Introducing the Berkeley Method of Entrepreneurship: A Game-Based Teaching Approach

Ikhlaq Sidhu, Ken Singer, UC Berkeley
Charlotta Johnsson, Lund University, Sweden
Mari Suoranta, University of Jyväskyla, Finland
Entrepreneurship & Technology:
E-Centers are now mainstream institutions at leading universities:

MIT, Stanford, Berkeley, Illinois, Michigan, Many others..
Globally: Tsinghua, IIT, Cambridge, ETH, Many others..

Berkeley Engineering’s S/CET is now in its 10 year
Center for Entrepreneurship & Technology (CET)
Academic Program Metrics

Est. 2005:
• Curriculum: 8-10 courses per semester
• Approx. 1000 students annually
• 100+ technical/experiential projects per year + Venture Lab
• 4,000+ Alumni, 10+ startups spin out of CET programs

Programs:
• Undergraduate: Entrepreneurship & Technology
• (New) Graduate; Management of Technology Innovation. Research driven commercialization and industry engagement for Ph.D
• Executive/Professional: ELPP with 20 Firms: Google, Samsung, Yahoo, Juniper, AMAT, Qualcomm, NetApp, .. 2 offerings per year
• 25+ Global Partners: Global Venture Lab (GVL) Partner Institutions
Connor Landgraf
Eko Devices

Eko provides physicians with certainty when diagnosing heart conditions. We’ve built one of the world’s first stethoscopes that can automatically detect heart murmurs.

Example CET Student Ventures

Philip Lee, Paul Hung
CellASIC

- Secured over US$5M SBIR grant funding from National Institute of Health (NIH)
- Commercialized microfluidic analyzers
- Grew self-sustaining

Jessica Mah
inDinero

inDinero helps thousands of businesses compete in the United States with a mission to fund them as they grow.

Christine Ho
Imprint Energy

- Imprint Energy is Named in the 2014 Global Cleantech 100 (October 6, 2014)

Harshil Goel, Jordan Greene, Zachary Hargreaves
VIRES AERO

"This it the first true innovation in aviation since the jet engine.”
- Tim Draper, DFJ

Andrew Laffoon and Aryk Grosz
Mixbook

- Country: United States
- CEO: Andrew Laffoon
- Website: www.mixbook.com
- Employees: 60
- Founders: Andrew Laffoon, Aryk Grosz
- Headquarters: Palo Alto, California
In reality:

UC Berkeley students do pursue careers in “New Ventures” and effectively in New Economy (25% US GDP)

Some misconceptions about learning Technology Entrepreneurship
Entrepreneurship Misconception #1:

Reality:
- Not Linear
- Complex and People Oriented
- Many unwritten rules
- Not enough data to make a plan

Idea People
B Plan and Validation
Raise Funds
Build Product
Sell and Scale
Entrepreneurship Misconception #2: It cannot be taught prescriptively like other subjects.
And, we can not simply “Test for Retention”
How we teach Technology Entrepreneurship
Inductive Learning

WHY

The Result
The Berkeley Method focuses on creating environment for self learning:

1. You can learn it only while you are trying to do it.

2. Instructor hosts the environment for students to interact directly with the problem. Students make their own decisions and learn inductively.

3. Behavior training – through games and exercises

4. De-emphasis of “grades” and refocus on “goals”

5. Leverage real-world competition
Figure 1: An interpretation of the didactic triangle showing a shift from the teacher-student-transfer focus (left) to the student-subject-relation focus (right).
Challenge Based Models
Innovation, New Ventures, and Translational Research

Source

Externally Set

Societal

Need

Self Originated

Industry or Market

Thailand Neonatal Incubator

Big Data Challenge

Projects in Clean Energy, Education, Poverty Alleviation, Transportation …

Mobile Applications Course
Two Cities in USA

- Chicago
- San Diego

Concept: What is the role of entrepreneurial culture?

Ref: Huang, Rainforest
1. Agree that you will **get help** from others, and **pay it forward**.

2. **Story Telling**
   
   “Realize a something new by **induction**, and then **learn to communicate the story with a new language**.”

3. Trust:  “If you can’t tell: Learn to trust others without expecting anything in return.”

4. Seek Fairness: “Make deals that seek fairness (in positive sum transactions), not advantage (in zero sum transactions).”
5. Plan to Fail / Resilience: “It is necessary to be Wrong sometimes. Plan to Experiment. Plan to Fail. (Fail Fast) Analyze, Adapt and repeat. The smarter you think you are, the harder this is going to be.”

6. Diversify your networks. Connect to people you would not normally, then go and listen. Open Up. And connect them to others.

7. Good Enough – Resource Allocation. “Perfection is no good but good enough is perfect.”

8. Collaboration : “Individual vs team and competitors vs partners”
Cultural Behaviors for Entrepreneurs

9. **Believe:** "Believe that you can change the world."

10. **Be a role model** for other entrepreneurs and innovators.

*If everyone in your community acts like this, you will have a vibrant entrepreneurial culture.*
The Berkeley Method: A holistic approach to entrepreneurship content

**Frameworks:** opportunity recognition, pivots, MVP, raising funds, tools, frameworks

**Networks:** ability to connect, facilities, services, rules of engagement and mentors

**Mindset:** Trusting, risk assessment, communication, overcoming social barriers, rejection therapy, fail training

Diagram:

- **Frameworks & Theory**
- **Mindset**
- **Network and Environment**
Creating an Innovative Culture

- Inductive Learning
- Learn While Doing + Cases Studies
- Diversity = Value
- Industry and Social Challenges
- Cultural Rules for Entrepreneurs
- Testing with Real World Goals
- Games + Exercises
- Students interact directly with problems
Thank you & Discussion