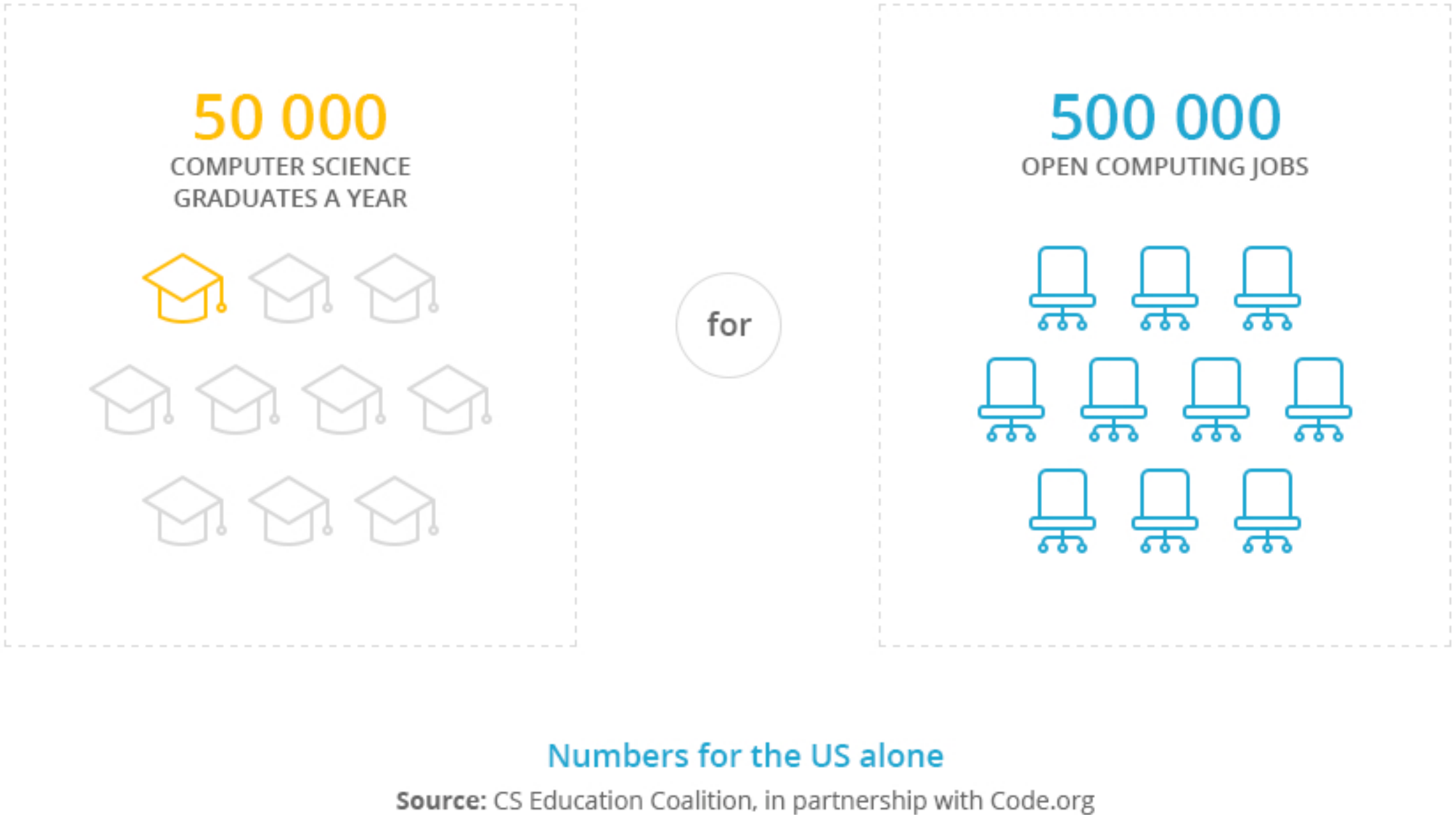
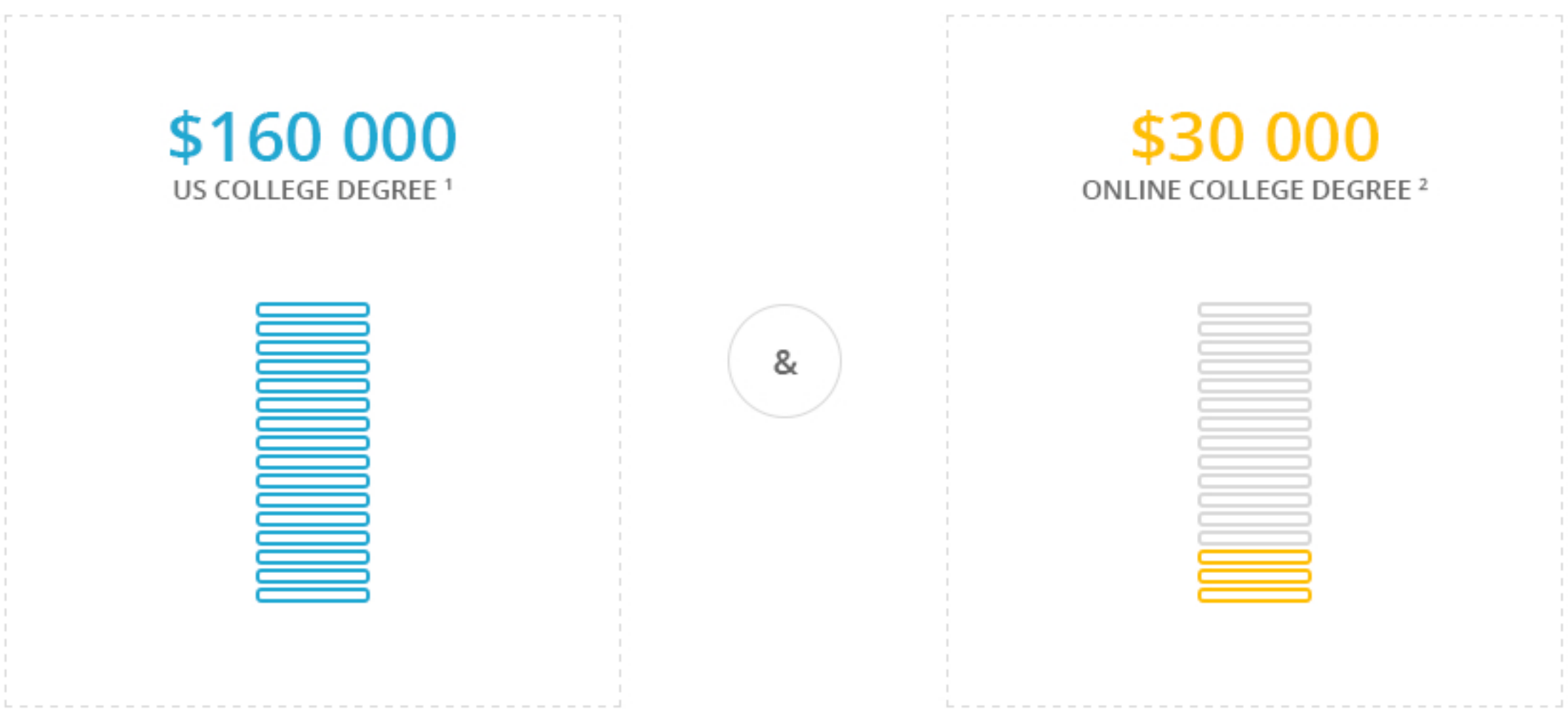


Computer programming jobs won't be filled in the future



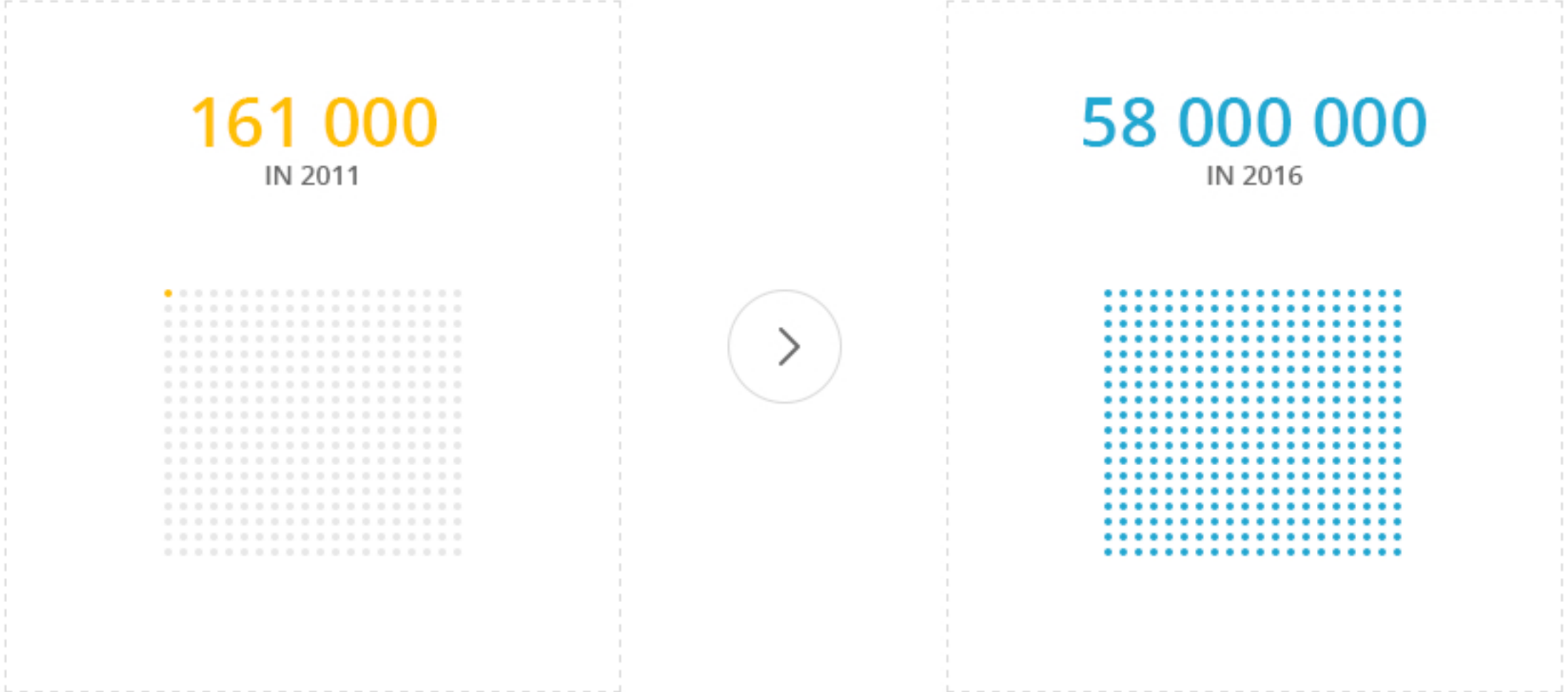
Numbers for the US alone  
Source: CS Education Coalition, in partnership with Code.org

Computer science certification costs are detrimental to potential students



Average fees to get a degree (Bachelor in the colleges)  
Sources: <sup>1</sup> www.collegecalc.org/majors/computer-science/ <sup>2</sup> http://www.onlineu.org/most-affordable-colleges/computer-science-degrees

Number of people to enroll in MOOCs to avoid college fees



MOOCs and online education programs both led by private providers and faculty are in staggering growth  
Source: Class Central

None of the major MOOCs certificates are free

In 2012, Massive Open Online Courses used to be 100% free. 5 years later, emphasis on personal enrichment is no longer the value proposition as providers are seeking for return on investment.

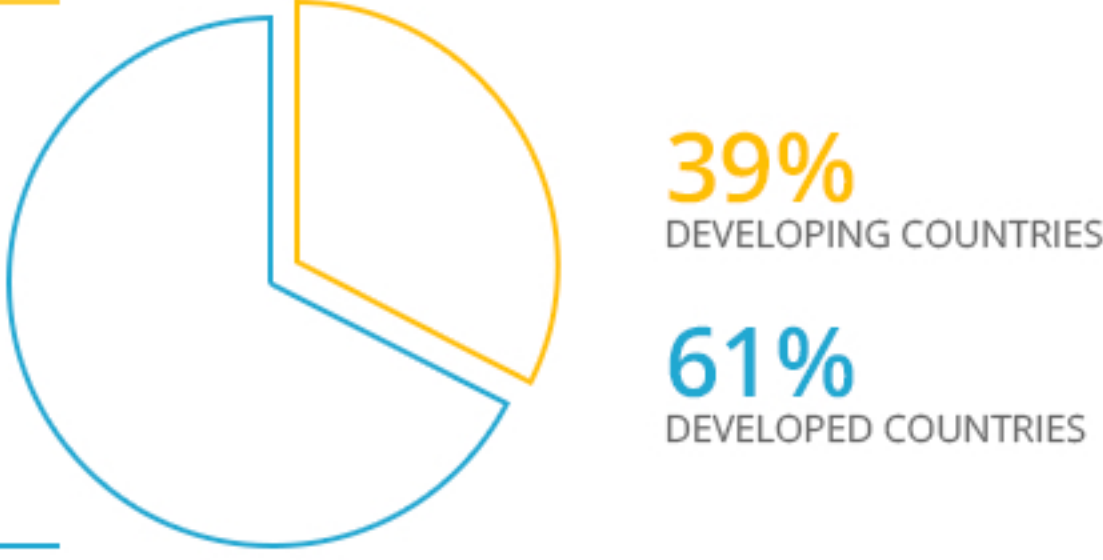
In 2016, 100% of major online learning platforms (Coursera, Edx, Udacity, FutureLearn) now charge fees for certifying completion, badges or credentials.



Sources: Class Central, April 25, 2017 - The Ultimate Guide to MOOC Certificates, MocoLab, 2017

MOOCs benefit developed countries most and are mostly available in English

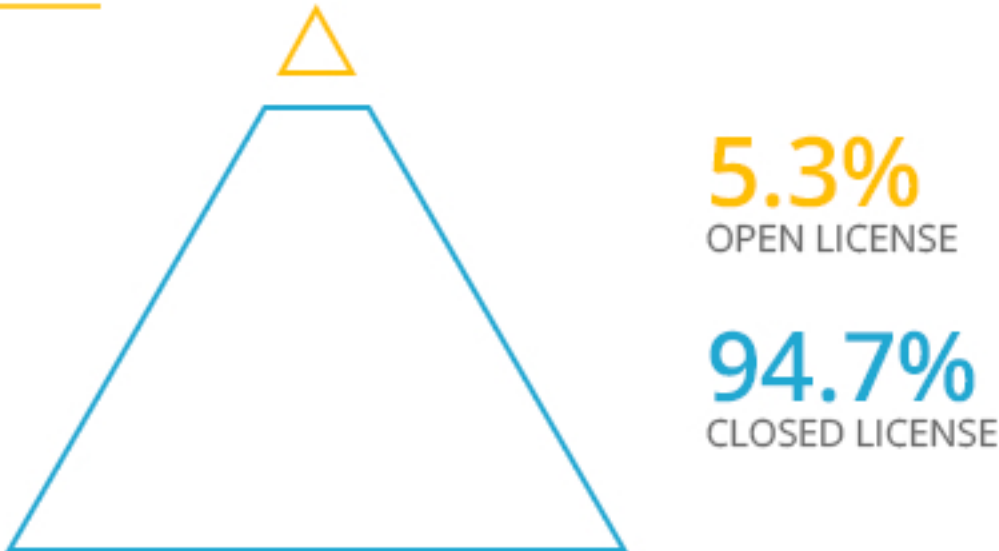
Although Moocs have provided greater access to learning opportunities since 2012, those benefiting are disproportionately learners who come from richer countries.



Source: Closing global achievement gaps in MOOCS, Stanford University / MIT Study, January 2017

Most Educational Resources are not open, which prevents them to be translated and adapted to achieve global reach

Only 5.3% of courses provided by higher education faculty are using openly licensed (Creative Commons or public domain) textbooks / educational resources.



Source: Opening the Textbook: Educational Resources in U.S. Higher Education, I.Elaine Allen, Jeff Seaman, Babson Survey Research Group, July 2016