support in terms of resources and dollars
  - We had to prove to Cornell that they would increase the pie for the whole university

Session B (Compare and contrast teaching entrepreneurship in business schools versus engineering schools, and information science versus life science) – David Ku, Georgia Tech

What topics should one teach?
What level?
Survey or in-depth?

Foundation skills
  1) Business models
  2) Cash flow, budgeting
  3) Negotiation
  4) Intellectual property
  5) Opportunity Recognition
  6) Marketing

Cross-Disciplinary Skills
  1) Communication
  2) Negotiation
  3) Project Management
  4) Org. Behavior

Cross-Disciplinary Projects
  1) Cross-functional teams
  2) Value talents in others
  3) Small teams over years

Broad Issues
  1) Teach way of thinking
  2) Nurture entrepreneurs
  3) Survey students regarding topics
  4) Mix students
  5) Value others- team respect
  6) Decision-making

Faculty
  1) Incentives
  2) Create content together
  3) Cross-teaching
  4) Cross-listing
  5) Pay & credit

Undergrads are different from graduate students
1) UG – lots of requirements, less mature
2) Grads – flexibility, have technology

Other Questions
1) Are these subjects better taught by B-school faculty or outsiders
2) Classical or cases
3) Sufficient for cases to be from IT or Life Science

SESSION C OVERVIEW: (DISTANCE LEARNING EFFORTS: ONLINE RESOURCES FOR ENTREPRENEURSHIP EDUCATORS) Katherine Emery, Stanford University

Overview of audience experiences/interests:
Large audience with differing experience and goals:
- Managing and developing full-blown distance learning programs
- Working with hybrid of online and face-face classroom instruction, looking to either collaborate with other universities, or incorporate technology to obtain access to additional resources
- Not sure where to begin
- Developing content for online distribution and struggling with issues of IP, editing and archiving infrastructure
- Interested in just finding content: how can I find what I need, now?

Activity: map of experience vs. experience wanted
Outcomes:
- Faculty unanimously have experience with email
- There is high experience in classroom management tools, but little interest in learning more. The only tool within a management system that was of interest was polling.
- There is great interest in incorporating discussion forums, and videoconferencing
- The greatest interest, and work in development was content

Overall questions:
1. How can you achieve the same quality via distance learning as you can achieve via traditional learning?
2. Is the traditional classroom the gold standard?
3. Methods and content—do they translate online? Ie. accounting online vs. case-study face-face
4. REEE Collaboration online: http://panfora.stanford.edu/REEE
5. What tools are available? What infrastructure needs to be in place for successful use? Lessons learned?
6. Content wanted!

I. Traditional Teaching Methods: how does the experience change in an online environment?
- How do you achieve the same quality via distance learning that you can achieve via traditional learning?
II. CONTENT METHODS = DOES IT TRANSLATE ONLINE?
Certain content lends itself to online education, whereas other skills and concepts are not delivered as effectively online. *I.e. accounting skills could be taught online, whereas case studies are most effective in face-face environments*

III. ONLINE CONTENT WANTED
- marketing plans
- modules of business skills for engineers
- spreadsheets
- videos of classes
- videos of industry leaders (in USA and beyond)
- case studies with videos players
- course outlines
- simulations
- contact with content experts

*Challenges:*
- Editing material to manageable length
- Indexing the material for search
- IP issues—control of use

ONLINE CONTENT IN DEVELOPMENT!
*Dale Murphy, Georgetown:* News, articles, class readings coming soon on web site.

*Deb Streeter, Cornell:* Digital video project; editing, indexing and archiving 7 years of content online

*Drew Isaacs, MoT, UC Berkeley:* Course outlines, teaching notes, videos, courses via videoconferencing

*Neal Armstrong, UT Austin:* Videos of lectures, videos of guest speakers, simulations

*Guy Minguet, Ecole des Mines de Nantes:* Mini-Courses, field survey

*Phil Weilerstein, NCIIA:* curriculum in database format

*Tom Miller, NC State:* Streaming video of guest speakers

*Katherine Emery, STVP, Educators Corner:* Case studies, course outlines, videos, discussion forum, list of entrepreneurship education societies, best-practices for implementing technology in entrepreneurship courses (online and in traditional classrooms)

CHAT
- Is chat effective in getting student interaction?
Applications:
Synchronous chat used to match students and experts; a history of the communication is
created so that students can refer to the conversation again

Lessons Learned:
Whoever can type the fastest often dominates discussion in chats

VIDEOCONFERENCE
• How do you achieve the same quality via distance learning that you can achieve via
  traditional learning??

Applications:
• Gain access to speakers who would otherwise not be available
• Linking 5 universities from other countries in global course
• Partner with another university and run a joint speaker series, rotating weeks

Lessons learned
Success is driven by having a top technical team to run the system

DISCUSSION GROUPS
• How do you achieve the same quality via distance learning that you can achieve via
  traditional learning?
• How do you maintain engagement in a discussion online?
• How do you facilitate breakout groups, and presentations to other groups online?
• How do you manage the discussion and maintain topic?
• How do you guide a discussion, and how do you evaluate it?

POLLING TECHNOLOGIES
Application:
Use during the class time to gauge understanding
Use as an assessment tool, before and after, to demonstrate that learning has occurred

Tips:
The difference between anonymous polling and raising of hands is significant especially in
cross-cultural environments: anonymous polling can help to ease unbiased participation of
certain students

Session D (Intellectual Property and Conflict of Interest) – Liz, Penn State (John
Sandelin, Stanford did the session)

Takeaways
1) IP = patents (importance & value, highly variable → biotech and software),
copyrights, trademarks, trade secrets
2) Desirable IP:
a. IP Mining – income from license fees
b. Patent “Packages”
   i. unused patents (bundled)
   ii. valued (3 for $10M)
   iii. donate to universities for tax write-offs
3) Hindrance IP:
   a. Costs of IP
      i. Patenting
      ii. Litigation
      iii. Licensing
4) IP office → VC similarities
   a. Value/evaluate proposal
   b. Few accepted and supported
   c. Time is critical: delays kill projects
5) Conflict of interest
   a. Manage it, don’t try to avoid it
   b. DISCLOSURE is the key- reveal all involvement in for-profit activities
6) Thorny Questions (5 questions posed, only 3 addressed)
   a. Profs/directors can be on boards of venture funds if fund is not in prof’s expertise area
   b. Profs/directors can be on boards of firms created by former students
   c. Profs/directors can have financial stakes in firms created by former students

Session E (Incubators) – Mark Rice, Babson

Groups discussed whether to incubate or not to incubate? No one said don’t do it, but raised the benefits and challenges.

Benefits
1) Educational opportunities for students
2) Research opportunities for faculty
3) Especially for communities without strong entrepreneurship roots
4) Technology transfer
5) Catalyzing network (drawing entrepreneurs back)
6) Opportunity for financial benefit
   ▪ Equity positions
   ▪ Alumni donation

Challenges
1) Business models – old-subsidy, new-generator
2) Distraction – faculty only have so many hours
3) Cultural conflicts- jealousy, etc.
4) Conflict of interests- licensing for university

Critical Issues
1) Motivation – financial or other (educational opportunities, contribution to community, etc.)
2) Return on investment – financial and a lot of other measures
   \[ RI = \frac{k}{TC} \] where \( R \) = rate of invention and \( TC \) = thickness of carpet
3) Virtual incubators
4) Main Question – What are you doing and why?

Session F (Research Efforts on Technology Entrepreneurship) – Marie Thursby, Purdue

1) What is it the study of?
   a. IP
   b. Growth
   c. Org. Forms
   d. Scholarly examination of how, by whom, with what technology opportunities drive competitive advantage
   e. Process by which ideas are transferred to commercial reality

2) Is it distinct from classic entrepreneurship?
   a. Yes and no
   b. Disruptive technologies
   c. Business leading customers
   d. What would you not cover in classic, but would for engineers?
      i. Marketing – how can people tell you about preferences for something that doesn’t exist?
      ii. Finance – how to value embryonic technologies?
   e. Process before company starts?

3) How to disseminate?
   a. Top journals in economics, sociology, psychology, and management
   b. Credit for promotion?
      i. Less credit for Journal of Business Venturing
      ii. Need a new journal for engineers to publish in
      iii. Problem with credit, viewed as soft for engineers
   c. Books, conferences
      i. Senior faculty don’t need to worry

4) Can we sustain education without IT?
   a. Credibility
   b. Body of knowledge
   c. Future professors

Wrap-up – Tom Byers, Stanford

REEE Objectives

- Create a forum for faculty to discuss the strategic and organizational issues of educating engineers and other about high-tech entrepreneurship
- Share experiences and plans for teaching, research and outreach in a relaxed and productive setting
- Establish and strengthen relationships that often lead to future interactions and opportunities
• Formulate ideas for future gatherings

Survey Questions
• Length of event
  o Half said longer and half said about right
  o What about those who left before the end?
• Size of event
  o Most said about right, but maybe breakout sessions a little longer and smaller
  o Is the event going to keep growing each year?
  o Some would like subject groups (to talk about books, examples of intrapreneurship, etc.)
  o Some use conference as motivation to do background work to talk to each other
  o There is a need for junior and senior people to get together and also as groups themselves
• Themes arise each year- maybe try to cascade them from year to year to make sure we cover new material/ideas.

Final Words – Tina Seelig, Stanford

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Thanks again, and see you next year.

Notes taken by Jeff Rosenberger, Stanford University.