

SOONER TEAM



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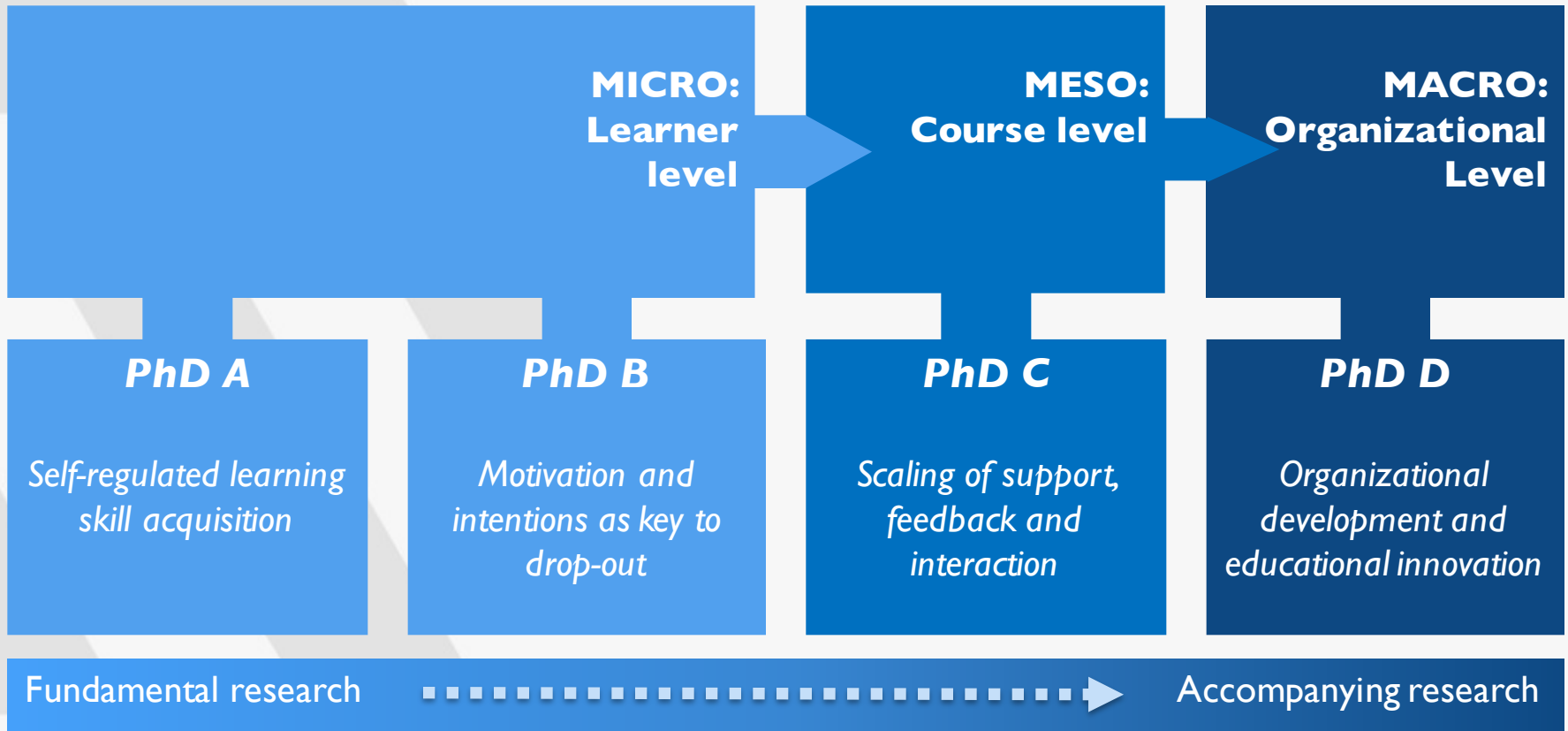


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MICRO, MESO, MACRO



DROPOUT: THE CATEGORY ERROR

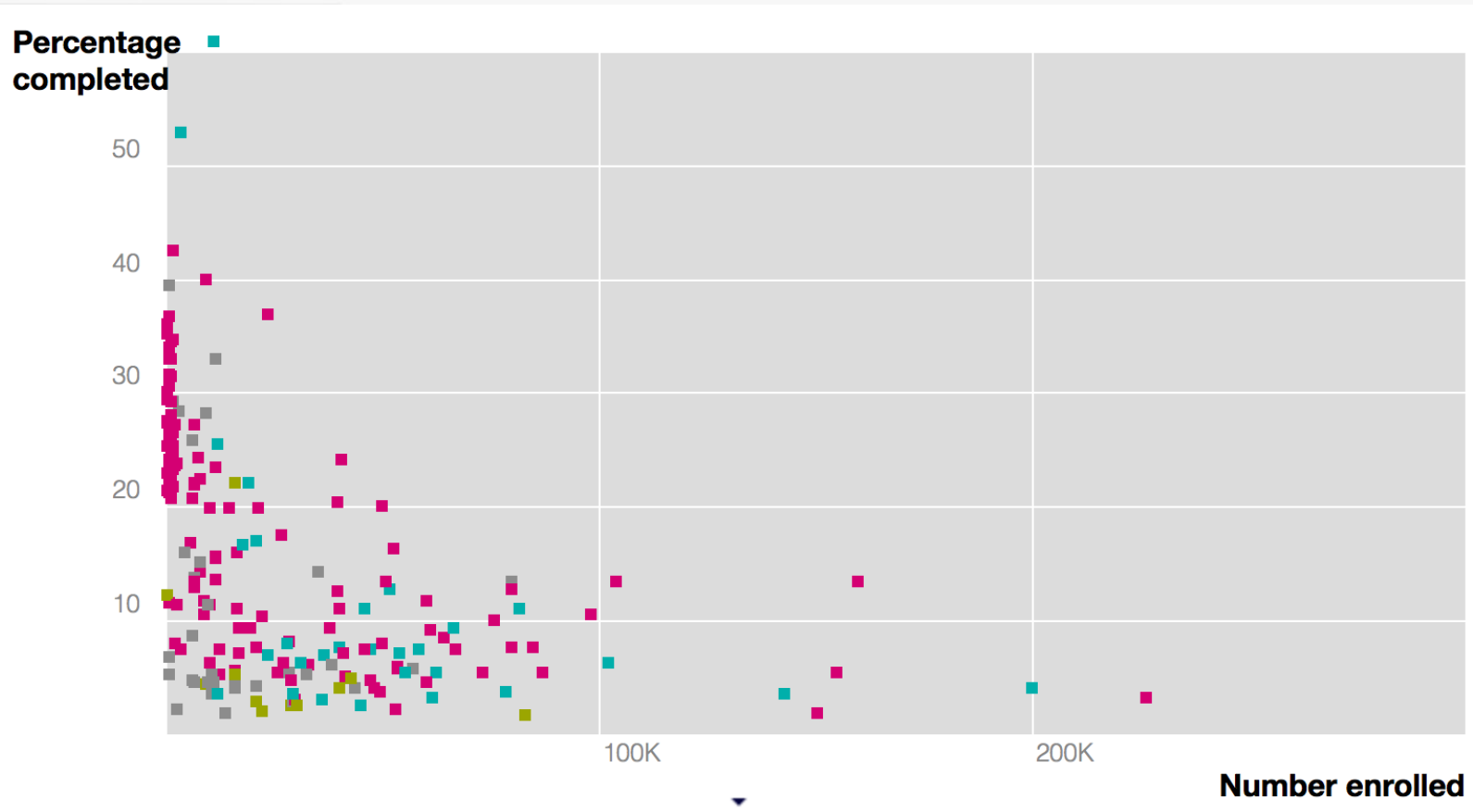


Mooc completion rates 'below 7%'

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

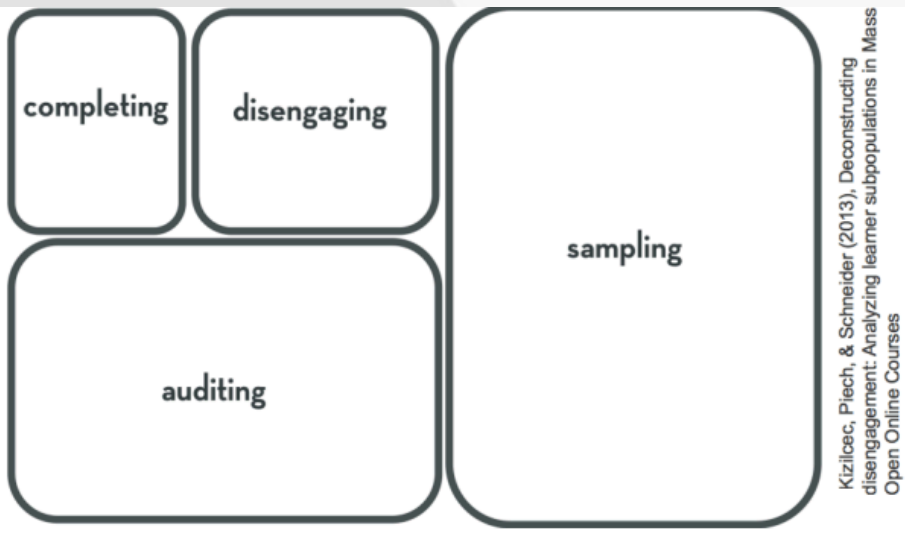
**THE ROAD TO HELL
IS PAVED WITH
GOOD INTENTIONS**

Proverb

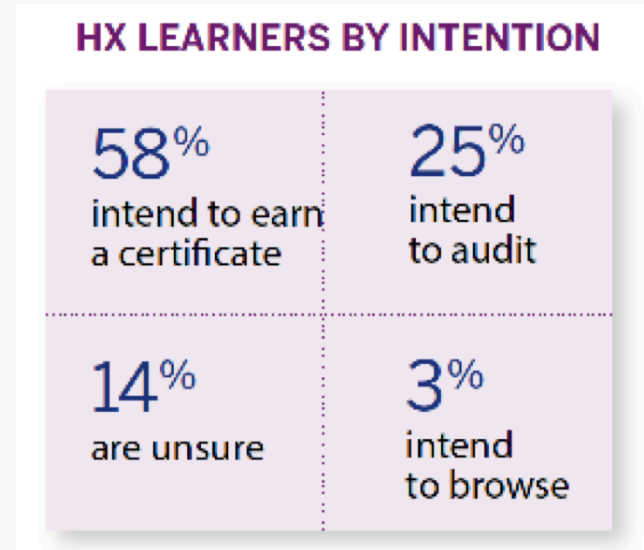
PICTUREQUOTES.com

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

INTENTIONS

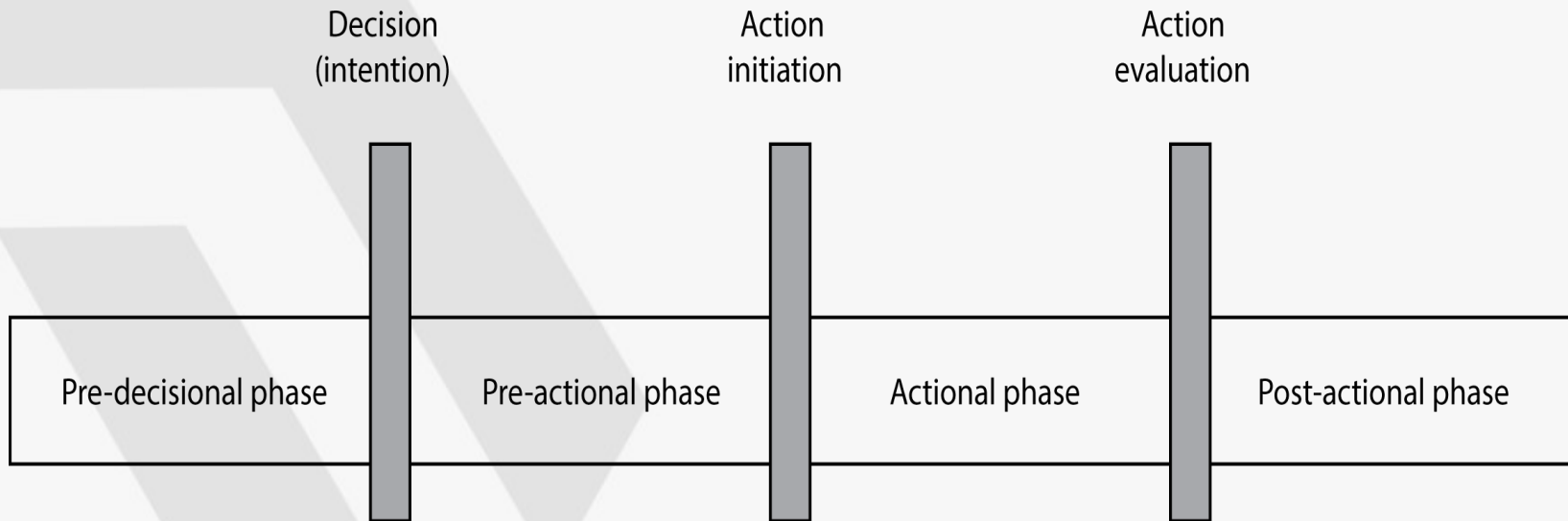


Kizilcek, Piech, & Schneider, 2013



Reich, 2014

Intention formation



(Gollwitzer, 1990)

INTENTION-BEHAVIOUR CLUSTERS

Consistent	Inconsistent
Inclined actors Intend to act and act	Inclined abstainers Intend to act, but do not act
Disinclined actors Don't intend to act, but act	Disinclined abstainers Don't intend to act and don't act

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

Implementation intentions define the

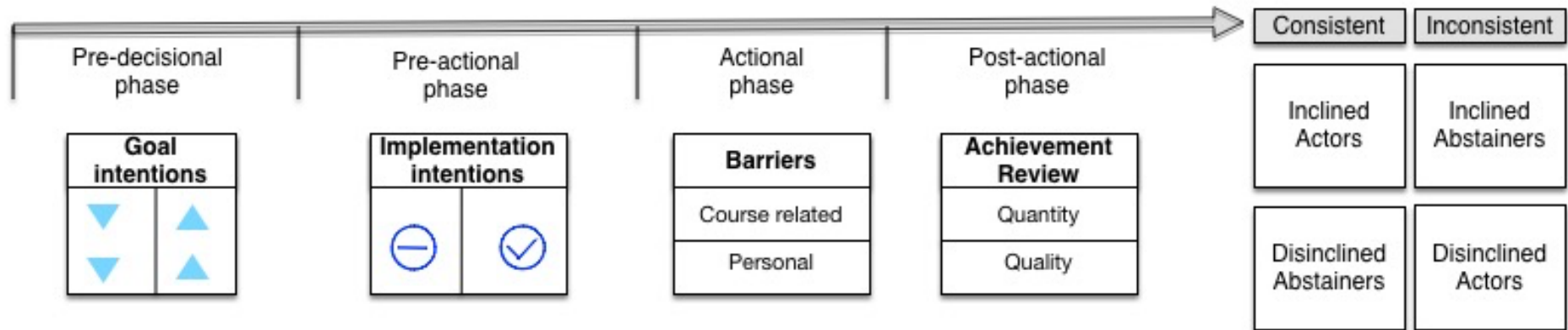
- when,
 - where and
 - how
- of goal striving.

Meta-analysis by Gollwitzer and Sheeran (2006):

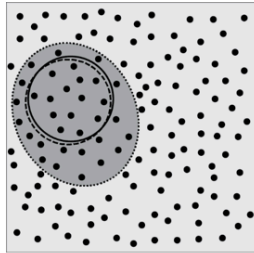
- 94 studies, N=8000
- Effect size $d = .65$

Simple plans, huge impact.

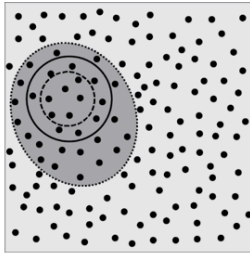
Intention formation in MOOCs



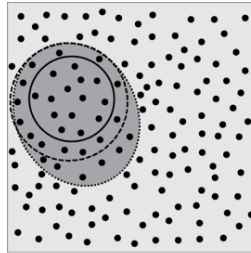
A model for goal achievement in MOOCs



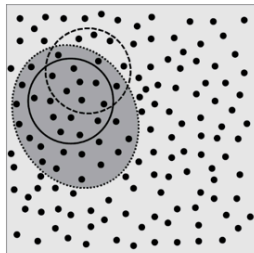
a. Type 11: All individual intended goals are achieved



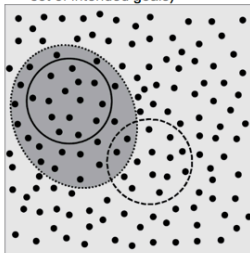
b. Type 12: Achievement is less than intended goals (reduction of initial set of intended goals)



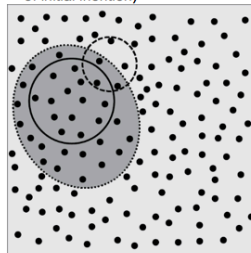
c. Type 13: Achievement exceeds initial intended goals (augmentation of initial intention)



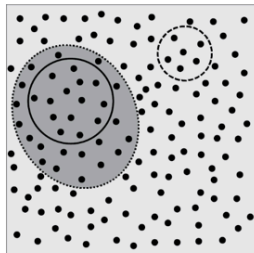
d. Type 21: Achievement is less or completely different than intended but fully compensated with other goals



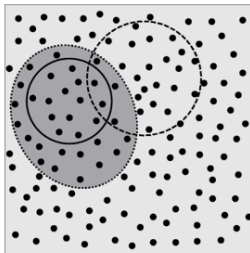
e. Type 22: Achievement is less or completely different than intended but fully compensated with other goals



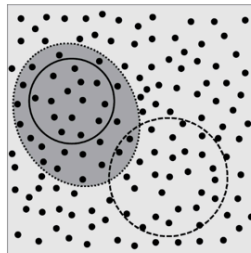
f. Type 22: Achievement is less or completely different than intended and not fully compensated with other goals (under compensation)



g. Type 22: Achievement is less or completely different than intended and not fully compensated with other goals (under compensation)



h. Type 23: Achievement is less or completely different than intended yet more than fully compensated with other goals (over compensation)



i. Type 23: Achievement is less or completely different than intended yet more than fully compensated with other goals (over compensation)

(Henderikx, Kreijns & Kalz, submitted)



All possible goals in a MOOC



Goals set by MOOC-provider

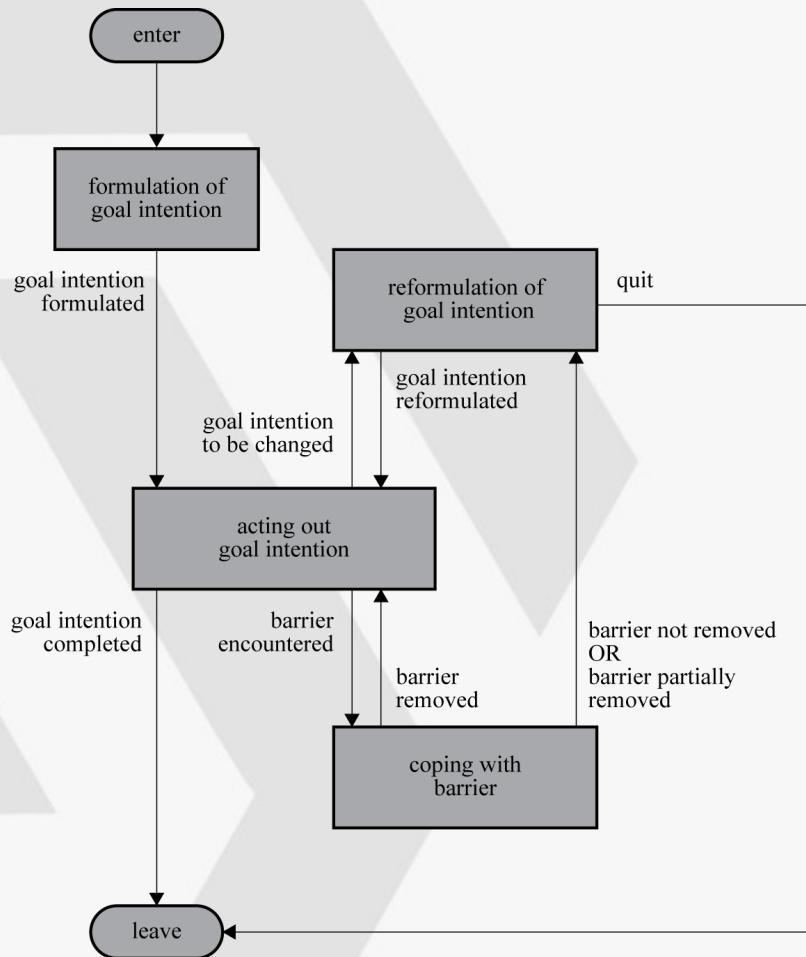


Goals set by MOOC-taker



Goals achieved by MOOC-taker

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

Massive Open Online Course (MOOC) on Marine Litter



DATA COLLECTION

- Construction of items that fit to the design of the MOOC (Pre- and Post) according to guidelines by Sutton (2008) and Fischbein & Ayzén (2010)
- Reuse of items by Rise, Thompson, & Verplanken (2003) for implementation intentions
- Construction of items for barriers (to which degree they 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)

$r_s = .34, p < 0,01, n = 86$

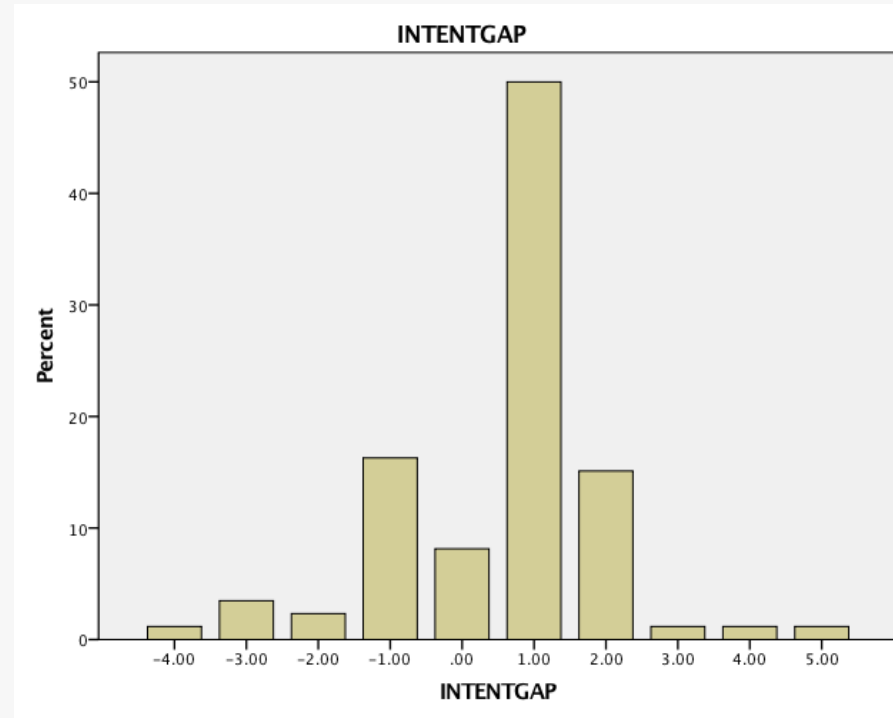
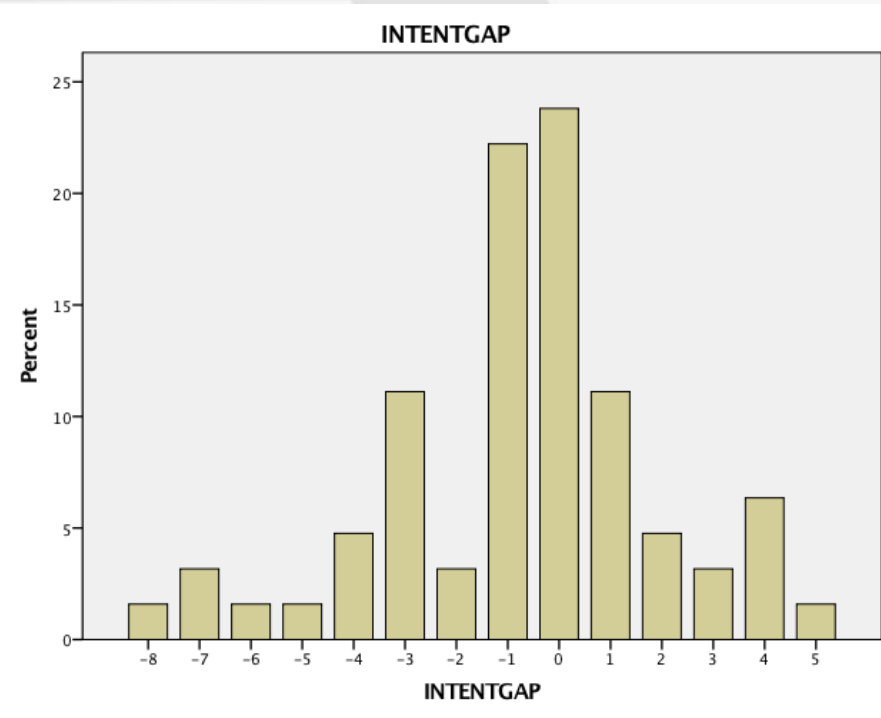
Massive Open Online Course (MOOC) on Marine Litter



MEASURING THE INTENTION-BEHAVIOUR GAP

MOOC “Marine Litter” (n=63)

MOOC “The Adolescent Brain” (n=86)



COMPARING SUCCESS PARADIGMS

MOOC “Marine Litter”

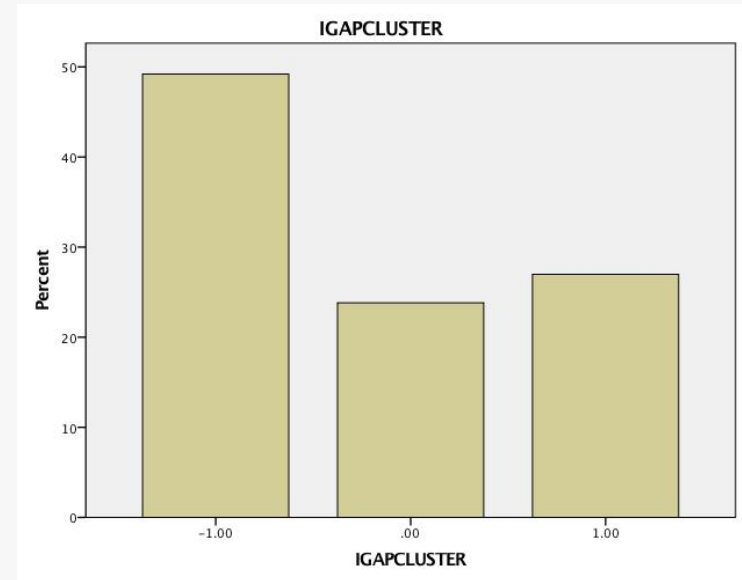
The traditional approach

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”

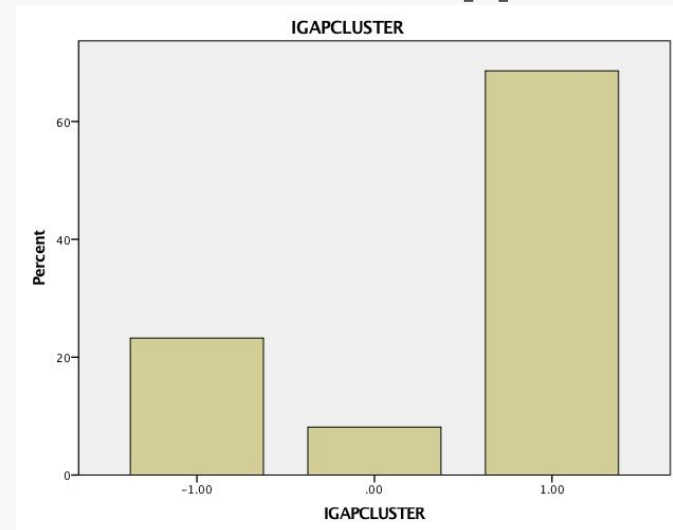
The traditional approach

1500 participants, 80 certificates

5,5 % successful learners

95,5 % dropouts

The intention approach



23,3 % Inclined abstainers

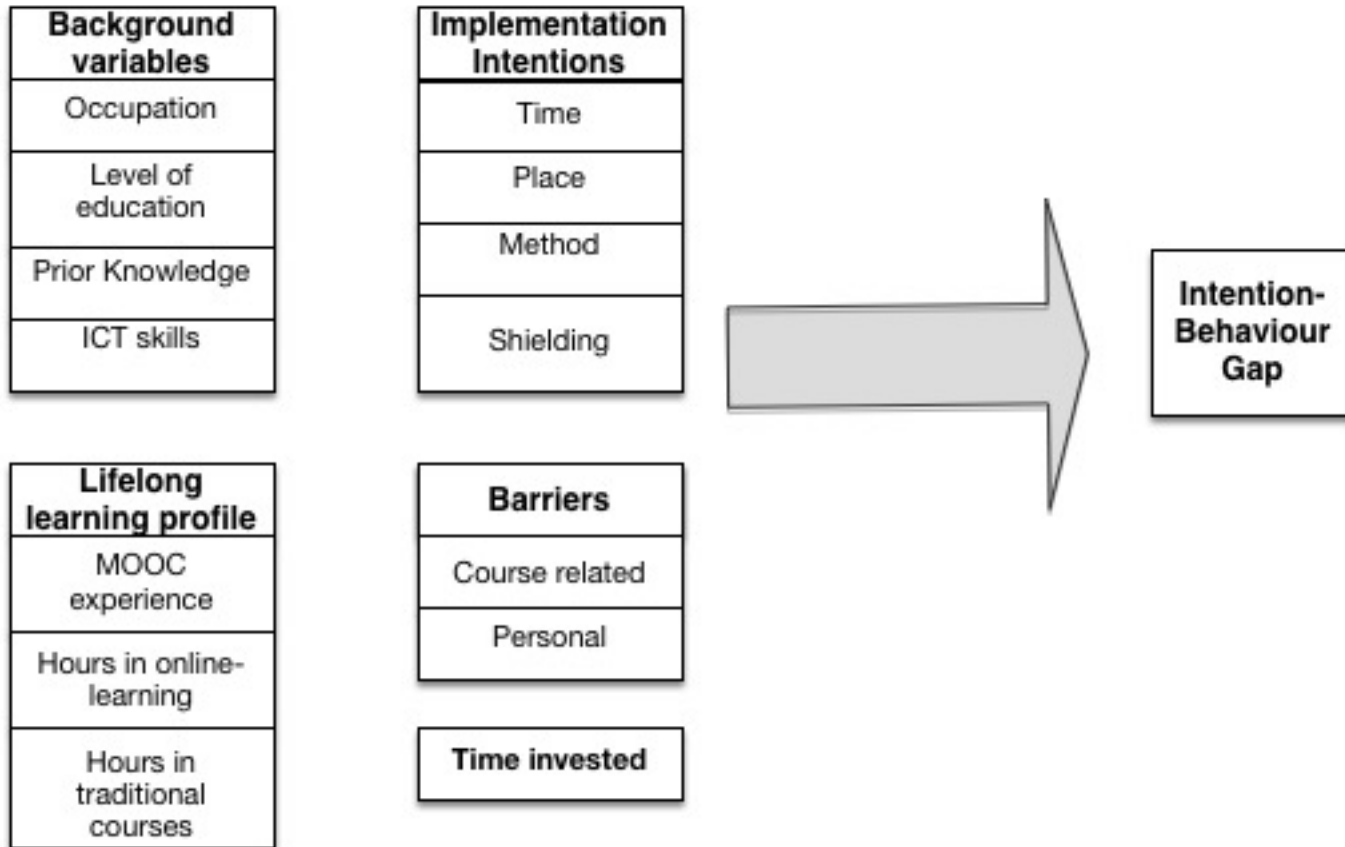
8,1 % Inclined actors

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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<http://www.sooner.nu>

A black and white illustration of a woman's face in profile, looking upwards. Her forehead is covered with various symbols, including a crown, a skull, and arrows pointing in different directions.

Our heads
are
round
so our
thoughts
can
change
direction.

- Francis Picabia

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