Disruptive Innovation in Dental Education

TPgOMWG

July 28, 2017
Articles using “Disruptive innovation” or “Disruptive technology”

SOURCE: FACTIVA ANALYSIS OF A WIDE VARIETY OF ENGLISH-LANGUAGE PUBLICATIONS

Christensen et al. 2015
Definitions

**Invention**
Devising and producing by independent investigation, experimentation, and mental activity something that is useful and that was not previously known or existing

**Innovation**
Complex process of introducing novel ideas into use and includes entrepreneurship as an integral part.

Committee for Study of Innovation 2003; https://www.slideshare.net/pln9/innovation-vs-invention
Diffusion of Innovation

The Chasm

Nielson 2014, adopted from Moore 1999
Sustaining vs. Disruptive Innovation

Make products or services more affordable and accessible

Christensen et al. 2015
Apprenticeship Model
## Disrupter 50 Companies

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Uber</td>
<td>A $66 billion on-demand ride</td>
</tr>
<tr>
<td>2</td>
<td>Airbnb</td>
<td>There's no place like (someone else's) home</td>
</tr>
<tr>
<td>3</td>
<td>Ezetap</td>
<td>Leading India's cashless revolution</td>
</tr>
<tr>
<td>4</td>
<td>Palantir Technologies</td>
<td>Big data; bigger secrets</td>
</tr>
<tr>
<td>5</td>
<td>23andMe</td>
<td>Decoding your ancestry</td>
</tr>
<tr>
<td>6</td>
<td>Bloom Energy</td>
<td>Live off the grid; keep the lights on</td>
</tr>
<tr>
<td>7</td>
<td>Ginkgo Bioworks</td>
<td>Custom organism design</td>
</tr>
<tr>
<td>8</td>
<td>Klarna</td>
<td>No cart left behind</td>
</tr>
<tr>
<td>9</td>
<td>Blippar</td>
<td>Change your reality</td>
</tr>
<tr>
<td>10</td>
<td>Coursera</td>
<td>Now we can all get in to Princeton</td>
</tr>
</tbody>
</table>

Global Market Share: 50%
Enrolled Students

- 2,000
- 4,000
- 6,000
- 8,000
- 10,000
- 12,000
- 14,000


UG RPG TPG MOOC

24x increase <10% cost per CU
Dim Sum Model
MOOC Portfolio

- Implant Dentistry
- Materials in Oral Health
- Restorative Dentistry
- Periodontontology

Implant Dentistry MOOC @ HKU

Materials in Oral Health
Massive Open Online Course

Comence Date: November 2016
Clinical Skills eTraining

- MSc
- Residency
- MicroMaster
- MOOC

Implant Dentistry

Discipline specific Self-directed skill training
Clinical Skills eTraining

- MSc
- Residency
- MicroMaster
- MOOC

Interdisciplinary
Supervised skill training
Case presentations

Discipline specific
Self-directed skill training

- Implant Dentistry
- Materials in Oral Health
- Restorative Dentistry
- Endodontology
- Oral and Maxillofacial Imaging
- Periodontology
- Materials in Oral Health
- Restorative Dentistry
- Endodontology
- Oral and Maxillofacial Imaging
- Periodontology
Clinical Skills eTraining

- MOOC
  - Discipline specific
  - Self-directed skill training
- MicroMaster
  - Supervised skill training
  - Peer review
- Residency
  - Interdisciplinary
- MSc

Sirona Dental Systems

3M
Clinical Skills eTraining

- MOOC
  - Discipline specific
  - Self-directed skill training
- MicroMaster
  - Interdisciplinary supervised skill training
  - Peer review
- Residency
  - Clinical observation
  - Expert review
- MSc
  - Clinical simulation
  - MOOG 2016
  - KaVo Dental GmbH 2017
Clinical Skills eTraining

MOOC

MOOC

MicroMaster

Residency

MSc

Thesis
Case journal

Clinical simulation
Clinical observation
Expert review
Interdisciplinary Supervised skill training Peer review

Discipline specific Self-directed skill training
Internationalisation
The best way to predict the future is to invent it

Alan Kay