Blazing the open education trail

Assignment March – October 2017: Ways to accelerate Open & Connected Higher Education.

There is a lot happening in H.E. & you need to look at O.E. in the context of innovation in Higher Education
**Intake in BSc & MSc Computer Science TUD**

- **all intake BSc**
- **all intake MSc**

<table>
<thead>
<tr>
<th>Year</th>
<th>BSc Intake</th>
<th>MSc Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>2013</td>
<td>150</td>
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<td>400</td>
</tr>
<tr>
<td>2016</td>
<td>450</td>
<td>500</td>
</tr>
<tr>
<td>2017</td>
<td>550</td>
<td>600</td>
</tr>
</tbody>
</table>

**Some context**

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**Waarom ik ontslag neem bij de universiteit**

De universiteit gaat aan - Heb denken om ooit echte universiteit docent Thuis te zijn - maakt dat bij weten we.

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**Nederlandse hoorcolleges zijn te duur, dus dan maar in het Engels**

*Onderwijsblog* Waarom die waarschijnlijk een symptoom van de problemen op universiteiten. Het echte probleem is vermarkting, schrijf universitair docent Thuis Lijster.

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**Cadeautje voor Europa**

*Hoger onderwijs* Steeds meer Engels. Nederlandse studenten op zoek naar een plek op universiteit die de kiesmaak van Engels. Wat doen we dan als ons madam de kosten en harten van internationale studenten in de getuigen in een euro's?

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**Opinie: Nederlandse student betaalt voor buitenlandse student (ten koste van eigen plek)**
TUDelft leadership in online education

1,775,000 enrolments in 4 years
over 100 online courses
leading university (#5) on the edX platform (Harvard & MIT)
first teacher of the year of edX platform
1500 paid enrolments in prof.education
online & campus education are connected

Blended learning cycle

Prelecture videos
Prelecture exercises
Slidepacks
FeedbackFruits quiz
Context questions

pedagogy is becoming a hard (big-data) science ! ?

Results

MyMathLab

Open Up Math Project

4TU Approach

Update: June 26, 2017

Flagship Project
Open and connected higher education program

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• Information is created at an **exponential rate** every day

• People require access to very **specialized information** at **particular instances** in time

• **Everybody** learns differently

• Requires neuroscientist, educators, statisticians, digital data designers, learning scientists, instructional designers, big data experts, etc.

**Boeing supports the NAE Grand Challenge of Advancing Personalized Learning through competency based learning and leveraging online learner analytics to uncover deep-learning measuring social networks.**

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“In recent years, a growing appreciation of individual preferences and aptitudes has led toward more “**personalized learning**,” in which instruction is tailored to a student’s individual needs”. NAE 2017
It’s official - higher education students want staff to be better with digital, not to use more of it

11 September 2017

Students have stated their frustration at staff’s inconsistent use of technology, with 22,000 voicing their opinions on the use of digital at their institutions in our digital student tracker report (pdf).
PROCESSEN IN HOGER ONDERWIJS & ONDERZOEK

- minister OCW
  - strategic agenda
  - digitalisering in HO
  - wetenschapsvisie
  - kamerbr. doorontw AS
  - sectorplan ond. wetenschap
  - NVAO beoord.kader
  - NRO programma ’16-’19
  - Van den Donk

Talking up
- talking up

Talking down
- talking down

VSNU
- universiteiten
- HBO’s
- ondersteuning
- primaire proces
- primaire proces

NWO
- programming funding

VH
- support funding

SURF
(digitale) INNOVATIE IN HOGER ONDERWIJS

minister W
strategic agenda

digitalisering in HO
wetenschapsvisie
kamerbezoeken in HO
camerbezoeken in HO
NVAO
sektorplan wetenschap

Van den

sectorplan wetenschap
NRO programma ‘16-’19

verspreking

VSNU
VH

VSNU
VH

universiteiten
HBO's

talk down

ondersteuning

ondersteuning

ondersteuning

ondersteuning

ONDERWIJS

onderwijs

onderwijs

onderwijs

onderwijs

ONDERWIJS

onderwijs

onderwijs

onderwijs

onderwijs

programma
funding

programma
funding

programma
funding

programma
funding

NWO
SURF
INNOVATION IN HIGHER EDUCATION

- innovation in education is high on the agenda of our institutions
- several institutions drive one didactical concept for which innovation investments are significant, that provides a logical place for open education
  - many teachers inspired and active in innovation
  - significant experience with many types of online education
  - involved knowledge centers (Welten institute, Surf a.o.)
  - Golden triangle (triple helix) approach is accepted and used
  - signed open coalition statement (VSNU)
- ‘discipline’-oriented education professors appointed in several institutions
  - some experience with multiple learning routes
- no institution has an explicit open education policy and deployed this in its way of working
- teachers notice a lack of institution education policy and vision
- teachers in universities notice a significantly stronger reward for research versus education. Teachers question: “what’s in it for me?”
- some financing systems hinder innovation. Major differences between research funding system and education (innovation) funding.
- some competition for student intake with innovative didactics as a differentiator hinders cooperation and openness
- role & mission of national knowledge centers not clear. Researchers of higher education insufficiently connected to innovation programs
- unclear, scattered and failing IT policies and infrastructure
- culture in education is negatively influenced by accreditation worries, performance agreements and ‘Inholland’ fears
- private companies expand positions in higher education. Big publishers (Pierson, Elsevier), little irritators (studeersnel.nl) and potential free riders (NCIO)
- new international private actors (Lynda-LinkedIn-Microsoft; Coursera)
- universities look for international versus national alliances
- credit for (M)OOC’s will challenge campus programs
- rules of often unclear and we may have more rules per institution than strictly required
- paradoxical effects of innovation require stamina and patience and leads to ‘yet another hype to survive’ reactions.

strengths

- government may demand more innovation from higher education institutions (compared to open access) and facilitate this thru adaptation of its control system
- students demand change, want rich campus life and diversity in educational offerings

weaknesses

- professional and distance learning offer new flexibilisation and online innovation opportunities
- IT systems in education develop at a high pace, adaption can be improved and benefit from learning analytics, multimedia information retrieval
- new options for joint solutions with publishers

opportunities

- cooperation of institutions and cooperation of staff at various levels
- resolution of (M)OOC’s challenge campus programs
- paradoxical effects of innovation require stamina and patience and leads to ‘yet another hype to survive’ reactions.
Innovation in Higher Education

- Innovation in education is high on the agenda of our institutions.
- Several institutions drive one didactical concept for which innovation investments are significant, that provides a logical place for open education.
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- Involved knowledge centers (Welten institute, Surf a.o.)
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- Students demand change, want rich campus life.
- Field of work of our alumni changes thru digitization.
- Open education can be better connected to open data and open access approaches.
- Cooperation of institutions and cooperation of staff at various levels.
- Professional and distance learning offer new flexibilisation and online innovation opportunities.
- IT systems in education develop at a high pace, adaption can be improved and benefit from IT-research (LMS, learning analytics, multimedia information retrieval).
- New options for joint solutions with publishers.

Lots of good (digital) innovation but we don’t learn from each other.

Strengths

- Opportunities
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Weaknesses

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Teachers question: “what’s in it for me?”

H.E. will get competition from the private sector.