



KALLIPOS: The Greek venture in the OERland

Nikolas Mitrou

Prof ECE, NTUA



Presentation outline

- **Introduction - ultimate goal**
 - **Education for all - Open Education**
 - **Open Educational Resources**
- **The KALLIPOS project**
 - **Identity & scope**
 - **Human resources - participation**
 - **Book development workflow**
 - **Publishing methods**
 - **The KALLIPOS Repository - usage statistics**
- **Future directions**



‘Education for All’

‘Education for All’, as a human right

- **Universal Declaration of Human Rights, UN General Assembly **10/12/1948**, Paris**

*“Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and **higher education shall be equally accessible to all** on the basis of merit” (Article 26)*

**70+ years after this bold declaration of human rights on education, the technology allows turning the vision into reality...
The open Internet allows access to educational resources without economic, geographic or time restrictions!**



Open Education

Open Education (OE) is a term used today almost identically to ‘Education for All’

OE Definition:

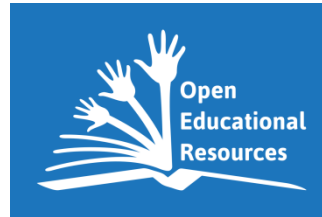
Open education encompasses **resources**, tools and practices that employ a framework of open sharing to improve educational access and effectiveness worldwide.



Open Educational Resources



OER Definition:



- **Teaching,**
- **learning**
- **and research materials**

in **any medium**, digital or otherwise, that **reside in the Public Domain** or **have been released under an open license** that permits **no-cost access, use, adaptation and redistribution** by others with **no or limited restrictions.**”



Open courses (MOOCs)



Open textbooks & monographs

Our focus



Open Research data



'Education for All' / Open Education



Fora & initiatives supporting Open Education

– UNESCO



– Commonwealth Of Learning



– Open Education Consortium



– Opening-up Education initiative (EU)



– ...



OE as a systemic tool for growth



**OE, from a movement of volunteers,
is becoming a systemic instrument for growth**

- Beyond their apparent ethical and moral content, **Open Education**, in general, and **Open Educational Resources**, in particular, have acquired a strong **social and economic dimension**:
 - been recognised as key-factors for **economic growth** and **catalyst for innovation**
 - been included **in the strategic plans** of systemic bodies and governments



Challenges and problems



- **Who pays for the OER development & maintenance**
- **OER Quality assurance**



The KALLIPOS Project: **identity**



- A large scale initiative for developing high quality academic textbooks and making them available to all through open licenses (**Creative Commons**)
 - **Funded** by the Greek Ministry of Education
 - **implemented** by the National Technical University of Athens,
 - **Under the auspices** of HEAL Link and the Senate of Rectors of the Greek Universities
- **The vast majority of the books are written in the Greek language.**



The KALLIPOS Project: **scope**



- **Covers all thematic areas of education/science**
 1. **Mathematics and Computer Science**
 2. **Natural Sciences & Agricultural Sciences**
 3. **Engineering and Technology**
 4. **Medicine and Health Sciences, Life Sciences, Biological Sc.**
 5. **Law and Social Sciences**
 6. **Humanities and Arts**

(new classification)



The two phases of the project

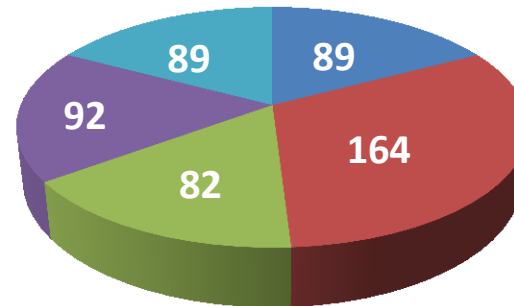


(books per thematic area)

1st Phase (2013-2015)

➤ ~520 textbooks

books



- Math, Physics, Chemistry (89)
- Engineering & Informatics (164)
- Medicine & Life Sc. (82)
- Social & Economic Sc. (92)
- Hunanites (89)

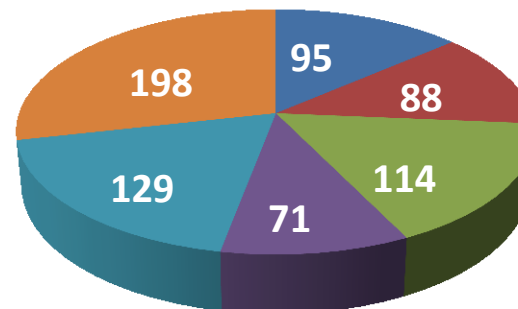
2nd Phase (2020-2022)

KALLIPOS+

➤ ~700 textbooks

➤ **Authoring in progress**

books



- Mathematics & Computer Sc. (95)
- Natural Sc. & Agriculture (88)
- Engineering & Technology (114)
- Medicine & Life Sc. (71)
- Law & Social Sc. (129)
- Humanities & Arts (198)

In 2023, there will be more than 1200 academic textbooks available



Open-textbook Repositories worldwide

(sampled on 5/2/2021)

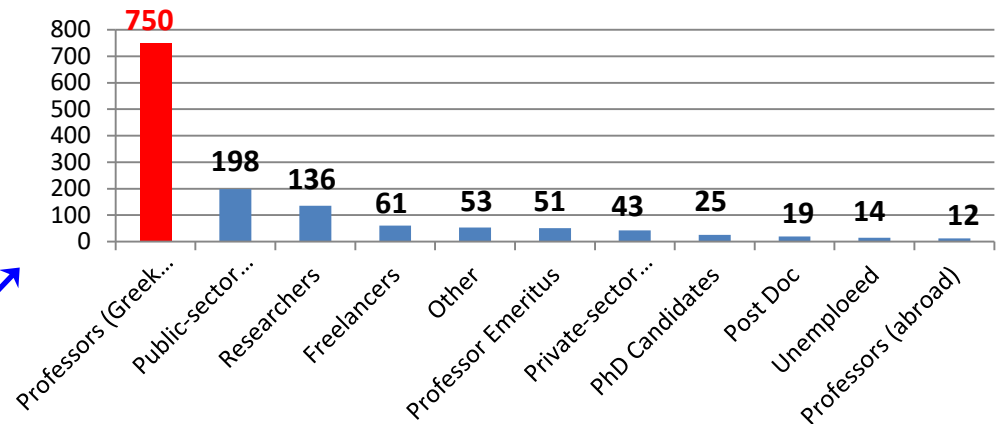
- Open Textbook Library (712)
- LibreTexts (516)
- BC Campus (313)
- Teaching Commons (185)
- GALILEO Open Learning Materials - University System of Georgia (65)
- Washington University in St. Louis (47)
- American Institute of Mathematics (43)
- Milne Open Textbooks (40)
- College of the Canyons (40)
- Open Oregon (39)



KALLIPOS+: Human resources

- Scientific Committee (Professors) - 42
- Support Team - 30
- Evaluators > 80
- Editors > 120
- Authors > 1200

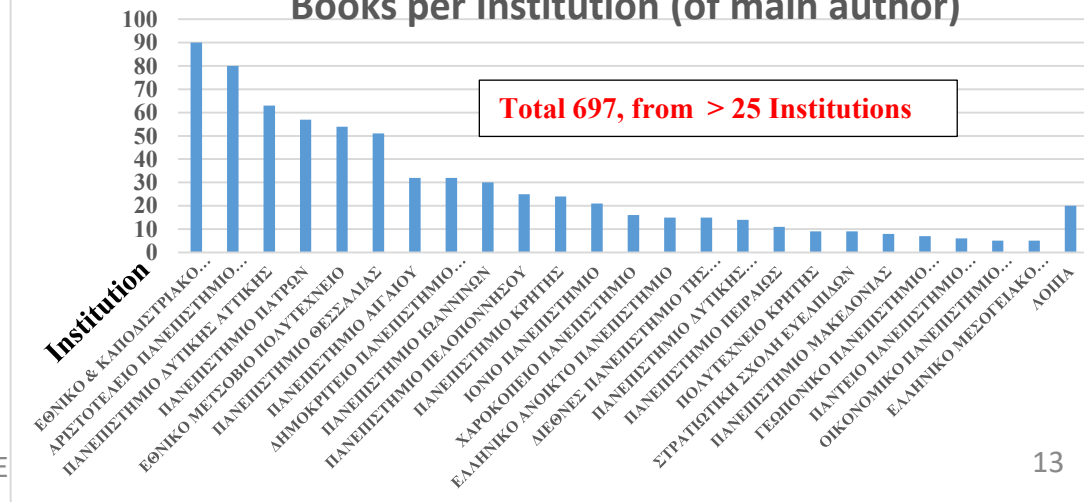
Authors per category



Participation of Institutions

Participation form (almost) all the Higher Education Institutions in Greece. Also from Research Centers and foreign Universities...

Books per Institution (of main author)

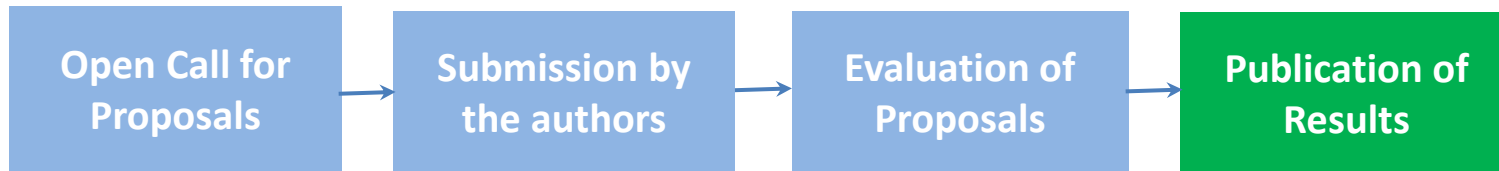




Book development workflow

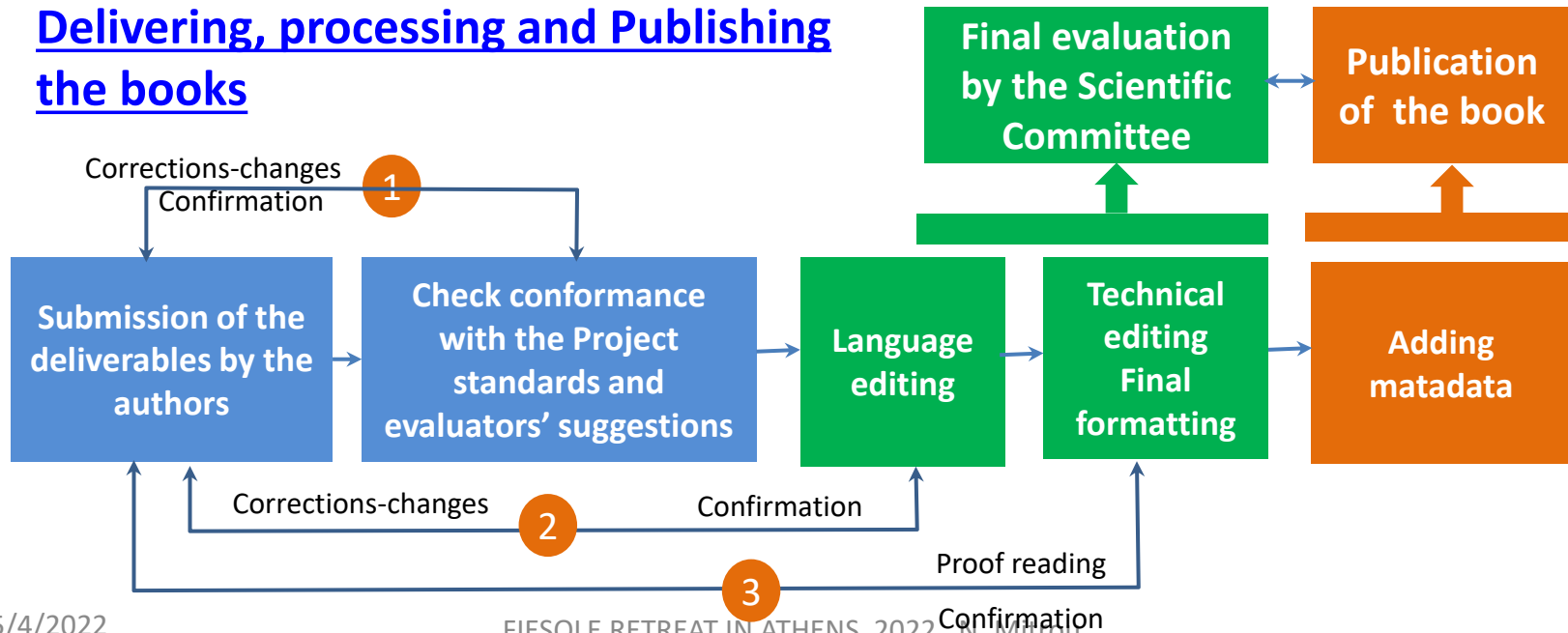


Submission & Evaluation of authoring Proposals



----- BOOK AUTHORING -----

Delivering, processing and Publishing the books





Quality assurance

- **Evaluation of authoring Proposals – Criteria**
 - **Authoring Team:**
 - ✓ Teaching & research experience
 - ✓ Authoring experience
 - **Proposed book:**
 - ✓ Coverage of at least one semester course
 - ✓ Complete coverage of the subject
 - ✓ Potential use in existing undergraduate/postgraduate courses
 - ✓ Use of multimedia/interactive elements
 - ...
- **Evaluation of the delivered content**



Publishing methods

Original material

LaTeX

Microsoft word

Intermediate Processing tool

Indesign

Docbook

Final format





The KALLIPOS Repository



<https://repository.kallipos.gr/>

KALLIPOS open academic editions

Home Contact Related links Help

Search

Subject



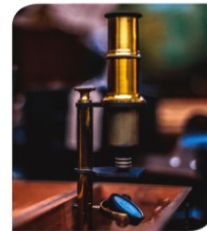
Mathematics and Computer Science



Natural Sciences and Agricultural Sciences



Engineering and Technology



Medicine and Health Sciences, Life Sciences, Biological Sciences



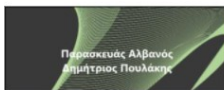
Law and Social Sciences



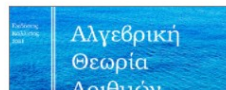
Humanities and Arts



Recent Submissions



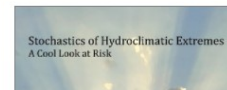
Παρασκευάς Αλβενός
Δημήτριος Πουλάκος



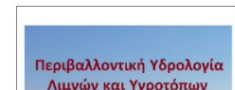
Αλγεβρική
Θεωρία
Ομάδων



Νίκος Μαρμαρίδης
Βασική
Θεωρία Galois



Stochastics of Hydroclimatic Extremes
A Cool Look at Risk



Περιβαλλοντική Υδρολογία
Λιμνών και Αγροτόπων



The KALLIPOS Repository (cont)



- Dspace 6.3
- Organized in
 - 6 thematic areas (subjects)
 - 3 basic item categories
 - 10 types of items
- Items referenced by a handle and a DOI (only for books ... soon)
- Annotated by a rich set of metadata, according to the standard practices of Library Science

Item Category	
Textbook	130
Chapter	1175
Learning Object	185

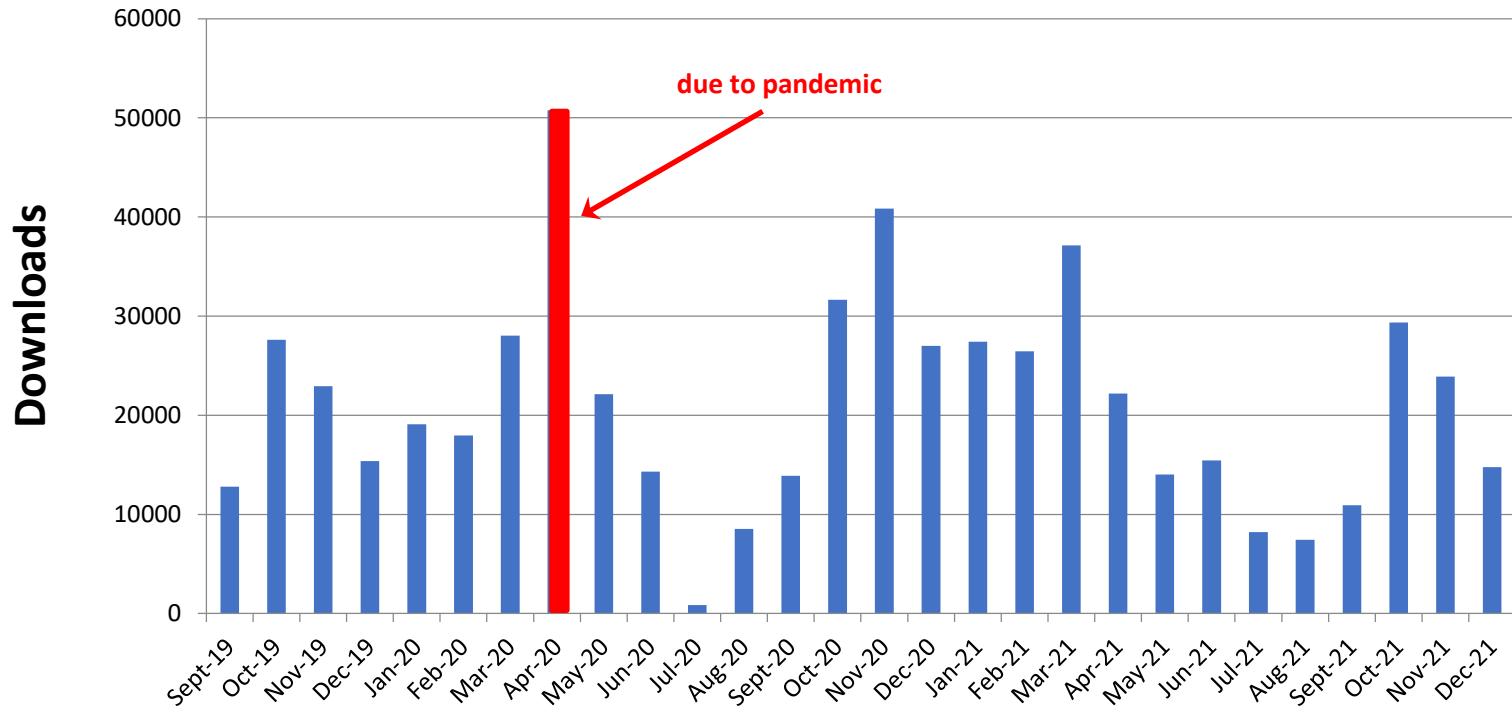
Type	
Chapter	1175
Undergraduate textbook	124
Video Clip	107
Interactive object	17
Test / Exam	13
Algorithm	12
Simulation	12
Exercise	9
Audio Clip	7
Laboratory Guide	6

next >

Subject	
MATHEMATICS AND COMPUTER SCIENCE	1490



Repository usage: **downloads**

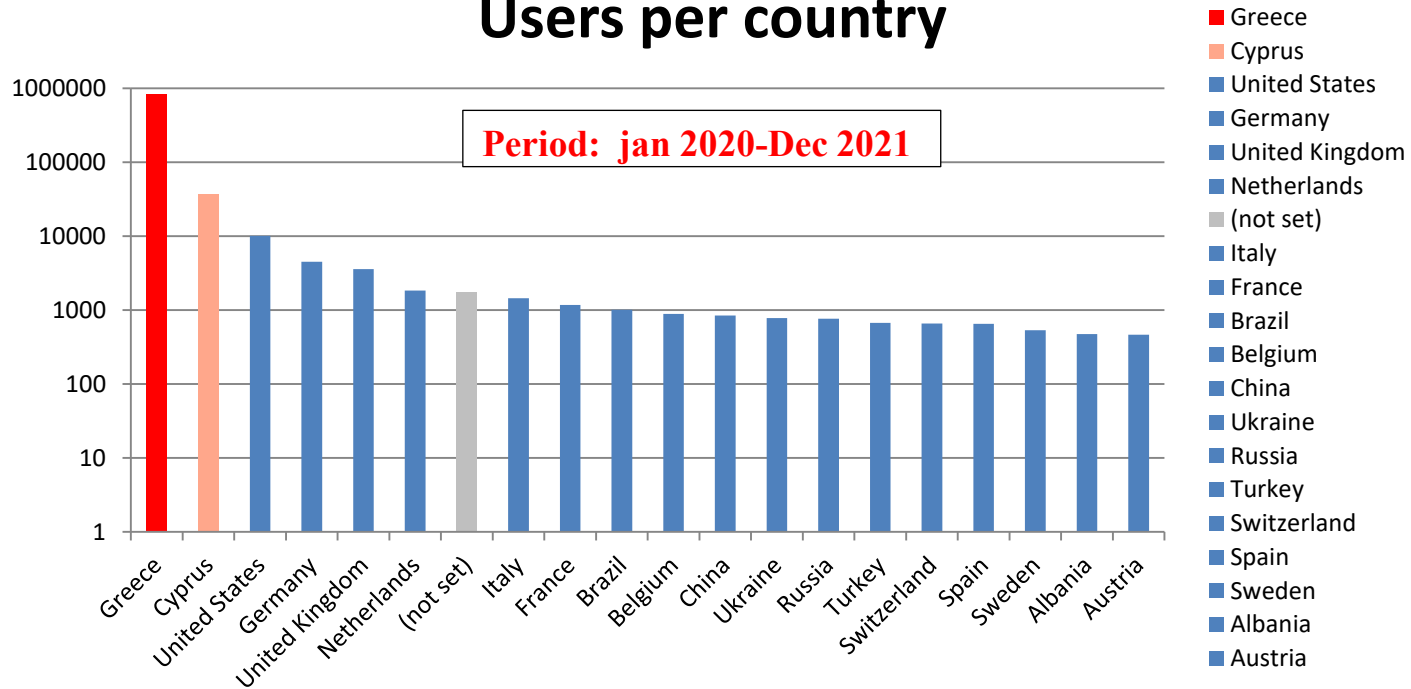




Repository usage: per country



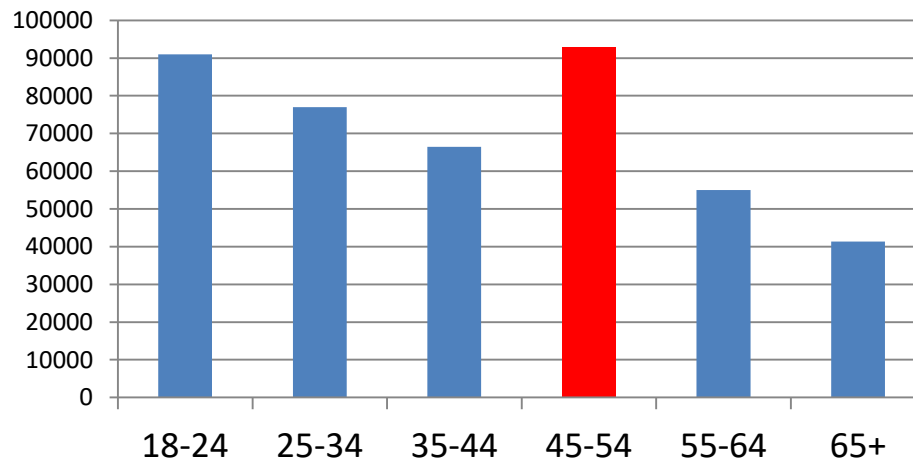
Users per country



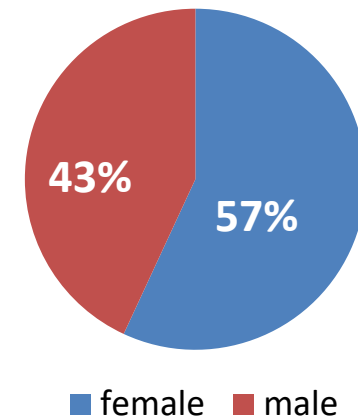


Repository usage: per age/gender

Users per age



Users per gender



More girls visit the site, than boys!



Future directions

- **Extension of the Project (Phase 3) by new Calls with a broader scope:**
 - New open textbooks, in other languages, too
 - English version of existing books (selected)
 - Encouraging multimedia/interactive books



The symbolism of the logos



*Prometheus is stealing the light of knowledge from Gods
in order to give it to the people,
open, for free...*

Thank you for your attention