



# Elearning design under the umbrella of openness

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ΠΑΝΕΠΙΣΤΗΜΙΟ  
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## It feels so good to be in Iran

### *A childhood full of Persian History*


Κύρος: Cyrus the Great, Δαρείος: Darius the Great, Persian wars, Ξέρξης:  
Xerxes I of Persia, Άρταξέρξης: Artaxerxes I of Persia, Παρύσατις,  
Xerxes II of Persia, Artaxerxes II, Cyrus the Younger, Τισσαφέρνης:  
Tissaphernes, Darius III, The Persians by Aeschylus, Susa, Persepolis,  
Gaugamela, Byzantine–Iranian wars, Sassanian Empire of Persia, Khosrau I,  
Khosrow II



## Scope of Presentation

- Why Openness?
- Open Educational Resources
- Open Science
- Openness in European Higher Education
- What about MOOCs?
- Open-up Education
- From OER to Open Education
- Opening-up Education
- Recommendations for HE Institutions

The scope of the presentation is to explain why we should support openness, what is openness and how we support it. Also to present the European policy about openness and which are the recommendation for Higher Education Institutes.



***Education is about  
sharing and giving  
knowledge and  
experiences***

Openness is embedded in  
education

*“Openness is the only  
means of doing  
education”*

*“If there is no sharing,  
there is no education”*

David A. Wiley

[talk@TEDxNYED](#), New York City, March 2010

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Why to support openness? Because education is about sharing and giving knowledge and experiences. Openness is embedded in education. And according to David A. Wiley, an evangelist of the open movement, “Openness is the only means of doing education” and “If there is no sharing, there is no education” (see his [talk @TEDxNYED](#), New York City, March 2010). If you need a more concrete justification for supporting openness have a look at [OER Leaders Interviewed - Benefits of Open Education Resources](#) and [What are the benefits of Open Science?](#) To learn more about openness use: <https://oeru.org/learning-in-a-digital-age/>



## Two movements to openness

### Open Educational Resources

*"teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use, adaptation, and distribution"*

UNESCO (2002)

### Open Science

*"the practice of science in such a way that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, under terms that enable reuse, redistribution and reproduction of the research and its underlying data and methods"*

FOSTER (2018)

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What is Openness? Openness is based on two movements:

1. **Open Educational Resources**, that is **"teaching, learning or research materials"** that are in the public domain or released with an intellectual property license that allows for **free use, adaptation, and distribution"** UNESCO (2002) and
2. **Open Science**, that is *"the practice of science in such a way that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, under terms that enable reuse, redistribution and reproduction of the research and its underlying data and methods"* FOSTER (2018)



## The 5 Rs

<http://opencontent.org/definition/>

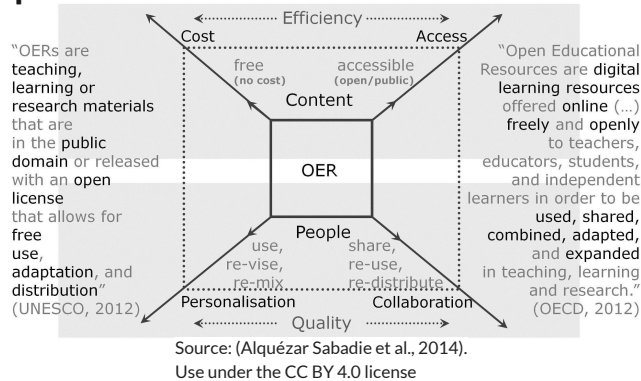
1. Retain,
2. Reuse,
3. Revise,
4. Remix,
5. Redistribute.

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These definitions lead to the 5 Rs (<http://opencontent.org/definition/>):

1. Retain - the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)
2. Reuse - the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)
3. Revise - the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)
4. Remix - the right to combine the original or revised content with other material to create something new (e.g., incorporate the content into a mashup)
5. Redistribute - the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)

## “Rethinking Education”: A European Policy Perspective



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In November 2012 the European Commission launched the "Rethinking Education" Communication (European Commission, 2012). A EC Communication is a policy paper. "Rethinking Education" Communication emphasizes the need to stimulate open and flexible learning in order to provide the skills needed in the 21st century economy and labour market. The Communication calls for wider access to and use of Open Educational Resources (OER).

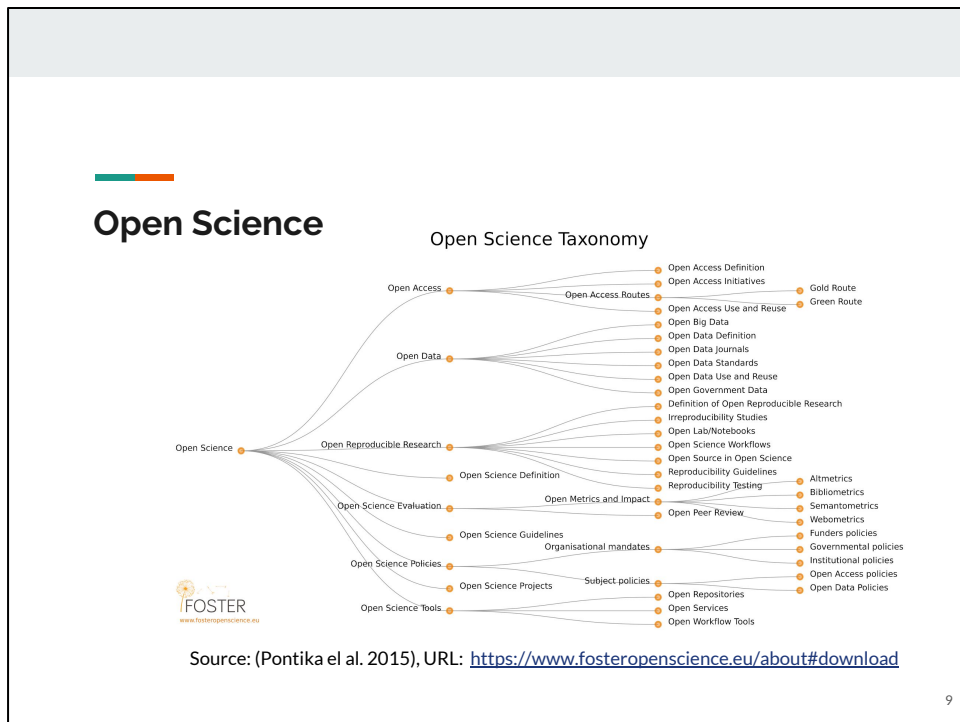
UNESCO in 2002 defined OER as "*teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use, adaptation, and distribution*". Recently in OECD's definition, the OER concept is restricted to digital resources.

These definitions lead to the following four (4) OER characteristics:

1. They are **free** (without charge, gratis)
2. They are **openly accessible** (freely and openly accessible, public domain)
3. They can be **shared** and **re-distributed** with others, leading to collaboration
4. They can be liberally **re-used, re-vise or re-mixed**, leading to personalization

The use of OER will increase the quality and the efficiency of of educational systems, innovation and cooperation. That's why EU launched the initiative "Opening Up Education" that we will present later on.

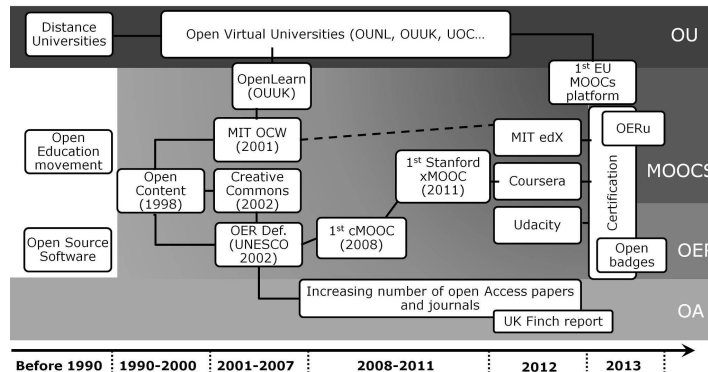




Open science is the movement to make scientific research, data and dissemination accessible to all levels of an inquiring society (<https://www.fosteropenscience.eu/taxonomy/term/7>). The EU project FOSTER, defined the Open Science Taxonomy, where we can see that Open Science includes the following different areas as presented in the image. For example:

- **Open Access** refers to online, peer-reviewed scholarly outputs, which are free to read, with limited or no copyright and licensing restrictions
- **Open Data** are online, free of cost, accessible data that can be used, reused and distributed provided that the data source is attributed.
- **Open Reproducible Research**. The act of practicing Open Science and the provision of offering to users free access to experimental elements for research reproduction.
- **Open Science Evaluation** open assessment of research results, not limited to peer-reviewers, but requiring the community's contribution.
- **Open Science Tools** refer to the tools that can assist in the process of delivering and building on Open Science.

## The Brief History of OER in Higher Education



Source: (Alqu azar Sabadie et al., 2014).

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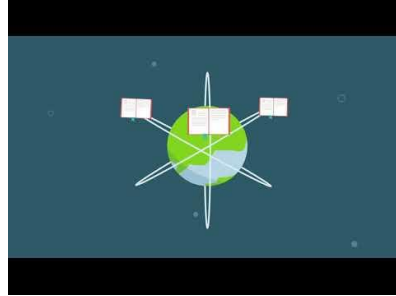
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HEI have been at the forefront of OER. It was on 2001 when MIT launched OCW and I can remember myself participating in the UNESCO mailing list discussing OER and then trying to convince my colleagues, computer engineers at NOCs, that the future is in the open content and not in the open-software per se. However, the recent emergence and spread of MOOCs have brought OER movement to a new high, although I do not believe that MOOCs are strictly OER, as we will discuss later on. MOOCs platform such as Coursera, edX and Udacity opened a new way of accessibility to Higher Education and in this area nothing will ever be the same in the future. Traditional brick-and-mortar universities should start right now considering this new organizational model. In parallel, the open access movement in Europe was increasing and we will discuss recent developments in the sequel. Let's look in more detail more interesting European initiatives after 2013.

## Interesting European initiatives



[OpenupEd](#)

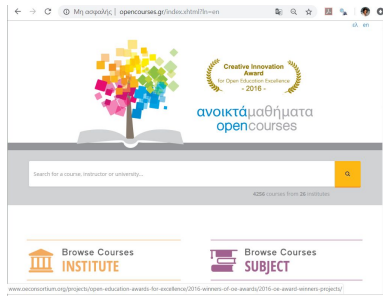


[OpenAIRE](#)

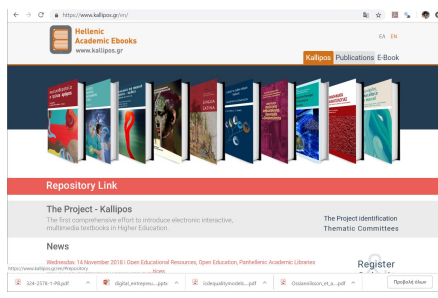
OpenupEd initiative is a non-profit partnership for MOOCs set up by the European Association of Distance Teaching Universities (EADTU) and supported by the European Commission.

OpenAIRE is a European foundation that aims to shift scholarly communication towards openness and transparency and facilitate innovative ways to communicate and monitor research.

## Interesting Greek experiences



Open academic courses, [opencourse.gr](https://www.opencourse.gr)  
26 Institutes, 4256 Courses, 4477 Instructors



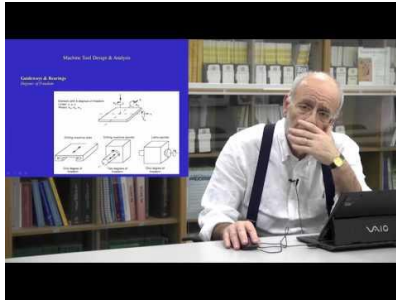
Hellenic Academic open text books, [kallipos.gr](https://www.kallipos.gr)  
522 books, 7,000 learning objects, >1.600 contributors

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[opencourse.gr](https://www.opencourse.gr): Educational material made available under CC licences and courses taught in Greek universities and technological institutes, were made freely accessible and freely available to everyone over the Internet. In the Greek initiative participated 4477 Instructors of 26 Institutes who developed 4256 Courses.

[Kallipos.gr](https://www.kallipos.gr) initiative created 522 hellenic academic open text books, consisting of 7000 learning objects under CC licences with more than 1600 contributors as authors and reviewers.

## Upatras experiences



[Upatras Open Academic courses](#)

340 courses (71 with video lectures): ~18% of  
Upatras courses



[OpEn: A learning walk in digital entrepreneurship](#)

Erasmus+ project "[Open-up entrepreneurship](#)"

As we have already discussed Upatras participated in the hellenic open courses initiative with the development of 340 courses, from which the 71 courses included video lectures in a percentage of 80% of the course curriculum. Example [Upatras Open Academic courses](#) in Medicine <https://eclass.upatras.gr/courses/MED983/> and Pharmacology <https://eclass.upatras.gr/courses/PHA1610/> "[Open-up entrepreneurship](#)" was an Erasmus+ project for the creation of a european open online course [OpEn: A learning walk in digital entrepreneurship](#) about digital entrepreneurship. It is based on the active-based elearning design. It was elected by EC as an Erasmus+ success story.

## What about MOOCs?

	xMOOCs	Hybrids	cMOOCs
<b>Primary Types</b>	<i>Content-based</i>	<i>Community and Task-based</i>	<i>Network-based</i>
	One-to-many model; expert-driven learning at scale	Community; guided, social learning activities	Peer-2-peer; self-organized, networked learning
<b>Learning Theories</b>	Prescriptive Cognitive-behaviorist Pedagogy	Prescriptive/Emergent Social-constructivist Andragogy	Emergent Connectivist Heutagogy

Source: (Ander, 2015). Use under a [Creative Commons Attribution 4.0 International License](#).

### Initial MOOCs were not so open ...

- no adaptation or arrangement
- no open licensing (CC)
- pretty basic learning model

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But how mooc design is evolving?

- Initial MOOCs were not so open ...
  - no adaptation or arrangement
  - no open licensing (CC)
  - pretty basic learning model

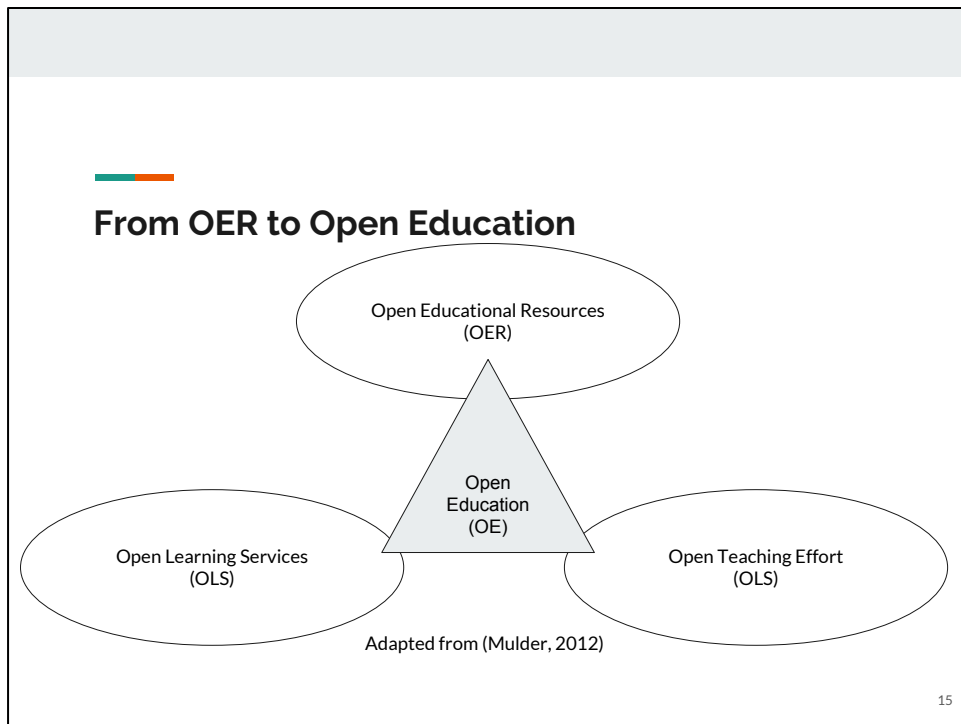
**xMOOCs** is a type of MOOC, which includes courses offered through the cloud-based learning management platforms of start-up MOOC providers edX, Coursera, and Udacity. In addition to adapting traditional LMS functions for use at scale, these platforms offer enhanced options for creating and delivering multimedia instructional content.

**cMOOCs** offer a style of “emergent learning” that is “self-organized and typically collaborative. It is open and is created and distributed by learners themselves”

Andragogy refers to methods and principles used in adult education

Heutagogy is Autodidacticism (also autodidacticism) or self-education (also self-learning and self-teaching), that is education without the guidance of masters (such as teachers and professors) or institutions (such as schools)

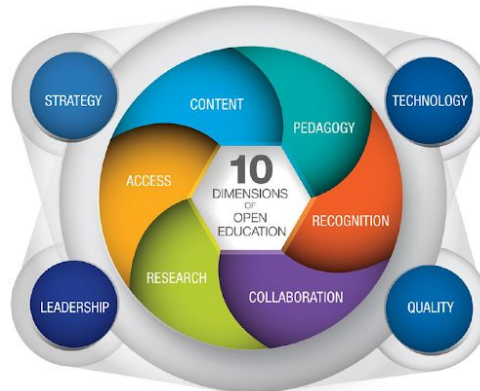
Lately we are seeing MOOCs that use the hybrid design (Ander, 2015). Multiple studies have indicated that observers, drop-ins, and passive participants outnumber active participants across all types of MOOCs. Both community-based and task-based design strategies offer ways to address this challenge. Community-based strategies strongly relate to theories of social-constructivism, but can also address connectivist and network-based social interactions. **Social constructivism** is a sociological theory of knowledge according to which human development is socially situated and knowledge is constructed through interaction with others. [\[Wikipedia reference\]](#)



We can observe that we are moving from OER to Open Education, where OER is combined with (Mulder, 2012):

- **Open Learning Services (OLS):** Complementary to OER, free or to be paid, and including a variety of online and virtual facilities for: tutoring, advice, meetings, communities, teamwork, presentations, testing, examination, consulting sources, internet navigation, etcetera ...
- **Open Teaching Effort (OTE):** Complementary to OER and OLS, to be paid for, referring to the human effort in different roles: developing, presenting, explaining, assessing, communicating, interacting, intervening, mediating, etcetera of teachers and educators (and with the learners in their specific role) in a professional, open, and flexible learning environment and culture.

## Opening-up Education (OpenEdu)



A European  
Support  
Framework for  
Higher  
Education  
Institutions

Source: (Inamorato dos Santos et. al, 2016)  
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Opening-up Education (OpenEdu) (Inamorato dos Santos et. al, 2016) was introduced from a Science for Policy report by the Joint Research Centre, the European Commission's in-house science service, aimed to support the related Communication ['Opening up Education: Innovative Teaching and Learning for All through New Technologies and Open Educational Resources' ]





## 6 Core dimensions

The 'what' of opening up education


1. access,
2. content,
3. pedagogy,
4. recognition,
5. collaboration, and
6. research.

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OpenEdu consists of 6 core dimensions that define the The 'what' of opening up education. These dimensions are:

1. **Access** in open education is the **removal or lowering of economic, technological, geographical and institutional barriers** to knowledge. It enables learners to engage with educational activities in formal and non-formal education. It is also about enabling informal and independent learners to seek and get recognition of their learning. An example will be the removal of barriers for learners with special needs by making content accessible.
2. **Content** in open education refers to materials for teaching and learning, and research outputs, which are **free of charge and available to all**.
3. **Openness** in pedagogy refers to the **use of technologies to broaden pedagogical approaches** [and make the range of teaching and learning practices more transparent, sharable and visible.]
4. **Recognition** in open education has two meanings: a) it is the **process**, usually carried out by an accredited institution, of **issuing a certificate, diploma or title which has formal value**; b) it is also the **process** of formally **acknowledging and accepting credentials**, such as a badge, a certificate, a diploma or title issued by a third-party institution.
5. **Collaboration** in open education is about **connecting individuals and institutions by facilitating the exchange of practices and resources with a view to improving education**. By collaborating around and through open educational practices, universities can **move beyond the typical institutional collaboration** patterns and engage individuals and communities to build a

1. **bridge between informal, non-formal and formal learning.**
2. **Openness in research** is about **removing barriers to access to data and research outputs**, and also about broadening participation in research.



## 4 Transversal dimensions

how' educational practices are opened up, structure for the realisation of the core dimensions

1. technology,
2. leadership,
3. strategy, and
4. **quality** (efficacy, impact, availability, accuracy and excellence).

Moreover, it defines 4 transversal dimensions that define the how' educational practices are opened up, structure for the realisation of the core dimensions:

1. **Technology** in open education refers to technological infrastructures and software which facilitate opening up education in its different dimensions.
2. **Strategy** in open education is the creation of a unique and valuable position on openness, involving different sets of activities.
3. **Leadership** in open education is the promotion of open education activities and initiatives across all stakeholders by inspiring and empowering people.
4. **Quality** in open education refers to the convergence of the 5 concepts of quality (**efficacy, impact, availability, accuracy and excellence**) with an institution's open education offer and opportunities.



## Recommendations for HE institutions

(Inamorato dos Santos, 2016)

- Have a **holistic strategy** for opening up education that encompasses the **10 dimensions** of the OpenEdu framework
- Make the open education strategy **part** of the overall institutional strategy
- Promote intra, inter and cross-border institutional **collaborations** and partnerships in order to achieve open education goals
- Explore **new** practices and welcoming changes
- **Revise** your practices at all levels: mission statement and vision, current organisational management structures and day-to-day policies, and the institution's role in the community and globally

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Finally, OpenEdu, results with the following recommendations for HE institutions (Inamorato dos Santos et. al, 2016) :

- Have a holistic strategy for opening up education that encompasses the 10 dimensions of the OpenEdu framework
- Make the open education strategy part of the overall institutional strategy
- Promote intra, inter and cross-border institutional collaborations and partnerships in order to achieve open education goals
- Explore new practices and welcoming changes
- Revise your practices at all levels: mission statement and vision, current organisational management structures and day-to-day policies, and the institution's role in the community and globally


**Let's Start with OE!  
(if we haven't yet ...)**

—

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So, if we haven't start Opening-up our education, let's do it now!

—  
Questions?



**Thank you!**

متشكرم

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UNESCO (2002). Forum on the Impact of Open Courseware for Higher Education in Developing Countries. Final report. Retrieved from:

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