The **MOOCs** Experience at EPFL

Francisco Pinto, Ph.D.
Head of Data Analytics
EPFL Centre for Digital Education

Part 1. Adopting a MOOCs Mindset

Context, opportunities, and challenges

1. Adopting a MOOCs mindset

1.1 Place of MOOCs in History



400 BC Philosophical thinking ➡ Academy & Lyceum



300 Rise of Christianity ➡ Focus on Theology



1400 The Renaissance ➡ Focus on Humanism



1700 Enlightenment ➡ Science & Reason



1800 Industrial Revolution ➡ Streamlining of education



1950 Digital Revolution ➡ Computational power



1990 Internet Revolution ➡ Massive connectivity

1. Adopting a MOOCs mindset

1.1 Place of MOOCs in History



The fundamentals never changed

After 2,500 years, it's still true that:

1. Societies rely on educational institutions
2. Teachers are the ones who teach students
3. The basics of pedagogy are the same

New opportunities in MOOCs

What is different today:

1. Students are internet natives
2. Prosuming and the power of crowds
3. Big data and powerful data analytics
4. Infrastructure is accessible to anyone



The Internet Age

New opportunities in MOOCs

Students are Internet Natives

- While students are internet natives, educators are not;
- The older generation does not understand the young;
- The young don’t question technology, they take it for granted;
- They don’t make a distinction between bits and atoms; digital products are as valuable as physical ones;
- They buy digital products, but expect information to be free;
- They never experienced privacy, so they don’t care.

New opportunities in MOOCs

Prosuming and The Power of Crowds

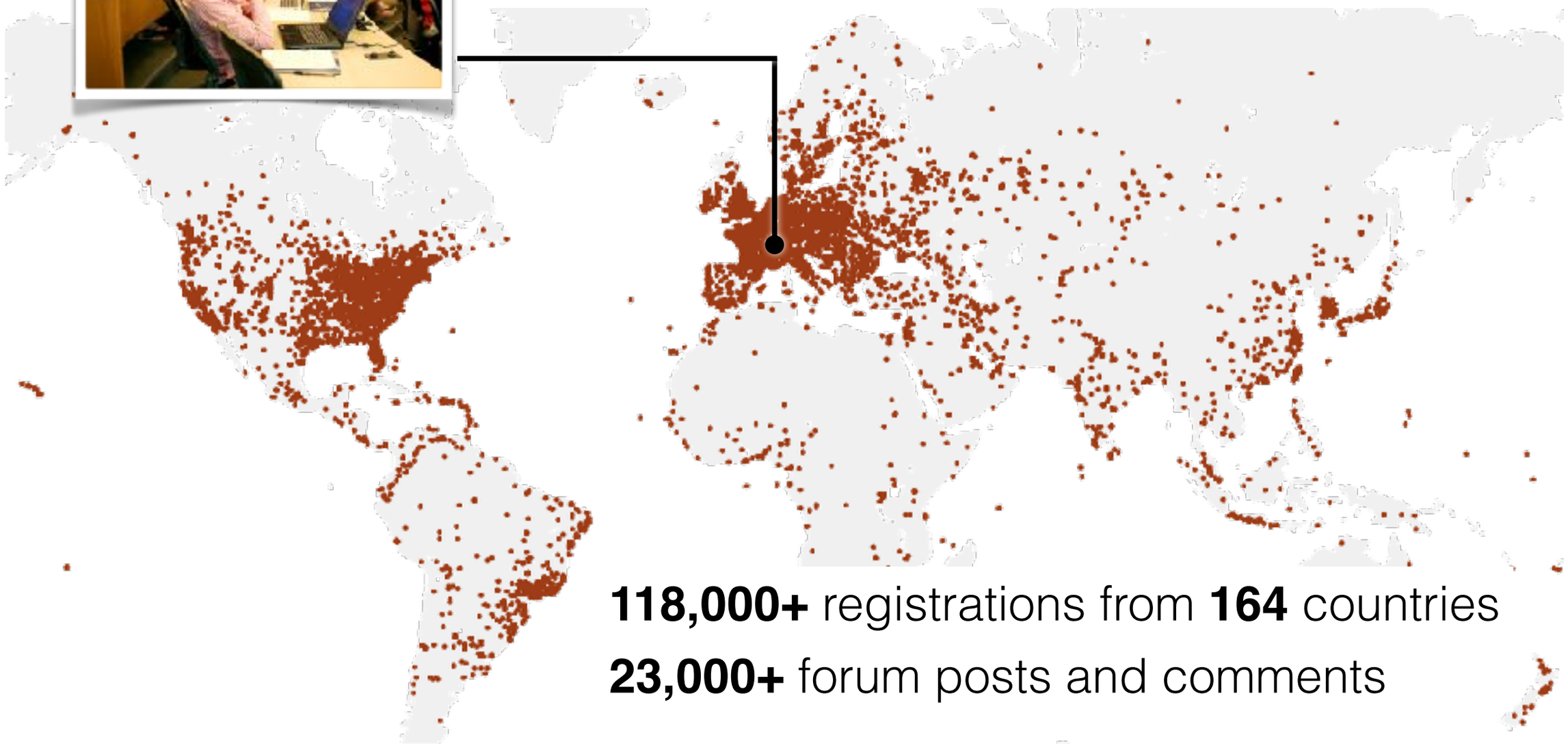
- Prosumers not only consume products but also participate;
- Power is shifting to people. They can help you or destroy you;
- Influence grows exponentially in networked environments; *(examples: “dell hell”, “united breaks guitars”)*
- Giving away value for free to a massive number of people brings back massive value to us.

Flipped Classroom Experiment: Java and C++ Programming



100 EPFL students in classroom

MOOC open to the world at the same time



118,000+ registrations from **164** countries

23,000+ forum posts and comments

New opportunities in MOOCs

Big Data and Powerful Data Analytics

- MOOCs platforms produce k's of Gigabytes of tracking data;
- Everything is tracked, from video navigation to forum activity;
- Data science and machine learning methods can be used to analyse user behaviour and make various predictions;
- Applications in market research, pedagogy, psychology, etc.

New opportunities in MOOCs

Infrastructure is Accessible to Anyone

- Unlike in the past, online courses are now easy to produce;
- Hardware is cheap, software free and promptly available;
- Yet, few institutions have truly committed to it.



Challenges of MOOCs

What makes it harder to succeed:

1. Focus on self-motivation
2. Exposure to the marketplace
3. Low perceived value of information



The Internet Age

Challenges of MOOCs

Focus on Self-Motivation

- MOOCs have less than 10% completion ratio;
- Will power is in short supply in most people;
- At the university, students are driven by external motivators;
- MOOCs don’t benefit from those motivating forces;
- To understand MOOCs, you need to understand motivation.

Challenges of MOOCs

Exposure to the Marketplace

- Universities are controlled environments; the market is not;
- Outside the university, your rules do not apply anymore;
- Professors are shocked by the indifference of the market;
- MOOCs often taken by people who’re not the intended target;
- The production quality and intellectual caliber of an information product has little correlation with the money it makes.

Challenges of MOOCs

Low Perceived Value of Information

- We live in an over-communicated society;
- Information used to double every 100 years; now it's every 1 year;

> *"Between the birth of the world and 2003, we've created the same amount of information we create now every 2 days. See why it's so painful to operate in information markets?"*—Eric Schmidt, CEO of Google

- People expect information to be free and promptly available;
- Noise is increasing, confusion is increasing, competition, etc;
- Targeting a massive audience requires raising above the noise.

Part 2. Creating successful MOOCs

Subjects, motivation, and targeted marketing

Marketing of MOOCs

Two Types of Marketing We've Used



Branding
(get <u>your</u> name out there)



Direct Response
(get <u>their</u> name in here)

Marketing of MOOCs

How it started…

- No hesitation, went big from the start;
- Created a new team exclusively for MOOC production (10+);
- Recruited as many professors as possible;
- Rode with the hype / used first-mover advantage;
- Partnered with both Coursera and EdX (= more leverage);
- Created a new team exclusively for MOOCs in Africa;
- Partnered with prestigious foundations that are active in Africa;
- Offered a path to certification.

2. Creating successful MOOCs

2.3 Marketing and targeting



2 Million students from
10,000 cities in **186** countries, where
100,000+ passed the course

All countries except:

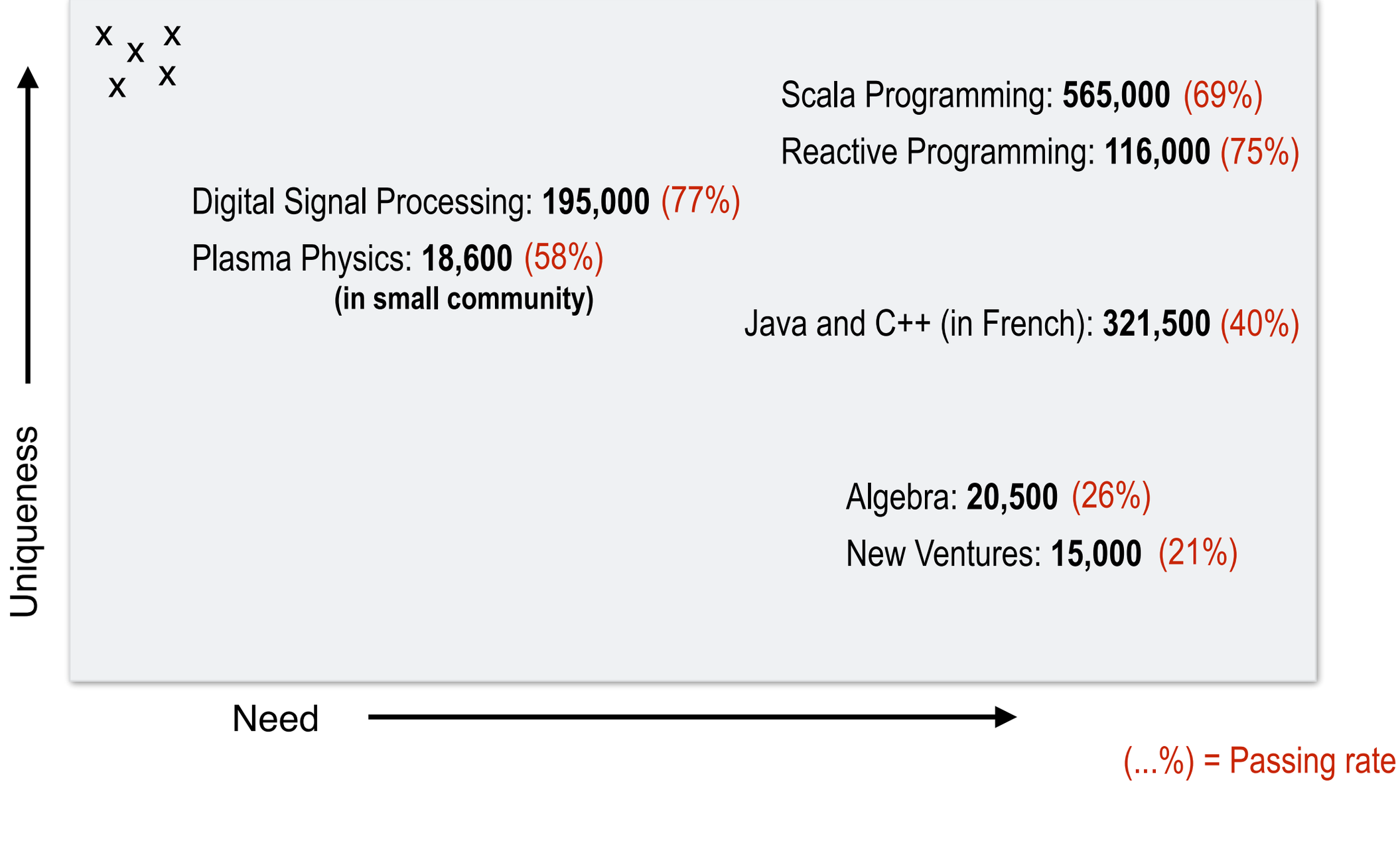


2. Creating successful MOOCs

2.1 Choosing the right subject

Number of Registrations in EPFL MOOCs

as a function of need and uniqueness



Marketing of MOOCs

Increasing focus on Targeted Advertising

- Less focus on branding (which is losing steam), and more focus on street smarts;
- Leverage data analytics for market research;
- Use MOOCs to capture leads and identify potential partners;
- Help the smaller MOOCs with targeted advertising;
- Leverage social media and communities to attract students;
- Created a new team for $-making MOOCs (Extension School).

Horizontal Channels

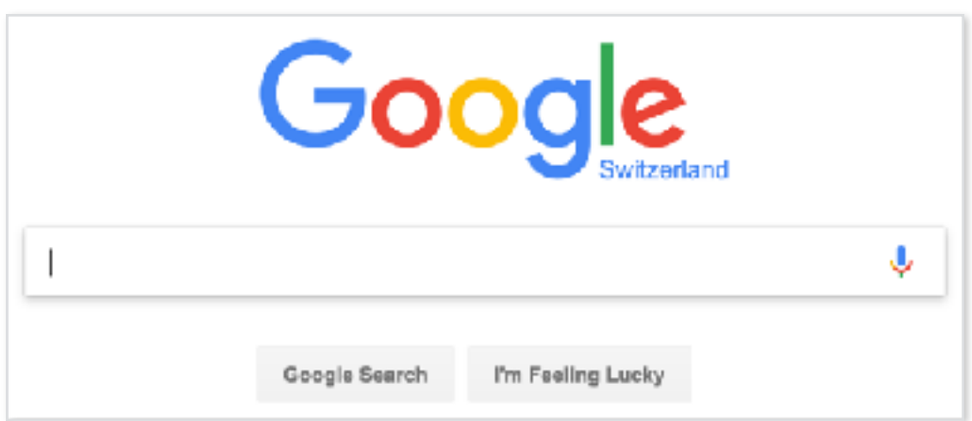
How we use them: Outsource to platforms



Potential Reach: **17 million students** in Dec 2015



Potential Reach: **7 million students** in Mar 2016





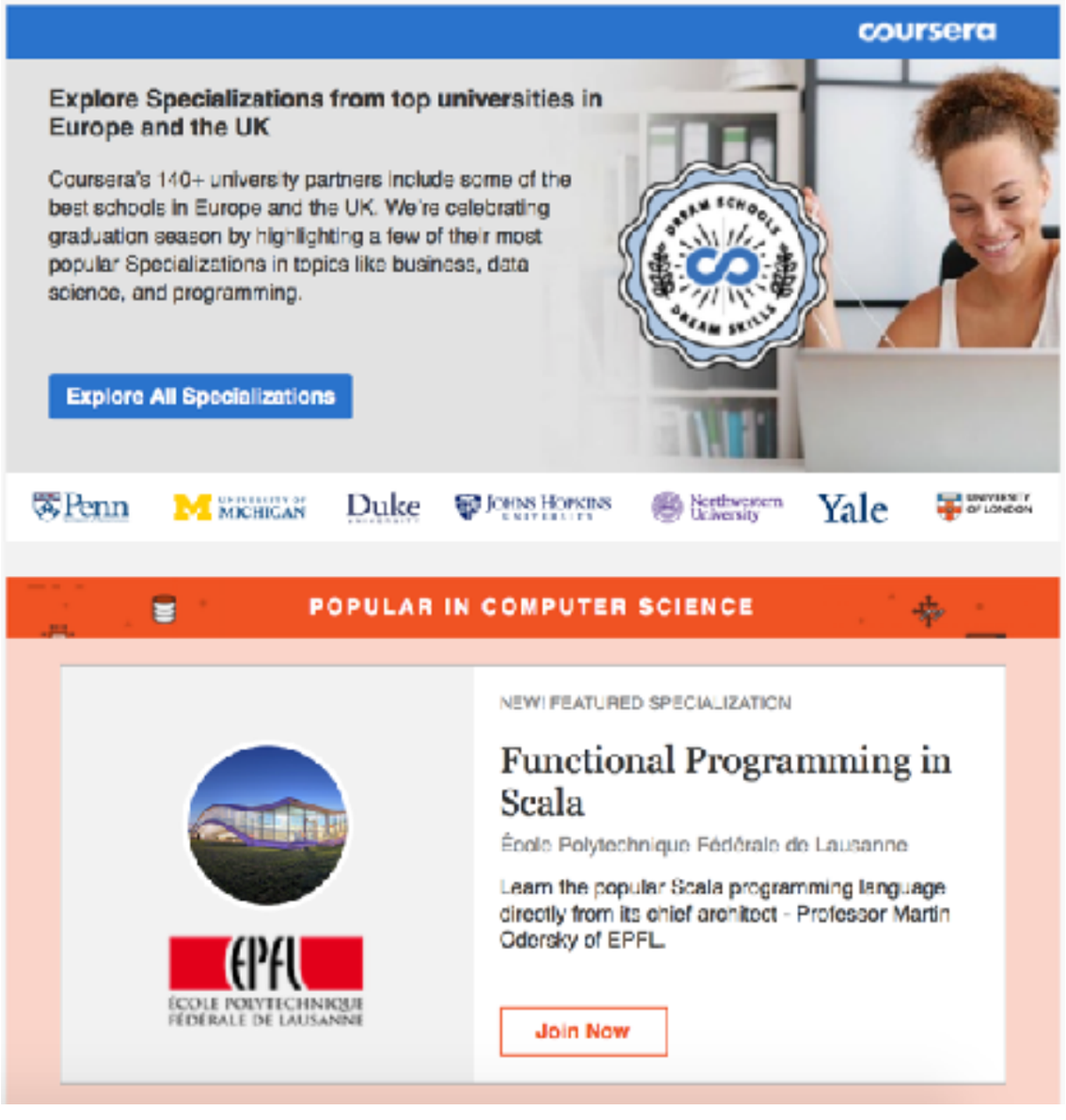
Google and **Mailing Lists** are used by Coursera and EdX themselves to attract new people into their user-base, and they use it aggressively!

2. Creating successful MOOCs

2.3 Marketing and targeting

Horizontal Channels

How we use them: Outsource to platforms



- Example newsletter sent out by Coursera to their mailing list.
- Used smart and effective marketing message, highlighting uniqueness of our Scala course
- Reach: **3.7 million students**

2. Reaching the right audience

2.3 Targeting

Facebook Targeting

Protected Areas in Africa

Age: 18 - 65+

Language: French

Location: Francophone Africa

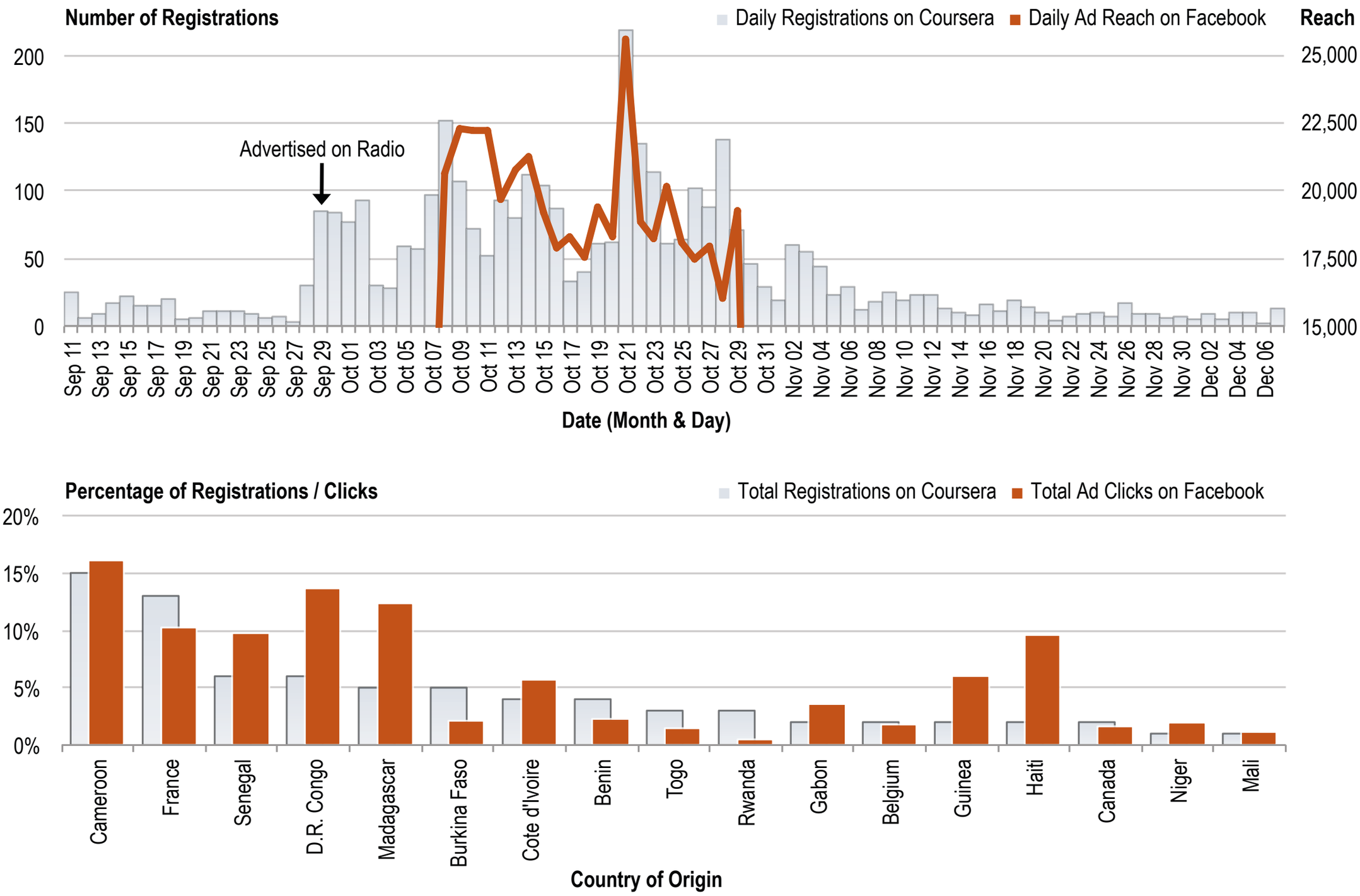
Employment:

- Greenpeace,
- Nature reserve,
- World Wide Fund for Nature,
- Sierra Club,
- Nature conservation,
- Park ranger
- National park
- Marine protected area



2. Creating successful MOOCs

2.3 Marketing and targeting



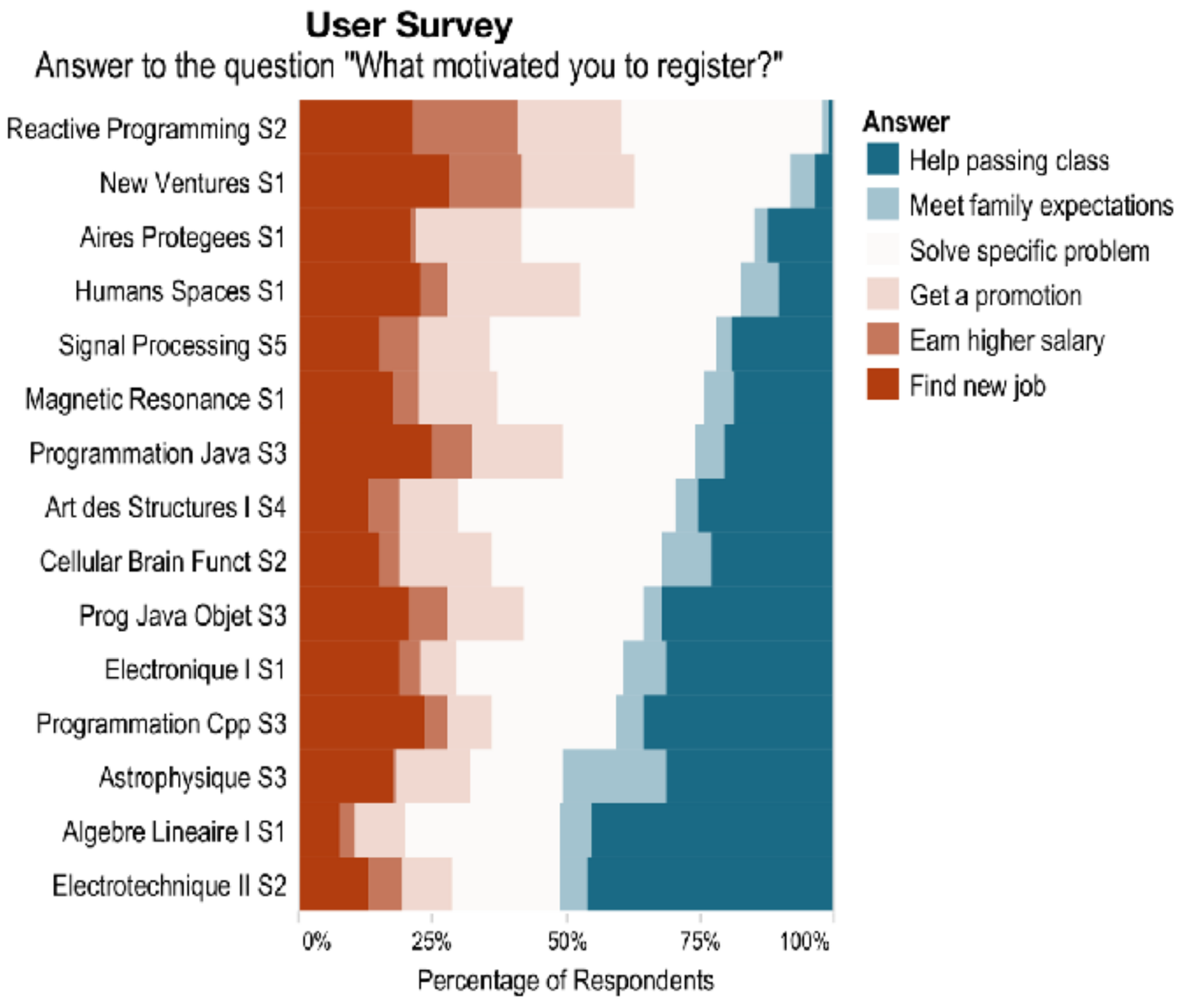
2. Reaching the right audience

2.3 Targeting



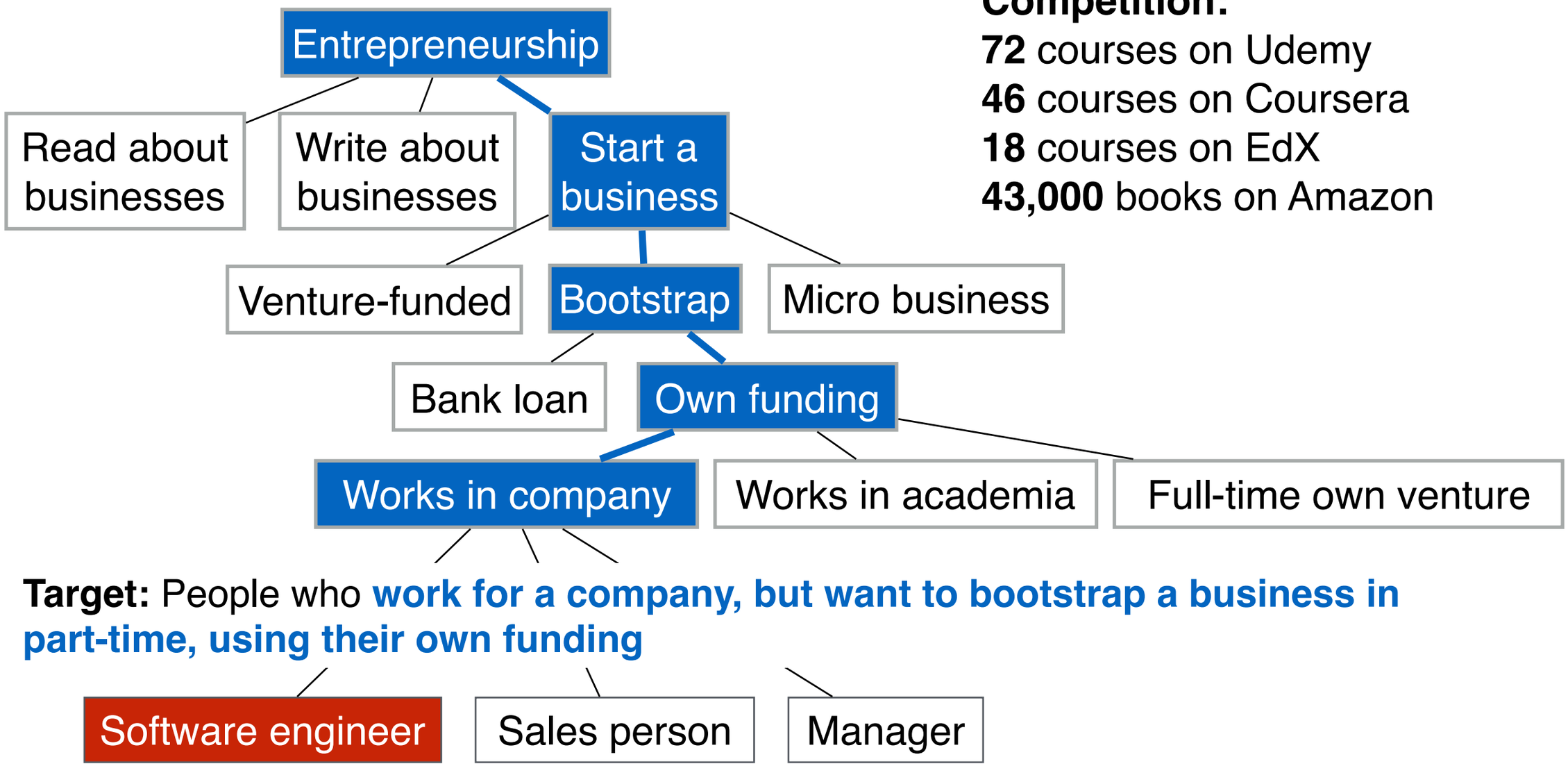
2. Creating successful MOOCs

2.2 Finding the right motivation



How to do Effective Targeting

De-abstraction exercise



Target: Everyone interested in **entrepreneurship**.

Competition:
72 courses on Udemy
46 courses on Coursera
18 courses on EdX
43,000 books on Amazon

Target: People who **work for a company, but want to bootstrap a business in part-time, using their own funding**

Target: **Software engineers** who **work for a company, but want to bootstrap a business in part-time, using their own funding**

Thank you! Any questions?