探求の先を追求する非正式学習のための
教育技術
EXPLORING THE FRONTIER OF INFORMAL OPEN LEARNING (IOL)

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Objectives

• To serve as a point of discussion about the next frontier of learning and education

• To offer a suggestion for an alternative learning approach
Traditional Education System

- Structured curriculum
- Standardised examinations
- Emphasise on academic achievement ("elitist" model)
- Produced in "batches"

The image was retrieved from http://www.exposingtruth.com/wp-content/uploads/2014/01/producinggraduates.png
Critics of Education System

Ken Robinson (Author, educationist):
- The system suppress diversity and creativity.
- Learning should be personalised, and not standardised.

Joichi Ito (Director, MIT Media Lab):
- Education is what people do to you and learning is what you do to yourself.
- People are more motivated to learn independently.

The image was retrieved from http://datafirstintelligence.com/wp-content/uploads/2015/09/TED-logo.png
Open Distance Learning (ODL)

- A breath of fresh air ..
- Break away from the constrains of physical classrooms
- Conduct class to large student population
- Reduced the dependency of students on teachers
- Retained characteristics:
  - Curriculum structure
  - Standardised examination

The image was retrieved from http://distance-educator.com/wp-content/uploads/MortarBoardComputers_01.jpeg
Alternative from the classroom: Problem Based Learning (PBL)

- Focus is shifted from the learning content to the problem to be solved
- Learners takes control of their own learning
- PBL approach helps to break away from rigid curriculum structures

Tan, O.S. (2003). Problem-based Learning Innovation
Alternative from the Community: Maker Movement

- Extended from the extension of the Do-It-Yourself (DIY) culture

- Constructivism - emphasises on learning-through-doing

- Technology applications: product design, fabrication, calligraphy, movie making and software programming

The image was retrieved from http://www.enterrasolutions.com/media/The-Maker-Movement.png
Why Informer Learners?

- Moore (1973): more informal learners than formally registered students
- “Invisible” learners who have left formal education but continue to learn for career or leisure
- Self-directed in determining what and how they learn.
Informal Open Learning (IOL)

- No fixed syllabus
- No examination
- No certificate
- Lifelong
- Focus on value

The image was retrieved from
Knowledge Management Approach

- Managing informal learning is difficult - it does not have fixed curriculum.

- There is a fixed pattern in the learning process

- Learning process involves flow of knowledge
Knowledge Management Approach

• Nonaka and Takeuchi (1999), SECI model

• The conversions of “tacit” and “explicit” knowledge across four quadrants

• Tacit knowledge - in the brains

• Explicit knowledge - codified and recorded
Value Creation

- Solve a problem
- Create a product
- Make life better

SECI Plain
Environment for IOL

• Socialising: Space for meeting and discussion
• Externalising: Platform for sharing the recorded activities
• Combining: Facilities for previous work references and publications
• Internalising: Online learning contents searchable by functional topics
Possible IOL Framework

- Create an environment that encourages self directed learning

<table>
<thead>
<tr>
<th>Socialising</th>
<th>Idea generation</th>
<th>Finding members</th>
<th>Forming group</th>
<th>Carry out project</th>
<th>Group discussion</th>
<th>Complete prototype</th>
<th>External review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Externalising</td>
<td>Writing down ideas</td>
<td>Writing down proposal</td>
<td>Project plan</td>
<td>Record activities</td>
<td>Record activities</td>
<td>Record activities</td>
<td>Complete portfolio</td>
</tr>
<tr>
<td>Combining</td>
<td>Compiling similar ideas</td>
<td>Research</td>
<td>Research review</td>
<td>Prepare reports</td>
<td>Prepare reports</td>
<td>Final report</td>
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<tr>
<td>Internalising</td>
<td>Reading</td>
<td>Learning</td>
<td>Understand tasks</td>
<td>Self learning</td>
<td>Self learning</td>
<td>Self review</td>
<td></td>
</tr>
</tbody>
</table>

Increase in Values
Alternative to Exam & Certificate: Show your skills online

- The results of learning is reflected directly from the values of work (Flores, 2014)

- E-portfolio can serve a few purposes,
  - to validate the work
  - to advertise the capabilities of learners
  - to be used as record knowledge so that others can learn from the experience

The image was retrieved from http://www.webaxis.info/assets/img/Portfolio.png
Target Shift in Learning

• Formal education:
  – Standardised
  – Just-in-case
  – Pass examination
  – Qualification and assessment

• Informal learning:
  – Diversified
  – Just-in-time
  – Create value
  – Skill and capability

The image was retrieved from http://wsdwheel.com/wp-content/uploads/2014/04/just-in-time-.png
Bridge the Academia-Industry Gap

- Academic research are far ahead in time to be relevant to the industry
- Researchers who seek publication avoid “industrial relevant” projects
- The projects for informal learning should fill the gap in terms of industrial relevancy
- Project value should directly meet industry needs

The image was retrieved from http://m.c.lnkd.licdn.com/mpr/mpr/p/3/005/074/0f3/2ee21f7.jpg
Almost all countries in the world are looking for education reform.

Usually education reforms started from lower education.

With informal learning, reform can also start from another end - the pool of experienced learners.

Usual reform direction: Primary → Secondary → Tertiary → Adult informer learners.

We start from here.
Benefits for School Dropouts

- More drop out of schools due to the increase in education costs or lack of interests
- Most of school dropouts have little chance to succeed (Carlozo, 2012)
- IOL can play the role in guiding dropouts to work on their interests and redevelop skills

The image was retrieved from http://preventhighschooldropouts.weebly.com/uploads/1/9/7/8/19787253/1771728_orig.jpg
Benefits for Sharing Economy and Aging Society

• Informal learners present themselves as service providers (as employee or self-employed) through the skills demonstrated

• Retired personnel can be financially independent and continue contributing their skills or re-skill through sharing economy (Burns, 2013)

The image was retrieved from http://cdn.playbuzz.com/cdn/8c3d14b2-7e10-4df0-beae-361ab5c0e768/30ed3907-f061-45ea-8249-732c56696555.jpg
In the Nutshell

Informal Learning

Value creation

Sharing

→ Employment

→ Self employ
Possible Future Directions

• Improve usage of Self Directed and Problem Based Learning in the current system

• Introduce IOL in corporate training

• IOL in independent projects or Makers’ projects
Conclusion

• The quest for academic excellence must continue in traditional education.
• IOL can bridge between the industry and academic needs
• IOL offers an alternative path for lifelong learners to take control of their learning