THE DETERMINATION OF SUCCESS IN MOOCS AND THE ROLE OF PARTICIPANT’S INTENTIONS

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LEARNING WITH MOOCS III

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Learning with MOOCs Conference 2016 “Being and Learning in a digital age”
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MICRO, MESO, MACRO

**MICRO:** Learner level

- **PhD A:** Self-regulated learning skill acquisition
- **PhD B:** Motivation and intentions as key to drop-out

**MESO:** Course level

- **PhD C:** Scaling of support, feedback and interaction

**MACRO:** Organizational Level

- **PhD D:** Organizational development and educational innovation

Fundamental research ➤ Accompanying research
Mooc completion rates ‘below 7%’

Open online courses’ cohort much less massive at finish line

May 9 2013
DROPOUT: THE CATEGORY ERROR

Jordan, 2015
A [...] more important limitation [...] is the tendency to ignore the perspective of the individual [...] Such definitions of dropout [...] imply connotations of inferiority [...] of the individual dropping out.

Tinto & Cullen, 1973
Individual goal achievement as new measurement approach

- How can we measure goal achievement?
- What is a valid model for goal achievement in MOOCs?
- Which factors influence goal achievement?
- What are the most striking barriers for MOOC participants to achieve their goals?
- What are implications for MOOC designers?
INTENTIONS

Average correlation between intention and behaviour in other domains of study between .48 (Sutton, 1998) and .53 (Sheeran, 2002).

THE ROAD TO HELL IS PAVED WITH GOOD INTENTIONS

Proverb

PICTUREQUOTES.com
INTENTIONS

Kizilce, Piech, & Schneider, 2013

Reich, 2014
Intention formation

(Gollwitzer, 1990)

Pre-decisional phase | Pre-actional phase | Actional phase | Post-actional phase

Decision (intention) | Action initiation | Action evaluation
# INTENTION-BEHAVIOUR CLUSTERS

<table>
<thead>
<tr>
<th>Consistent</th>
<th>Inconsistent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclined actors</strong></td>
<td><strong>Inclined abstainers</strong></td>
</tr>
<tr>
<td>Intend to act and act</td>
<td>Intend to act, but do not act</td>
</tr>
<tr>
<td><strong>Disclined actors</strong></td>
<td><strong>Disinclined abstainers</strong></td>
</tr>
<tr>
<td>Don’t intend to act, but act</td>
<td>Don’t intend to act and don’t act</td>
</tr>
</tbody>
</table>

Gollwitzer & Sheeran, 2006
“Forming a goal intention does not prepare people sufficiently for dealing with self-regulatory problems in initiating, maintaining, disengaging from, or over-extending oneself in goal striving.”

Tinto & Cullen, 1973
Implementation intentions define the
- when,
- where and
- how
of goal striving.

Meta-analysis by Gollwitzer and Sheeran (2006):
- 94 studies, N=8000
- Effect size d = .65

Simple plans, huge impact.
Intention formation in MOOCs
A model for goal achievement in MOOCs

(Henderikx, Kreijns & Kalz, submitted)
A model for goal achievement in MOOCs

(Henderikx, Kreijns & Kalz, submitted)
TWO CASES

MOOC “Marine Litter”
(6500 participants)
OpenEdX

MOOC “The Adolescent Brain”
(1500 participants)
EMMA platform
DATA COLLECTION

- Construction of items that fit to the design of the MOOC (Pre- and Post) according to guidelines by Sutton (2008) and Fischbein & Ayzen (2010)
- Reuse of items by Rise, Thompson, & Verplanken (2003) for implementation intentions
- Construction of items for barriers (to which degree their were expected, had an impact and could be resolved)
- Background variables (socio-economic profile, prior knowledge, lifelong learning profile, ICT skills)
CORRELATION BETWEEN INTENTION AND BEHAVIOUR

MOOC “Marine Litter” (6500 participants)

$r_s = .16, p>0.05, n=63$

MOOC “The Adolescent Brain” (1500 participants)

$r_s = .34, p<0.01, n=86$
MEASURING THE INTENTION-BEHAVIOUR GAP

MOOC “Marine Litter” (n=63)

MOOC “The Adolescent Brain” (n=86)
COMPARING SUCCESS PARADIGMS

MOOC “Marine Litter”

The traditional approach

6500, 4000 starters, 400 certificates

10 % successful learners

90 % dropouts

The intention approach

49.2 % Inclined abstainers
23.8 % Inclined actors
27 % Disclined abstainers
COMPARING SUCCESS PARADIGMS

MOOC “The Adolescent Brain”

The traditional approach

1500 participants, 80 certificates
5.5% successful learners
95.5% dropouts

The intention approach

23.3% Inclined abstainers
8.1% Inclined actors
68.6% Disclined abstainers
CONCLUSIONS & LIMITATIONS

• Taking into account participants’ intention opens new options for understanding success in MOOCs more objectively
• Individual success measurement might help to identify powerful instructional design/ challenging designs
• Not all drop-out has implications for course design
• Self-reported behaviour needs to be combined with real behavioural data to check reliability (data-triangulation through learning analytics)
• Timespan between measurements influences correlation between intention and behaviour
• Potential survival effects through survey participation
• Dynamics in intention-formation (adapting intentions during the course)
• Quality of the intention-behaviour gap
• This measurement needs to be combined with direct measurement of impact on learning
What impacts the IBGAP?
THANKS!

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