UNESCO IITE Conference Quality Education 2014 in Moscow

Quality Education through Innovation & ICT: Opportunities or Contradiction?

Christian M. Stracke (ICORE / TELIT - University of Duisburg-Essen, Germany)
Elected Chair ISO PC 288, Chair CEN TC 353 & ISO-Convener SC36 for QM in LET

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Christian M. Stracke:

Open Learning, Innovations, Quality & Competences, Evaluation & Impact

My affiliations & dedications:

- TELIT Research Institute for E-Learning and Innovative Education & Training
- Global cooperation: ECNU & KNOU
- Global initiative ICORE for OR & OE
- Annual international LINQ Conference
- eLC European Institute
- Standardization Chair in ISO & CEN

TELIT

TELIT is the international Research Institute @ the University of Duisburg-Essen for Learning, Education & Training (LET):

- **technology-enhanced LET,**
- **economic LET as well as**
- **vocational & lifelong LET.**

http://www.TELIT.wiwi.uni-due.de

TELiT

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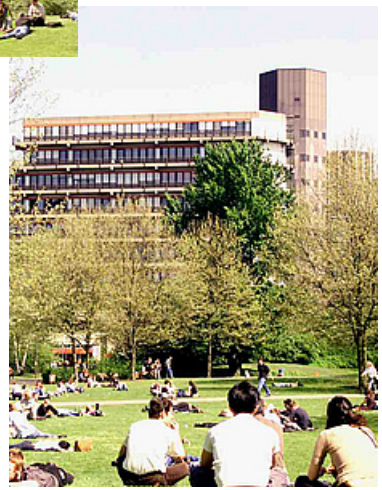


http://www.TELIT.wiwi.uni-due.de

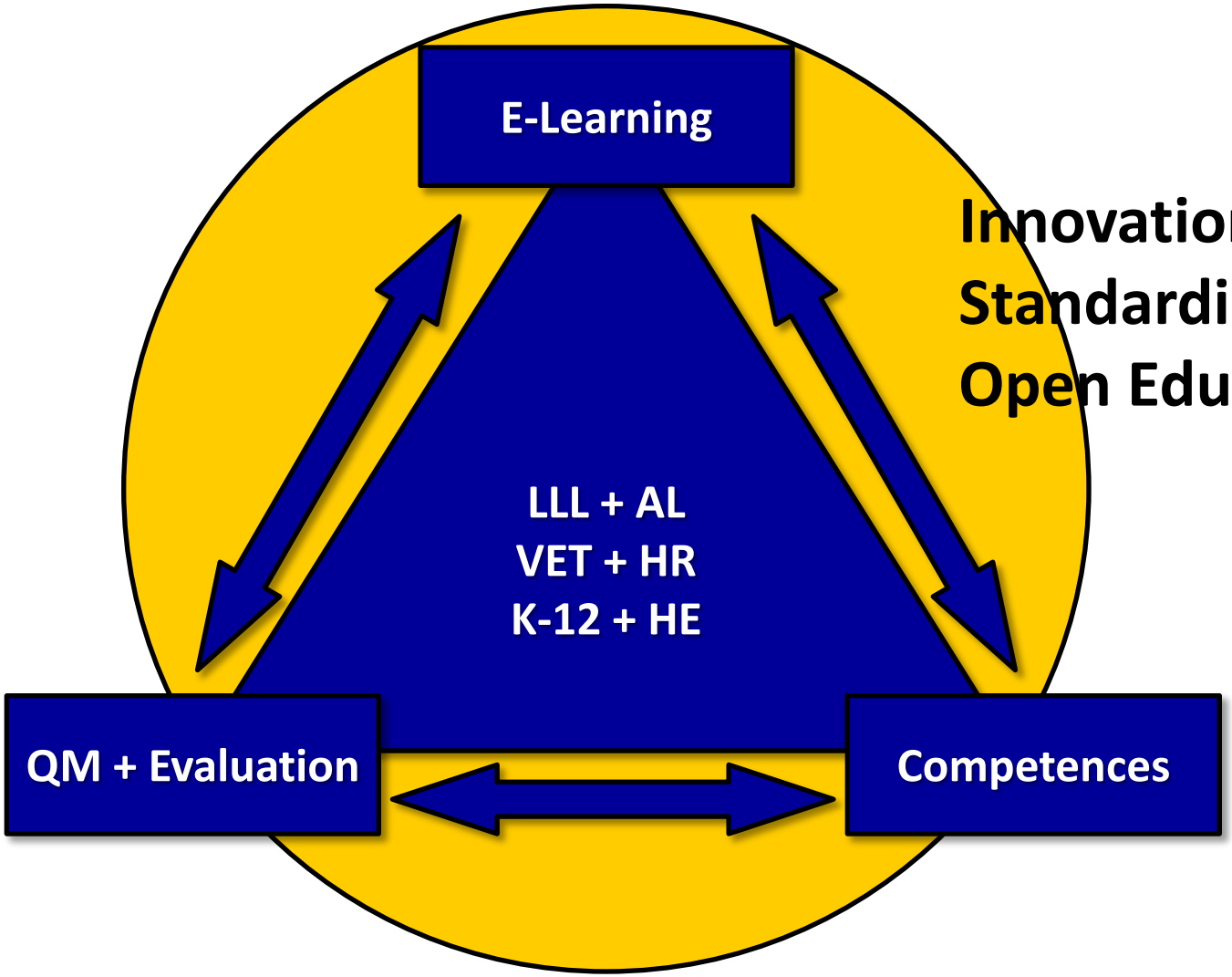
TELIT

www.TELIT.wiwi.uni-due.de

The International Research Institute for Technology-Enhanced Learning & Innovative Education and Training

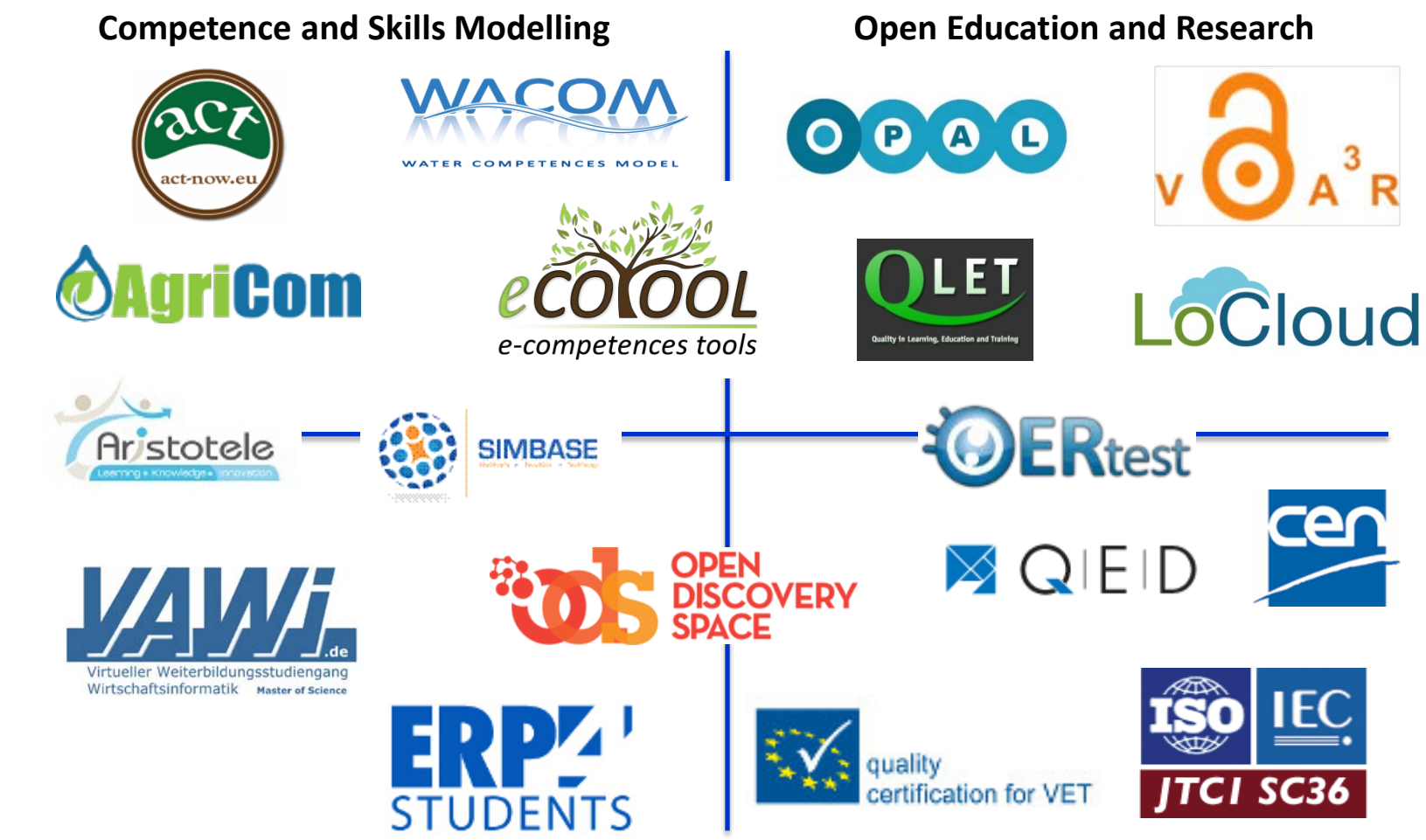
> 20 international and EU projects in parallel
SAP Partner: SAP Certifications in > 30 countries
M.Sc. Study Program VAWI (100 % online)
Chairing International Standardization:
--> ISO PC 288, ISO/IEC SC36 WG5 & CEN TC 353

Our expertise:



Innovations
Standardization
Open Education

Selected Projects:



Selected Projects:

www.erp4students.de

www.ACT-now.de

www.aristotele-ip.eu

www.opendiscoveryspace.eu

www.ecompetence.eu

www.wacom-project.eu

www.simbase.co

www.agriculture-competence.eu

www.oer-quality.org

www.voa3r.eu

www.oer-europe.net

www.qed-info.de

www.locloud.eu

www.quality-development.eu

www.cen.eu/isss/TC_353/

www.sc36.org

Quality Education through Innovation & ICT:

Opportunities or Contradiction?

Why Change in Education?

The Digital Age

Two core factors:

1. Globalisation &
2. Worldwide Internet

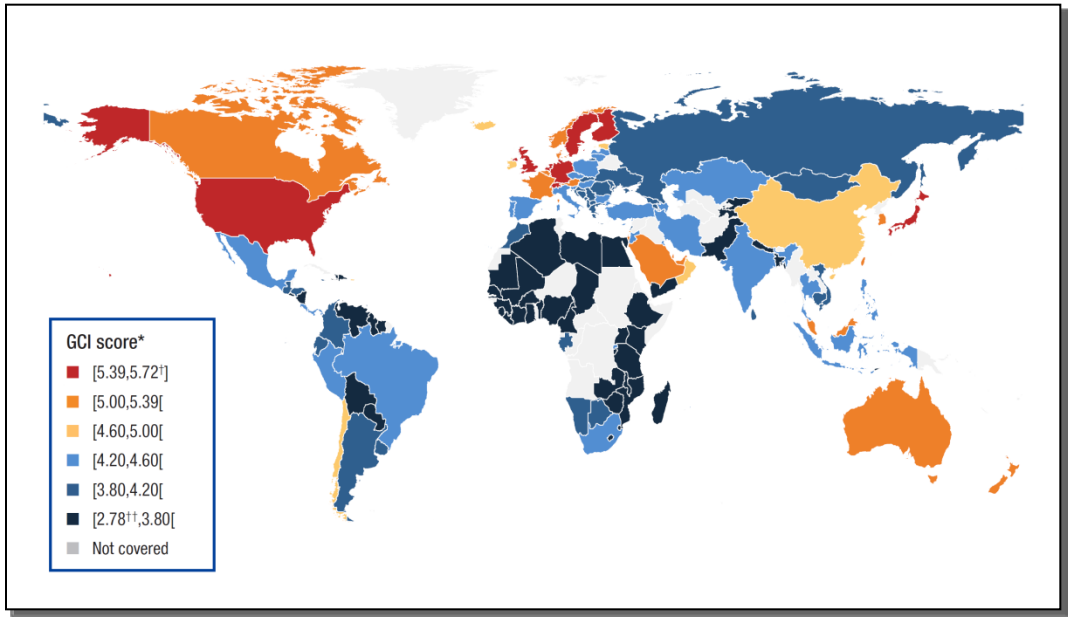
Photo: https://ec.europa.eu/digital-agenda/en/digital-life/education

Internationalization

Global Competitions and societal changes

Close the gaps & open new opportunities

Challenges: Learn to Learn

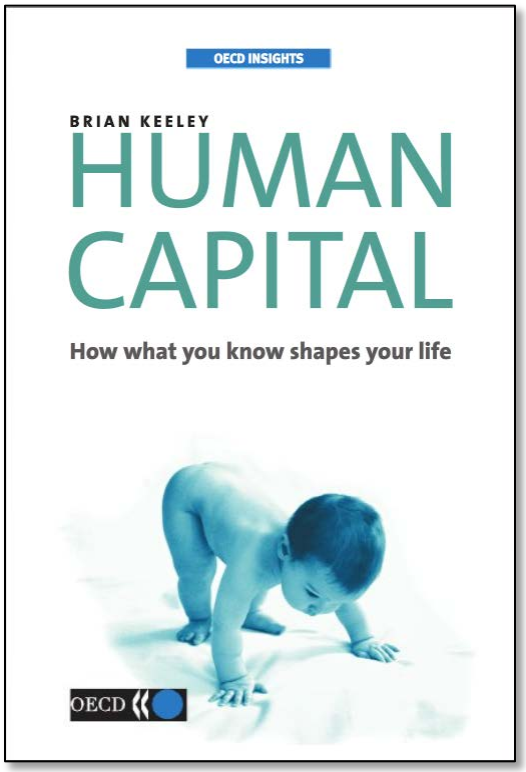


http://www.weforum.org/issues/global-competitiveness

Business changes

Human Capital as (most?) important success factor for economies

Which education and training now and in the future?

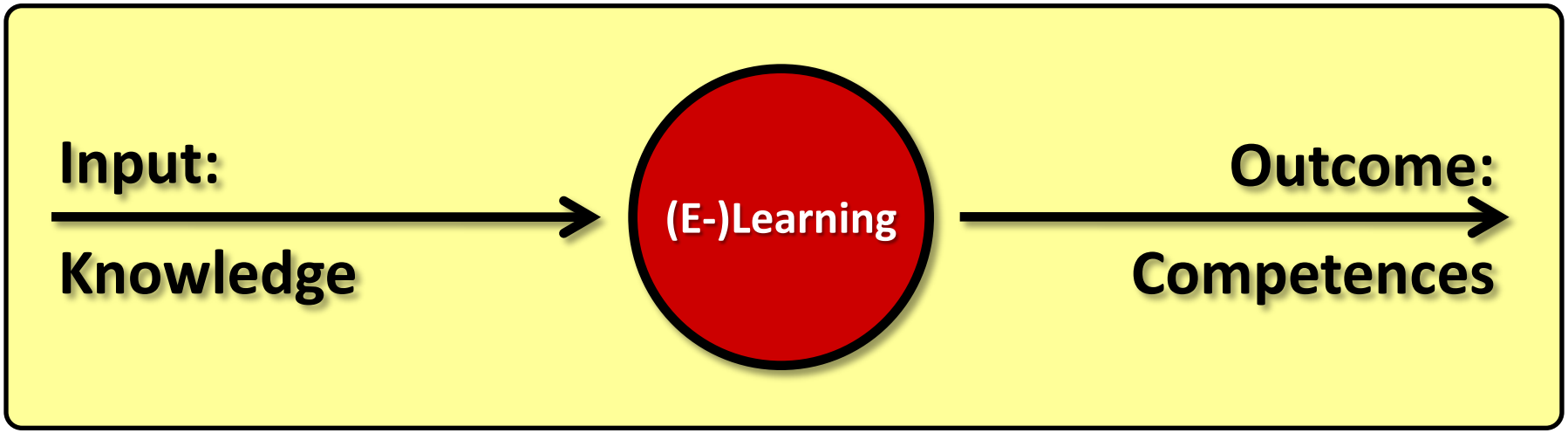


http://www.oecd.org/insights/humancapital

Learning cha(lle)nges

Not knowledge but competences are required to meet future jobs and tasks still unknown today

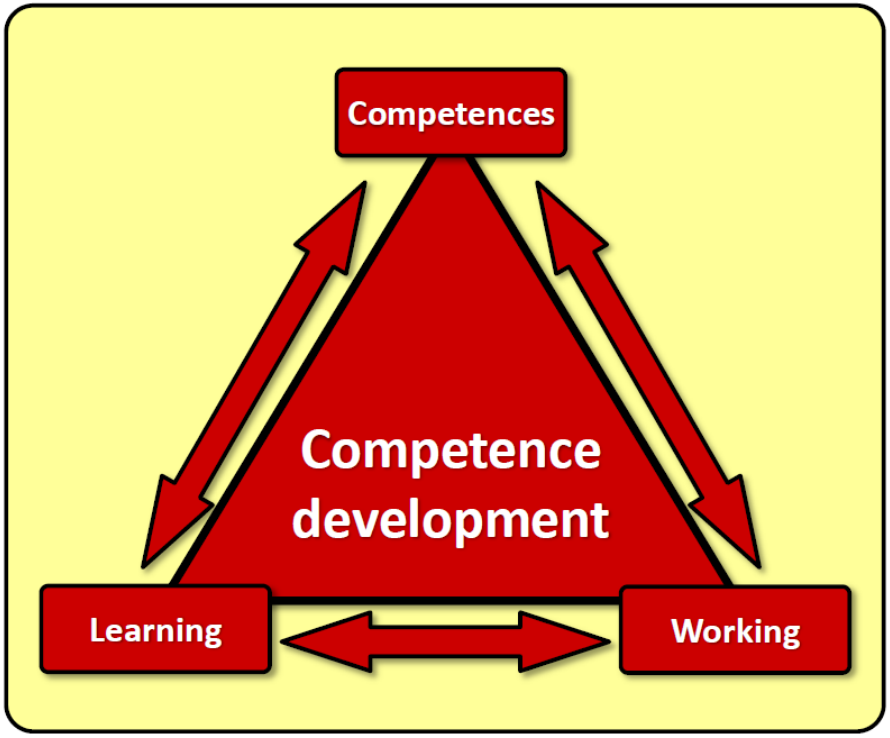
Change from input to outcome orientation



Solutions: Competences

Competence and skills development focuses the new challenge

Learning outcomes for defining learning opportunities and working places



Solutions: Innovations

Tailor-made learning designs to support the learning processes

Before, during & after the crisis: Online Communities & Lifelong (E-)Learning

http://www.qualitydevelopment.eu/

Solutions: Didactics

Tailor-made didactical designs to support the learning processes

In particular in schools and capacity building: Only by technology-enhanced Learning

http://www.qualitydevelopment.eu/

Solutions: Quality

Quality is key for success and results of learning processes

**Learners needs,
Learning objectives,
Learning outcomes
and competences**

Change
in Education!

Quality
in Education

Quality

What is Quality?

The experiment ...

Quality
cannot be defined

... except through adaptation to your situation and context!

Quality Education through Innovation & ICT:

Opportunities or Contradiction?

Disruptive Technologies

=

Disruptive Learning?

What is more important?

Learning Innovations

versus

Learning Quality

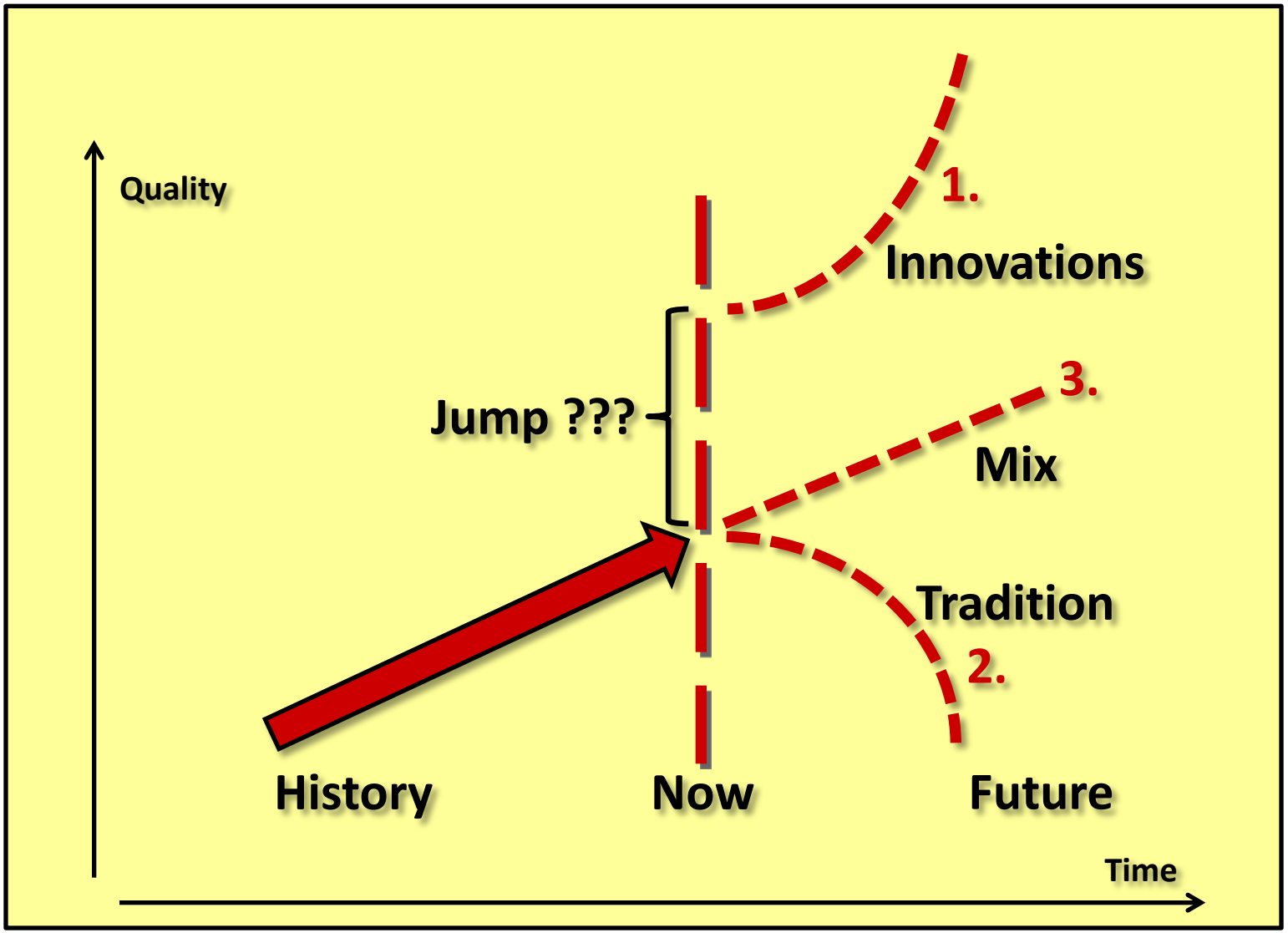
Innovations vs. Quality

1. **Learning history should not and cannot be ignored.**

2. **Learning innovations are mainly technology-driven.**

3. **Learning is not completely changing.**

Innovations vs. Quality



Source: Stracke, C. (2012): "Learning Innovations and Learning Quality"

What is Quality?

Quality

most important

for Learning, Education and Training!


Innovation
Quality
History
Standards

Source: Donabedian 1980

Quality: Most important

... and "new pedagogy" is important just the same!

Quality
in Education!

... with fun!

Quality Education through Innovation & ICT:

Opportunities or Contradiction?

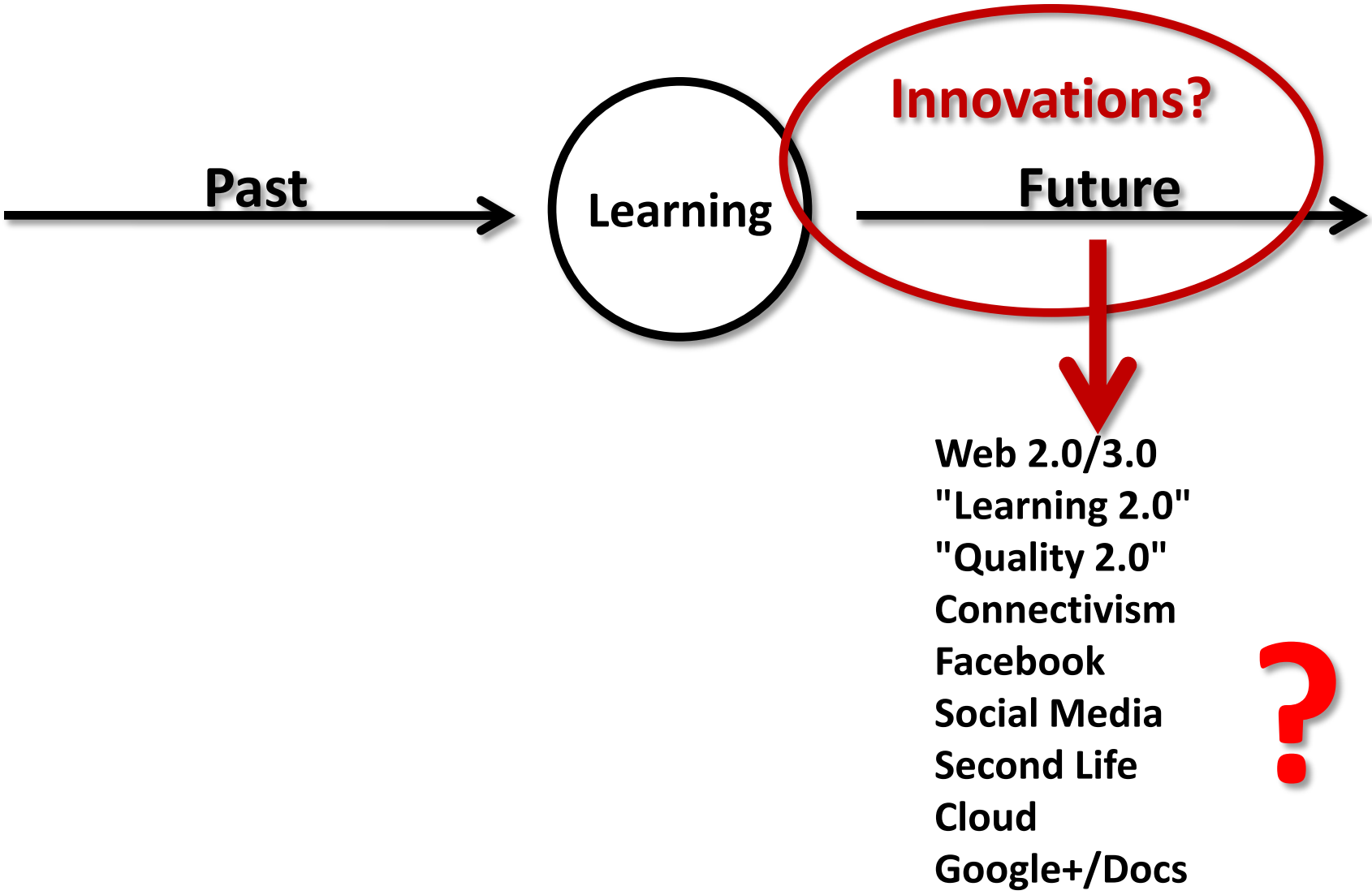
What Kind of Innovations?

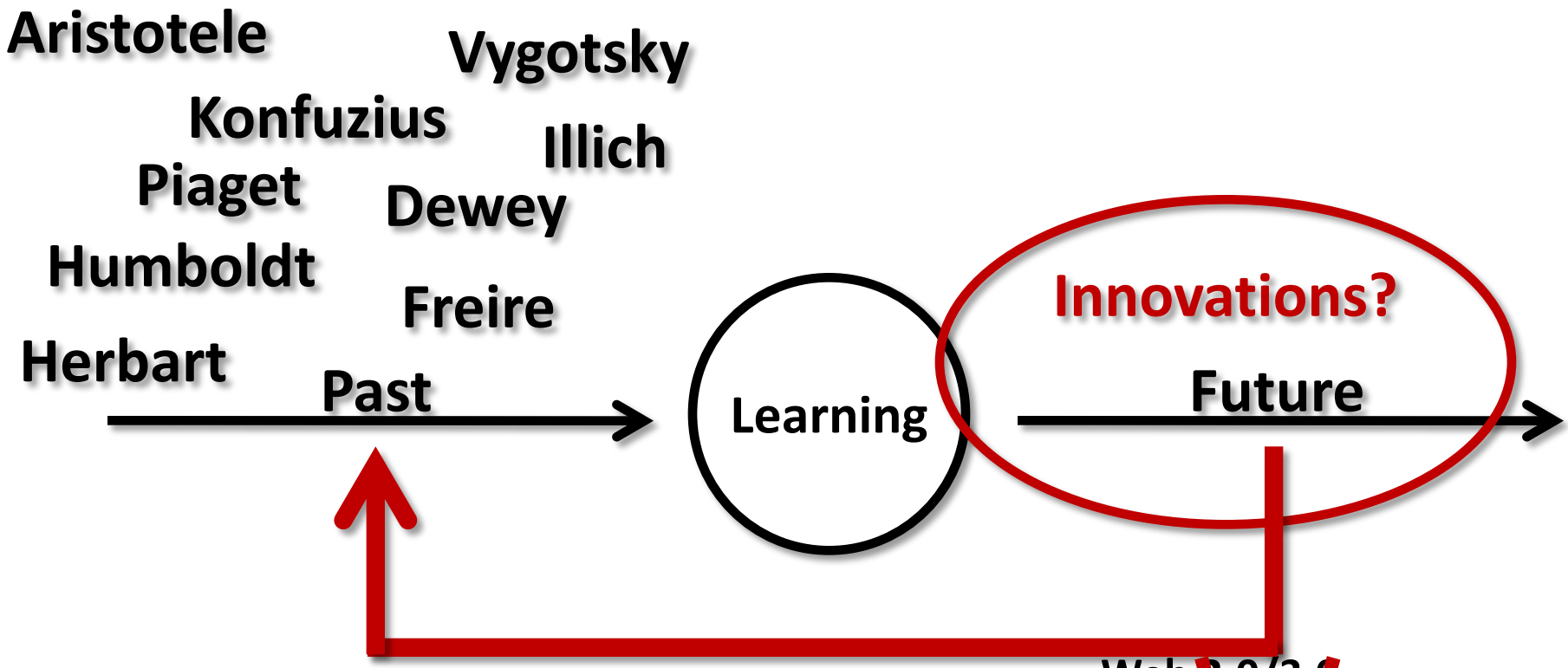
Buzzwords & Hype Cycles

CSCW
E-Learning
Online Communities (CoP)
Second Life
Facebook
Twitter
MOOCs

Web 2.0/3.0
"Learning 2.0"
"Quality 2.0"
Connectivism
Facebook
Social Media
Second Life
Cloud
Google+/Docs

for learning innovations & better quality?


Past
Learning
Innovations?
Future
Web 2.0/3.0
"Learning 2.0"
"Quality 2.0"
Connectivism
Facebook
Social Media
Second Life
Cloud
Google+/Docs
?



All these concepts were already developed and used in the past!

(Some > 100 years ago)

~~Web 2.0/3.0~~
~~"Learning 2.0"~~
~~"Quality 2.0"~~
~~Connectivism~~
~~Facebook~~
~~Social Media~~
~~Second Life~~
~~Cloud~~
~~Google+/Docs~~

Web 2.0/3.0
"Learning 2.0"
"Quality 2.0"
Connectivism
Facebook
Social Media
Second Life
Cloud
Google+/Docs

are only tools & hypes -

not a pedagogy!

NO Disruptive Learning!

and ...

NO Digital Natives!

Pedagogy is key

for learning success

with strategy, vision and ideas

- not tools & hypes!

(like Web 2.0/3.0, Facebook, etc.)


Innovation
Quality
History
Standards

Which Frameworks and Tools?

RFDQ - The First International Learning Quality Standard

EN ISO/IEC 19796-1

RFDQ

1. International Standard for Learning Quality:

Unique ISO Standard on QM for LET

Developed by SC36, published by ISO in 2005:
Adapted & used worldwide
in > 60 countries (also EU, RF + China)!

EN ISO/IEC 19796-1

RFDQ

The Reference Process Model:

Needs Analysis	Framework Analysis	Conception / Design	Development / Production	Implementation	Learning Process / Realization	Evaluation / Optimization
Initiation	Analysis of the external context	Learning objectives	Content realization	Testing of learning resources	Administration	Planning
Stakeholder identification	Analysis of staff resources	Concept for contents	Design realization	Adaptation of learning resources	Activities	Realization
Definition of objectives	Analysis of target groups	Didactical concept/ methods	Media realization	Activation of learning resources	Review of competencies levels	Analysis
Demand analysis	Analysis of the institutional and organizational context	Roles and activities	Technical realization	Organization of use		Optimization / improvement
	Time and budget planning	Organizational concept	Maintenance	Technical infrastructure		
	Environment analysis	Technical concept				
		Concept for media and interaction design				
		Media Concept				
		Communication concept				
		Concept for tests and evaluation				
		Concept for maintenance				

EN ISO/IEC 19796-1

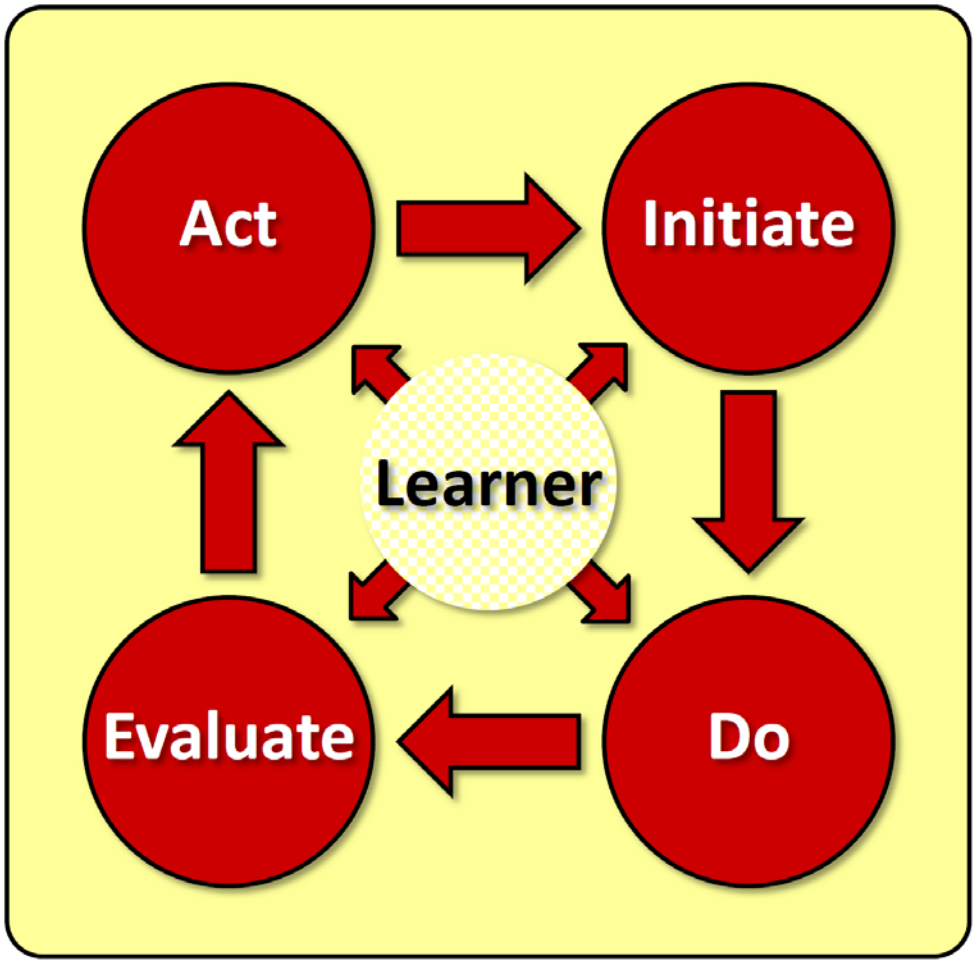
Example of required adaptation:

RFDQ

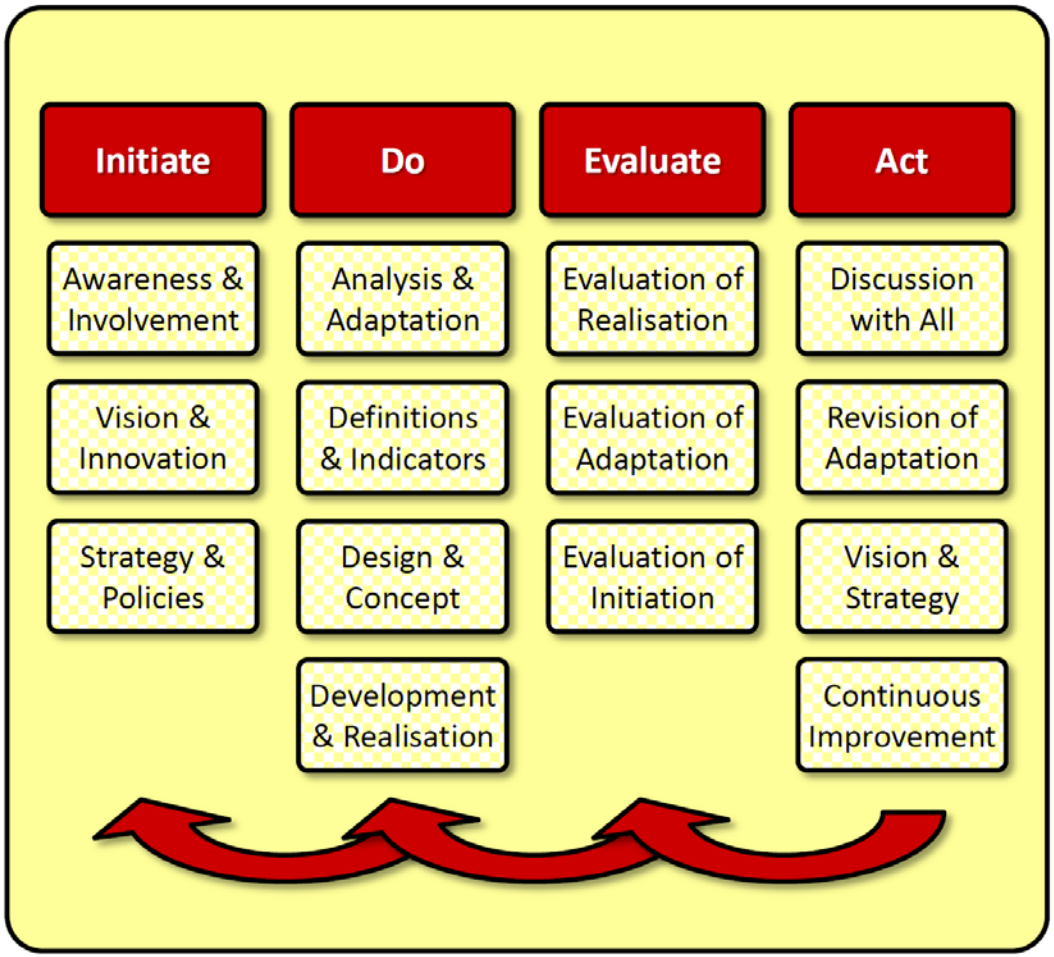
Needs Analysis	Framework Analysis	Conception / Design	Development / Production	Implementation	Learning Process / Realization	Evaluation / Optimization
Initiation	Analysis of the external context	Learning objectives	Content realization	Testing of learning resources	Administration	Planning
Stakeholder identification	Analysis of staff resources	Concept for contents	Design realization	Adaptation of learning resources	Activities	Realization
Definition of objectives	Analysis of target groups	Didactical concept/ methods	Media realization	Activation of learning resources	Review of competencies levels	Analysis
Demand analysis	Analysis of the institutional and organizational context	Roles and activities	Technical realization	Organization of use		Optimization / improvement
	Time and budget planning	Organizational concept	Maintenance	Technical infrastructure		
	Environment analysis	Technical concept				
		Concept for media and interaction design				
		Media Concept				
		Communication concept				
		Concept for tests and evaluation				
		Concept for maintenance				

IDEAL - The Framework for Learning Quality and Competence Development

IDEAL Framework

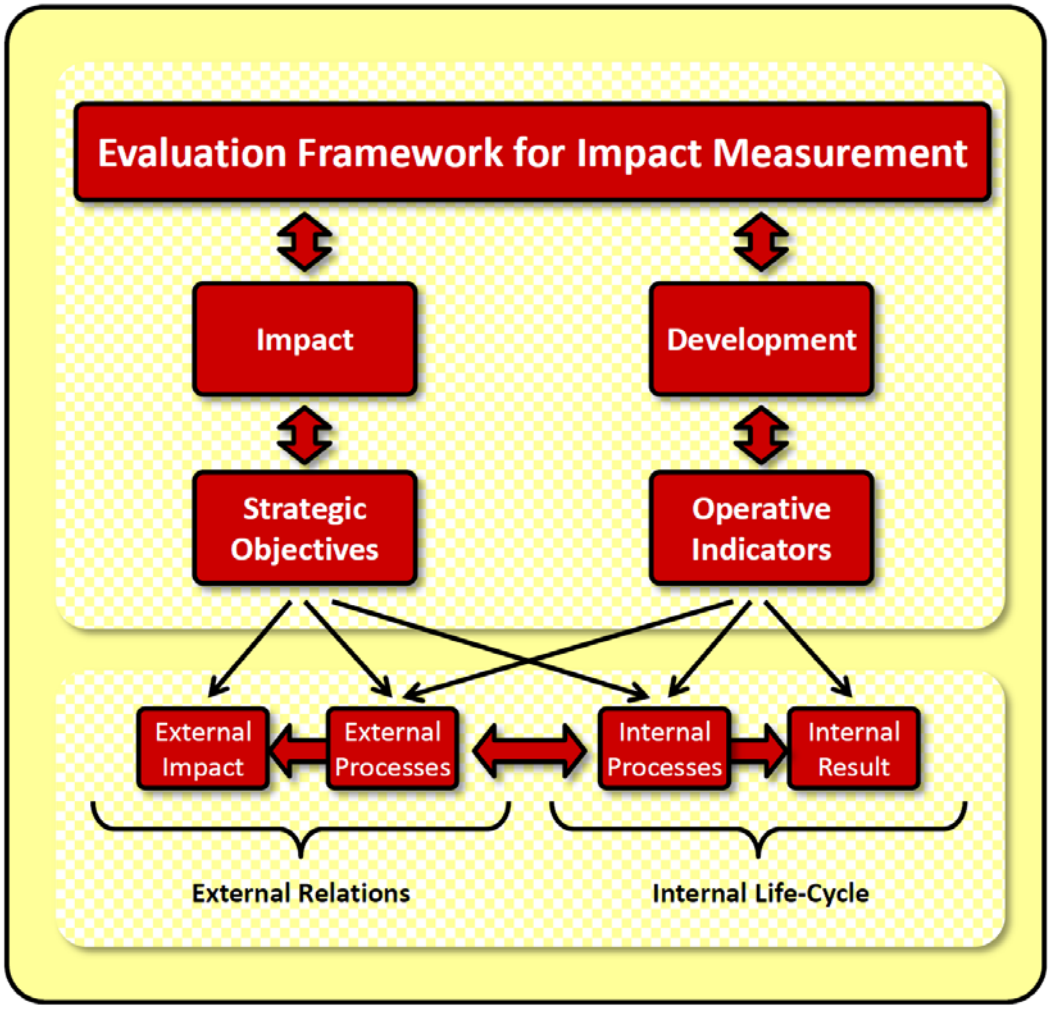


IDEAL Framework

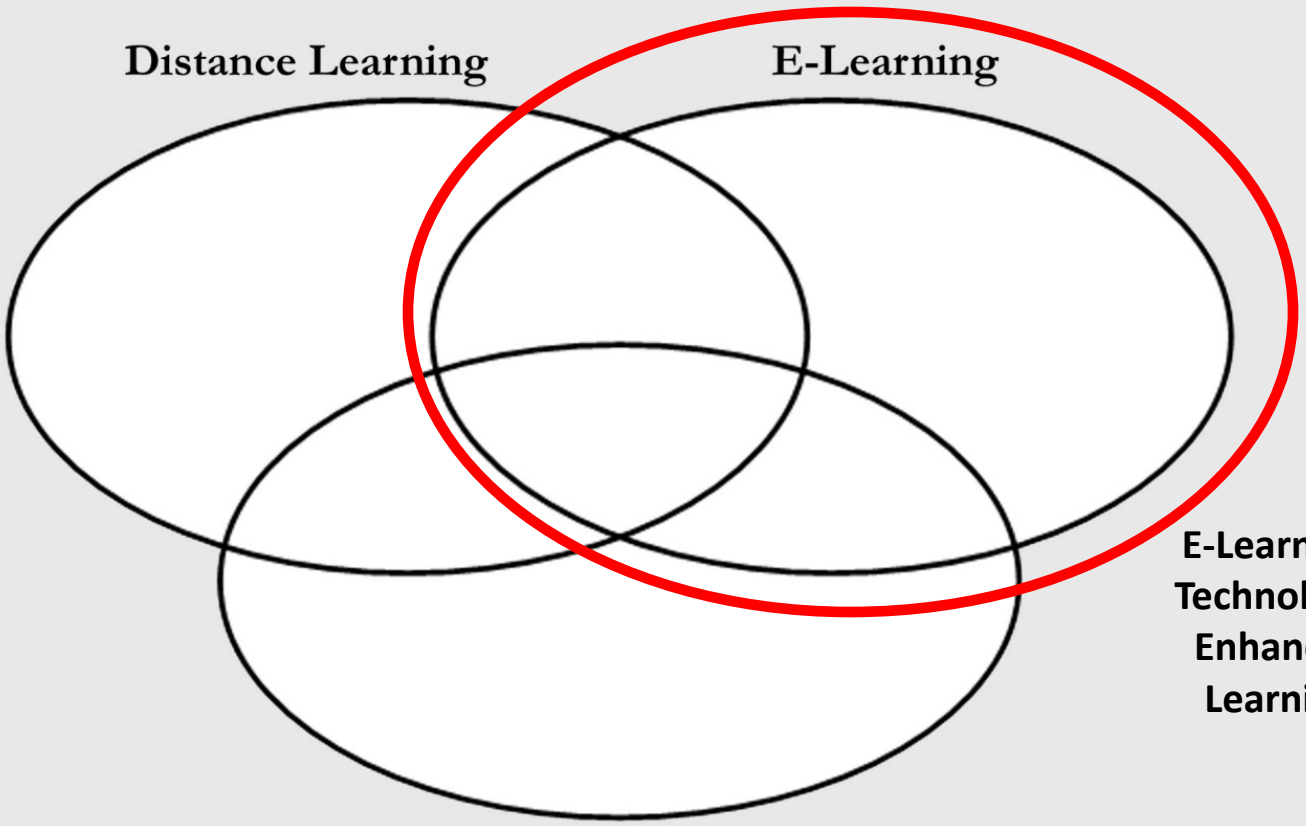


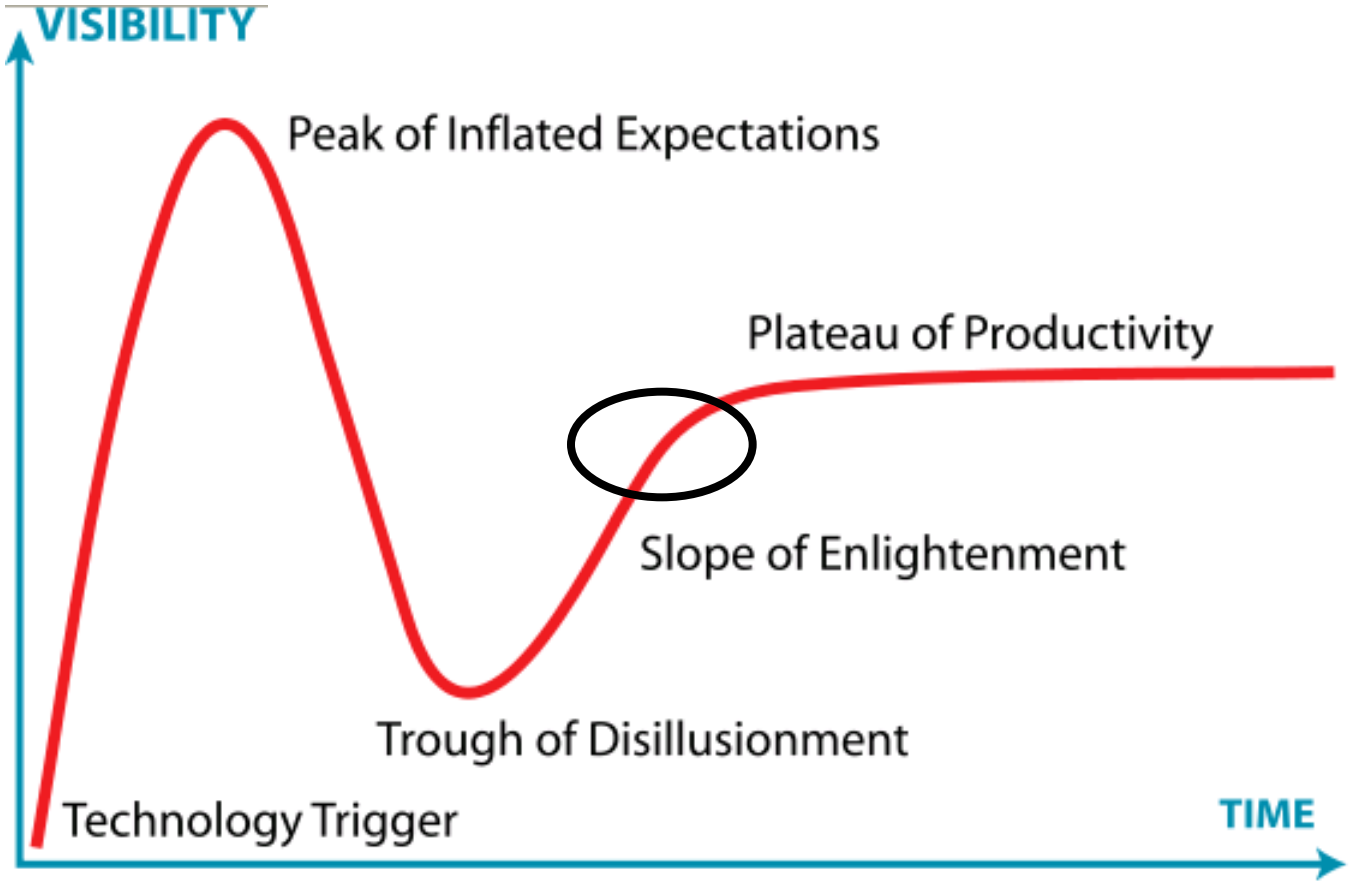
EFI - The Evaluation Framework for Impact

EFI Framework



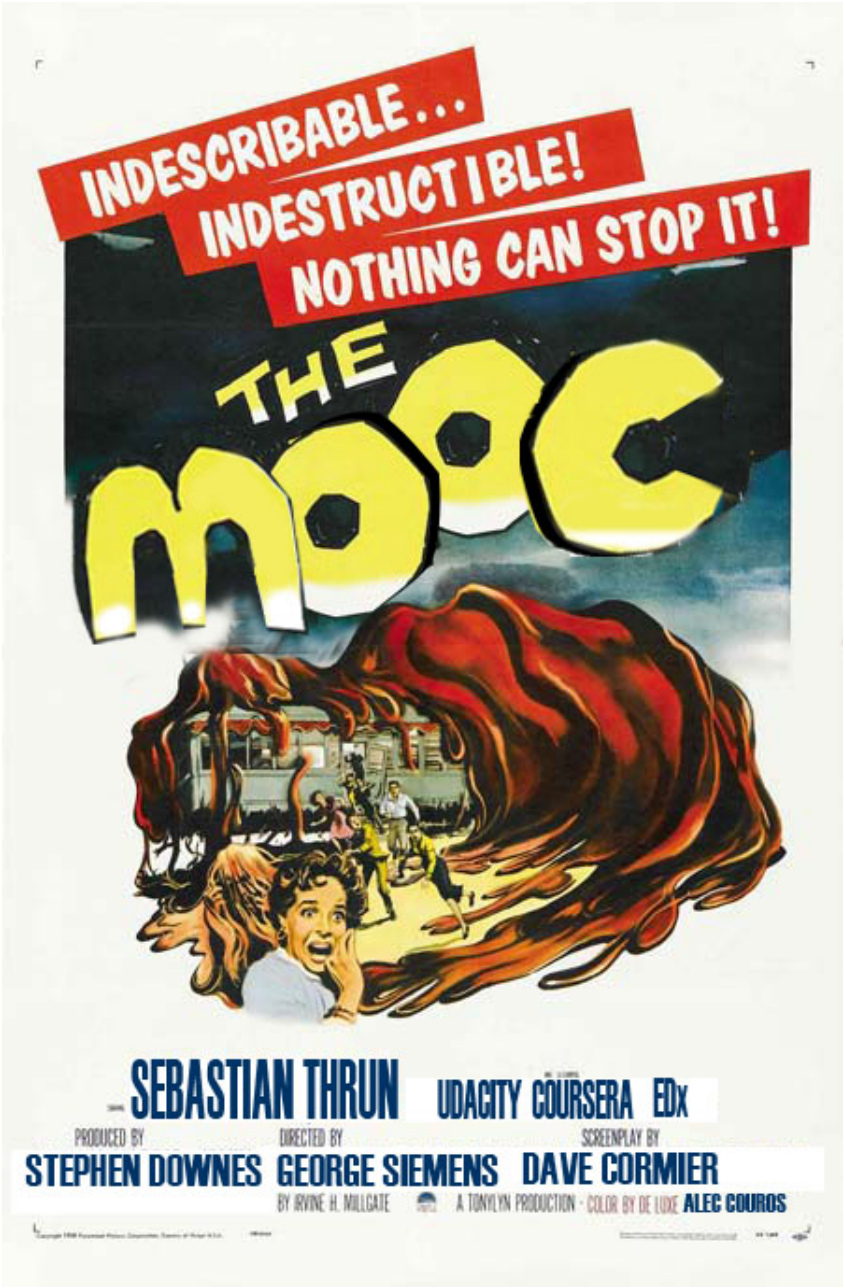
What are Innovations in Education?


Distance Learning
E-Learning
Face-to-Face Learning
E-Learning: Technology-Enhanced Learning



Source: Adapted to the Gardner Hype Cycle

Source: https://www.flickr.com/photos/catspyjamasnz/



Source: https://www.flickr.com/photos/gforsythe/

Source: https://www.flickr.com/photos/-ed/

MOOCs

cMOOCs vs. xMOOCs (vs. yMOOCs?)
Openness?
Quality?
Tutoring?
Completion rate?

The big advantage:
Mass marketing for E-Learning

Why Open Learning?

Source: https://www.flickr.com/photos/opensourceway/

Opening Up Education

European Commission: DG EAC and DG Connect

http://europa.eu/rapid/press-release_IP-13-859_en.htm

http://ec.europa.eu/education/policy/strategic-framework/education-technology_en.htm

Open Learning

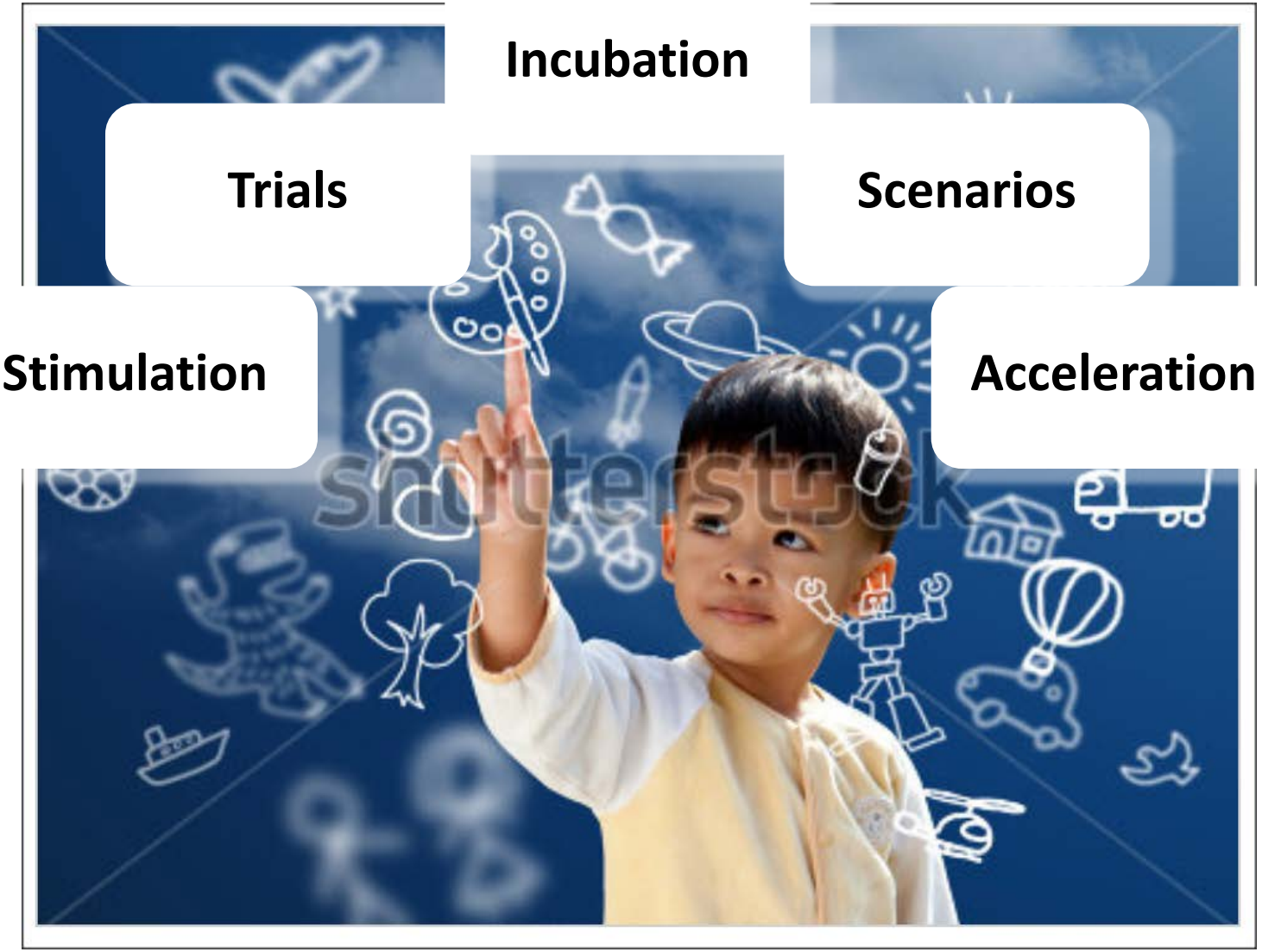
1. Suitable and **Open Learning Styles** and Designs

2. Suitable and **Open Learning Scenarios** and Environment

(see: Stracke, Christian M. (2013): "Open Learning: The Concept for Modernizing School Education and Lifelong Learning through the Combination of Learning Innovations and Quality"; in: Stracke (Ed.): *Learning Innovations and Quality: The Future of Digital Resources,* Berlin: Logos. p. 15-28.)

What are Innovations in Education?

Innovation: Bottom up



Source: www.shutterstock.com - 171988865

Projects

for Learning Innovations:

1. ODS

www.opendiscoveryspace.eu

@ 2,000 schools, 51 partners + 27 countries
+ 10,000 teachers + 15,3 Mio € budget

2. Inspiring Science Education

@ 5,000 Schools in whole Europe

www.InspiringScience.eu

and many more...

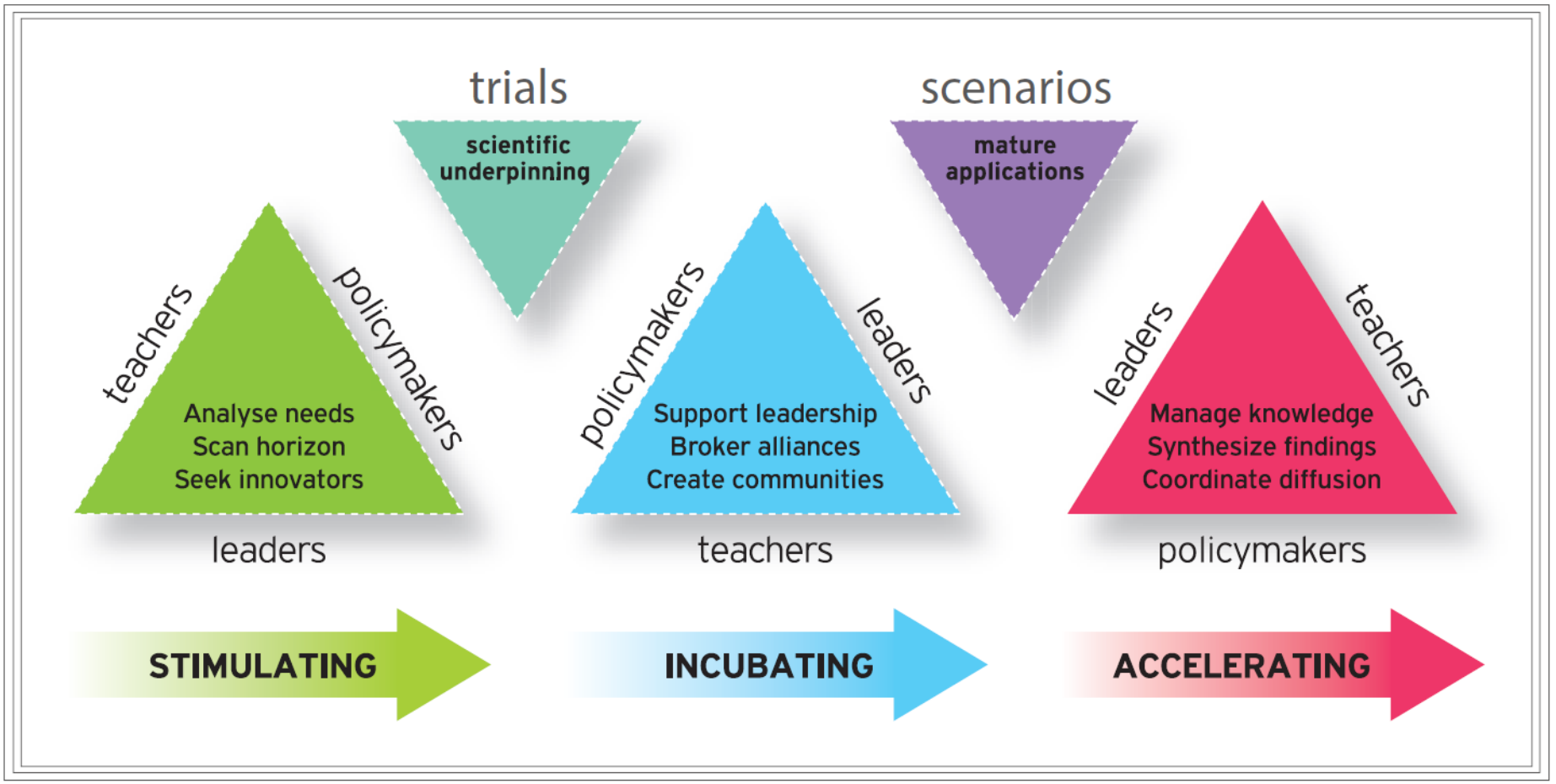
www.qualitydevelopment.eu

OPEN DISCOVERY SPACE

http://www.opendiscoveryspace.eu
http://portal.opendiscoveryspace.eu

The Open Discovery Space Project is funded by CIP-ICT-PSP-2011-5, Theme 2: Digital Content, Obective 2.4: eLearninig Objective 2.4

ODS Innovation Model



Source: Open Discovery Space – D1.1 Innovation Model (Year 2 Addendum)

ODS IM: Stimulation

Source: www.shutterstock.com - 88629640

ODS IM: Trials

Source: www.shutterstock.com - 143878255

ODS IM: Incubation

Source: Open Discovery Space – D1.1 Innovation Model (Year 2 Addendum)

ODS IM: Scenarios

Source: www.shutterstock.com - 113231725

ODS IM: Acceleration

Source: www.shutterstock.com - 112196741

inspiring SCIENCE education

Email us | contact@intrasoft-intl.com
More Info: +352 44 10122186

Search... Search

HOME ABOUT PARTNERS NEWS CONTACT

Welcome

In the framework of the Inspiring Science Education project the consolidation of good practice will be achieved by:

a) Bringing into the classroom a unique collection of digital resources and tools that are based on real-world problems. The resources will involve students in finding their own problems, testing ideas (from small to big ideas in science), receiving feedback, and working collaboratively with other students or practitioners beyond the school classroom. Advanced eLearning tools will provide scaffolds that enhance learning, support thinking and problem solving, model activities and guide practice, represent data in different ways, and form part of a coherent and systemic educational approach.

b) Giving students and teachers more opportunities to evaluate the quality of their own thinking and products for feedback, reflection, and revision.

c) Giving students and teachers the opportunity to interact with working scientists, receive feedback from multiple sources.

d) Building local and global communities where teachers, teacher trainers, education policy makers, parents, students, practicing scientists and other interested members of society are included in order to expand the learning environment beyond the school walls and expand opportunities for teachers' professional

The Open Discovery Space Project is funded by CIP-ICT-PSP-2011-5, Theme 2: Digital Content, Obective 2.4: eLearninig Objective 2.4

http://www.InspiringScience.eu

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CHRISTIAN M. STRACKE, UDE

Open Learning for Future Learning

Open Learning

1. Suitable and **Open Learning Styles** and Designs

2. Suitable and **Open Learning Scenarios** and Environment

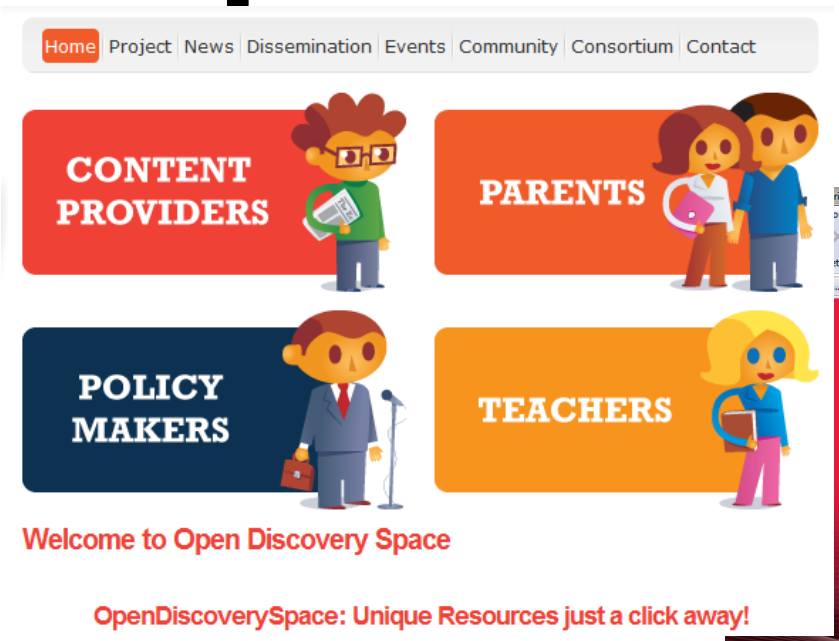
(see: Stracke, Christian M. (2013): "Open Learning: The Concept for Modernizing School Education and Lifelong Learning through the Combination of Learning Innovations and Quality"; in: Stracke (Ed.): *Learning Innovations and Quality: The Future of Digital Resources,* Berlin: Logos. p. 15-28.)

Open School Learning

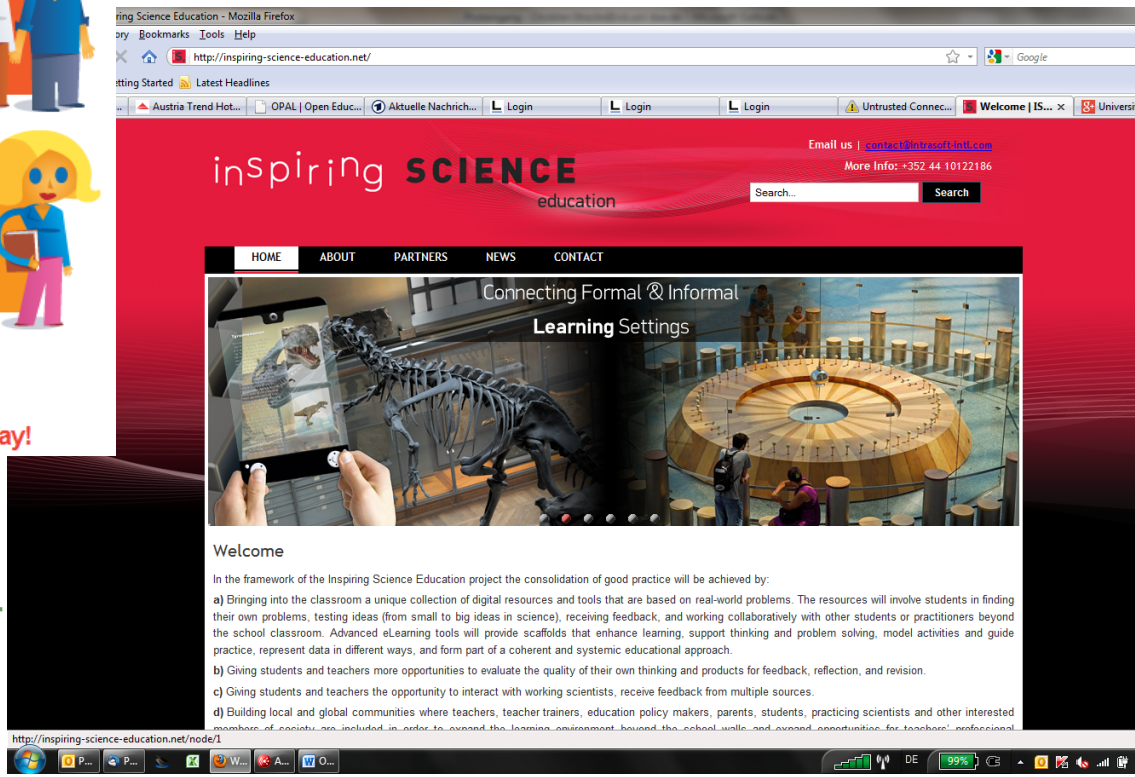
1. Open Education
   (innovative education with technologies)

2. Creative Classrooms
   (collaboration with moderation)

Open School Learning



www.opendiscoveryspace.eu



www.InspiringScience.eu

Open Academic Learning

1. Open Higher Education
   (innovative education with technologies)

2. Scientific Working Groups
   (cooperation with professors as enablers)

Open Lifelong Learning

1. Open Training
   (innovative non-formal training with ICT)

2. Workplace Learning
   (communities with peer-support)

How to Participate?

LINQ

The leading European and international Conference on

Learning INnovations & Quality

www.learning-innovations.eu

LINQ 2013

Our Vision:
Open Learning for best future Learning Innovation and Learning Quality!

Please use: #LINQ2013
Follow: @LINQ_Conference


LINQ
2013

LINQ & EIF 2014

Openess: Declaration of Crete!

Common ICORE and OEC Workshop

www.learning-innovations.eu

Please use: #LINQ2014
Follow: @LINQ_Conference

ICORE

ICORE: International Council for Open Research and Open Education

15th May 2013 in Rome
(evening before LINQ 2013)
Join the discussions and
apply as ICORE member!

www.ICORE-online.org

ICORE

ICORE: International Council for Open Research and Open Education

Online Meetings and
Wiki for Collaboration!
Next ICORE Event at ICCE:
1st December 2014 (in Nara, Japan)

www.ICORE-online.org

Conclusions

Quality Education through Innovation & ICT:

Opportunities or Contradiction?

Quality Education through Innovation & ICT:

Opportunities!

Quality Education

through
Innovation & ICT

Innovation & ICT can help ...

but are only means

Change
in Education!

Quality

Quality
in Education!

... with fun!

Source: Donabedian 1980

Quality: Most important

... and "new pedagogy" is important just the same!

Towards Open Learning

Let us Opening up Learning, Education and Training for ALL!

Further References

Stracke, Christian M. (2013): "Open Learning: The Concept for Modernizing School Education and Lifelong Learning through the Combination of Learning Innovations and Quality"; in: Stracke, Christian M. (Ed.): *Learning Innovations and Quality: The Future of Digital Resources*, Berlin: Logos. p. 15-28.

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All also online available at: http://www.qualitydevelopment.eu/docs

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All also online available at: http://www.qualitydevelopment.eu/docs

Thank you very much for your attention!

Your Questions?

Christian M. Stracke

christian.stracke@uni-due.de

Elected Chair ISO PC 288 "QM for LET" <www.learning-standards.eu>
Elected ISO-Convener for QM and QA in LET <www.sc36.org>
Elected Chair CEN TC 353 "ICT for LET" <www.cen.eu/isss/TC_353>

http://www.telit.wiwi.uni-due.de/en

http://www.qualitydevelopment.eu

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Towards Open Learning

Let us Opening up Learning, Education and Training for ALL!