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Swiss Education Briefing, Brussels, 21.3.2013

EPFL and MOOCs

25 .2.2013 :

Basler Zeitung: Les cours en ligne également sur EdX

Des cours en ligne de l'EPFL seront dorénavant également disponibles sur EdX, la plateforme d'enseignement web de Harvard et du MIT. A lire dans la "Basler Zeitung".

22.2.2013: Des MOOCs pour tous

Au tour de l'International **Herald Tribune** d'évoquer les nouveaux partenaires des principales plates-formes offrant des MOOCs, son internationale du **New York Times** mentionne donc l'EPFL parmi les nouveaux fournisseurs de contenu pour edX.

21.2.2013: Des MOOCs en français et sur une autre plate-forme

Washington Post: Providers of free online college courses add schools, including many foreign

L'EPFL a lancé lundi sur Coursera son premier cours en ligne ouvert et massif en français. L'EPFL propose également des cours en anglais sur la plateforme Coursera. L'EPFL proposerait également des cours par son intermédiaire.

18.2.2013

24 heures, Le temps. L'EPFL lance son premier cours en ligne

14.2.2013 Le train en marche...

Der Spiegel: Der virtuelle Hörsaal

Dans un article consacré au développement des MOOCs, le journal allemand "Der Spiegel" cite l'EPFL comme étant l'une des premières universités à proposer des MOOCs.

8.2.2013

Swiss info: Swiss universities try to catch the MOOC train

Free interactive online university courses known as MOOCs (Massive Open Online Courses) are quickly spreading far beyond the United States. After Lausanne's Federal Institute of Technology (EPFL), other Swiss universities are keen to experiment.

4 .2.2013

La Liberté: Cinq nouveaux moocs

Les MOOCs, ces cours en ligne dispensés notamment par l'EPFL et une trentaine d'autres universités dans le monde, dont le MIT ou Stanford, font l'objet d'un article dans "La Liberté". Au semestre de printemps, l'Ecole y dispensera cinq nouveaux cours en français et en anglais sur la plateforme Coursera.

Press coverage of EPFL's participation in MOOCs
in February 2013 (probably incomplete)
See also: moocs.epfl.ch

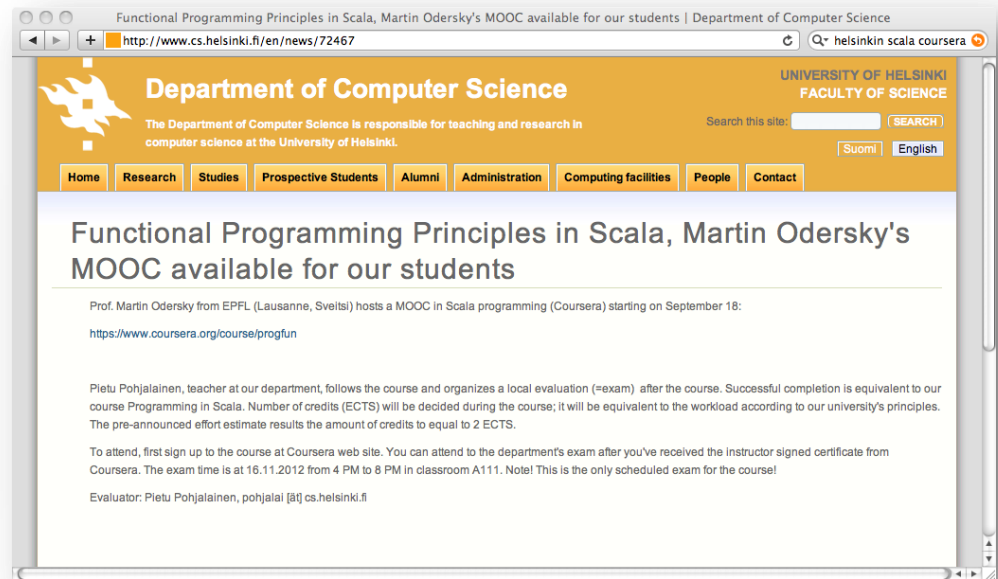
Why should a (European) university engage in MOOCs?

- Immediate answer: it is better to be on the train than to run behind it
- Obvious opportunity: we see a lot of potential in improving teaching, e.g., through having more data
- Long term perspective: opens opportunities to contribute to and enlarge the mission of the university

Effects of MOOCs – External Visibility

MOOCs bring **immediate** and **global** visibility

- Good for attracting students and researchers
- Good for increasing the reputation of the institution and its faculty



Functional Programming Principles in Scala, Martin Odersky's MOOC available for our students | Department of Computer Science

http://www.cs.helsinki.fi/en/news/72467

helsinki scala coursera

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Functional Programming Principles in Scala, Martin Odersky's MOOC available for our students

Prof. Martin Odersky from EPFL (Lausanne, Svetsli) hosts a MOOC in Scala programming (Coursera) starting on September 18:
<https://www.coursera.org/course/progfun>

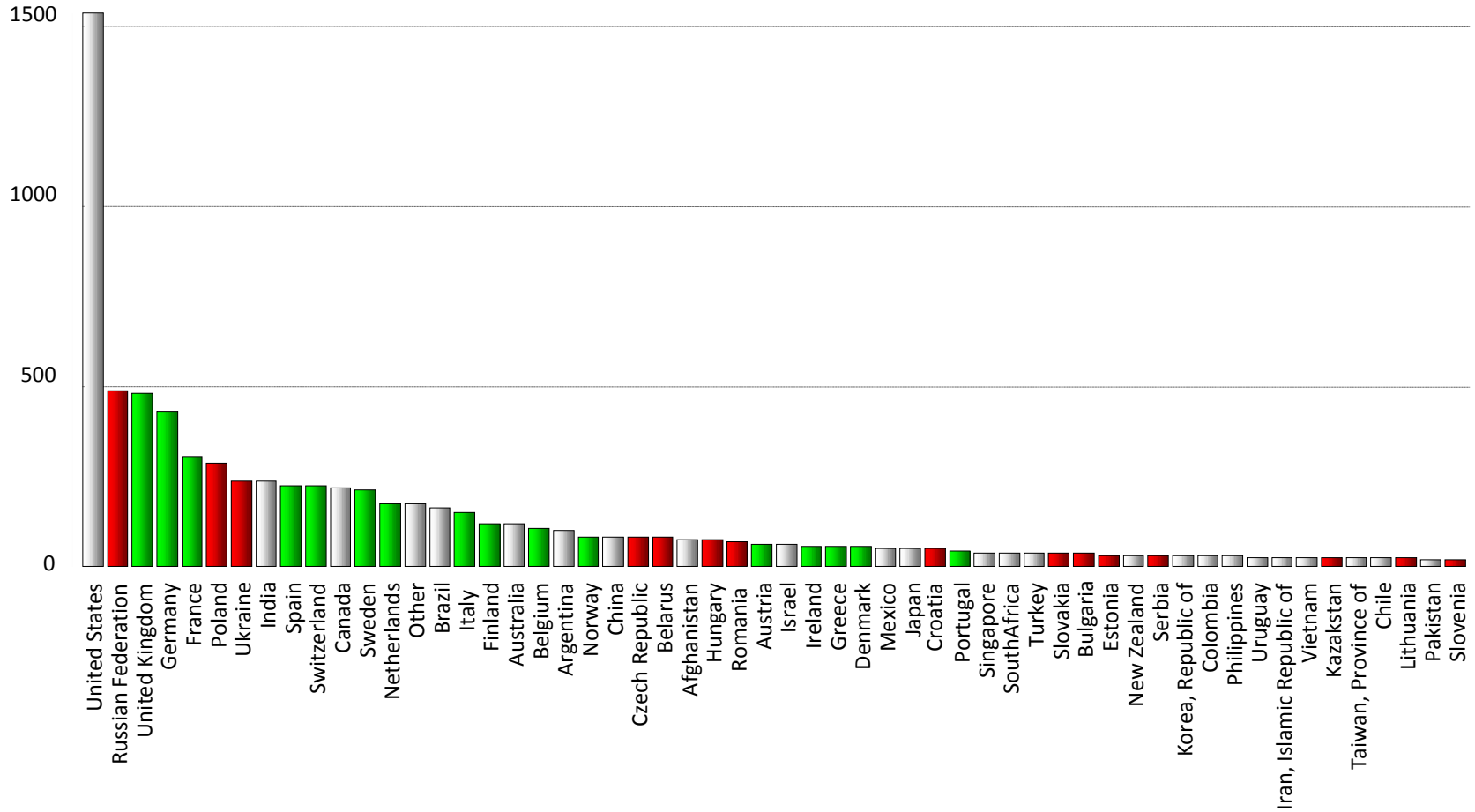
Pietu Pohjalainen, teacher at our department, follows the course and organizes a local evaluation (=exam) after the course. Successful completion is equivalent to our course Programming in Scala. Number of credits (ECTS) will be decided during the course; it will be equivalent to the workload according to our university's principles. The pre-announced effort estimate results the amount of credits to equal to 2 ECTS.

To attend, first sign up to the course at Coursera web site. You can attend to the department's exam after you've received the instructor signed certificate from Coursera. The exam time is at 16.11.2012 from 4 PM to 8 PM in classroom A111. Note! This is the only scheduled exam for the course!

Evaluator: Pietu Pohjalainen, pohjalai [at] cs.helsinki.fi

50'000 registered, 10'000 completed (Fall 2012)

Lessons learned: becoming global

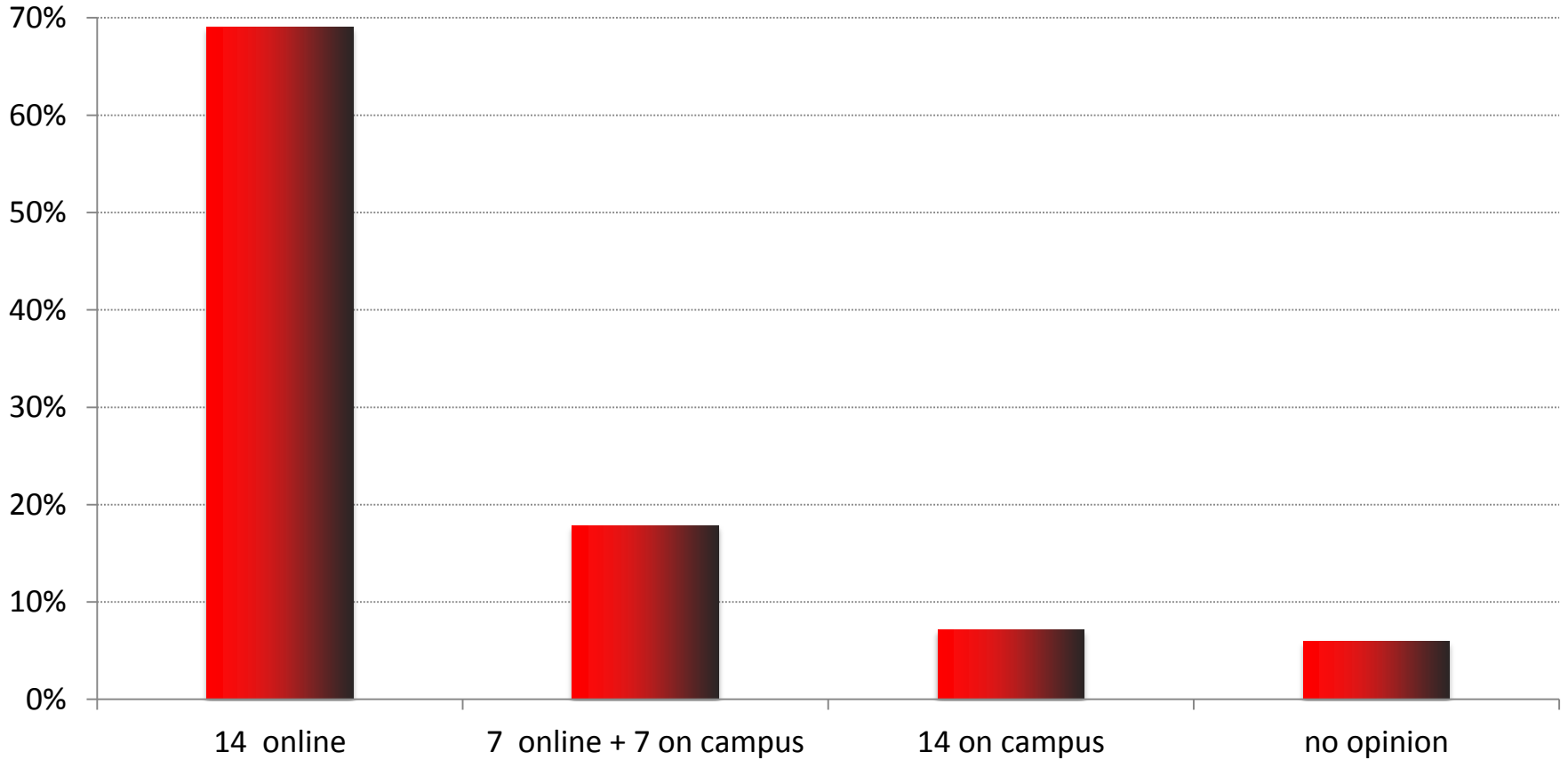


Data produced by Heather Miller & Martin Odersky

Improving teaching

- Professors invest more energy in the quality of the teaching materials (exposure!)
- Education suddenly becomes attractive (visibility!)
- Students like the additional flexibility and adaptability
- Students contribute the teaching material!

Students appreciate MOOCs



«In the future, I would prefer to take this course.... »

Community Effects

- Subtitling and translation
- Volunteers for tutoring
- Local study groups

Classes and Substitutions (2)

Answer: The expression `new C(v1, ..., vm).f(w1, ..., wn)` is rewritten to:

$$[w_1/y_1, \dots, w_n/y_n][v_1/x_1, \dots, v_m/x_m][\text{new } C(v_1, \dots, v_m)/\text{this}] b$$

There are three substitutions at work here:

- ▶ the substitution of the formal parameters y_1, \dots, y_n of the function f by the arguments w_1, \dots, w_n ,
- ▶ the substitution of the formal parameters x_1, \dots, x_m of the class C by the class arguments v_1, \dots, v_m ,
- ▶ the substitution of the self reference *this* by the value of the object `new C(v1, ..., vn)`.

*class C(x₁, ..., x_m) {
def f(y₁, ..., y_n) =*

ici, alors c'est réécrit en utilisant pas une substitution, comme pour les fonctions simples, mais

02:34 | 16:25

← Previous Press H for keyboard shortcuts Lecture 3.3 - Evaluation and Operators (16:25) Speed: 1.25x + Next →



A propos des Meetups Everywhere Coursera

13 086 COURSERIANS 1 449 VILLES

Learning for life.
Education for everyone.

Coursera Meetups are a great way to meet your fellow Courserians, swap stories, share ideas, form study groups, and have a great time.

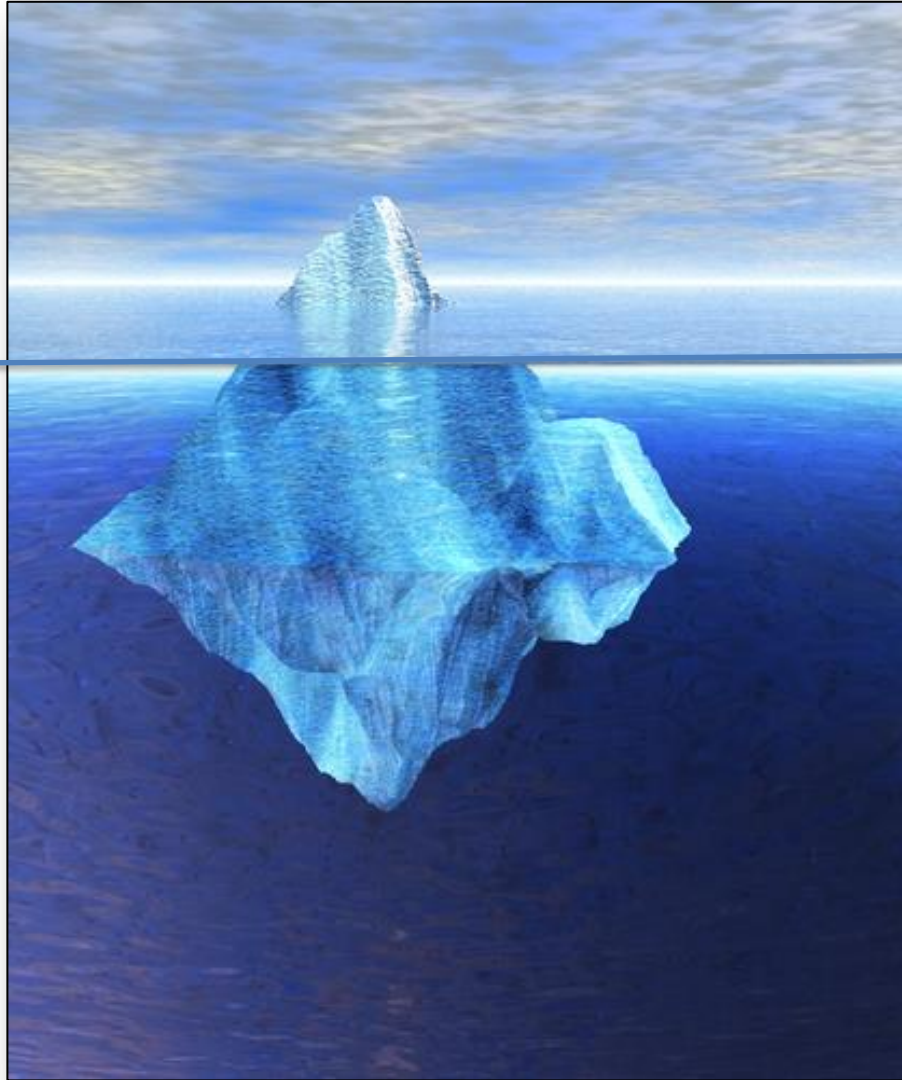
Find a meetup near you, or start a new one. These events are for you, by you, so meet wherever you like. You choose the topic, the time and the venue.

Effects of MOOCs - Resources

Possible effects

- Less need for big classrooms
- More need for small classrooms
- Less ex-cathedra teaching
- More face-to-face contact

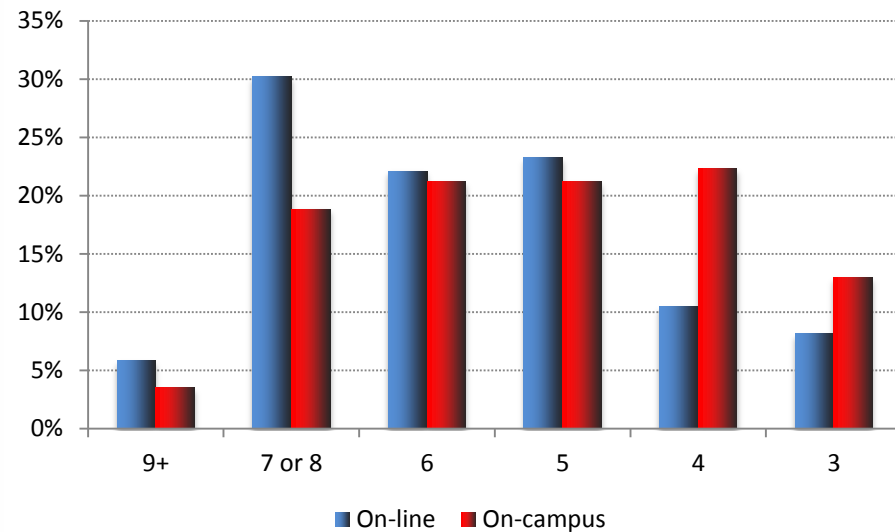
Lessons learned: MOOCs are demanding for students



<http://www.chipestimate.com/blogs/IPInsider/?p=458>

videos, quizzes

assignments



Answers from 84 EPFL students, M. Odersly & H. Miller

Lessons learned: MOOCs are demanding for teachers



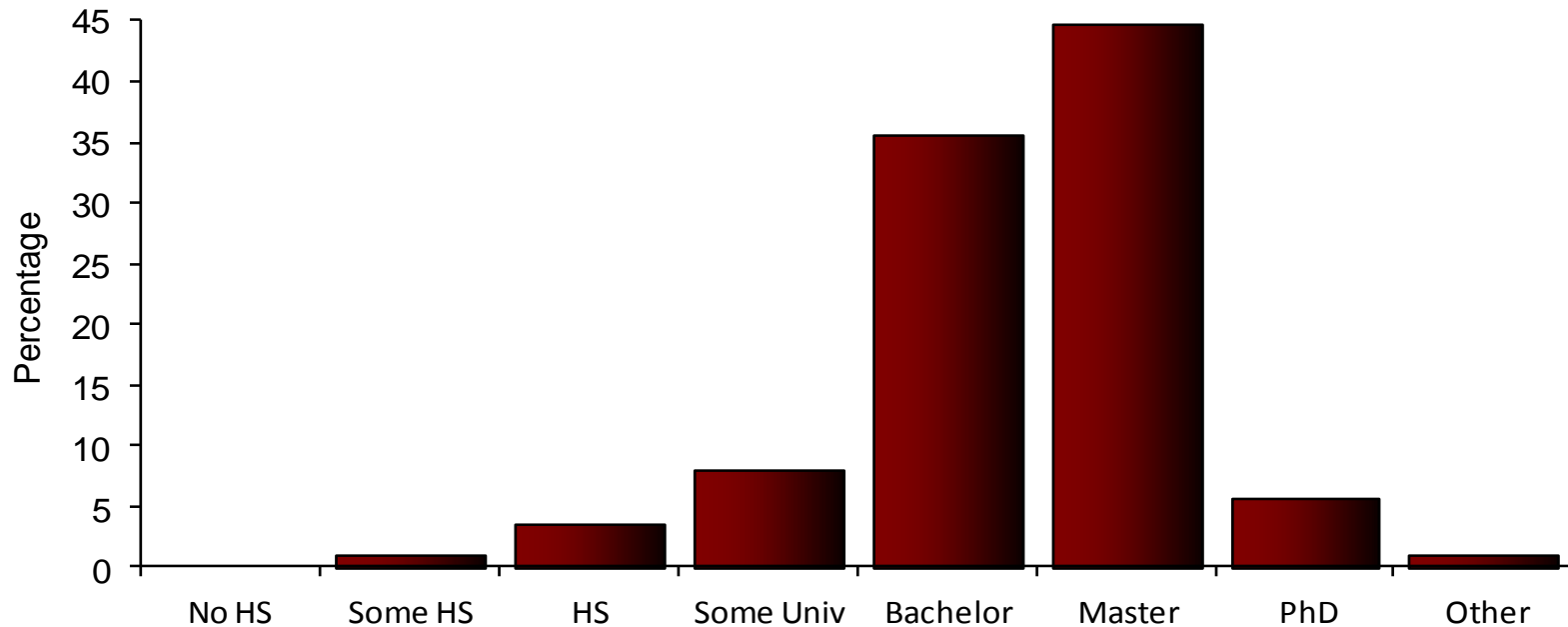
Effects of MOOCs - Outreach

Outreach to communities that are otherwise not easily accessible!

- People in professional life
- Developing regions of the world
- General society

MOOCs attract postgrads

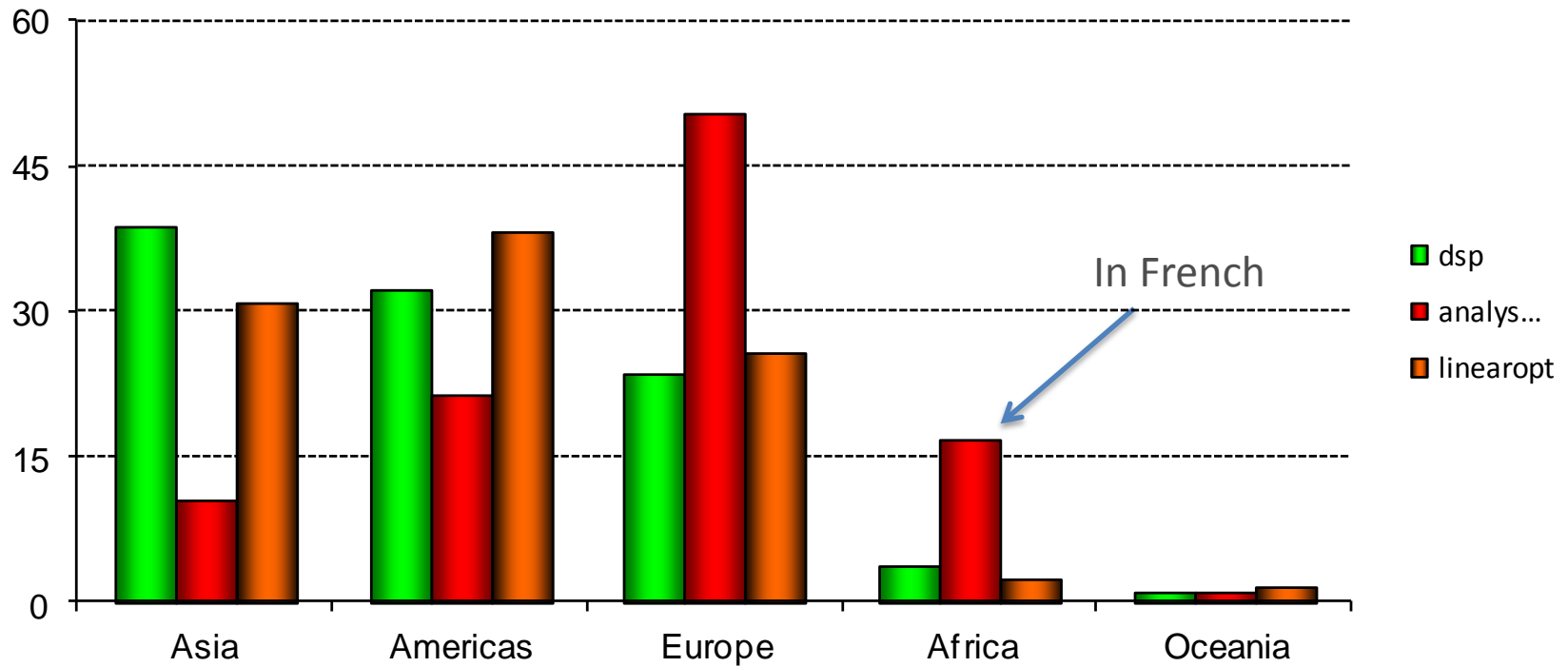
PARTICIPANTS' HIGHEST DEGREES



Data produced by Heather Miller & Martin Odersky

MOOCs are taken in Africa

Proportion of students



EPFL MOOCs Strategy

Visibility: Enhance EPFL reputation

- Unique selling point MOOCs

Inside

- First year teaching
- « Flipped » classrooms

Networks

- RESCIF: education for French speaking Africa
- EuroTech: MOOCs for postgraduate education

Continued Education

- Potential source of revenue

Citizens

- Raising interest in the population

Situation at EPFL March 2013

Partnership with Coursera and EdX

- Only university on both platforms together with Rice

1 MOOC finished, to be re-conducted with TAs

3 MOOCs started in February (1 in French)

6 MOOCs in preparation for fall (3 in French)

6 MOOCs in preparation for 2014

Steering board

- Oversees strategy, horizontal and vertical deans

Editorial board

- Surveils quality (CourseraGate!)
- Approves courses and allocates budgets
- Synchronizes teachers

Center for Digital Education

- Support for course development and delivery
- Opens April 30

RESCIF

- French-speaking African countries
- Supported by Swiss Federal Government

Eurotech (with DTU, TUM, TU/e)

- Continued education

Many interested industries and organizations

Key Issues

Quality

Certification

Internal organization

Cost and revenue

Platform independence

Partnerships

Better be an actor than a spectator

