



# High Quality Education and Learning for All through Open Education

Keynote @ LEF 2016 in Yakutsk  
by **Christian M. Stracke**

Open University of the Netherlands



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# Selected Projects:

Competence and Skills Modelling

Open Education and Research



Technology-Enhanced Learning at Large Scale

Quality Management and Evaluation

# Selected Projects:



[www.inclusive-education.net](http://www.inclusive-education.net)



[www.pure-h2o-learning.eu](http://www.pure-h2o-learning.eu)



[www.aristotele-ip.eu](http://www.aristotele-ip.eu)



[www.opendiscoveryspace.eu](http://www.opendiscoveryspace.eu)



[www.ecompetence.eu](http://www.ecompetence.eu)



[www.wacom-project.eu](http://www.wacom-project.eu)



[www.isecure-edu.eu](http://www.isecure-edu.eu)



[www.mooc-quality.eu](http://www.mooc-quality.eu)



[www.agriculture-competences.eu](http://www.agriculture-competences.eu)



[www.voa3r.eu](http://www.voa3r.eu)



[www.digifem.eu](http://www.digifem.eu)



[www.eMundus-project.eu](http://www.eMundus-project.eu)



[www.aristotele-ip.eu](http://www.aristotele-ip.eu)



[www.learning-standards.eu](http://www.learning-standards.eu)



<http://lelle.gtk.uni-pannon.hu>



[www.inspiringscience.eu](http://www.inspiringscience.eu)



# Dr. Christian M. Stracke: Open Learning & Education, Innovations, Policies, Quality & Competences, Impact

Open University of the Netherlands



Global cooperation: ECNU & KNOU



Global initiative ICORE for OR & OE



Annual international LINQ Conference



eLC European Institute



Standardization Chair in ISO & CEN

**Welten Institute**  
Research Centre for Learning, Teaching and Technology

Open Universiteit  
[welten-institute.org](http://welten-institute.org)



# **Keynote Overview:**

- 1. What is Open Education?**
- 2. Why Change in Education?**
- 3. What is Quality in Education?**
- 4. How to Improve Quality?**
- 5. How to Participate?**

# Keynote Overview:

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# **What is Open Education?**



# **Open Questions 4U**

**Who owns what you are designing?**

**Who knows Creative Commons (CC)?**

**Who shares materials with colleagues?**

**ATTENTION!!!**

**What is  
Open Education?**

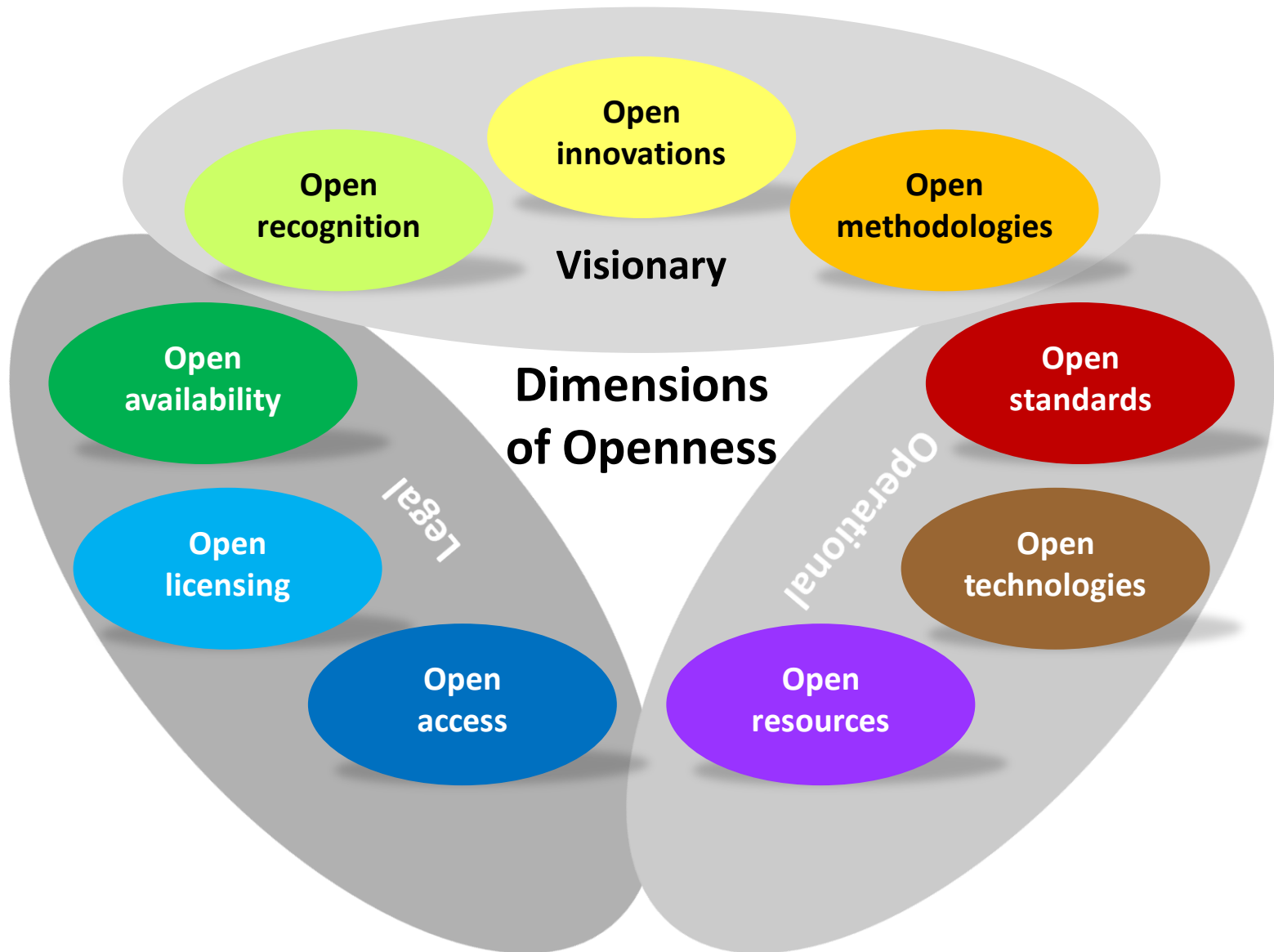
**EXAMINATION!!!**

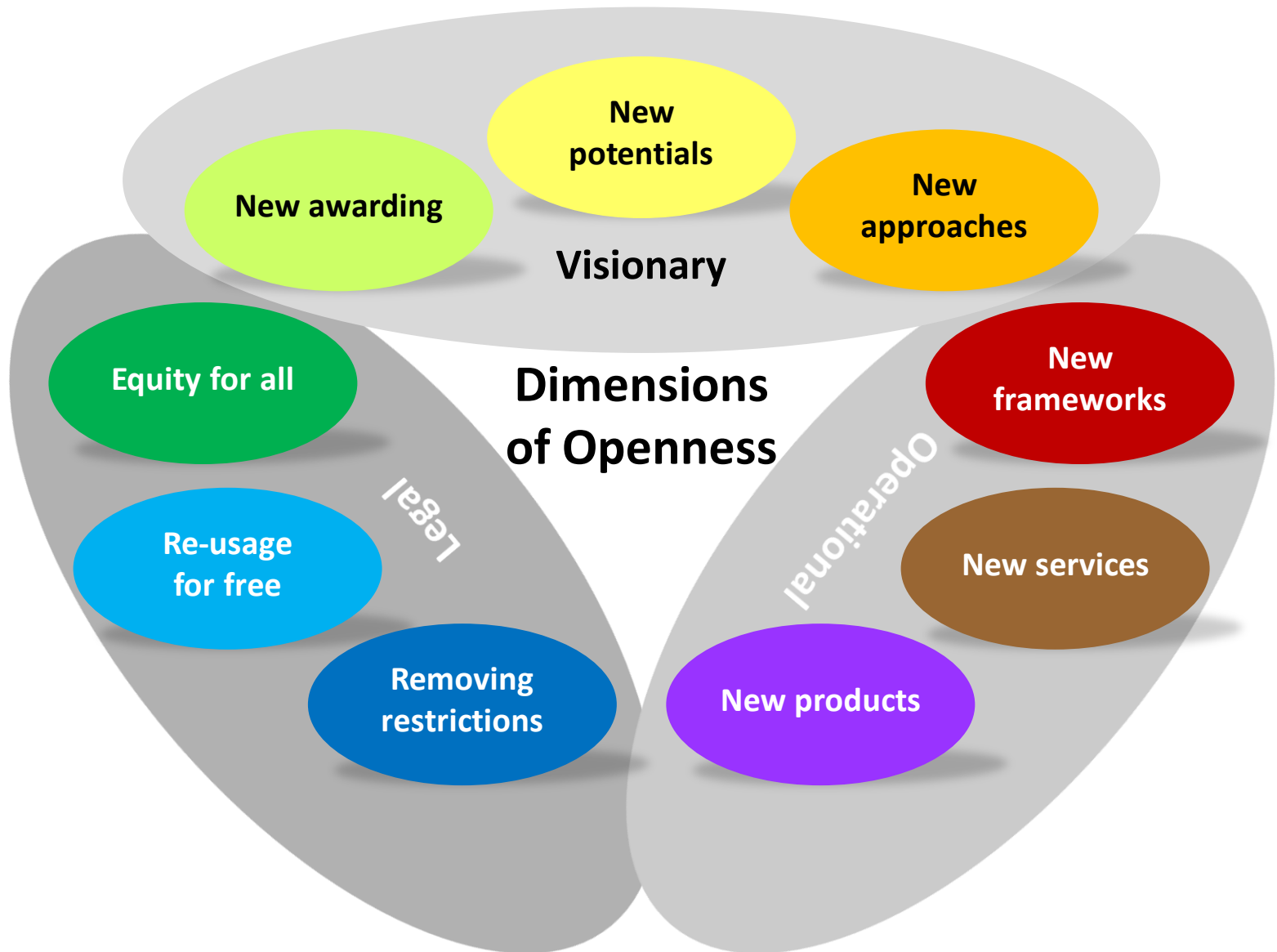
**Your answers:**

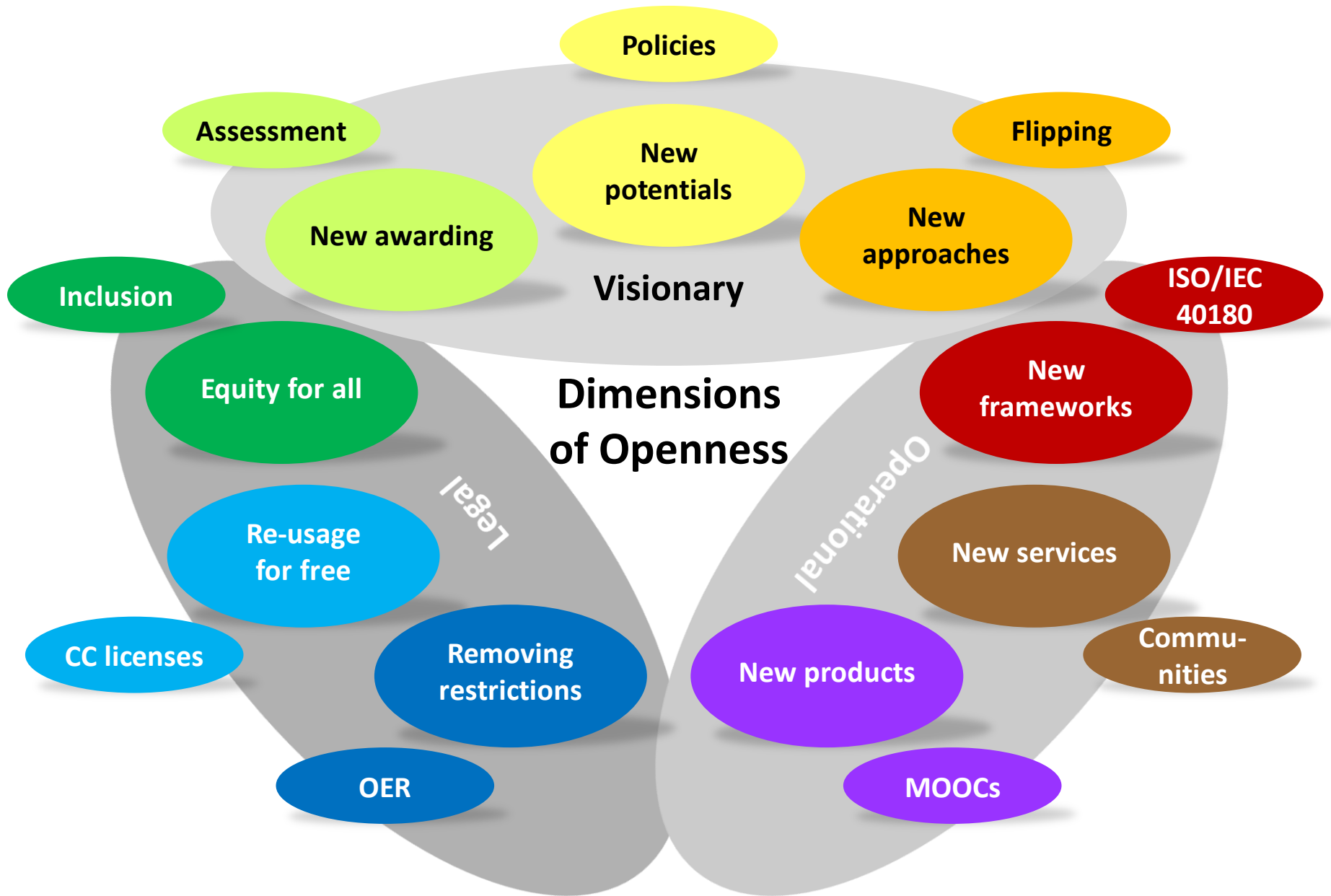
**What is  
Open Education?**



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





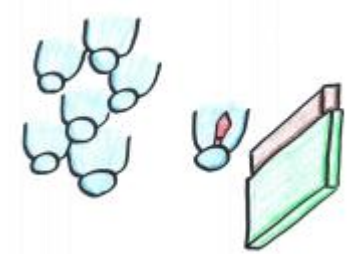


**Open Education (OE):  
Innovations for **changing**  
& **opening up** education  
to improve the **quality****





# Waves of OE



**1960s: Open Classrooms**

**1960s: Open Universities**

**1990s: Open Educational Resources**

**2000s: Open Online Collaboration**

**2010s: Open Educational Practices**

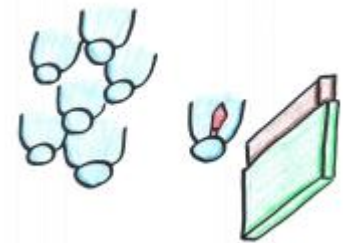
**Now: Open Educational Environments**



# Open Education

## 1960s: Open Learning

- Progressive education
- Flipped methodologies
- Open Universities

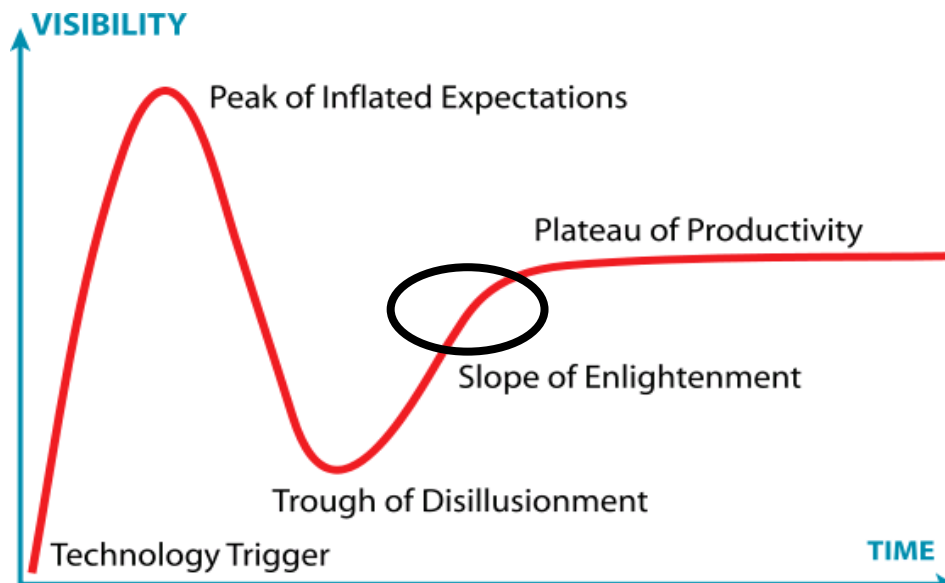


# Open Education



## 1990s: Open Educational Resources

- **Open content**
- **OER portals**
- **E-Learning hype**



# Open Education

## 2000s: Open Online Collaboration

- Open communities
- Web 2.0 & Social media
- MOOCs



# Open Education

## 2010s: Open Educational Practices

- **Open classrooms**
- **Competence focus**
- **OER declaration**



United Nations  
Educational, Scientific and  
Cultural Organization

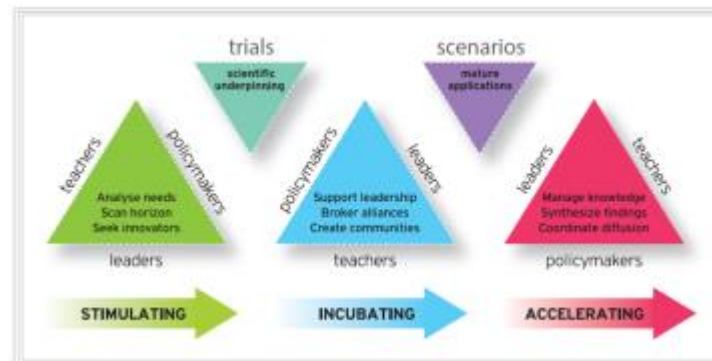


**OPEN EDUCATIONAL RESOURCES**

# Back to Open Learning?

## Now: Open Learning Environments

- Open methods
- Open policies
- Learner focus



# Open Education

**Do not to forget the long-term history:**

**1000 BCE - : Open Educational Practices**

- **Open discourse (Confucius, Socrates)**

**1800 CE - : Open Learning**

- **Progressive theory (Pestalozzi, Humboldt)**
- **Competence building (Piaget, Vygotsky)**

# Open Education (OE)

**Macro:**

**Policies and Curricula**

Strategic & organisational

**Meso:**

**Organisation and Design**

**Micro:**

**Learner and Course**



**Open Education (OE):  
Innovations for **changing**  
& **opening up** education  
to improve the **quality****

# Keynote Overview:

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- 2. Why Change in Education?**
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# The Digital Age

**Two core factors:**

- 1. Globalisation &**
- 2. Worldwide Internet**

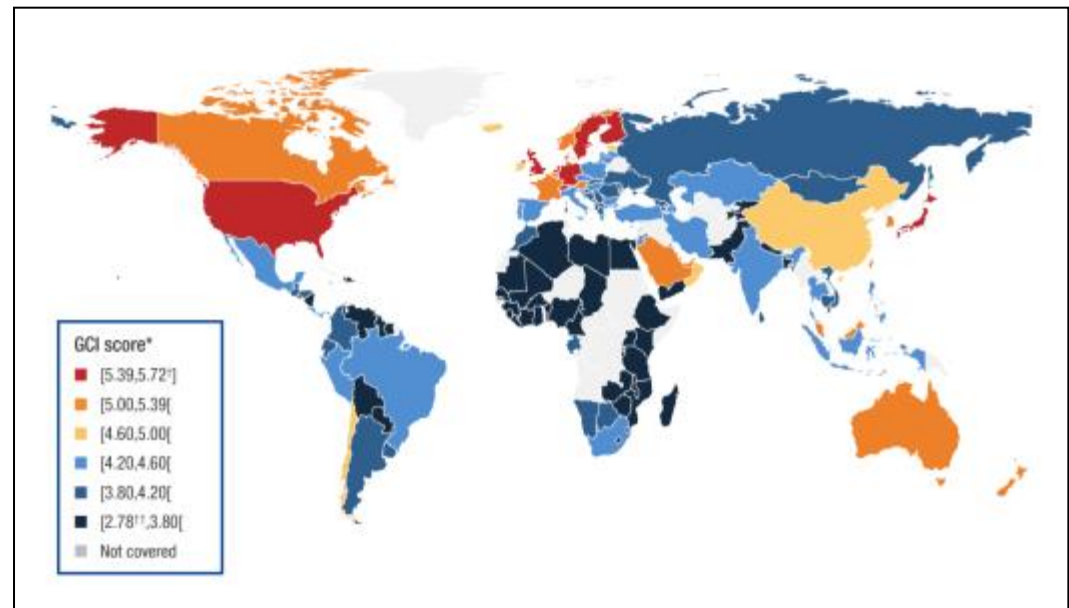


# Internationalization

**Global Competitions and societal changes**

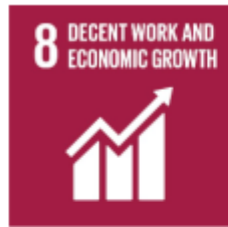
**Close the gaps  
& open new  
opportunities**

**Challenges:  
Learn to Learn**





# SUSTAINABLE DEVELOPMENT GOALS



# SUSTAINABLE DEVELOPMENT GOALS

Click on goals to show targets and topics related to the Sustainable Development Goals as defined in *Transforming Our World - the 2030 Agenda for Sustainable Development*

- Topics A-Z -



EXPAND ALL GOALS



1 NO POVERTY  
End poverty in all its forms everywhere



2 ZERO HUNGER  
End hunger, achieve food security and improved nutrition and promote sustainable agriculture



3 GOOD HEALTH AND WELL-BEING  
Ensure healthy lives and promote well-being for all at all ages



4 QUALITY EDUCATION  
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



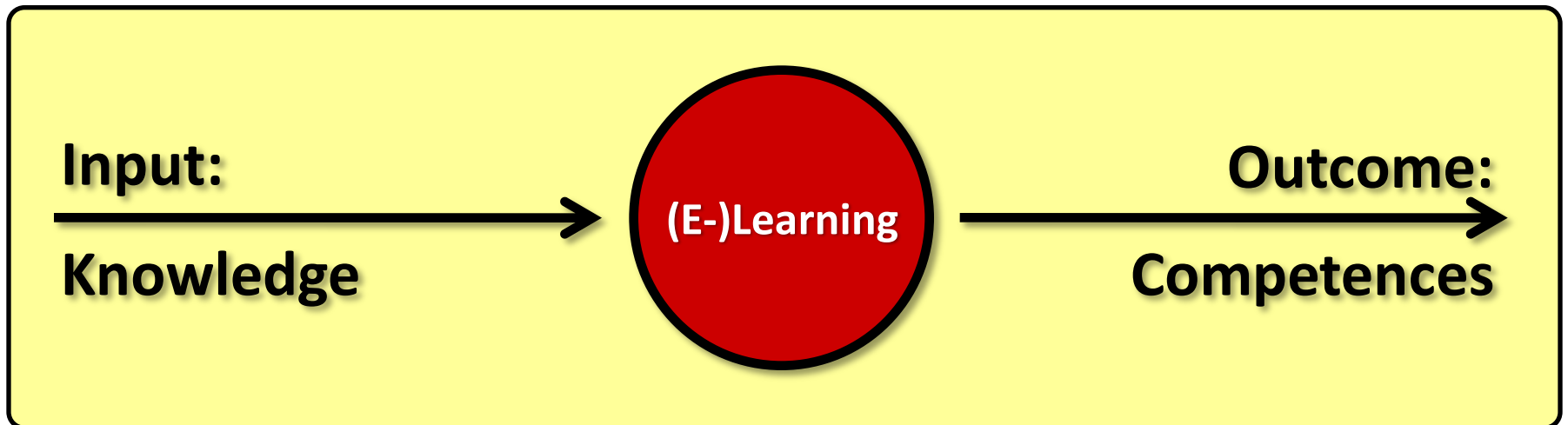
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

<b>Inclusive:</b>	<b>How to adapt?</b>	<b>OEP</b>
<b>Equitable:</b>	<b>How to offer?</b>	<b>OER</b>
<b>Quality:</b>	<b>How to improve?</b>	<b>IDEAL</b>
<b>For all:</b>	<b>How to deliver?</b>	<b>OA</b>

# 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





# **Change in Education!**

**To improve  
Quality  
in Education!**

# Keynote Overview:

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**What is  
Quality in  
Education?**

# Quality in Education

**Quality is key for success and results of learning processes**

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



**What is  
Quality?**

**A simple  
experiment ...**



**A simple experiment:**

**Please imagine and define  
the quality of your  
favourite jelly bear**



# **Quality cannot be defined**

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

**What is  
Quality?**

# **Quality**

**most important**

**for Learning, Education  
and Training!**







# Open Education (OE)

**Macro:**

**Policies and Curricula**

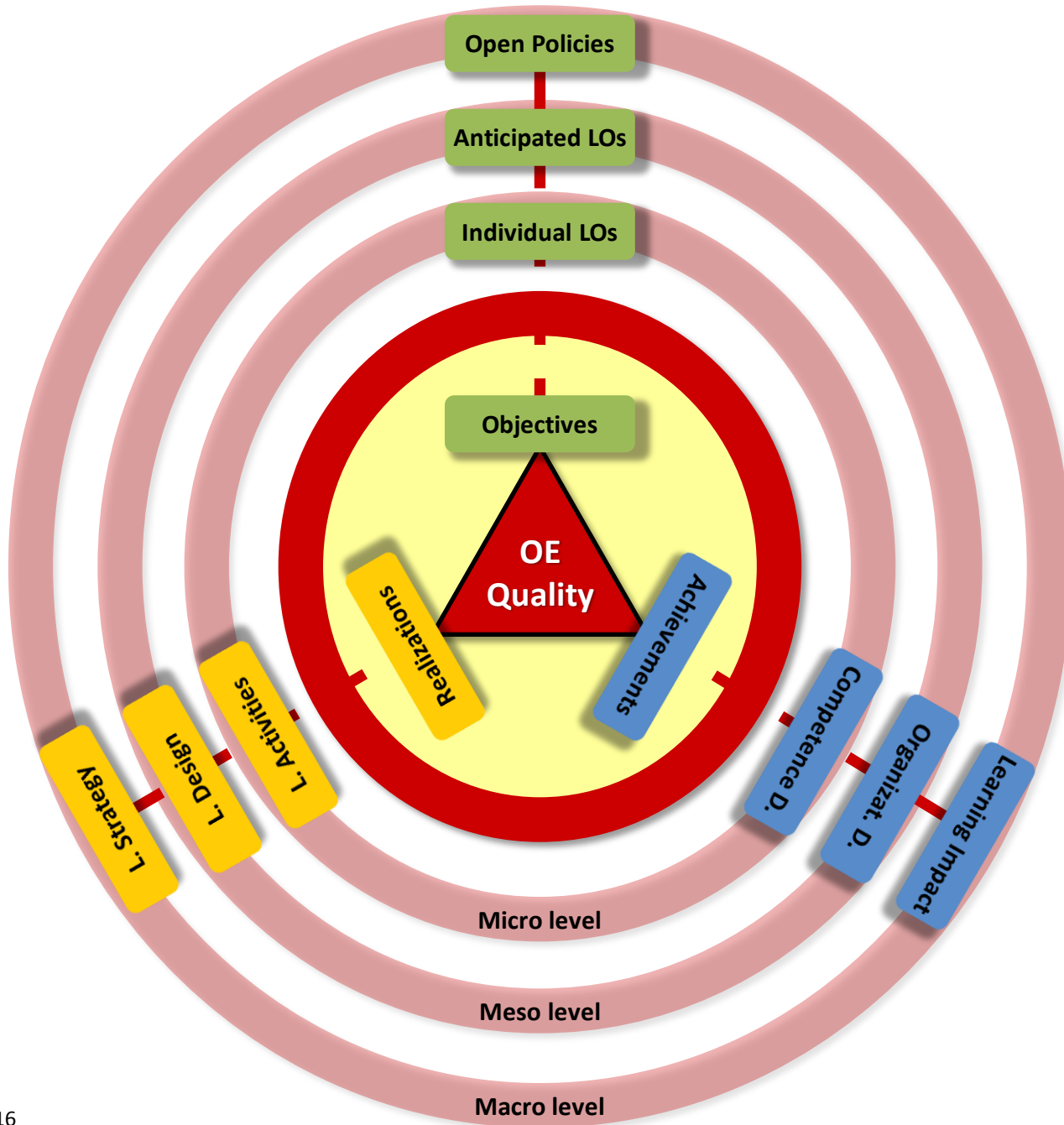
Strategic & organisational

**Meso:**

**Organisation and Design**

**Micro:**

**Learner and Course**





**Quality: Most important  
... and "new pedagogy" is  
important just the same!**



# **Quality in Education!**

# **Quality in Open Education!**

**... with fun!**

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# Open Education (OE)

**Macro:**

**Policies and Curricula**

Strategic & organisational

**Meso:**

**Organisation and Design**

**Micro:**

**Learner and Course**

# Quality by OE

**Macro:**

**Movement & Strategies**

Strategic & organisational

**Meso:**

**Frameworks & Standards**

**Micro:**

**Competence & Community**

# **OE Examples: EC**

**Strict open policy:**

**All research results from H2020 and other funding programmes have to be published with “green” open access license**

**In addition: Open data policy**

# **OE Examples: NL**

**Strict open policy:**

**All research results from Dutch funding programmes with open access license**

**In addition: Framework contracts with major publishers (Springer, Wiley) to opt for “gold” open access for free**



# OE Examples: OUNL

**Strict open policy:**

**All research results and publications  
with “green” open access license on  
our own open repository Dspace**

**<http://dspace.ou.nl/>**

**In addition: Open Education research  
group in Welten Institute**

# OUNL Video

**The Welten Research Institute:  
Leading in Learning Innovations**



[www.ou.nl/web/welten-about-us/home](http://www.ou.nl/web/welten-about-us/home)

# Quality by Open Learning

**Macro: Movement & Strategies**

Meso: Frameworks & Standards

Micro: Competences & Communities

# International Policies

## **UNESCO: OER Declaration**

<http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/what-is-the-paris-oer-declaration>

## **European Commission: Opening Up Education**

[http://ec.europa.eu/education/policy/strategic-framework/education-technology\\_en.htm](http://ec.europa.eu/education/policy/strategic-framework/education-technology_en.htm)

## **ICORE / OEC: Declaration of Crete**

[http://wiki.icore-online.org/index.php/ICORE\\_Declaration\\_of\\_Crete](http://wiki.icore-online.org/index.php/ICORE_Declaration_of_Crete)

## **Republic of the Philippines: Open Distance Learning Act**

<http://www.gov.ph/2014/12/09/republic-act-no-10650/>

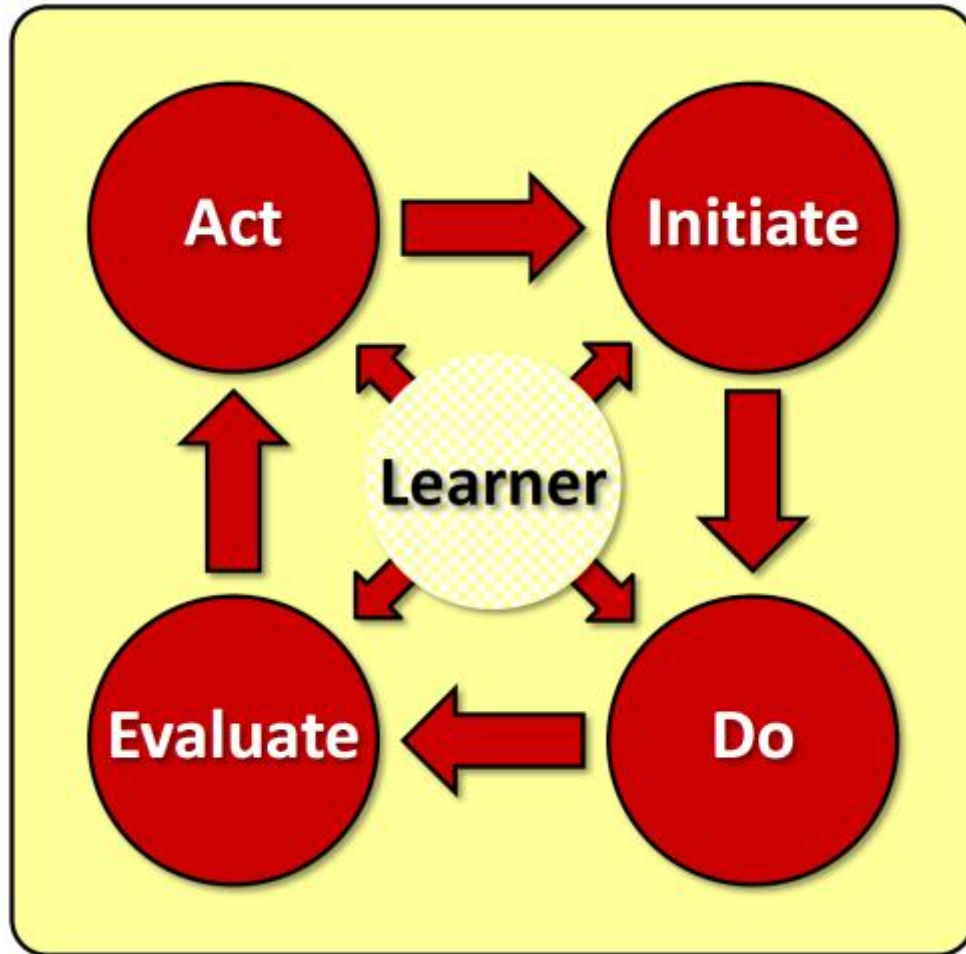
# Quality by Open Learning

Macro: Movement & Strategies

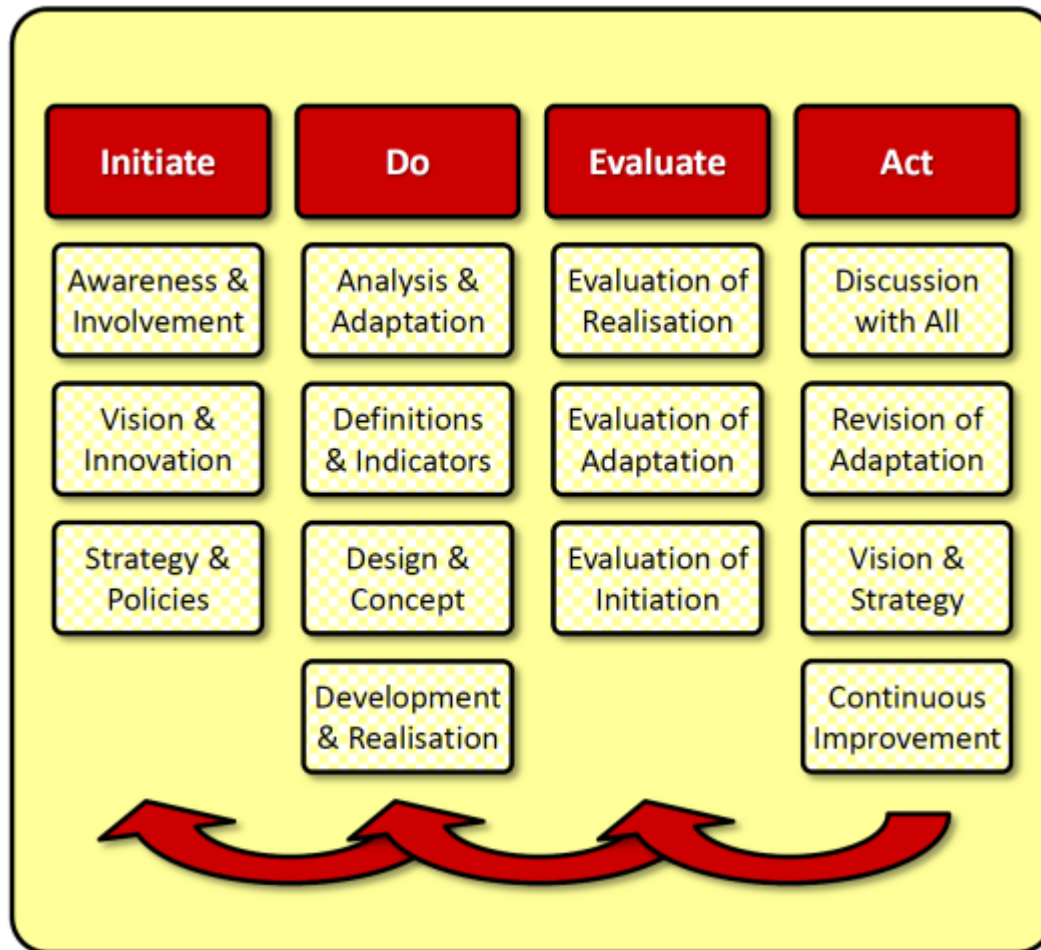
**Meso: Frameworks & Standards**

Micro: Competences & Communities

# Strategies: IDEAL

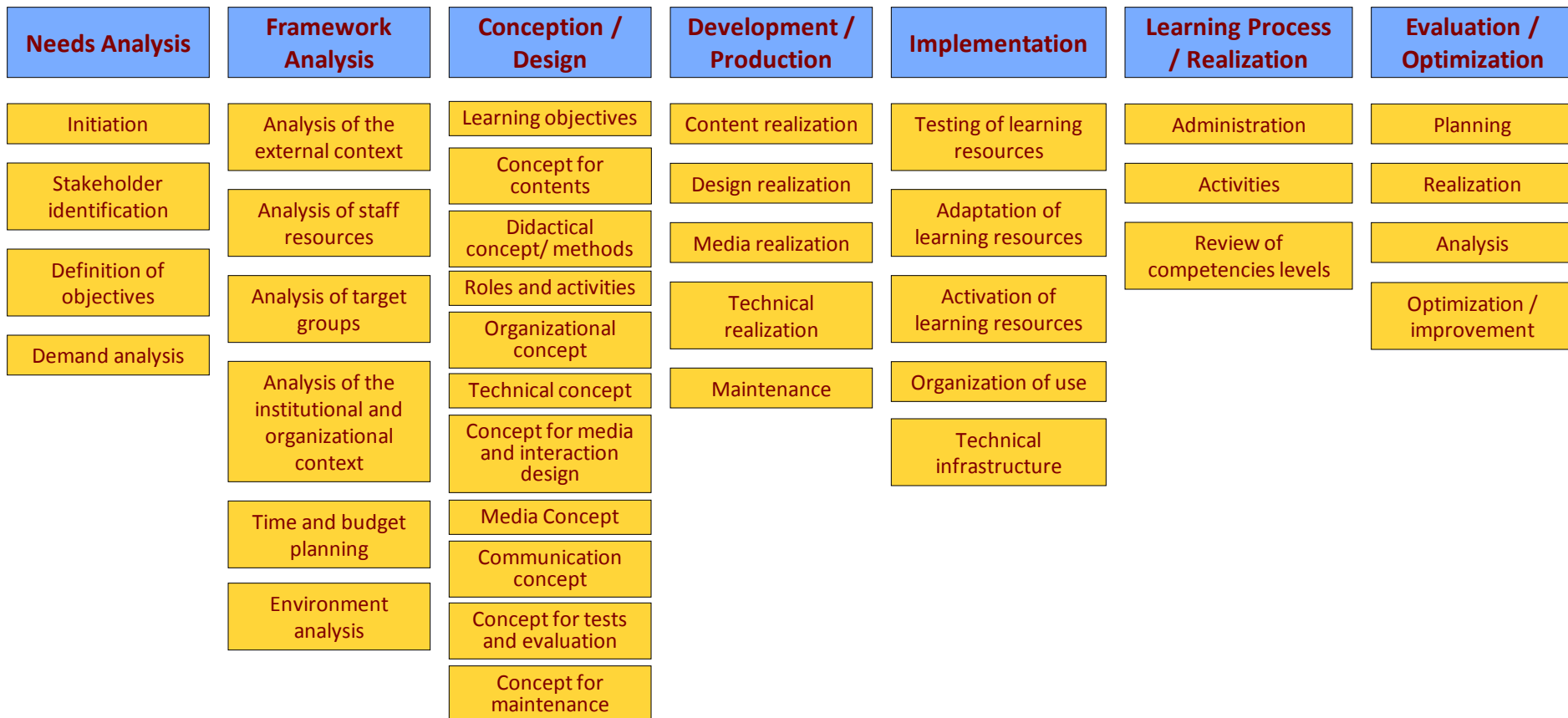


# Strategies: IDEAL



# Standard: ISO/IEC 19796-1

## The Reference Process Model:





# Standard: ISO/IEC 19796-1

## Example of required adaptation:

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				

# Quality by Open Learning

Macro: Movement & Strategies

Meso: Frameworks & Standards

**Micro: Competences & Communities**

# Learn how to learn

**Learning-how-to-Learn:**

**The key competence in 21st century**

**Focus on inclusion of learning skills  
into curricula**

**[lelle.gtk.uni-pannon.hu](http://lelle.gtk.uni-pannon.hu)**



# Problem-based learning

**Problem-based Learning as method for key competences in 21st century**

**Focus on integrating learning analytics & semantics in problem-based learning**

**[www.PBL3-project.eu](http://www.PBL3-project.eu)**



# Open inclusive learning

Evidence-based inclusive  
school education in Europe

PROSEL for prosociality &  
social emotional learning



[www.inclusive-education.net](http://www.inclusive-education.net)

# Communities: ODS & ISE

> 10,000 teachers and  
> 3,000 schools in 28 countries

Home Project News Dissemination Events Community Consortium Contact

**CONTENT PROVIDERS**

**PARENTS**

**POLICY MAKERS**

**TEACHERS**

Welcome to Open Discovery Space

OpenDiscoverySpace: Unique Resources just a click away!

[www.opendiscoveryspace.eu](http://www.opendiscoveryspace.eu)

inspiring SCIENCE education

Email us | [contact@inspiring-science.eu](mailto:contact@inspiring-science.eu)  
More info: +352 44 10122186

Search... Search

HOME ABOUT PARTNERS NEWS CONTACT

Connecting Formal & Informal Learning Settings

Welcome

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

- 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.
- Giving students and teachers more opportunities to evaluate the quality of their own thinking and products for feedback, reflection, and revision.
- Giving students and teachers the opportunity to interact with working scientists, receive feedback from multiple sources.
- Building local and global communities where teachers, teacher trainers, education policy makers, parents, students, practicing scientists and other interested members of society are involved in order to ensure the learning environment beyond the school walls and extend opportunities for teachers' professional

[www.inspiring-science.eu](http://www.inspiring-science.eu) & [portal.opendiscoveryspace.eu/ise](http://portal.opendiscoveryspace.eu/ise)

# **Open Schools for Open Learning**

# Open Schools

## Facilitating Open Educational Practices

- **Open classrooms**
- **Competence focus**
- **OER re-use**



United Nations  
Educational, Scientific and  
Cultural Organization



**OPEN EDUCATIONAL RESOURCES**



**Open Schools for  
Equity and High  
Quality Education**

# **Two major Trends: Open Learning and MOOCs**

# **What is Open Learning?**



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

# Open School Learning

> 10,000 teachers and  
> 3,000 schools in 28 countries

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More info: +352 44 10122186

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Connecting Formal & Informal  
Learning Settings



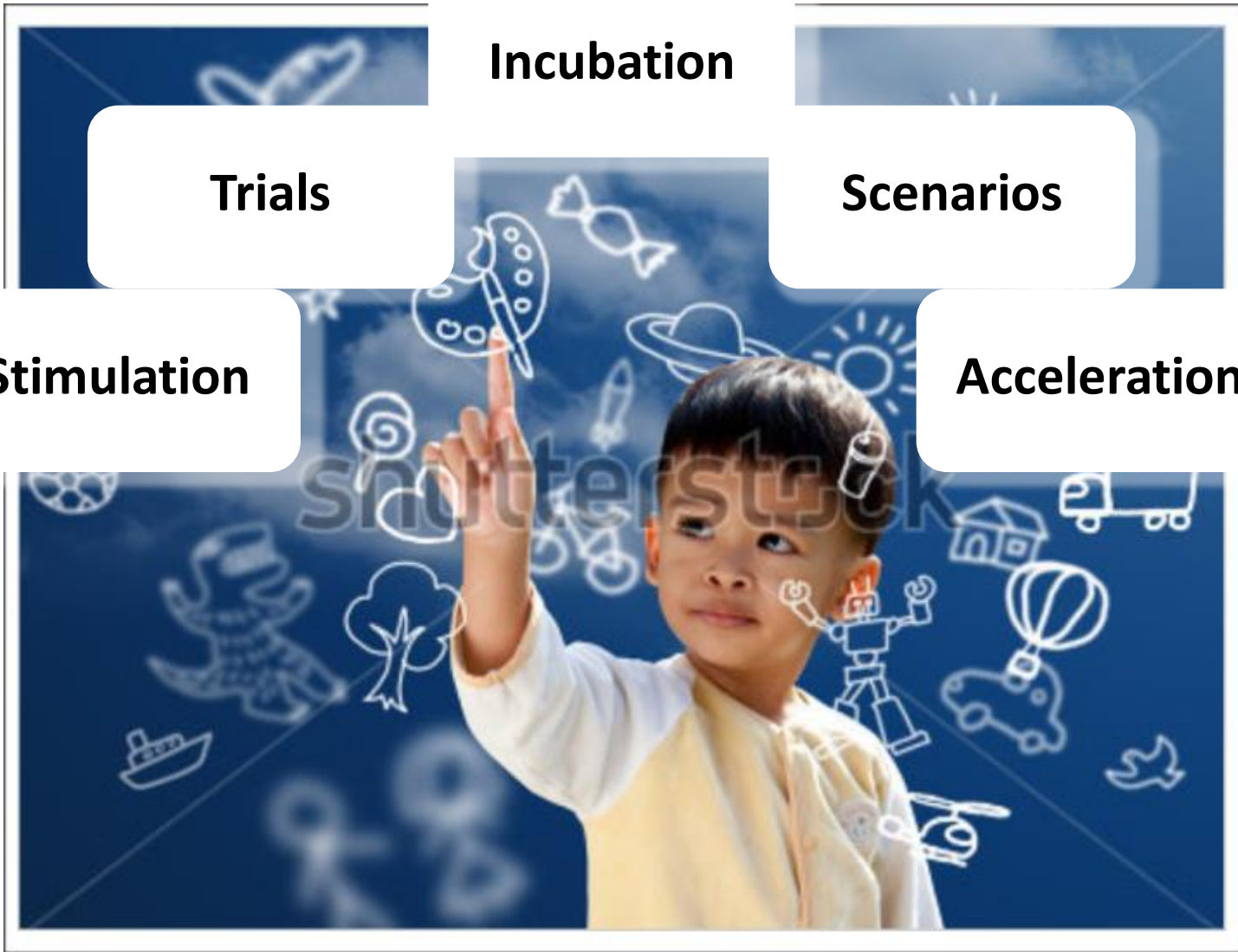
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[www.inspiring-science.eu](http://www.inspiring-science.eu) & [portal.opendiscoveryspace.eu/ise](http://portal.opendiscoveryspace.eu/ise)

# Innovation: Bottom up





# OPEN DISCOVERY SPACE

[Home](#) | [Project](#) | [News](#) | [Dissemination](#) | [Events](#) | [Community](#) | [Consortium](#) | [Contact](#)

**CONTENT  
PROVIDERS**



**PARENTS**



**POLICY  
MAKERS**



**TEACHERS**



Welcome to Open Discovery Space

OpenDiscoverySpace: Unique Resources just a click away!



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

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

# Open Discovery Space

The screenshot shows the homepage of the Open Discovery Space website. At the top left is the logo for 'ods OPEN DISCOVERY SPACE'. To the right is a login section with fields for 'Username or e-mail' and 'Password', a 'Log in' button, and a link for 'Request new password'. Below the logo is a navigation bar with the slogan 'linkup, create, share, grow' and a call to action 'New in ODS? Join our teachers' community'. A search bar is located on the right side of the navigation bar. The main content area features a large image of three children looking at a laptop, with the text 'An inspiring afternoon of practice for Education...' and a sub-headline 'What should children learn to be fully prepared for life in the 21st century? Besides language and...'. At the bottom, there are five columns representing different categories: RESOURCES (818632), COMMUNITIES (1153), SCHOOLS (2588), TEACHERS (11676), and ODS ACADEMIES (165).

www.opendiscovery.eu

ods OPEN DISCOVERY SPACE

Username or e-mail

Password

Log in

Request new password

linkup, create, share, grow

New in ODS? Join our teachers' community

Learn more about ODS

Search for educational resources...

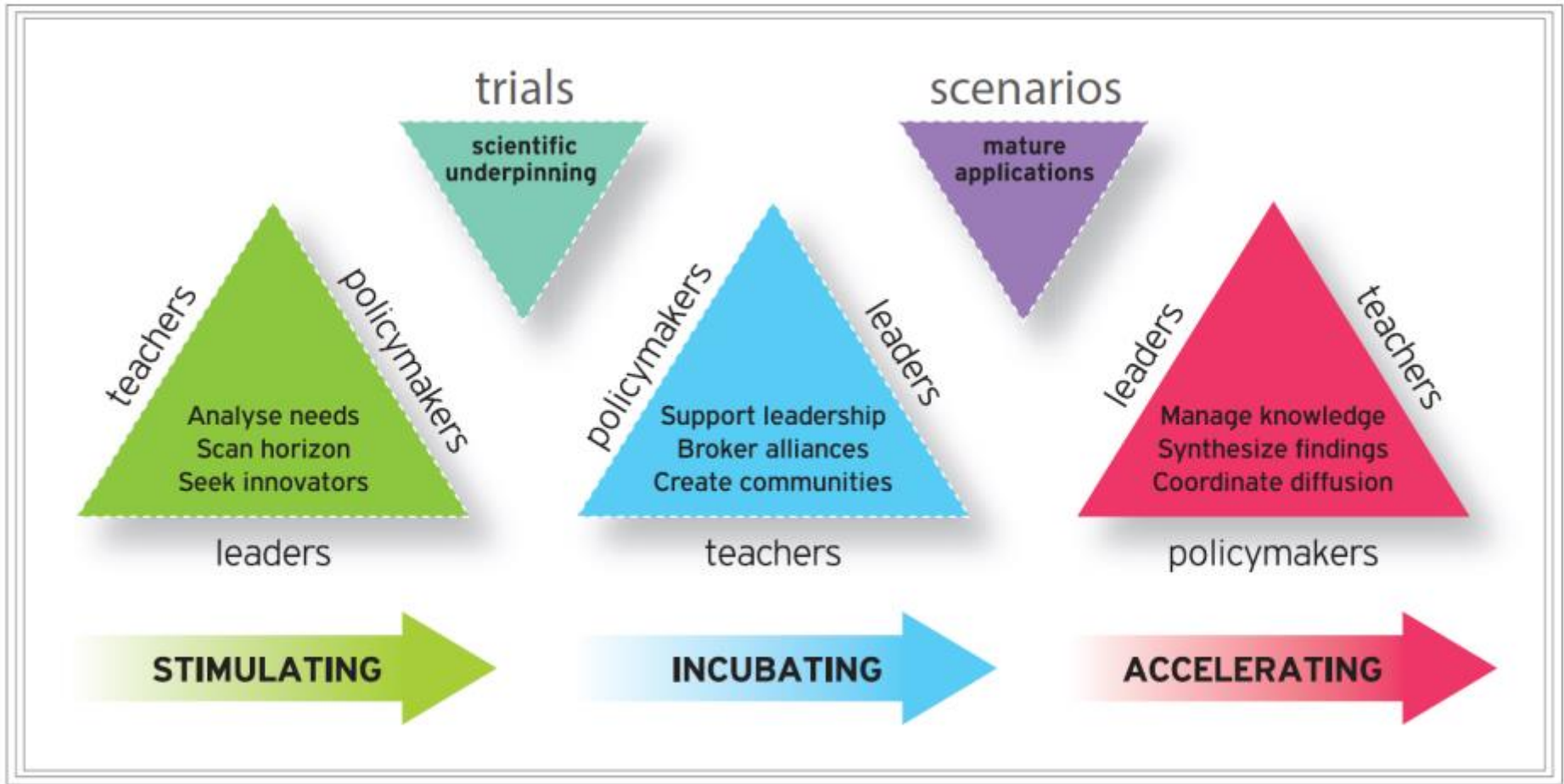
An inspiring afternoon of practice for Education...

What should children learn to be fully prepared for life in the 21st century? Besides language and...

RESOURCES	COMMUNITIES	SCHOOLS	TEACHERS	ODS ACADEMIES
EXPLORE OUR RESOURCES TO USE IN THE CLASSROOM AND PLAN YOUR LESSONS	SHARE EDUCATIONAL CONTENT THROUGH COMMUNITIES OR START YOUR OWN	NAVIGATE THROUGH THE SCHOOLS OF ODS NETWORK	BEING CONNECTED WITH OUR TEACHERS FROM ALL OVER THE EUROPE	FOLLOW THE ODS ACADEMIES TO IMPROVE YOUR PROFESSIONAL EDUCATION
818632 RESOURCES	1153 COMMUNITIES	2588 SCHOOLS	11676 TEACHERS	165 ACTIVITIES



# ODS Innovation Model





## Connecting Formal & Informal Learning Settings

### Welcome

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

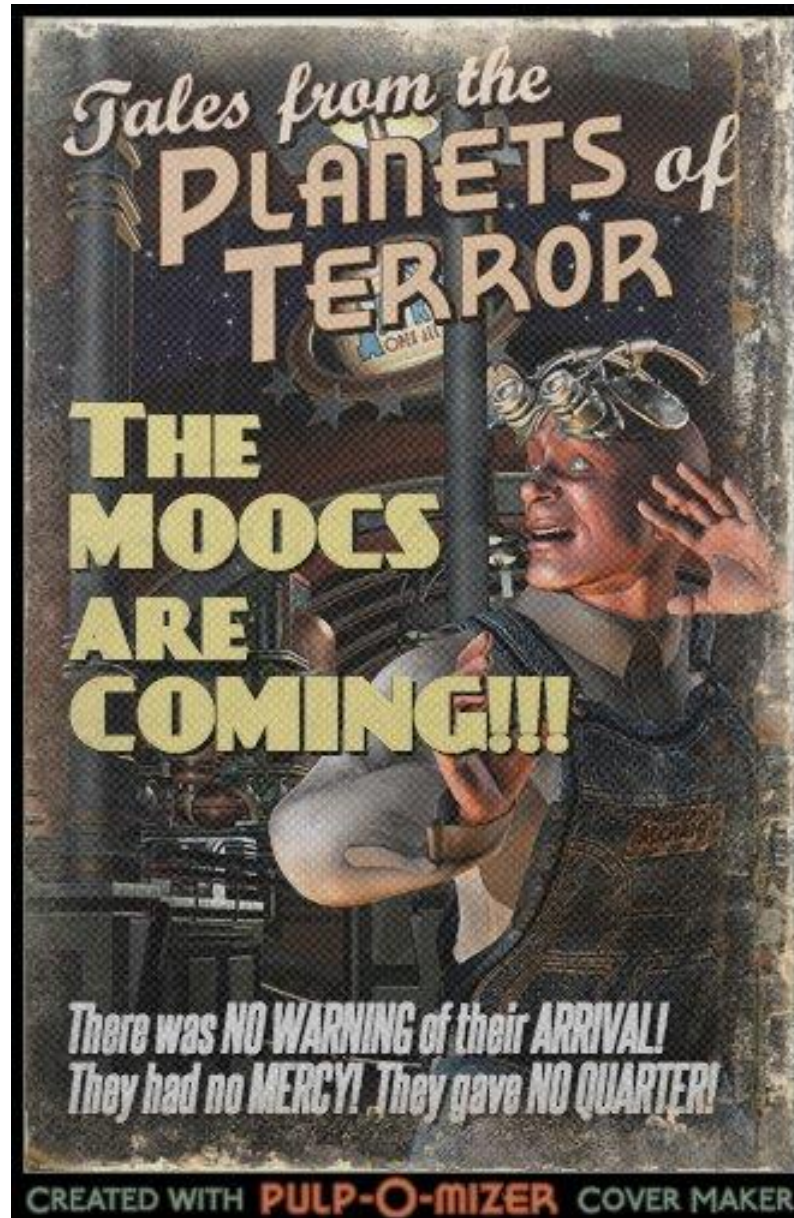
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- b) Giving students and teachers more opportunities to evaluate the quality of their own thinking and products for feedback, reflection, and revision.
- c) Giving students and teachers the opportunity to interact with working scientists, receive feedback from multiple sources.
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<http://www.InspiringScience.eu>

<http://portal.opendiscoveryspace.eu/ISE>

**Second major Trend:  
MOOCs**

**What are MOOCs?**



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

**INDESCRIBABLE...  
INDESTRUCTIBLE!  
NOTHING CAN STOP IT!**

# THE MOOC



**SEBASTIAN THRUN** UDACITY COURSERA EDX  
PRODUCED BY **STEPHEN DOWNES** DIRECTED BY **GEORGE SIEMENS** SCREENPLAY BY **DAVE CORMIER**  
BY IRVING H. MULLIGATE A TONYEVN PRODUCTION - COLOR BY DE LOUX ALEC COURDS



# MOOCs

**Massive Open Online Courses**

**cMOOCs vs. xMOOCs (vs. yMOOCs?)**

**Openness?**

**Quality?**


**Tutoring?**

**Completion rate?**

**The big advantage:**

**Mass marketing for E-Learning**



The background features several overlapping, wavy lines in various shades of green, creating a sense of motion and depth. The lines are most prominent on the left and right sides, framing the central text.

mooq

**WE WILL MAKE  
MOOCs BETTER!**

[www.mooc-quality.eu](http://www.mooc-quality.eu)



# **Quality Reference Framework with indicators for design & comparison**

**Launch of MOOC Survey at EDEN 2016:**

**<http://goo.gl/forms/dsjqwDl6jZ5iOmZx2>**

**or go to: [www.MOOC-quality.eu/news](http://www.MOOC-quality.eu/news)**

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1. What is Open Education?
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4. How to Improve Quality?
5. **How to Participate?**

# How to Open Education?

- O** Open your mind for openness
- P** Put an open license on it
- E** Enrich OER and share them
- N** Network with same minded
- I** Involve your management
- N** Notify your communities
- G** Generate consensus

# How to Open Education?

- U** Unite your open collections
- P** Promote them worldwide
- E** Enter global movements
- D** Discuss with decision makers
- U** U make the difference!

# LINQ

The leading European and  
international Conference on  
Learning INnovations & Quality

[www.learning-innovations.eu](http://www.learning-innovations.eu)



# ICORE

## ICORE: International Community for Open Research and Open Education

**Launched 15th May 2013 in Rome**

**Already more than 300 members within one year**

**First recognition by key stakeholders & EC:**

**Let us join forces and become ICORE member!**

**[www.ICORE-online.org](http://www.ICORE-online.org)**





# ICORE

## ICORE: The need for cooperation!

Series of ICORE Workshops with key organisations  
“How to re-establish Openness as default?”  
First ICORE Workshops at ICDE Conference  
in South Africa & at OE Global 2016 in Poland!  
Towards a global joint initiative!

[www.ICORE-online.org](http://www.ICORE-online.org)





**ATTENTION!!!**

**What is CC?**

**EXAMINATION!!!**

**ATTENTION!!!**

What is CC?

**What is Open Content?**

**EXAMINATION!!!**

# How can you participate?

**Publish and share your content!**

**Re-use existing content!**



**Connect to colleagues!**

# Conclusions



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

# **Towards Open Learning**

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





Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

# **Open Learning for inclusive equity & high quality education for all**



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

<b>Inclusive:</b>	<b>How to adapt?</b>	<b>OEP</b>
<b>Equitable:</b>	<b>How to offer?</b>	<b>OER</b>
<b>Quality:</b>	<b>How to improve?</b>	<b>IDEAL</b>
<b>For all:</b>	<b>How to deliver?</b>	<b>OA</b>



**Innovation  
and E-Learning  
can help ...**

**but are only means**

**Open Education is a **Vision**  
that is happening!**

**Quality** is most important  
for your situation & learners

**Inclusion and equity for all  
to improve our **Global Society!****

# Further References

- Stracke, C. M. (2016). Openness for learning quality and change by Open Education in theory and practice - Overview, history, innovations and policies: How can Open Learning, OER and MOOCs achieve impact for earners, organizations and in society? In T. Amiel (Ed.), *Utopias and Dystopias in Education*. Sao Paulo: UNICAMP. [in print]
- Stracke, C. M. (2016). MOOCs are dead! - Open Education and the Quality of Online Courses Towards a Common Quality Reference Framework. In *EDEN Proceedings*. Bucharest: EDEN. [in print]
- Stracke, C. M. (2015). The Need to Change Education towards Open Learning. In C. M. Stracke & T. Shamarina-Heidenreich (Eds.), *The Need for Change in Education: Openness as Default?*. Berlin: Logos. pp. 11-23.

All also online available at: <http://www.opening-up.education>

# Further References

- Stracke, C. M. (2014). How Innovations and Competence Development support Quality in Lifelong Learning. *The International Journal for Quality and Innovation (INNOQUAL)*, Vol. 2 (3). pp. 35-44.
- Stracke, C. M. (2014). Evaluation Framework EFI for Measuring the Impact of Learning, Education and Training. 华东师范大学学报(自然科学版) *Journal of East China Normal University*. Vol. 2014 (2). Shanghai: ECNU. pp. 1-12.  
[DOI: 10.3969/j. ISSN 1000-5641. 2012.02.012]
- Stracke, C. M. (2014). The Concept of Open Learning for Opening Up Education. In C. M. Stracke et al. (Eds.), *Changing the Trajectory: Quality for Opening up Education*. Berlin: Logos. pp. 15-24.

All also online available at: <http://www.opening-up.education>

# Further References

- Stracke, C. M. (2013). Open Learning: The Concept for Modernizing School Education and Lifelong Learning through the Combination of Learning Innovations and Quality. In C. M. Stracke (Ed.), *Learning Innovations and Quality: The Future of Digital Resources*. Berlin: Logos. pp. 15-28.
- Stracke, C. M. (2013). The Evaluation Framework for Impact Assessment. In *Proceedings of 6th International Conference of Education, Research and Innovations 2013 [= ICERI 2013]*. Madrid: IATED. pp. 4654-4663 [ISBN: 978-84-616-3847-5].
- Stracke, C. M. et al. (2013). Open School Learning. A vision to improve European schools towards 2030 – using the results of the Open Discovery Space project. In *OPEN EDUCATION 2030. JRC-IPTS Call for Vision Papers. Part II: School Education*. Sevilla: JRC. pp. 99-104.

All also online available at: <http://www.opening-up.education>

# Further References

- Stracke, Christian M. (2012): "Learning Innovations and Learning Quality: Relations, Interdependences, and Future"; in: Stracke, Christian M. (ed.) (2012): *The Future of Learning Innovations and Learning Quality. How do they fit together?* Brussels: Gito. p. 13-25.
- Stracke, Christian M. (2012): "Competences and skills for learning-outcome orientation: Competence development, modelling, and standards for human resources development, education and training"; in: 华东师范大学学报(自然科学版) *Journal of East China Normal University*. Vol. 2012 (2). Shanghai: ECNU. p. 115-130.
- Stracke, Christian M. (2011): "Competence and Skills Modelling for European HR and Policies"; in: Stracke, Chr. M. (ed.): *Competence Modelling for Human Resources Development and European Policies. Bridging Business, Education and Training*. Brussels: Gito. p. 12-37.

All also online available at: <http://www.opening-up.education>

# Further References

- Stracke, Christian M. (2011): "Competences and Skills in the Digital Age: Competence Development, Modelling, and Standards for Human Resources Development"; in: *Proceedings of the International Conference on Metadata and Semantics Research Conference (MTSR 2011)*, Berlin/ Heidelberg: Springer. p. 34-46.
- Stracke, Christian M. (2011): "Competence Modelling for Innovations and Quality Development in E-Learning: Towards learning outcome orientation by competence models"; in: *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunication 2011 [= ED-MEDIA 2011]*; Chesapeake, VA: AACE. p. 1885-1894.
- Stracke, Christian M. (2010): "Quality development and standards in learning, education, and training: adaptation model and guidelines for implementations"; in: *Информатизация образования и науки [= Информике (Informika), ISSN 2073-7572]*; Vol. 7 (3), 2010. Moscow (Russian Federation), S.136-146.
- All also online available at: <http://www.opening-up.education>

# Further References

Stracke, Christian M. (2010): "The Benefits and Future of Standards: Metadata and beyond"; in: *Proceedings of the International Conference on Metadata and Semantics Research Conference (MTSR 2010)*. Berlin/ Heidelberg: Springer. p. 354-361.

Stracke, Christian M. (2010): "Quality and Standards in Learning, Education, and Training: The Adaptation Model IDEA for the Introduction of Quality Development"; in: *Proceedings of the International Conference on the Past and Future of e-Learning Standards*. Tokyo (Japan). p. 26-36.

Stracke, Christian M. (2007): *Quality Standards for Quality Development in e-Learning: Adoption, Implementation and Adaptation of ISO/IEC 19796-1*. Essen: eLC / Q.E.D.

Stracke, Christian M. (2006): "Process-oriented Quality Management", in: Ehlers, U.-D./ Pawlowski, J. M. (Eds.): *Handbook on Quality and Standardisation in E-Learning*. Berlin: Springer. p. 79-96.

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# **Towards Open Learning**

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



# Let us cooperate!



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# Let us connect!



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# Thank you! Questions?

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Research Centre for Learning, Teaching and Technology

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# **Open questions 4U**

**Your opinion about Open Education?**

**What are your OE policies?**

**How will you use OER?**

**Which quality indicators for you?**