Alternative perspectives on MOOC success

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Overview

• The problem of high drop-out rates
• Non-formal learning with MOOCs: Personal curriculum
• Two levels of pursuing a personal curriculum
  – Planning to enroll in a number of MOOCs (level one)
  – Selecting appropriate MOOCs (transition)
  – Actual enrollment in particular MOOCs (level two)
• Intention and actual behavior in a particular MOOC: Identifying the MOOC taker
• Dynamics of acting out (initial) intentions when enrolled in a particular MOOC
• Conclusions
• Questions
The problem of high drop-out rates
The problem of high drop-out rates

MOOC providers report high drop-out rates which on average range from 90 to 95%
The problem of high drop-out rates

Definition from F2F education

MOOC provider perspective

Students who leave education without an end-qualification

N students without certificate / N enrolled students = dropout
We need alternative perspectives on MOOC success!

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Recognizing MOOCs as non-formal learning
Non-formal learning with MOOCs: Personal curriculum

• The learning landscape
  – **Formal learning**: Formal learning is typically institutionally sponsored, classroom-based, and highly structured
  – **Informal learning**: Learning that happens incidental and as a consequence of being involved in daily activities; the opposite of formal learning.
  – **Non-formal learning**: Between formal and informal learning.
Non-formal learning with MOOCs: Personal curriculum

Werquin, P. (2010). Recognising non-formal and informal learning: Outcomes, policies and practices. OECD
Non-formal learning with MOOCs: Personal curriculum

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Non-formal learning with MOOCs: Personal curriculum

Werquin, P. (2010). Recognising non-formal and informal learning: Outcomes, policies and practices. OECD
MOOC takers have a personal curriculum

Why?

• Career benefits
  – Will allow me to find a new job
  – Will keep me updated in the field of my current job
  – Will allow me to get a promotion

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MOOC takers have a personal curriculum

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• Educational benefits
  – Will allow me to complete the prerequisites for an academic program
  – Will refresh key concepts within my field of study
  – Will help me to prepare for a standardized examination
MOOC takers have a personal curriculum

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  – Will help me to prepare for a standardized examination

• Personal benefits
  – Will allow me to spend my spare time useful
  – Will raise my self-esteem
  – Will save me money
Two levels of pursuing a personal curriculum

Ambition:
To upgrade yourself in Electrical engineering

http://wonderfulengineering.com/free-engineering-hd-wallpapers-for-download/
Planning to enroll in a number of MOOCs

the level where MOOC takers are planning to enroll in a number of MOOCs as part of their personal curriculum

self-directed learning

① = theme or topic
Planning to enroll in a number of MOOCs

The level where MOOC takers are planning to enroll in a number of MOOCs as part of their personal curriculum.

- Basic electronics
- Programming
- Electronic circuits
- Digital systems
- Computer architecture
- Microprocessors
- Operating systems

Self-directed learning

(t) = theme or topic
Selecting appropriate MOOCs

the level where MOOC takers are planning to enroll in a number of MOOCs as part of their personal curriculum

the level where MOOC takers are enrolled in a single MOOC as part of completing their personal curriculum

$t$ = theme or topic

self-directed learning

self-regulated learning
Selecting appropriate MOOCs

- Ed-X
  - Fundamentals of Nanoelectronics: Basic...
    - Starts: March 26, 2015
  - Fundamentals of Nanoelectronics, Part B...
    - Starts: October 3, 2015
  - Computer Structures 3: Computer Organization
    - Starts: February 28, 2017

- Microsoft
  - Developing Dynamic Web Applications using Angular...
    - Starts: June 30, 2016
  - Signals and Systems, Part 2
    - Starts: March 5, 2017
  - Electronique I
    - Starts: September 1, 2016

- PuntoX
  - Introduction to Bioelectricity
    - Starts: August 24, 2015
  - A System View of Communications: From...
    - Starts: November 9, 2016
  - Discrete Time Signals and Systems, Part 2...
    - Starts: March 18, 2016

- Coursera
  - Introduction to Power Electronics
    - Length: 3 weeks of study, 1 document
  - Magnetics for Power Electronics
    - Length: 2 weeks of study, 2 documents
  - Converter Circuits
    - Length: 3 weeks of study, 1 document
  - Capstone Design Project in Power Electronics
    - Length: 4 weeks of study, 3 documents
Actual enrollment in particular MOOCs

- The level where MOOC takers are planning to enroll in a number of MOOCs as part of their personal curriculum.

- The level where MOOC takers are enrolled in a single MOOC as part of completing their personal curriculum.

Symbols:
- T = theme or topic
- Lo = learning object (quiz, video, etc.)
- = theme/topic covered by some lo’s
- = MOOC covering theme’s and topics

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Intention and actual behavior in a particular MOOC: Identifying the MOOC taker
Identifying the MOOC taker

= theme or topic
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= MOOC covering theme’s and topics

The level where MOOC takers are planning to enroll in a number of MOOCs as part of their personal curriculum.

The level where MOOC takers are enrolled in a single MOOC as part of completing their personal curriculum.

Self-directed learning

Self-regulated learning
Identifying the MOOC taker

For simplicity reasons we focus on the learning objects (lo’s) in stead of focusing on the themes and topics.
Identifying the MOOC taker

the level where
MOOC takers are
enrolled in a single
MOOC as part of
completing their
personal curriculum

- learning object (quiz, video, etc.)
- initial intention
- actual behavior
- MOOC covering theme’s and topics as lo’s

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Identifying the MOOC taker

- learning object (quiz, video, etc.)
- initial intention
- actual behavior
- MOOC covering theme’s and topics as lo’s

Partly deviated & Fully compensated

Exact as intented

inclined actor
Identifying the MOOC taker

- Learning object (quiz, video, etc.)
- Initial intention
- Actual behavior
- MOOC covering theme's and topics as Io's

Partly deviated & Fully compensated

Completely deviated & Fully compensated

Exact as intented

Inclined actor
Identifying the MOOC taker

- **Partly deviated & Fully compensated**
- **Completely deviated & Fully compensated**

**Identifying the MOOC taker**

- **Exact as intended**
- **inclined actor**

- **inclined actor by compensation**

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Identifying the MOOC taker

Less than intended
inclined abstainer
Identifying the MOOC taker

Partly deviated & Under compensated

Less than intended

inclined abstainer
Identifying the MOOC taker

Partly deviated & Under compensated

Completely deviated & Under compensated

Less than intended
inclined abstainer
Identifying the MOOC taker

Less than intended

inclined abstainer

Partly deviated & Under compensated

Completely deviated & Under compensated

inclined abstainer by under-compensation
Identifying the MOOC taker

More than intended

disinclined actor
Identifying the MOOC taker

Partly deviated & Over compensated

More than intended

disinclined actor
Identifying the MOOC taker

More than intended

disinclined actor

Partly deviated & Over compensated

Completely deviated & Over compensated
Identifying the MOOC taker

More than intended
- disinclined actor

Partly deviated & Over compensated

Completely deviated & Over compensated
- disinclined actor by over compensation

the level where MOOC takers are enrolled in a single MOOC as part of completing their personal curriculum

- learning object (quiz, video, etc.)
- initial intention
- actual behavior
- MOOC covering theme’s and topics as lo’s
Dynamics of acting out (initial) intentions when enrolled in a particular MOOC
Conclusions
• Drop-out is only in the eye of the MOOC provider

• Success and failure is only in the eye of the MOOC taker

• MOOCs as a non-formal learning are successful