Fostering Entrepreneur and Constructing Innovation Ecosystem through “Mono/Koto-Tsukuri” by teams beyond silos

Team-Oriented Cross Border Entrepreneur Cultivating (CBEC) Program

Junichi Iijima
Director of CBEC, Tokyo Institute of Technology

September 13, 2016
Objective of **EDGE**

To develop and realize Educational Curriculum based on PBL (Project-Based Learning) following to **Design Thinking** in order to foster two kinds of human resources;

1) Venture creators,
2) Serial innovators.
**EDGE**
Enhancing Development of Global Entrepreneur program

**CBEC**
Cross Border Entrepreneur Cultivating program

*2001: A Space Odyssey* by Stanley Kubrick

http://video.search.yahoo.co.jp/search?ei=UTF-8&p=HAL%202001%E5%B9%B4%E5%AE%87%E5%AE%87%E5%AE%99%E3%81%AE%E6%97%85
http://image.search.yahoo.co.jp/search?rkf=2&ei=UTF-8&gdr=1&p=HAL+2001%E5%B9%B4#mode%3Ddetail%26index%3D15%26st%3D400
Dispatch for SLUSH in Helsinki

Entrepreneur-oriented Business Administration

Entrepreneurship Theory

Q1: Design Thinking Fundamentals
Q2: Engineering Design Project A
Q3: Engineering Design Project B
Q4: Engineering Design Project C

MELTING POT

Startup Weekend Tokyo Tech

Master Program 1 year
Architecture of CBEC program

Business Administration

Entrepreneurship

Exit

Design Thinking

Entrance
Entrance
Design Thinking Pillar

★ Innovation by three stage rocket

- First stage: Design Thinking Fundamentals
  Several phases in one topic

- Second stage: Engineering Design Project A
  Common topic

- Third stage: Engineering Design Project B+C
  Different topics

★ Collaboration:
Large companies (for external funding),
O-ota city (manufacturing), IT industries,
Tokyo University of the Arts, Musashino University of the Arts

B: UNSW
C: SLUSH, Aalto U.

Uppsala U.

NTU
Engineering Design Project A, 2015

Task:
"Redesign experience on Vending Machines for Creative workers"

Schedule:
• June 13 (Sat) Workshop
• June 20(Sat) 〜 July 11(Sat) Prototyping (3 cycles)
• July 25(Sat) Final presentation

Participants:
• Executives 4, Professionals from SME 7, Art University 6, TokyoTech 17
• Each team has 4〜5 members, totally 7 teams
• Involving Students from Art University has a great effect. Communication with pictures, perfect prototypes
  not quick & dirty but quick & beauty

Example (as of the first cycle):
Vending machine of dried fish to be eaten after a week. People can enjoy the visible process of aging, but should wait for a week.
Engineering Design Project A, 2016

“Redesign user experience in Design Studio”

Ms. Alice Lundin from Uppsala University

the winning team
ESD Project B,C

- 現在、EデザインプロジェクトBが進行中。引き続き、EデザインプロジェクトCを開講。
- 東京芸大2名、ムサビ4名をRA雇用および東京芸大とムサビから非常勤講師1名ずつ参加。

<table>
<thead>
<tr>
<th>プロジェクト課題名</th>
<th>チーム名とメンバー構成</th>
</tr>
</thead>
<tbody>
<tr>
<td>災害やネットワークの故障によりスマホやPCが使えなくなった状況での安心体験をデザインせよ</td>
<td>スシカレー&lt;br&gt;5名：大手企業、武蔵野美大2、大田区企業、東工大（機械系）</td>
</tr>
<tr>
<td>人工知能の急激な進化によって職を奪われる人々の再就職体験をデザインせよ</td>
<td>HAL&lt;br&gt;6名：大手企業、武蔵野美大、大田区企業、東工大3（機械系2、情報系1）</td>
</tr>
<tr>
<td>非日本語圏における日常食としての日本食体験を再デザインせよ</td>
<td>ニシキゴシキ&lt;br&gt;6名：大手企業、東京芸大、大田区企業2、東工大2（機械系1、情報系1）</td>
</tr>
<tr>
<td>来たる超高齢化時代のための豊かで健やかな「働き方」をデザインせよ</td>
<td>JPA&lt;br&gt;5名：大手企業1、武蔵野美大、大田区企業、東工大2（機械系、経営工学）</td>
</tr>
<tr>
<td>狭小スペースにおいて人と機械が協調する搬送体験を再デザインせよ</td>
<td>むさくるしい男達が女性の幸せを考える会（むさおとめ）&lt;br&gt;6名：東京芸大、大田区企業、東工大4（機械系4）</td>
</tr>
</tbody>
</table>
Engineering Design Project B+C, 2015

“Design a safety experience in the case when neither smartphones nor PCs can be used by natural disaster.” ➔ ColorNavi (Color Navigation System)
There is a possibility of joining ME310 or SUGAR. Each number is in the ideal case.
Is Diversity all?

Send a selected team for Start-up Event like SLUSH

**Entrepreneurship Theory**

**Engineering Design Project A**

**Engineering Design Project B**

**Engineering Design Project C**

**Design Thinking Fundamentals**

**Consultation by IDEO**

**MELTING POT**

**MBA courses**
From the viewpoint of user-orientation based on Design Thinking, we foster students who can utilize Technology by taking advantage of the Japanese spirit of hospitality of “Omotenashi” and the Japanese sense of beauty of “Makunouchi-Bento” to realize ideas in the market with collaborating people in his/her team.

Utilization of seeds in our University, “Mono-Tsukuri” (Hardware), “Mono-Tsukuri” (Software), “Koto-Tsukuri” (Service), … Among those themes, there are some topics proposed by industries.

Send a selected team for Start-up Event like SLUSH
The pillar is the field to learn common language in CBEC.

The following seven courses on Entrepreneur-oriented Business Administration are provided:

1. Leadership, 2. Marketing Science, 3. Finance,
7. Business Law
Entrepreneurship Theory Pillar

Collaboration with Martin Trust Center for MIT Entrepreneurship.

Mr. Bill Aulet
Managing Director of Martin Trust Center for MIT Entrepreneurship
Final presentation as an open competition in TokyoTech
The winning team will be dispatched for SLUSH and Aalto University in November.
The winning team in the competition was …

Indispensable process in manufacturing

Cheap, efficient and smooth for every metals.

Burr removing machine
Five Characteristics

1. In **Engineering Design Project**, each team is asked to design not a pie in the sky but something realizable. Most of teams provide movable prototypes.

2. Solution development is conducted by teams satisfying the melting pot condition. That is, each team consists of people from large industries, SMEs of O-ota city, University of Arts, foreign students, ...

3. Design activities are facilitated by professors and doctors with high research ability and **passion**.

4. **Entrepreneur-oriented business administration courses** including *Sales strategy and organization*, *Product Design and Development* are provided by adjunct professors “on the cutting edge” recruited in overall Japan.

5. From the viewpoint that Entrepreneur is not a talent but those that can be nurturing, **Entrepreneurship Theory** is taught under collaboration with MIT.
Overseas Field Survey

PCS is the key success factor; ①Place, ②Coffee, and ③Support from the University.

http://design-develop.net/design/freemarker-worldmap...
Join CBEC for Innovation
- Change the World from O-okayama -

CONTACT:
Global Entrepreneur Office, I6-30, TokyoTech,
2-12-10, O-okayama, Meguro-ku, Tokyo, 152-8552,
JAPAN

📞 03(5734)3475
Fax 03(5734)3475
Email info@cbec.titech.ac.jp
Office #219, Ishikawadai-6

http://www.eng.titech.ac.jp/~cbe/