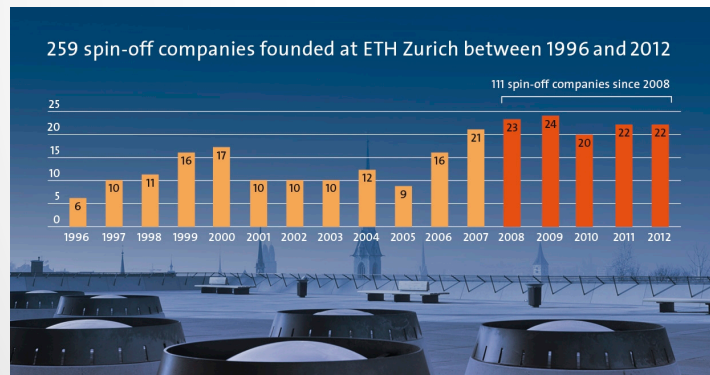# Introducing the Berkeley Method of Entrepreneurship:
A Game-Based Teaching Approach

Ikhlaq Sidhu, Ken Singer, UC Berkeley
Charlotta Johnsson, Lund University, Sweden
Mari Suoranta, University of Jyvaskyla, 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..

TECHNOLOGY ENTREPRENEUR CENTER
ENGINEERING AT ILLINOIS

STANFORD TECHNOLOGY VENTURES PROGRAM

MIT Entrepreneurship CENTER

259 spin-off companies founded at ETH Zurich between 1996 and 2012

111 spin-off companies since 2008

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
6	10	11	16	17	10	10	10	12	9	16	21	23	24	20	22	22

清华经管学院
Tsinghua SEM
华-伯克利全球技术创业

高建 教授致辞

ecell iit bombay

CAMBRIDGE UNIVERSITY entrepreneurs
VISION TO SUCCEED

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

Eko Dev

Eko fits almost any analog stethoscope.

HUB VENTURES   SAP
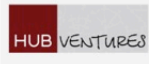
CET
Center for Entrepreneurship & Technology   Founder.org

CET | Berkeley   9

Philip Lee, Paul Hung
CellASIC

- Secured over US$5M SBIR grant funding from National Institute of Health (NIH)
- Commercialized microf... analys...
- Grew ... self-su...

Jessica Mah
inDinero

...nDinero ...s thousands of ...businesses ...he United ...with a mission to ...them as they

inDinero

$8,350.12

...a Mah, Co-
...r / CEO

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

CET | Berkeley   8

...drew Laffoon and Aryk Grosz
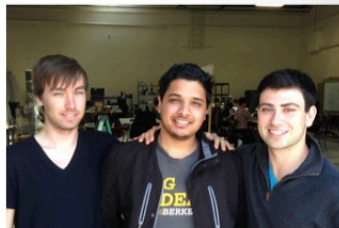## Mixbook

Mixbook

- ... Retailing
- ...: 2006
- Country: United States
- CEO: Andrew Laffoon
- Website: www.mixbook.com
- Employees: 60
- Founders: Andrew Laffoon, Aryk Grosz
- Headquarters: Palo Alto, California

CET | Berkeley   38

50 Top Colleges Creating VC-Backed Entrepreneurs

CAL is an E-Leader

In reality:

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

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Sutardja Center
for Entrepreneurship & Technology
Berkeley Engineering

		TOP 50 UNDERGRADUATE	entrepreneur count	company count	capital raised ($M)
1		Stanford	378	309	$3,519
2		UC Berkeley	336	284	$2,412
3		MIT	300	250	$2,417
4		Indian Institute of Technology	264	205	$3,150
5		Harvard	253	229	$3,235
6		University of Pennsylvania	244	221	$2,194
7		Cornell	212	190	$1,971
8		University of Michigan	176	158	$1,159
9		Tel Aviv University	169	141	$1,253
10		University of Texas	150	137	$1,298

DATA: PITCHBOOK

Jan 4, 2015 –A ranking of the 50 top colleges creating VC-backed entrepreneurs placed UC Berkeley 2nd in the world. Ronald Barba for the National Edition

Berkeley
UNIVERSITY OF CALIFORNIA

Some misconceptions about learning
Technology Entrepreneurship

Entrepreneurship Misconception #1:
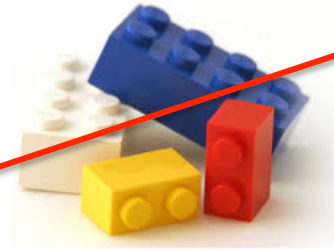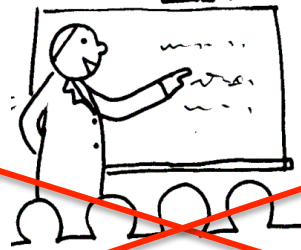
| Idea People | B Plan and Validation | Raise Funds | Build Product | Sell and Scale |

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

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Entrepreneurship Misconception #2:

It can not be **taught prescriptively** like other subjects.

And, we can not simply "Test for Retention"

How we teach
Technology Entrepreneurship

The Berkeley Method focuses on creating environment for <u>self learning</u>:

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. <u>Behavior</u> training – through games and exercises

4. De-emphasis of "grades" and refocus on "goals"
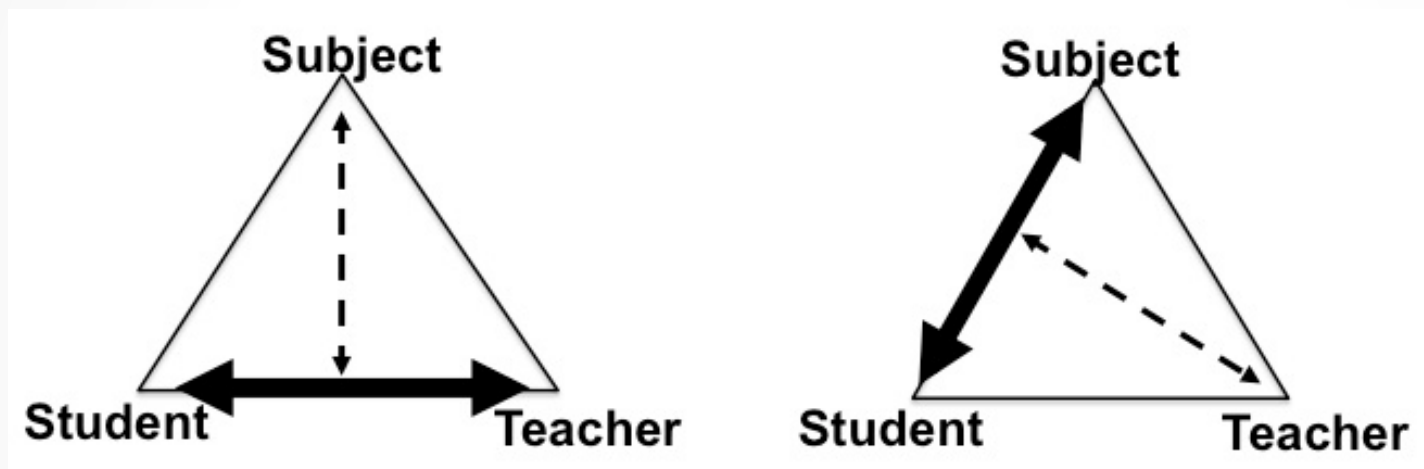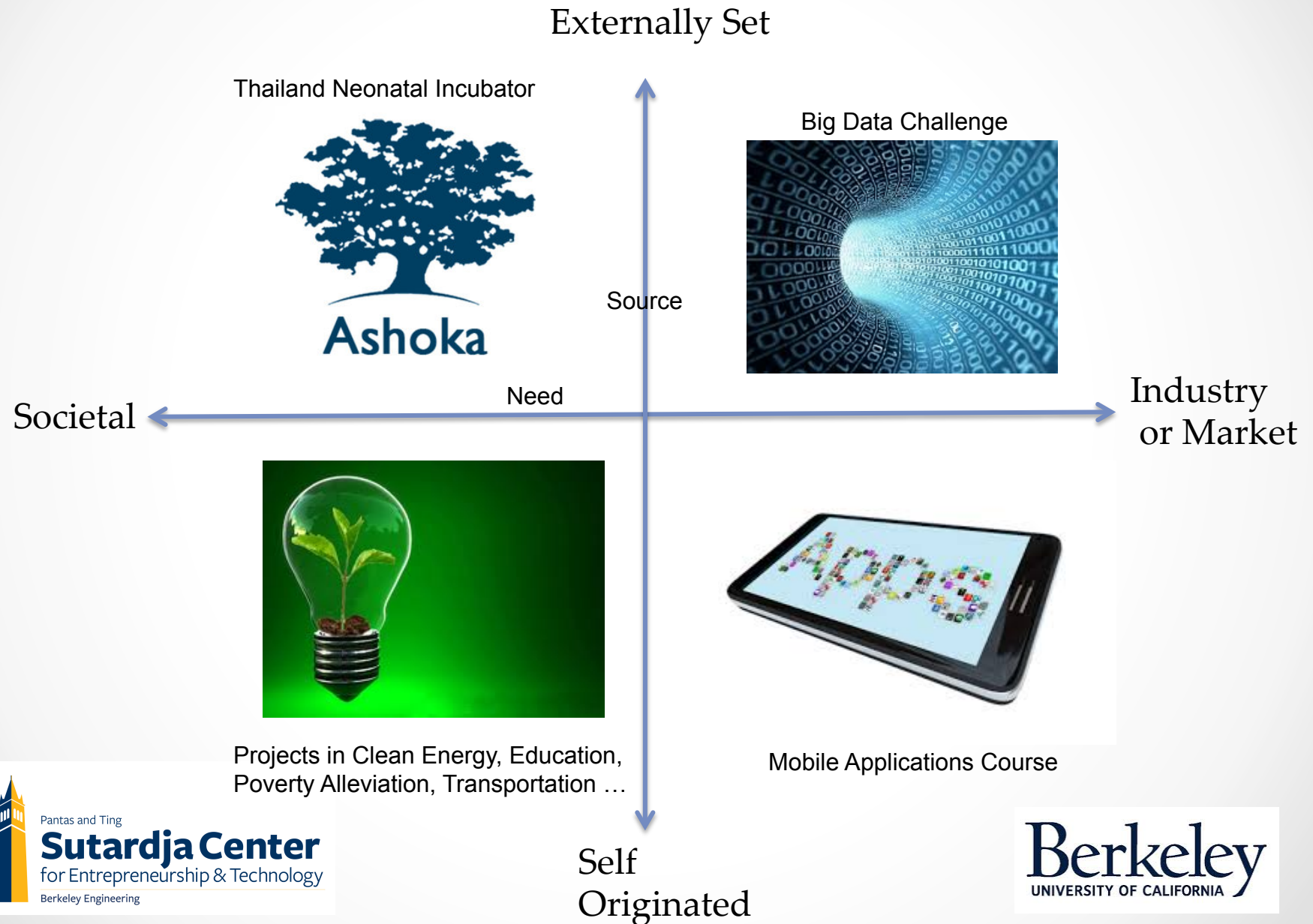
5. Leverage real-world competition

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

Externally Set

Thailand Neonatal Incubator

Big Data Challenge

Source

Societal ← Need → **Industry or Market**

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

Mobile Applications Course

Self Originated

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Two Cities in USA

- Chicago

- San Diego

Concept: What is the role
of entrepreneurial culture?

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Berkeley Engineering

Ref: Huang, Rainforest

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Cultural Behaviors for Entrepreneurs

|	
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."

BUILD YOUR RESILIENCE

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.

good enough is the new perfection
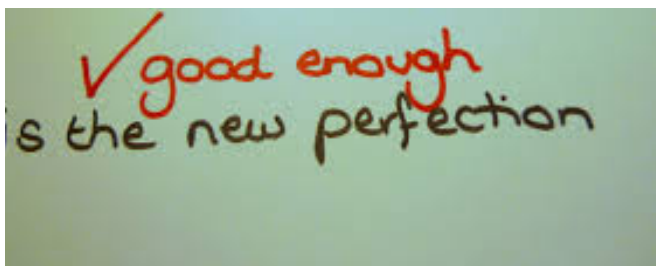
7. Good Enough – Resource Allocation. "Perfection is no good but good enough is perfect."

8. Collaboration : "Individual vs team and competitors vs partners"

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

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

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

Frameworks & Theory

Mindset

Network and Environment

Creating an Innovative Culture

Inductive Learning

Learn While Doing + Cases Studies

Diversity = Value

Industry and Social Challenges

Testing with Real World Goals

Cultural Rules for Entrepreneurs

Games + Exercises

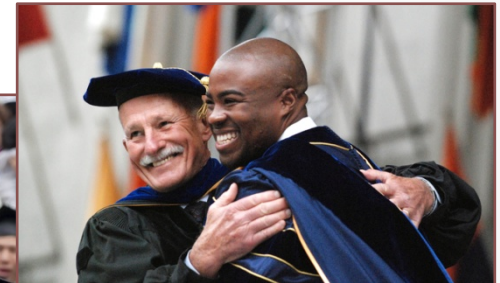**Students interact directly with problems**

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Thank you & Discussion