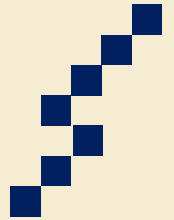




Forum 2014, Track 8



HELENA



Higher Education Global
Efficiency Analysis

Higher Education Study Program & Degree Management – What can be learned from Automotive Management?

Matthias Klumpp

EAIR Forum 2014, University of Duisburg-Essen, 28.08.2014

- 1. Introduction**
- 2. Theoretical Framework**
- 3. Consequences in HE**
- 4. Automotive Experiences**
- 5. Options in HE**
- 6. Outlook**

1. Introduction

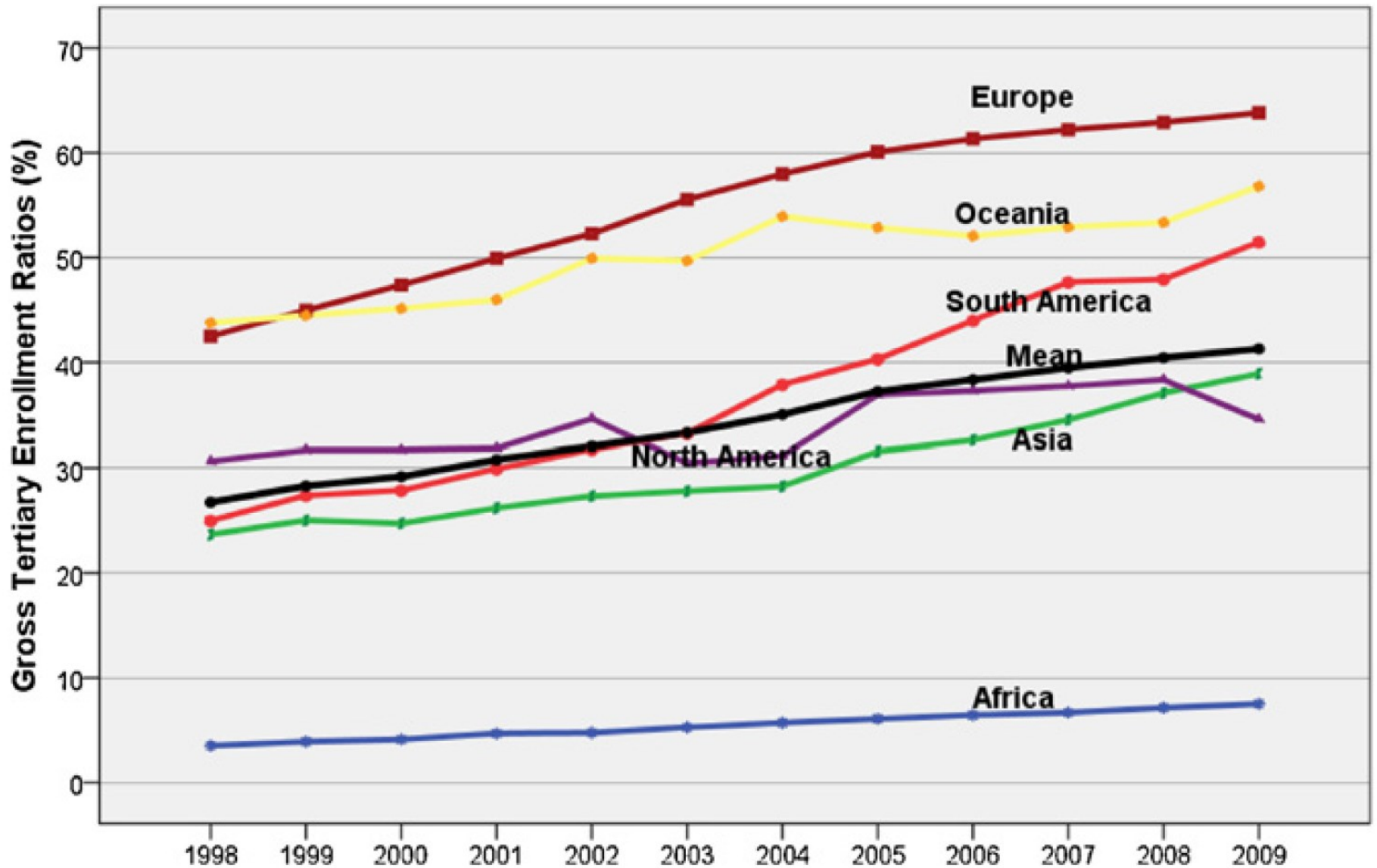
Background and Trend

- Massification in higher education
- Quality trends and data in higher education („downgrading“)?!
- Increasing knowledge demands by society & economy (K.S./E.)

Specific Research Question

- **What can be learned from automotive management for the development and management of higher education, facing similar trends and challenges?**

1. Introduction



2. Theoretical Framework

- **Higher Education Massification:** Many questions and problems (as well as benefits) may arise from this development, e.g. for the information demand represented in an increasing number of university rankings (Shin & Totkoushian, 2012) or the question of a possible deterioration of graduates entry wages.
- One major concern embedded in this trend may also be the possible “**downgrading**” of higher education degrees in terms of competence levels of graduates associated with these specific degrees (BA, MA, PhD).
- This could possibly happen – besides all commitment and engagement of quality assurance – under the **prerequisite of three assumptions.**

2. Theoretical Framework

- (A) In one age cohort the total **distribution of intelligence and pre-qualification** before higher education entry is assumed to be evenly normal distributed.
- (B) During higher education the specific **drop-out quotas are expected to be stable** (i.e. do not increase with the larger enrollment rates). This ensures that with higher enrollment rates also **higher graduation rates** per cohort will occur.
- (C) For the average **qualification level of graduates** it has to be assumed that intelligence and pre-qualification levels of students have a significant impact. This implies, that higher education **cannot assure the same qualification level** of all students and graduates at the end of their higher education path.

2. Theoretical Framework

(A)
Intelligence
is evenly /
normally
distributed
and
medical
research
has even
identified
the gene
(SNAP25)
causing the
variation

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Genes Brain Behav. 2012 Oct;11(7):767-71. doi: 10.1111/j.1601-183X.2012.00819.x. Epub 2012 Jul 28.

Supporting the generalist genes hypothesis for intellectual ability/disability: the case of SNAP25.

Rizzi TS¹, Beunders G, Rizzi P, Siermans E, Twisk JW, van Mechelen W, Deijen JB, Meijers-Heijboer H, Verhage M, Heutink P, Posthuma D.

Author information

Abstract

Intellectual disability (ID) is an unresolved health care problem with a worldwide prevalence rate of 2-3%. For many years, research into the genetic causes of ID and related disorders has mainly focused on chromosomal abnormalities or X-linked genetic deficits. Only a handful of autosomal genes are known to cause ID. At the same time it has been suggested that at least some cases of ID represent an extreme form of normal intellectual ability and therefore that genes important for intellectual ability in the normal range may also play a role in ID. In this study, we tested whether the autosomal SNAP25 gene, which was previously associated with variation in intellectual ability in the normal range, is also associated with ID. The gene product of SNAP25 is an important presynaptic plasma membrane protein, is known to be involved in regulating neurotransmitter release, and has been linked to memory and learning by its effect on long term potentiation in the hippocampus. Allele frequencies of two genetic variants in SNAP25 previously associated with intellectual ability were compared between a group of 636 ID cases (IQ < 70) and a control group of 361 persons of higher than average intellectual ability. We observed a higher frequency of the putative risk allele of rs363050 (P = 0.02; OR = 1.24) in cases as compared to controls. These results are consistent with a role of SNAP25 in ID, and also support the notion that ID reflects the lower extreme of the quantitative distribution of intellectual ability.

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PMID: 22762387 [PubMed - indexed for MEDLINE]

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Variants in SNAP25 are targets of natural selection and influence v [Cell Mol Life Sci. 2012]

Neuropsychological profile of Italian children and adolescents with 22q11.2 de [Behav Genet. 2012]

The research on the status, rehabilitation, education, vocational dev [Res Dev Disabil. 2010]

Review Epilepsy in four genetically determined syndromes of intelle [J Intellect Disabil Res. 2013]

Review Genetics of early onset cognitive impairm [Annu Rev Genomics Hum Genet. 2010]

See reviews... See all...

Cited by 1 PubMed Central article

Reduced SNAP-25 alters short-term plasticity at developing glutamatergic syn [EMBO Rep. 2013]

Related information

Related Citations

Gene

Gene (GeneRIF)

HomoloGene

MedGen

Nucleotide (RefSeq)

Nucleotide (Weighted)

Protein (RefSeq)

Protein (Weighted)

Taxonomy via GenBank

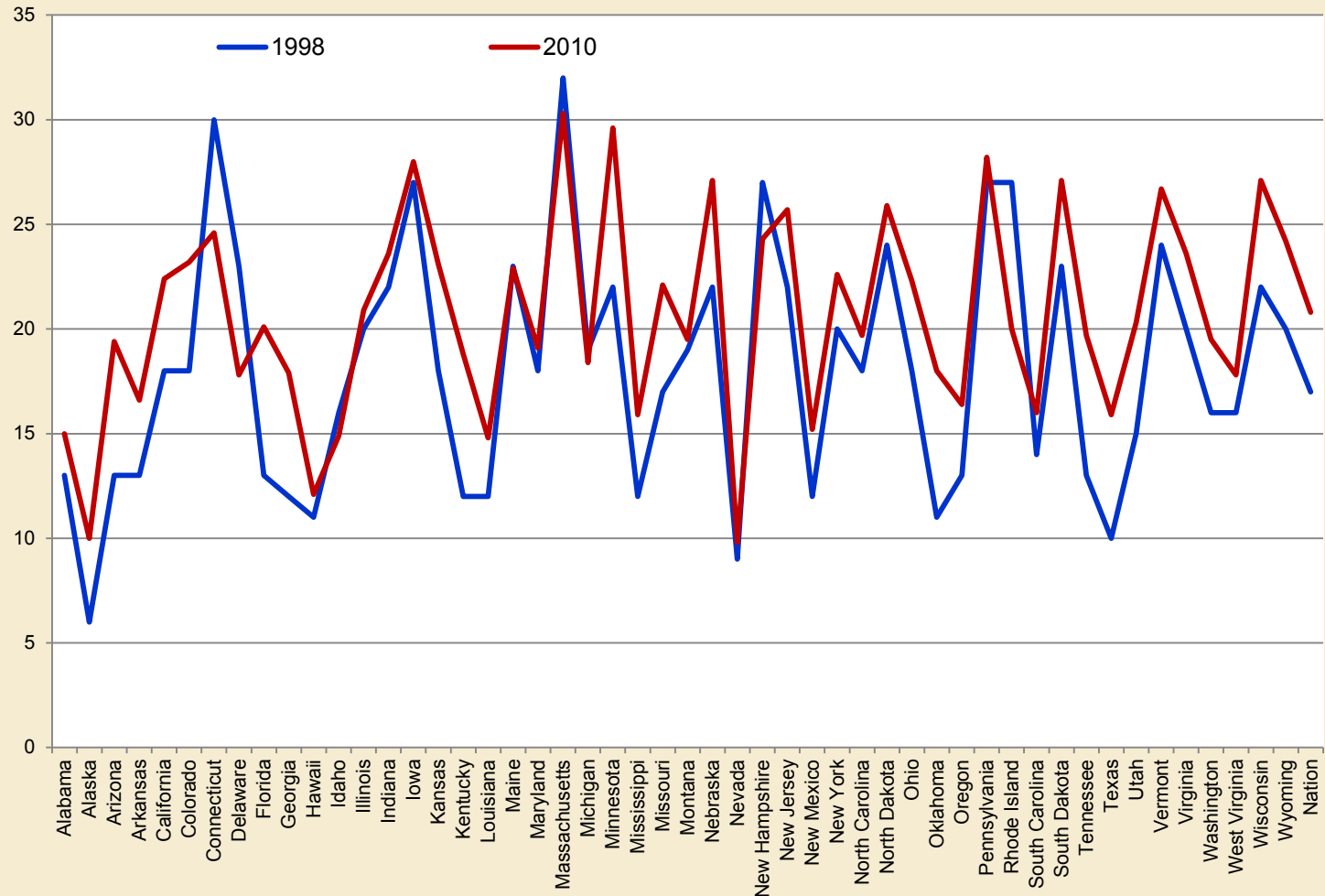
UniGene

GEO Profiles

Cited in PMC

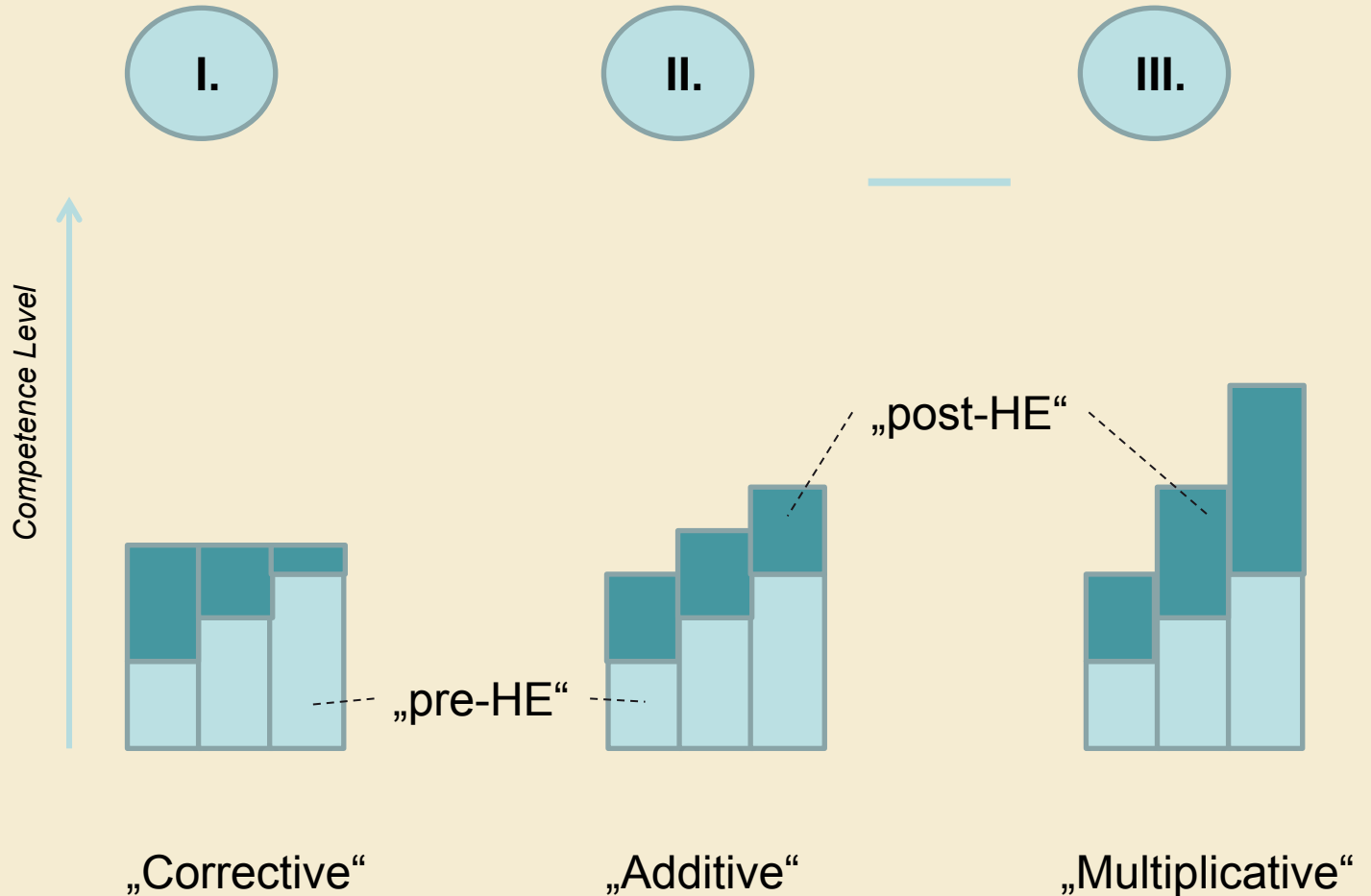
2. Theoretical Framework

(B)
Graduation Rates per cohort are increasing (data USA), national average from 17,0 to 20,8 % in 12 years (regular students)



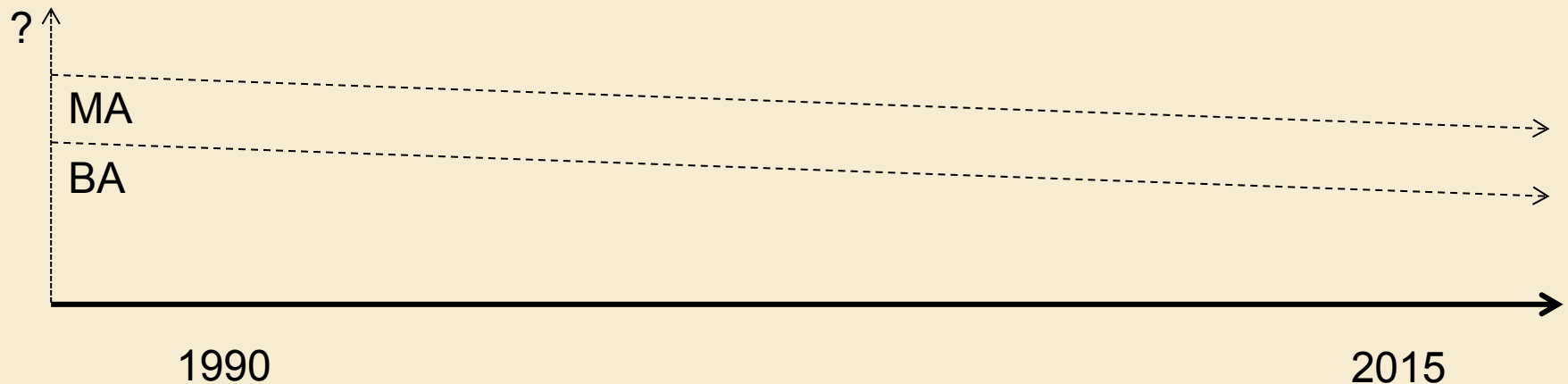
2. Theoretical Framework

(C)
Theoretical
Hypothesis
regarding
HE impact
on
students
and
graduates
(I, II, III)



3. Consequences in Higher Education

- Given these three assumptions, higher education expansion will inevitably lead to a **downgrading of degrees**. (**Output = pre-qualification * teaching input?**)
- A higher education degree (i.e. BA) earned in the 1990s may therefore represent a higher average qualification level than 20 or 35 years later.
- The same may be true for MA and PhD degrees – important to say always on average; **questionable: measurement indicators**, competence, wage, marks?



4. Comparative Automotive Management

Example Volkswagen (VW) – „Bottom“



Golf (I)



Polo (I)

Golf (VII)



Polo (V)



Up!



(* 2011)

1974

2014

4. Comparative Automotive Management

Example Volkswagen (VW) – „Top“

Expectations

Phaeton



(* 2002)

Passat (VIII)



Passat (I)



1973

2014

4. Comparative Automotive Management

Example BMW – „Diversification“



BMW 5 series



BMW 3 series

BMW 1 series
(* 2004)



6



4



2

1975

2014

5. Options in Higher Education

Possibly one or more of the following options derived from automotive portfolio management can be seen or used in higher education:

- (A) Portfolio enlargement at the “bottom” end – introduction “sub-degree” and other certificate programs (i.e. also for dropouts).**
- (B) Portfolio enlargement at the “top” end – introduction of higher degrees and executive programs (recognizing that MA graduates become younger $\leftarrow \rightarrow$ LLL).**
- (C) “Platform” strategies of identical parts (courses) \rightarrow e.g. in combination with MOOC development, even combining parts (courses) of different institutions.**
- (D) Customizing strategies with individual parts and production (cyber-physical production CPP) concepts \rightarrow models for individualized higher education programs.**

5. Options in Higher Education

(A) Portfolio enlargement at the “bottom” end – introduction “sub-degree” & other certificate programs (i.e. also for dropouts): Example FOM OBS (DE)

→ Two sub-degree steps („Betriebswirt“ & „Ökonom“)

FOM Open Business School

Über Ihren Beschreiber und Werbemittel haben Sie sich entschieden selbst, ob Sie in acht Semestern den staatlich anerkannten Hochschulabschluss Bachelor of Arts erwerben oder die Hochschule nach vier bzw. sechs Semestern mit dem Hochschulzertifikat „Ökonom/-in (FOM)“ oder „Betriebswirt/-in (FOM)“ verlassen, um später wieder einzusteigen.

Die FOM Open Business School erkennt dabei Ihre bisher gemachten beruflichen Erfahrungen und Fortbildungen an und bietet Ihnen so die Möglichkeit, das Studium zu verkürzen.

Die Vorteile des Studienkonzepts im Überblick

- Präsenzstudium
- Durchlässigkeit
- Praxisnähe
- Flexibilität

Das Drei-Stufen-Modell der FOM Open Business School

3

Stufe 3
Bachelor of Arts (B.A.)
Hochschulabschluss

- Einstieg nach erfolgreichem Abschluss der Stufe 2 oder mit einer nachweisbaren Fortbildung z.B. zur/zur Betriebswirt/-in (VWA) oder (HK).
- Abschluss der Stufe 3 mit dem Hochschulabschluss »Bachelor of Arts«.

2

Stufe 2
Betriebswirt/-in
Hochschulabschluss (FOM)

- Einstieg nach erfolgreichem Abschluss der Stufe 1 oder mit nachweisbarer geeigneter Fortbildung z.B. zur/zur Fachwirt/in oder Fachkaufmann/-frau (HK).
- Abschluss der Stufe 2 mit dem Hochschulzertifikat »Betriebswirt/-in (FOM)«.

1

Stufe 1
Ökonom/-in
Hochschulabschluss (FOM)

- Einstieg mit (Fach-)Abitur oder mit abgeschlossener Berufsausbildung und mind. drei Jahren Berufspraxis im erlernten Beruf.
- Wahl einer aus insgesamt 14 Vertiefungsrichtungen.
- Abschluss der Stufe 1 mit dem Hochschulzertifikat »Ökonom/-in (FOM)«.

5. Options in Higher Education

(B) Portfolio enlargement at the “top” end – introduction of higher degrees and executive programs.

→ Example
DBA UK
(Cranfield and
others)

Cranfield University
School of Management

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→ INTERNATIONAL EXECUTIVE DOCTORATE (DBA)

Welcome to Cranfield's International Executive Doctorate (DBA)

Cranfield's International Executive Doctorate (DBA) is the highest-level business qualification that can be attained. The programme enables senior managers to conduct valuable doctoral-level research on a part-time basis, over four-six years, whilst remaining employed.

This unique, research-based, practice-driven programme provides a route to a doctorate level qualification that enables participants to develop leading-edge thinking, through use of the latest research tools and techniques. The programme is both rigorous and relevant, making it the ideal choice for developing both in-depth knowledge and analytical skills, whilst developing solutions to business issues at the same time. The programme allows individuals to undertake research that will have a real impact on practice, while also transforming the way that they personally approach decision-making.

Aimed at senior practitioners, policy-makers and consultants who want to be thought leaders in their organisations and wider occupations, it is one of only a few DBA's worldwide holding Association of MBAs (AMBA) accreditation.

Candidates are a highly diverse group of professionals from a variety of nationalities, industries, cultures and backgrounds. As well as the networking and learning opportunities offered by the programme, participants will benefit from the quality of study facilities, supervisory expertise, alumni networks and the international research perspective offered by Cranfield.

The International Executive Doctorate (DBA) is cohort based - meaning you join a diverse, carefully selected group of students from around the world for the taught modules held at Cranfield and stay networked with them throughout the programme and beyond. At Cranfield, we support you in every way to maximise your chances of successfully completing the programme.

As the research is likely to be thematic, rather than discipline-based, you are supported by a panel of faculty members rather than by a single supervisor. This ensures you will receive outstanding support in your studies.

I personally look forward to welcoming you onto this world-class programme.

Dr Emma Parry
Director, International Executive Doctorate (DBA)

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7 Aug
FAQ Cranfield Colleagues + Doctoral Researchers: Call for posters on Mindfulness: 9 Sep
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Emma Parry @dremmaparry
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@cranfieldmgmt: @dremmaparry talks to leading German newspaper @welt about the #CranfieldDBA tnycc/aqzjx*
13 Retweeted by محمد آل ته الجبوي
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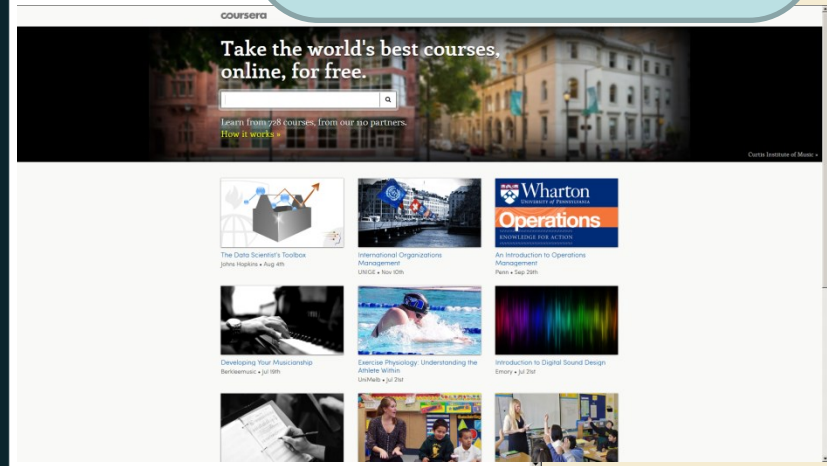
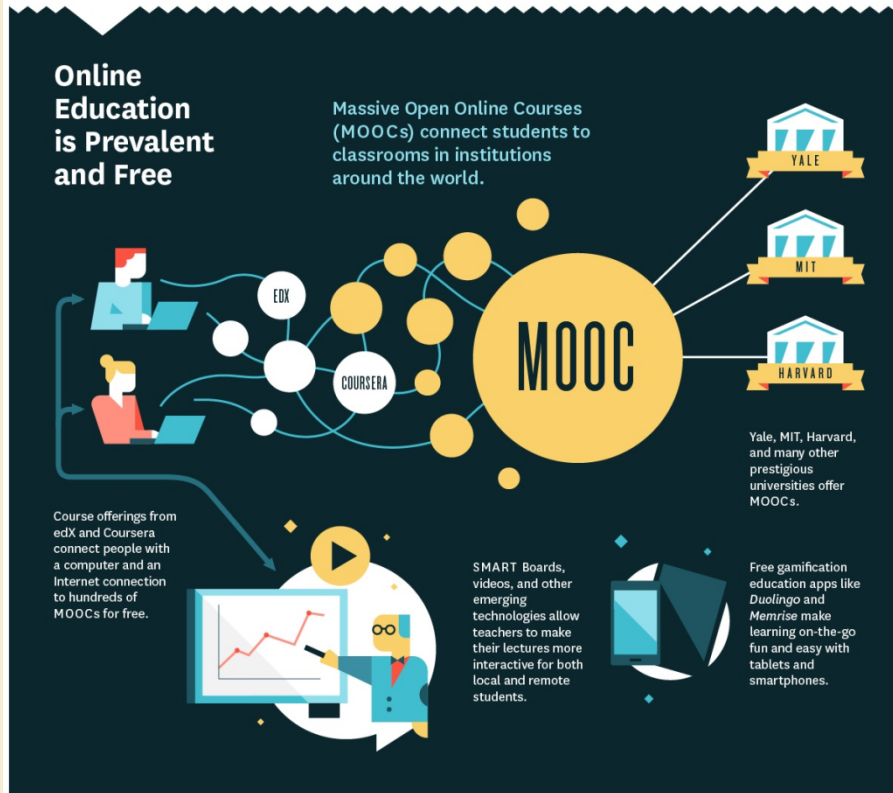
Doctoral Open Day Registration

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5. Options in Higher Education

(C) “Platform” strategies of identical parts (courses) → e.g. in combination with MOOC development, even combining parts (courses) of different institutions.

→ Example of new „providers“ like EDX or Coursera, combining different MOOC courses from several institutions (USA)



5. Options in Higher Education

(D) Customizing strategies with individual parts and production (cyber-physical production CPP) concepts → models for individualized higher education programs.

The screenshot shows the website for the National Dropout Prevention Center/Network. The page is titled "Individualized Instruction" and includes an overview, resources, and a section on why individualized instruction is needed. The overview states that the current catch phrase is "no child left behind," but implementation is difficult. It notes that children have diverse learning styles and needs, and individualized programs can increase student success. The resources section lists "Model Programs" and "Related Webcasts". The "Individualized Instruction Is Needed" section explains that special education requires individualized plans, and dropout statistics show that many students do not succeed because they are not treated as individuals. The "What is Individualized Instruction?" section defines it as a collaborative effort and lists several instructional strategies: problem-based learning and reciprocal teaching; peer tutoring; cooperative learning; hands-on learning; journaling; projects; role play; simulation; and inquiry (Switzer, 2004, p. 196). It also mentions that motivation is particularly important when working with at-risk students.

→ Example
Individualized
Instructor to
prevent
dropouts

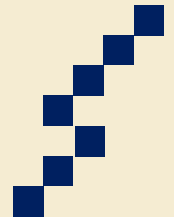
6. Outlook

Further items for research and university management may be in the future:

(I) Redraft, research and implementation of portfolio management concepts in higher education (teaching) – in comparison to automotive management.

(II) Revision of currently primarily “internal” / RBV view towards “external” / MBV / customer perspective also in education (similar to automotive industry) as basis for enhanced portfolio management in teaching.

(III) Transfer of concept idea towards research in higher education.



**Thank you for
your attention!**

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