

M00Cs in Africa and emerging countries: a blended learning experiment



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INNOVATION

Downloads Boosted by Cooperation
go4NL3g The technology developed by Shoelace Wireless enables devices connected to a Wi-Fi or cellular network to gather their bandwidth ... »

EPFL MOOCs

Physique générale - mécanique
Jean-Philippe Ansermet
Polytechnique Fédérale de Lausanne, un cours de physique générale fait partie de la formation de tous les futurs ingénieurs et scientifiques. Le présent cours de mécanique en fait partie. Il a pour but de leur apprendre à transcrire sous forme mathématique un phénomène physique, afin de pouvoir en formuler une analyse raisonnée.
»

Initiation à la programmation (en C++)
Vincent Lepetit, Jean-Cédric Chappellier et Jamila Sam
Ce cours initie à la programmation en utilisant le langage C++. Il ne présuppose pas de connaissance préalable. Les aspects plus avancés (programmation orientée objet) sont donnés dans un cours suivant, «Introduction à la programmation orientée objet (en C++)».
»

Initiation à la programmation (en Java)
Jamila Sam, Vincent Lepetit et Jean-Cédric Chappellier
Ce cours initie à la programmation en utilisant le langage Java. Il ne présuppose pas de connaissance préalable. Les aspects plus avancés (programmation orientée objet) sont donnés dans un cours suivant, «Introduction à la programmation orientée objet (en Java)».
»

L'art des structures 1
Câbles et arcs
L'art des structures propose une découverte du fonctionnement des structures porteuses, telles que les bâtiments, les toitures ou les ponts. Ce cours présente les principes du dimensionnement et les structures en câbles et en arcs. Un deuxième

EVENTS
EMOOCs 2014 (EPFL, Feb 10-12, 2014)

SPECIAL

Histoire d'un MOOC
Mooc.fr - 28.05.2013
Interview de Prof. Picasso sur le MOOC Analyse Numérique par Anne-Cécile Grolleau.
»

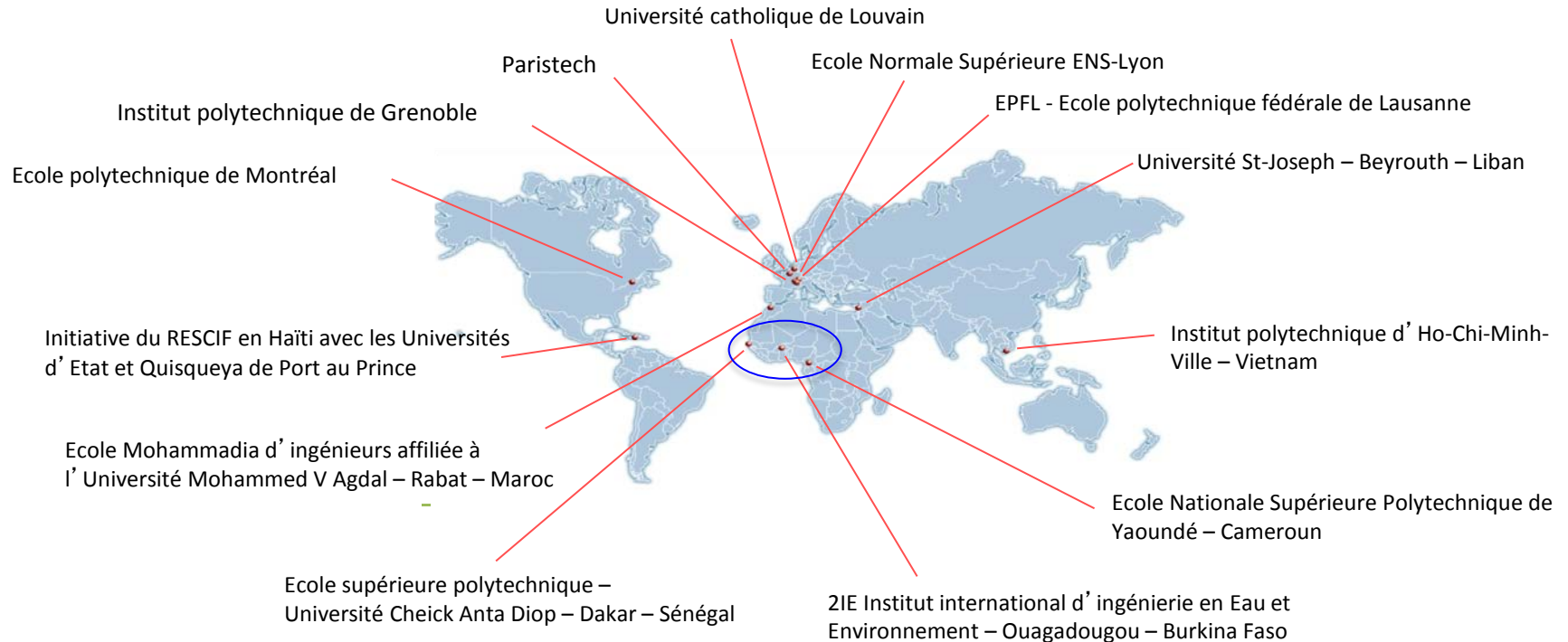
Flash newspaper
No 05 - 16.05.2013
Special issue on MOOCs
»

EPFL – CEDE
Center for Digital Education

Patrick.Jermann@epfl.ch

Networks – RESCIF

14 universités d'Afrique, des Ameriques, d'Asie, d'Europe et du Moyen-Orient



Possible collaboration models

2 to 3 partners from North & South

MOOCs developed jointly or offered unilaterally

North/South partnership:

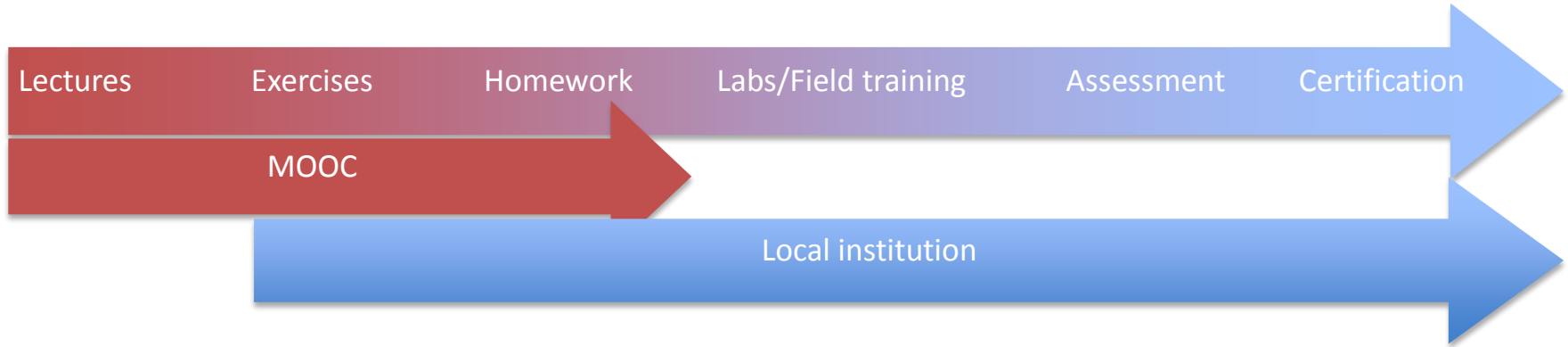
- North/South: choice of topics + content development+ production + QC + certification+ accreditation
- North: Technical platform + human resources and infrastructure
- South: Local valorization of courses + dissemination

2 editorial orientations

- ① Undergraduate courses covering fundamental sciences (Mathematics, Physics, Computer science)
 - Interaction of teachers from North and South.
 - Mobility of teachers and their instructors!
 - Integration of MOOCs into the local curricula.
- ② Specialized courses following the main RESCIF topics: Water, Energy, Nutrition, Health
 - Community of instructors formed around a topic.
 - Practical training sessions organized locally.

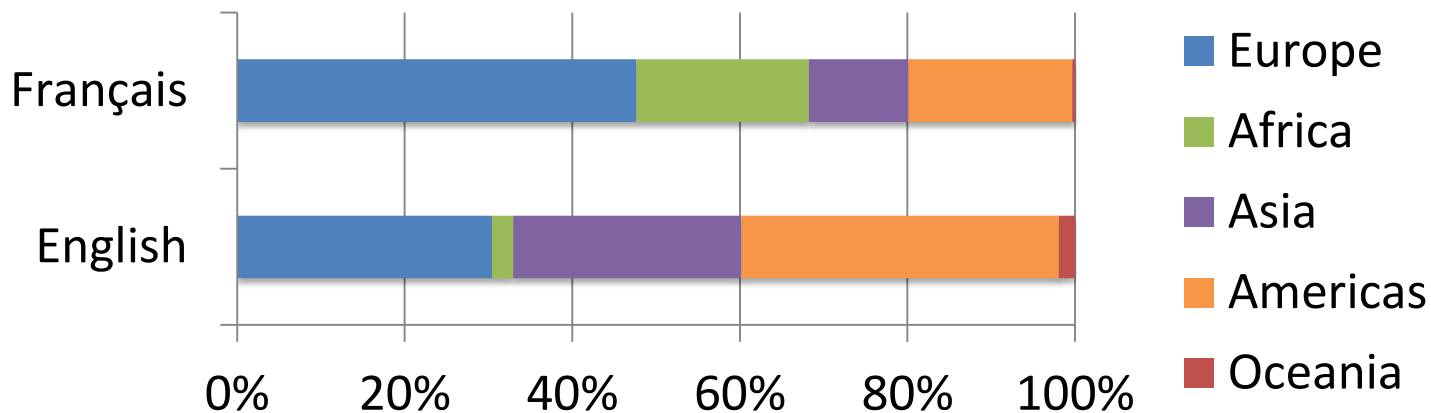
Blended learning model within RESCIF partners

A MOOC is integrated into a local course



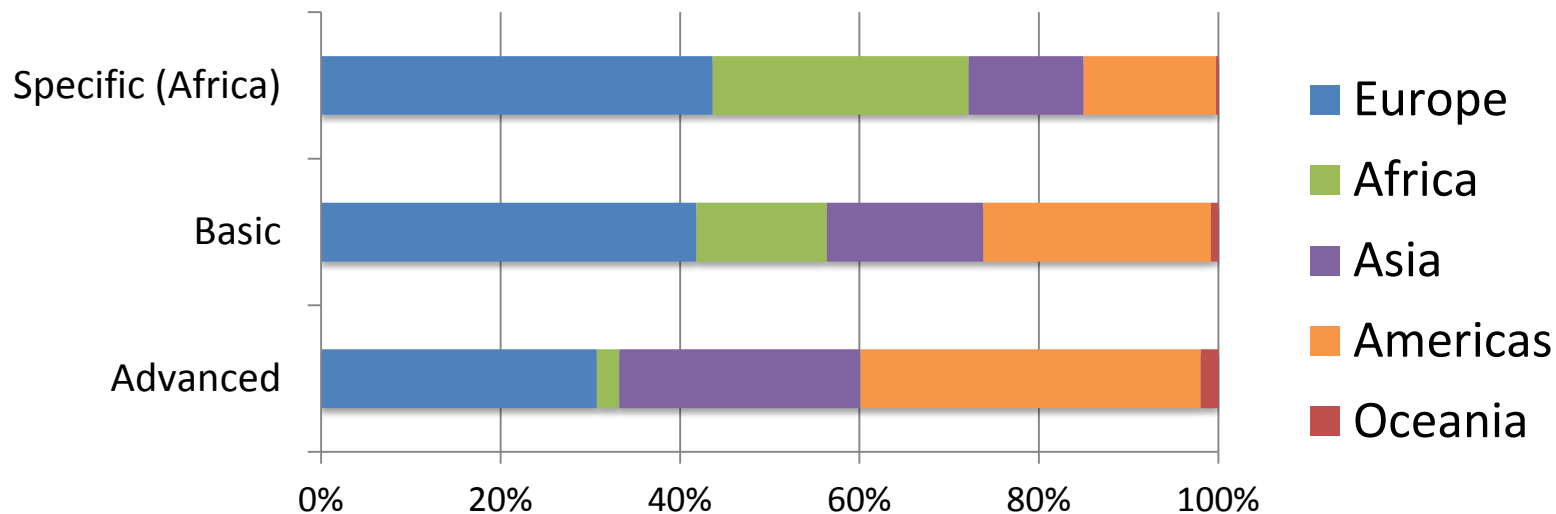
Geographical distribution by language of the course

[N= 17 sessions, 13 courses, 275'000 participants who logged in once]



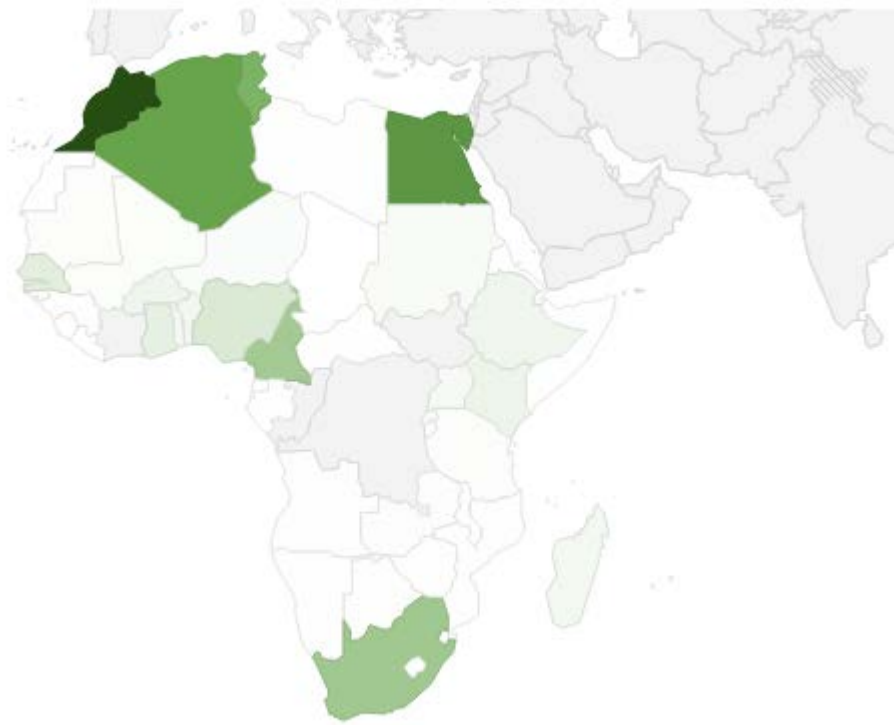
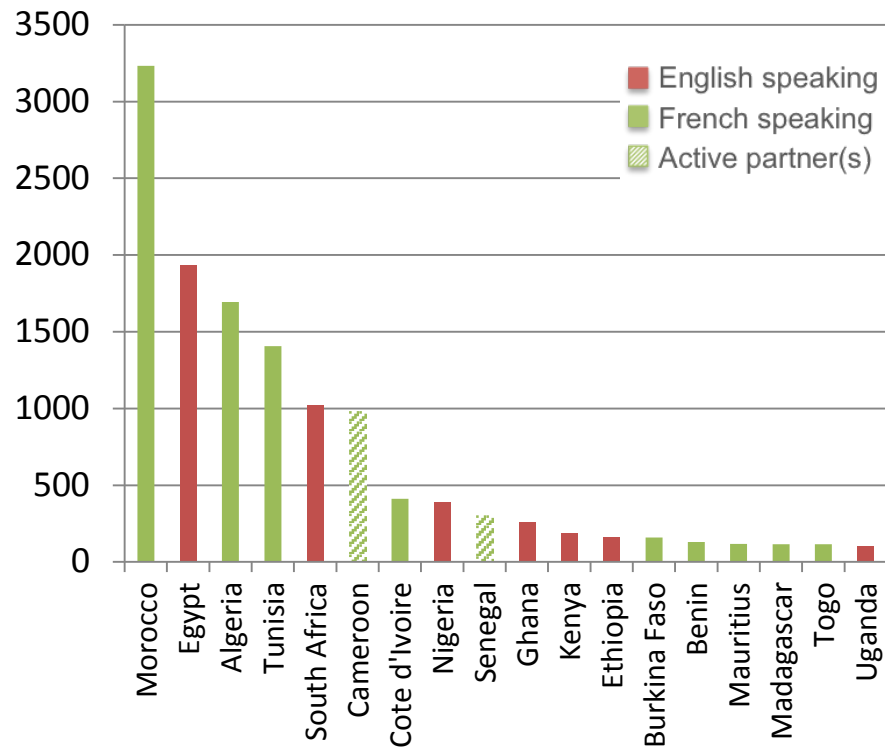
Geographical distribution by type of course

[N= 17 sessions, 13 courses, 10 coursera & 3 edX, 275'000 participants who logged in once]



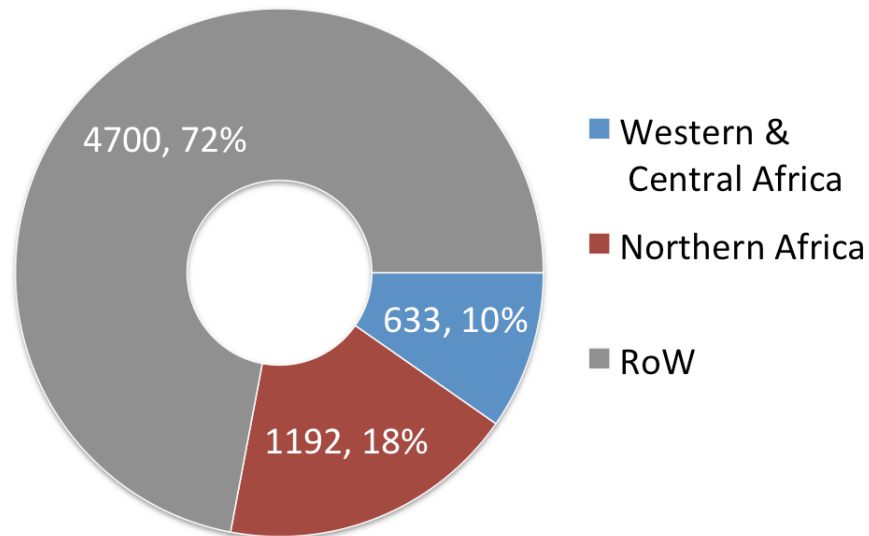
Geographical distribution in Africa

[MOOC participants (people who logged in once, N>100, Africa)]

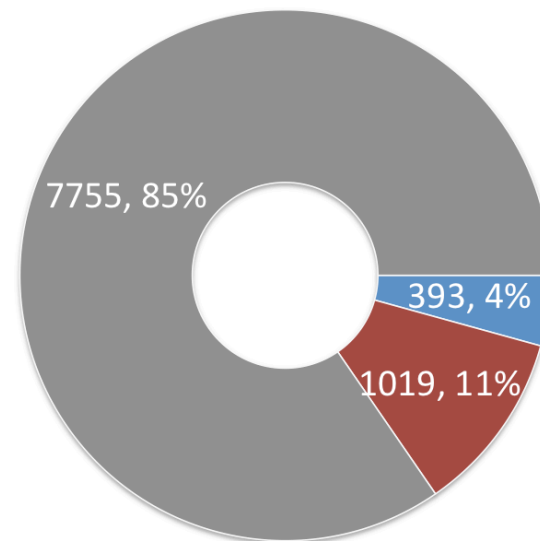


Local coordination and promotion pays off ... [4% => 10%]

Microcontrôleurs / 6'525



Initiation à la program. C++ / 9'100



What have we learned from Africa? /1

Dissemination

- Accessing MOOCs via the existing platforms in Africa is tricky. Help is needed to access the Internet !
- Well-designed off-line solutions can be a viable option on the short term
- French-speaking MOOCs are sought after, and followed when available in North and Sab-Saharan Africa
- The involvement of local faculty (and administration) greatly helps the inclusion of MOOCs into the local curricula → **blended learning involving distant faculty !**

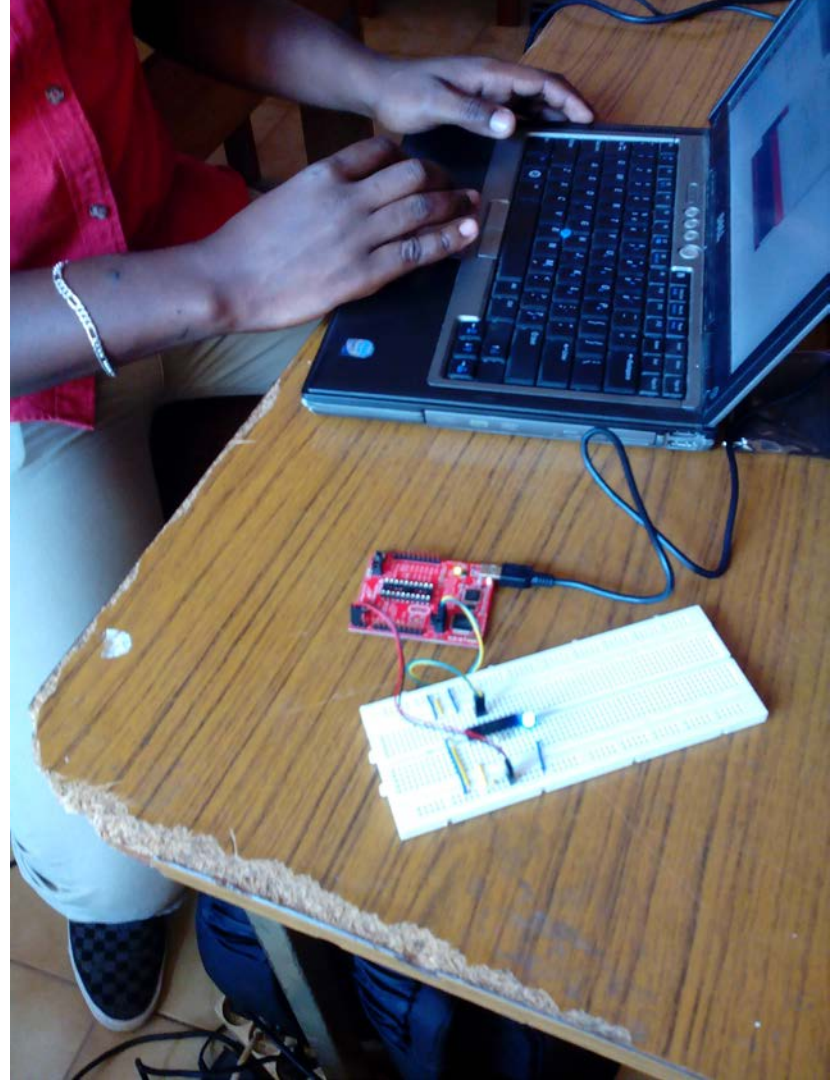
What have we learned from Africa? /2

Academic environment

- Students need credits (if at a university) or certification (if self-learners)
- For MOOCs to be included to the local curricula, academic regulations need to be amended in many countries
- Bundling of MOOCs to form curricula depends on state-edited regulations
- Create collaborative MOOCs with the participation of many partners is a challenge !

Online teaching / Onsite training – ENSP Yaoundé

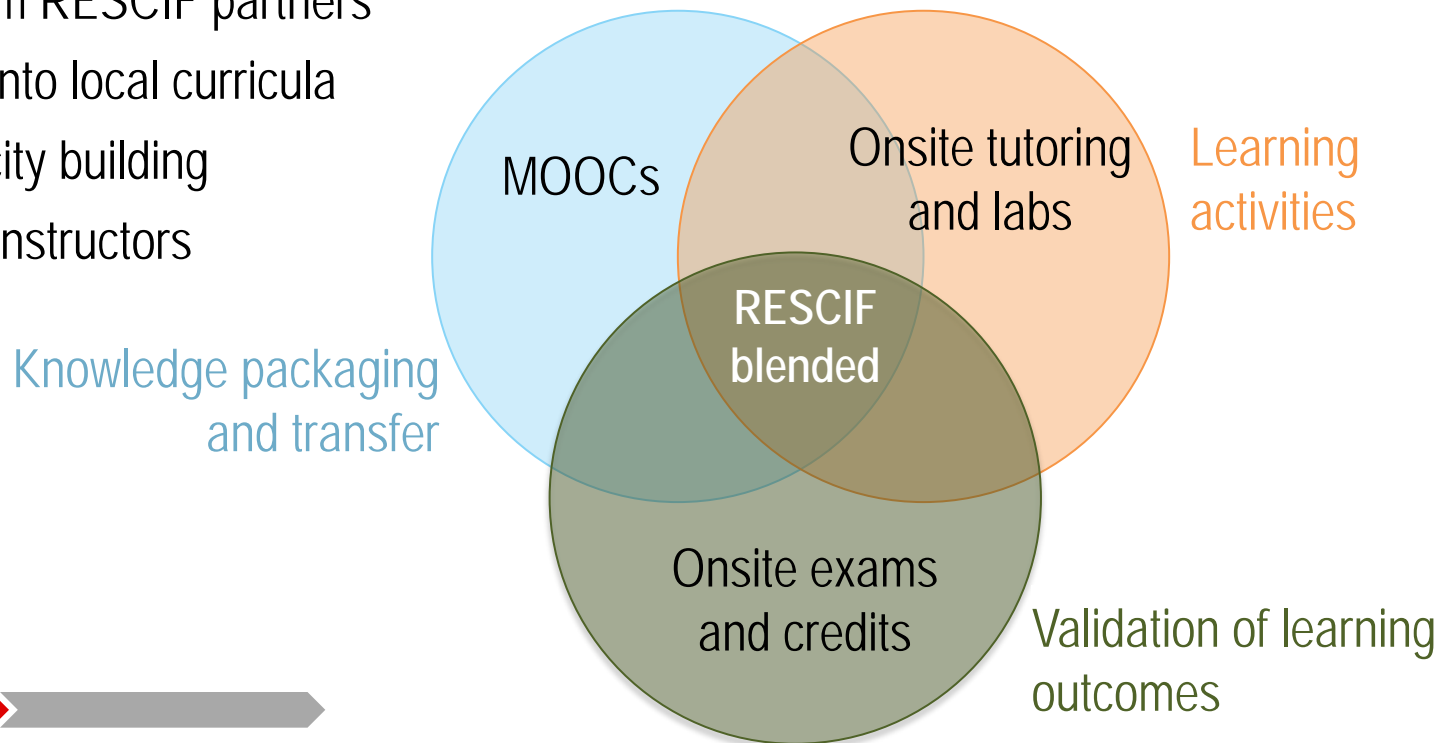




Perspectives

Blended learning in new environments

- MOOCs from RESCIF partners
- Integration into local curricula
- Local capacity building
- Network of instructors

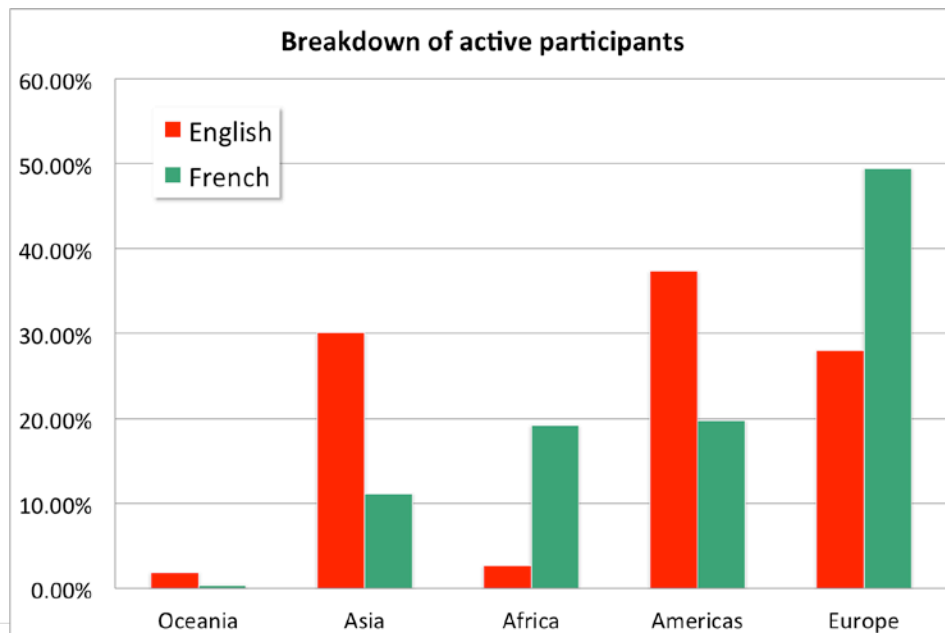
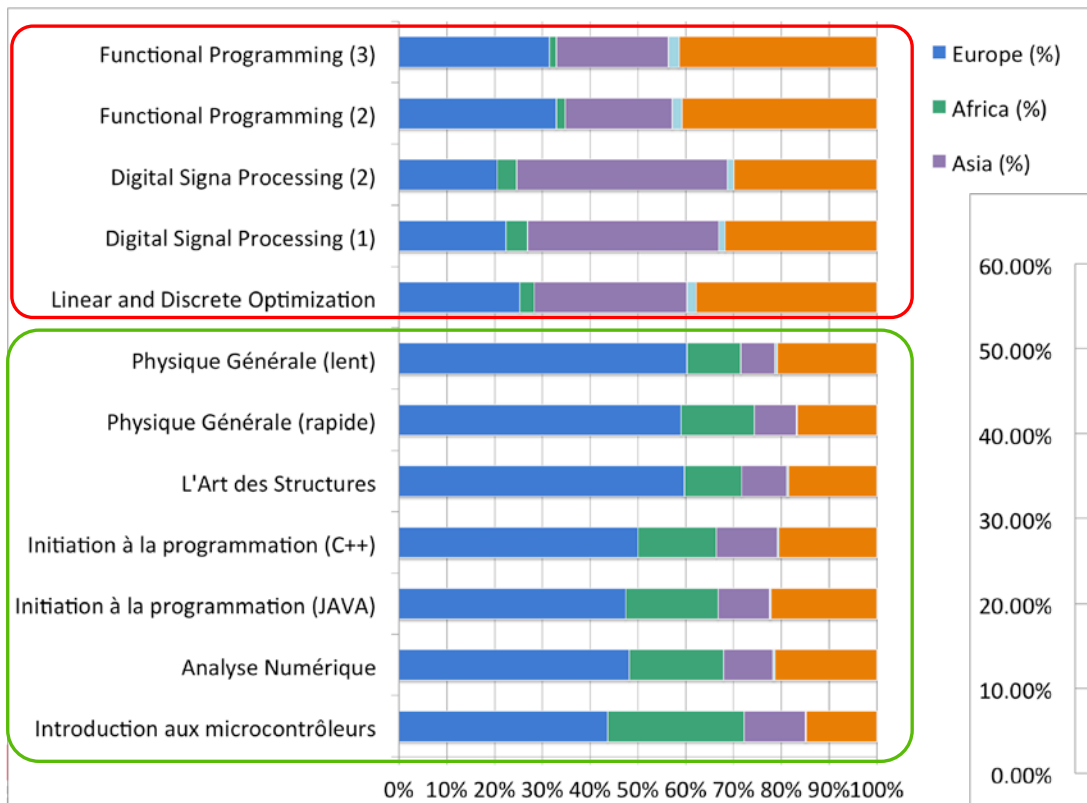




Additional slides

Geo-breakdown

[N=7 French-speaking, 37'000 registrations / N=5 English-speaking, 144'000 registrations]



Country and region-wide initiatives

- Europe



- China



- Arab world



- Generation Rwanda – Kepler initiative



- Sub-saharan Africa



Networks – African Hubs

