

**"Online обучение быстро входит в нашу  
жизнь"**

**Марфенин Н.Н. – проф., д.б.н.,  
Биологический ф-т МГУ**

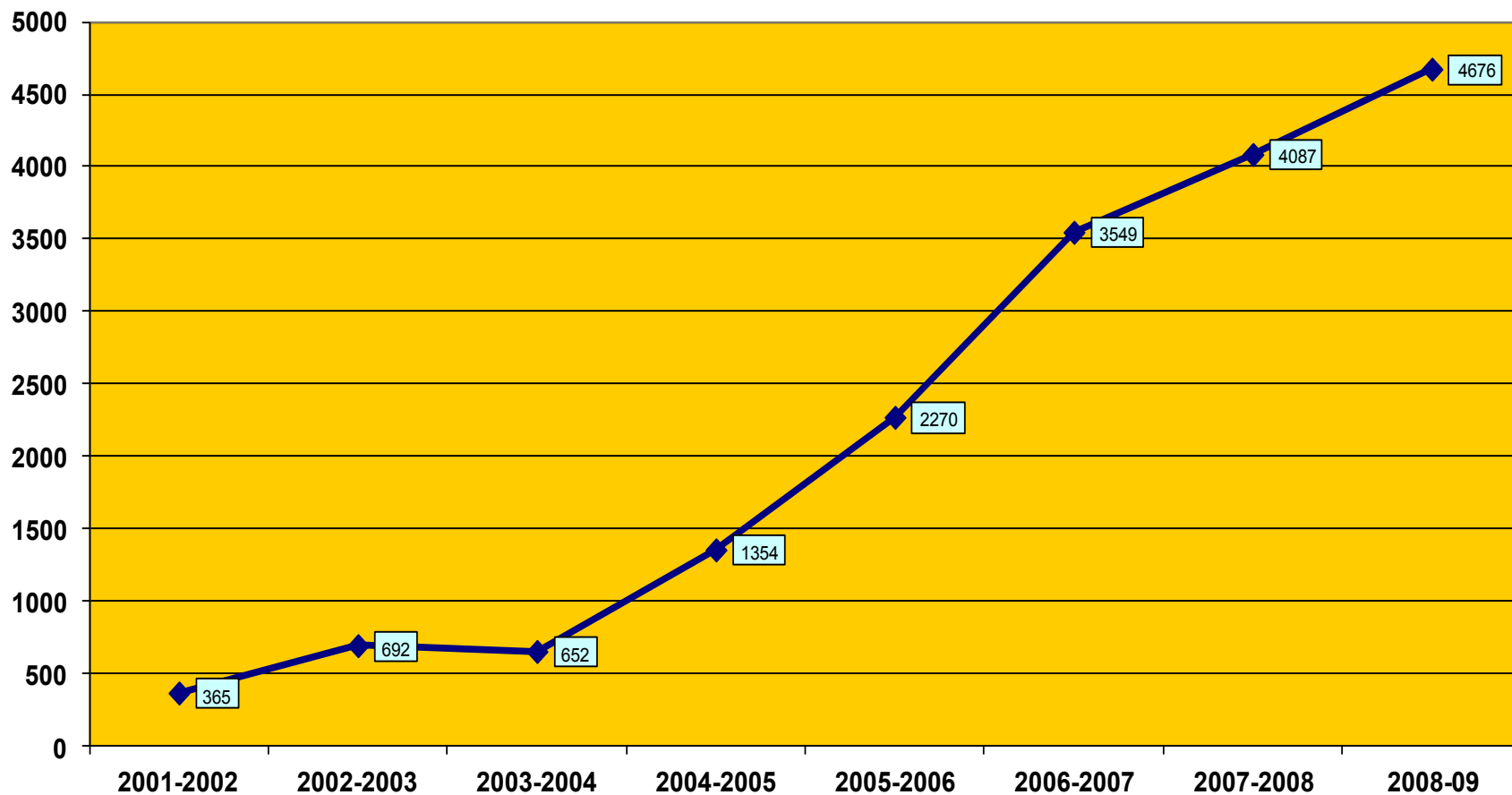
**Москва – 15.02.2017**

# Доля студентов дистантников в США

- **В 2012, 5.5 млн студентов (26%** всех студентов колледжей) изучали дистантно хотя бы один курс и **2.6 млн студентов (13%) обучались полностью дистанционно.**
- По данным Национального центра статистики образования США примерно **2 млн студентов-дистантников обучается в бакалавриате и 600,000 в магистратуре** (*U.S. Department of Education, 2014*).
- Дистанционное образование уже сейчас оказывает сильное влияние на всю систему высшего образования в США.

Clinefelter, D. L. & Aslanian, C. B., (2014). Online college students 2014: Comprehensive data on demands and preferences. Louisville, KY: The Learning House, Inc.

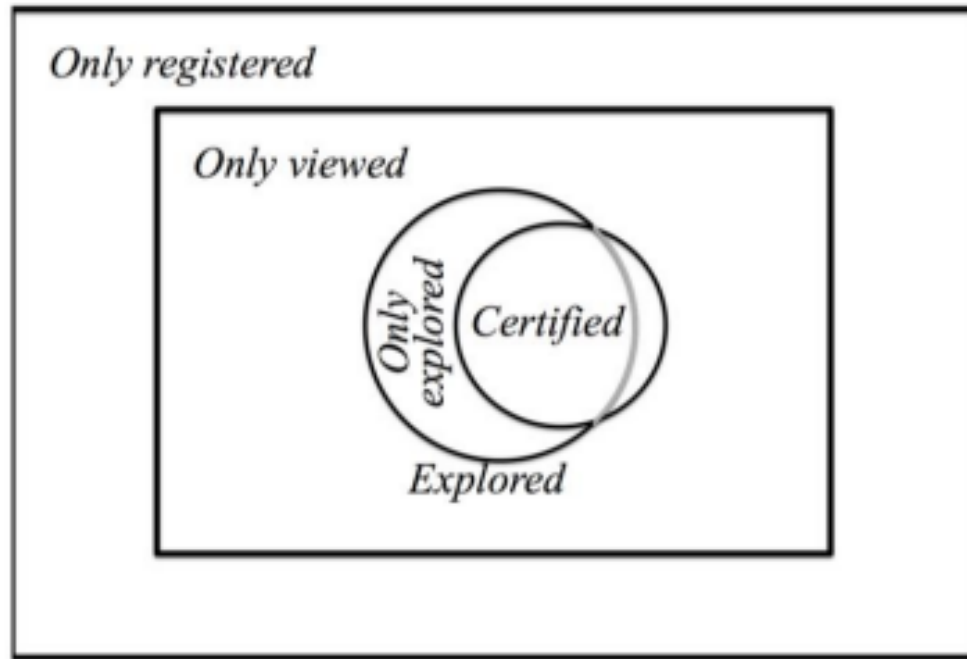
# Динамика роста числа обучающихся дистанционно в Объединенном Сан-Диего колледже (*San Diego Community College District*) Всего 130 000 студентов



# Соотношение онлайн и традиционный

| <i>Proportion of Content Delivered Online</i> | <i>Type of Course</i> | <i>Typical Description</i>  |
|---|-----------------------|---|
| 0%  | Traditional           | Course where no online technology used — content is delivered in writing or orally.   |
| 1 to 29%                                      | Web Facilitated       | Course that uses web-based technology to facilitate what is essentially a face-to-face course. May use a course management system (CMS) or web pages to post the syllabus and assignments.                      |
| 30 to 79%                                     | Blended/Hybrid        | Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings. |
| 80+%  | Online                | A course where most or all of the content is delivered online. Typically have no face-to-face meetings.   |

## Four Mutually Exclusive and Exhaustive Categories of Course Registrants (see Figure 2)



**Only Registered:** Registrants who never access the courseware.

**Only Viewed:** Non-certified registrants who access the courseware, accessing less than half of the available chapters.

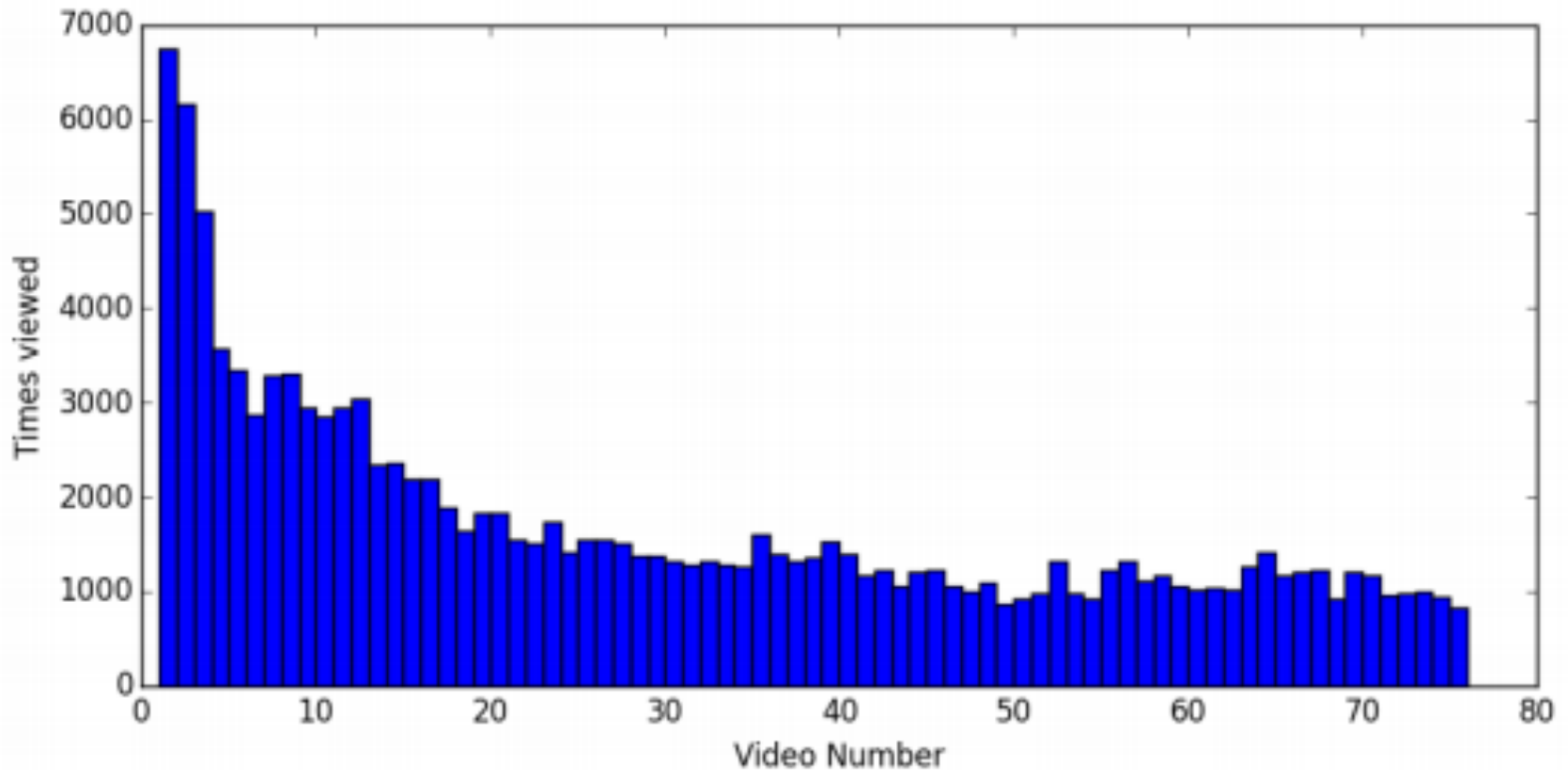
**Only Explored:** Non-certified Registrants who access more than half of the available chapters in the courseware.

**Certified:** Registrants who earn a certificate in the course.

Ho, A. D., Reich, J., Nesterko, S., Seaton, D. T., Mullaney, T., Waldo, J., & Chuang, I. (2014). HarvardX and MITx: The first year of open online courses (HarvardX and MITx Working Paper No. 1).

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2381263](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2381263)

# Число просмотров значительно сокращается после третьего фильма



**Figure 4: Number of times each video in the first course was viewed (measured as the end of its first run)**

# % студентов, которые прослушали хотя бы одну лекцию в разделе

Laura W. Perna et al., 2014 Moving Through mOOCs: Understanding the Progression of Users in massive Open Online courses

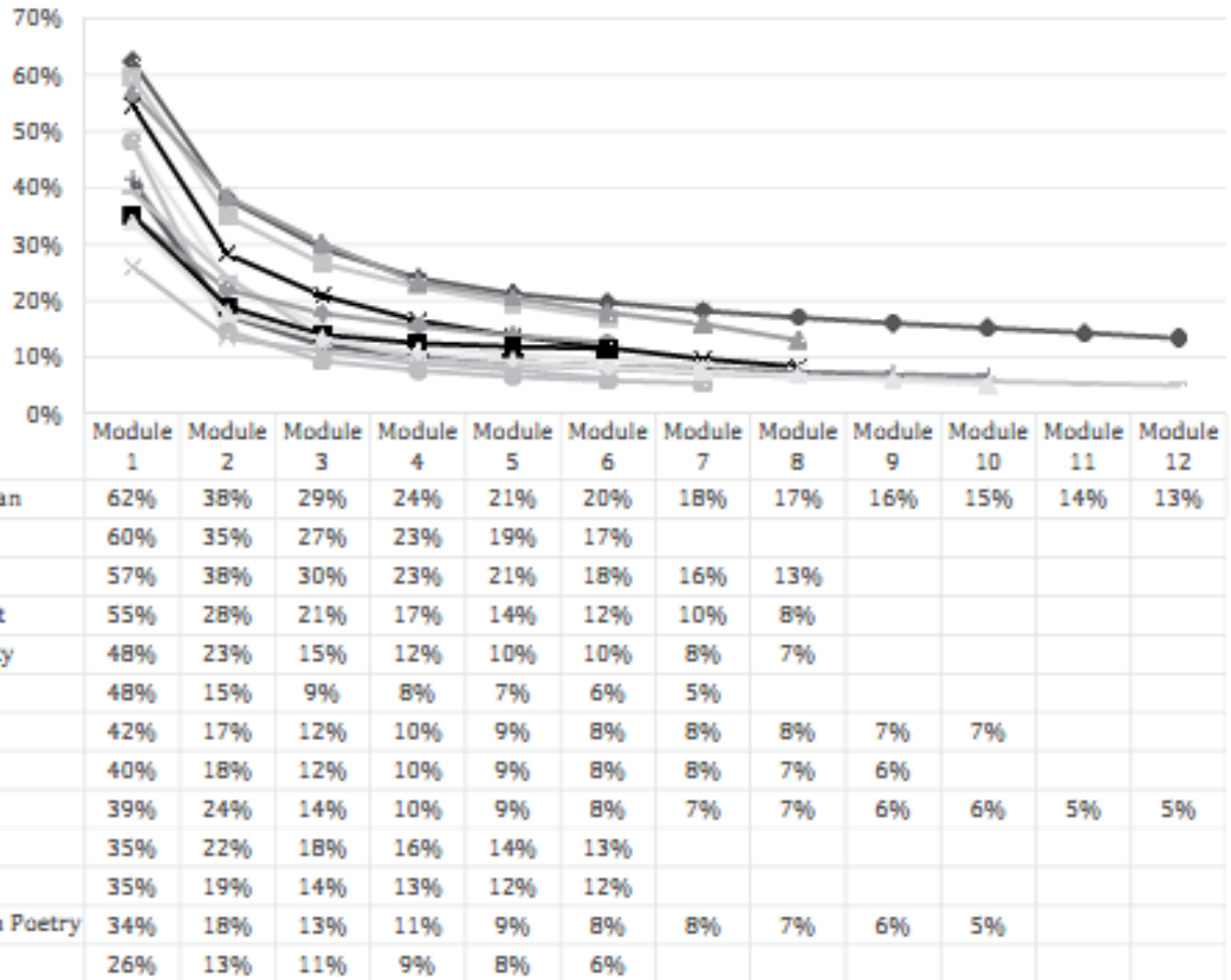


FIGURE 1. "Sequential movement" of registrants: Percentage of registrants who accessed at least one lecture in each course module in the ordered sequence identified by the instructor (for the courses with relevant data available)

Просматривали

Частично прошли

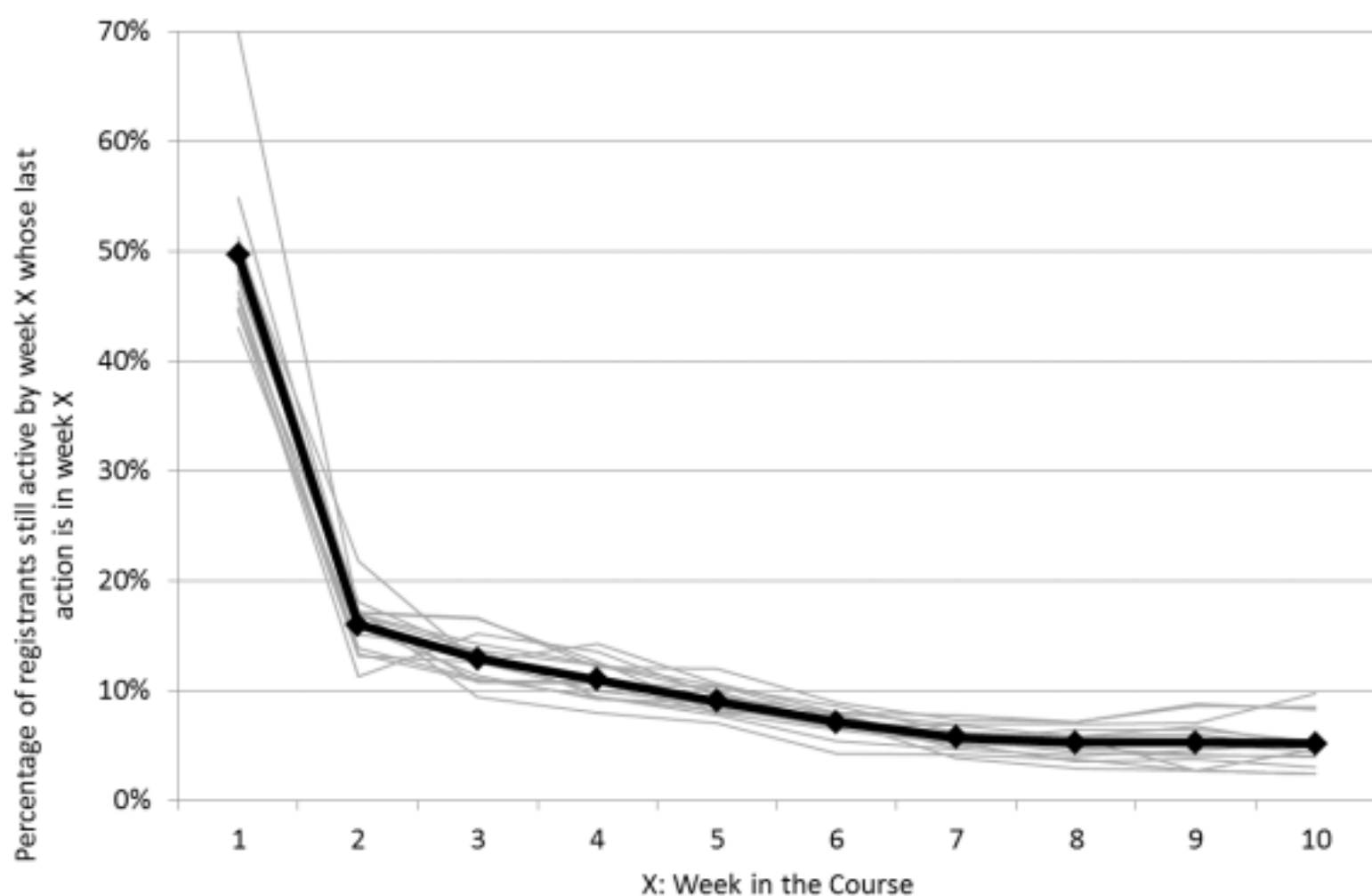
Только зарегистрировались

Прошли полностью

Table 2. Registrants, membership of registrants in mutually exclusive registration categories, and exploration/certification rates.

| Institution                | Course     | Launch Date | Registered | Only Registered | Only Viewed | Only Explored | Certified | Certified / Registered | (Only Explored + Certified) / Registered | Certified / Viewed | (Only Explored + Certified) / Viewed | Certified / Explored |
|----------------------------|------------|-------------|------------|-----------------|-------------|---------------|-----------|------------------------|--|--------------------|--------------------------------------|----------------------|
| Harvard                    | HealthStat | Oct 15, '12 | 61170      | 22319           | 28748       | 5045          | 5058      | 8%                     | 17%                                      | 13%                | 26%                                  | 50%                  |
|                            | CS50X      | Oct 15, '12 | 181410     | 67369           | 101994      | 10608         | 1439      | 1%                     | 7%                                       | 1%                 | 11%                                  | 12%                  |
|                            | JusticeX   | Mar 2, '13  | 79750      | 29731           | 40969       | 3608          | 5442      | 7%                     | 11%                                      | 11%                | 18%                                  | 57%                  |
|                            | HeroesX    | Mar 13, '13 | 43555      | 17874           | 23903       | 378           | 1400      | 3%                     | 4%                                       | 5%                 | 7%                                   | 79%                  |
|                            | HealthEnv  | May 15, '13 | 53335      | 30496           | 19095       | 999           | 2745      | 5%                     | 7%                                       | 12%                | 16%                                  | 73%                  |
| MIT                        | Circuits-2 | Sep 5, '12  | 51394      | 18043           | 28453       | 1911          | 2987      | 6%                     | 10%                                      | 9%                 | 15%                                  | 61%                  |
|                            | CS-1       | Sep 26, '12 | 84511      | 29172           | 46365       | 3242          | 5732      | 7%                     | 11%                                      | 10%                | 16%                                  | 64%                  |
|                            | SSChem-1   | Oct 9, '12  | 24493      | 10836           | 10854       | 751           | 2052      | 8%                     | 11%                                      | 15%                | 21%                                  | 73%                  |
|                            | CS-2       | Feb 4, '13  | 72920      | 3700            | 63475       | 2440          | 3305      | 5%                     | 8%                                       | 5%                 | 8%                                   | 58%                  |
|                            | SSChem-2   | Feb 5, '13  | 12276      | 470             | 11158       | 106           | 542       | 4%                     | 5%                                       | 5%                 | 5%                                   | 82%                  |
|                            | Poverty    | Feb 12, '13 | 39759      | 14844           | 18756       | 1562          | 4597      | 12%                    | 15%                                      | 18%                | 25%                                  | 75%                  |
|                            | E&M        | Feb 18, '13 | 41037      | 13122           | 24672       | 1527          | 1716      | 4%                     | 8%                                       | 6%                 | 12%                                  | 53%                  |
|                            | Circuits-3 | Mar 3, '13  | 29050      | 14774           | 12679       | 498           | 1099      | 4%                     | 5%                                       | 8%                 | 11%                                  | 68%                  |
|                            | Biology    | Mar 5, '13  | 37997      | 11405           | 21129       | 2228          | 3235      | 9%                     | 14%                                      | 12%                | 21%                                  | 59%                  |
|                            | Structures | Apr 15, '13 | 12243      | 3957            | 6722        | 750           | 814       | 7%                     | 13%                                      | 10%                | 19%                                  | 52%                  |
| MechRev                    | Jun 1, '13 | 16787       | 4740       | 10730           | 284         | 1033          | 6%        | 8%                     | 9%                                       | 11%                | 78%                                  |                      |
| All/Average HarvardX*      |            |             | 419220     | 167789          | 214709      | 20638         | 16084     | 5%                     | 9%                                       | 9%                 | 16%                                  | 54%                  |
| All/Average MITx*          |            |             | 422467     | 125063          | 254993      | 15299         | 27112     | 6%                     | 10%                                      | 10%                | 15%                                  | 66%                  |
| Average HarvardX and MITx* |            |             | 52605      | 18303           | 29356       | 2246          | 2700      | 6%                     | 10%                                      | 9%                 | 15%                                  | 62%                  |
| All HarvardX and MITx**    |            |             | 841687     | 292852          | 469702      | 35937         | 43196     | 5%                     | 9%                                       | 8%                 | 14%                                  | 54%                  |





**Figure 12.** Average percentage of active registrants whose last action in a course is in a particular week. For example, among registrants still active by Week 5 of a course, around 10% will have their last action in that week. Only includes registrants enrolling before the third week of the course. CS50X is not included. Selected individual course estimates are shown in gray to illustrate course-to-course variation. The course-level average percentage is shown in black.

# % закончивших разные онлайн курсу

по . Garza et al., (2015). Atypical: Analysis of a massive open online course (MOOC) with a relatively high rate of program completer // Global Education Review, 2 (3). 68-81

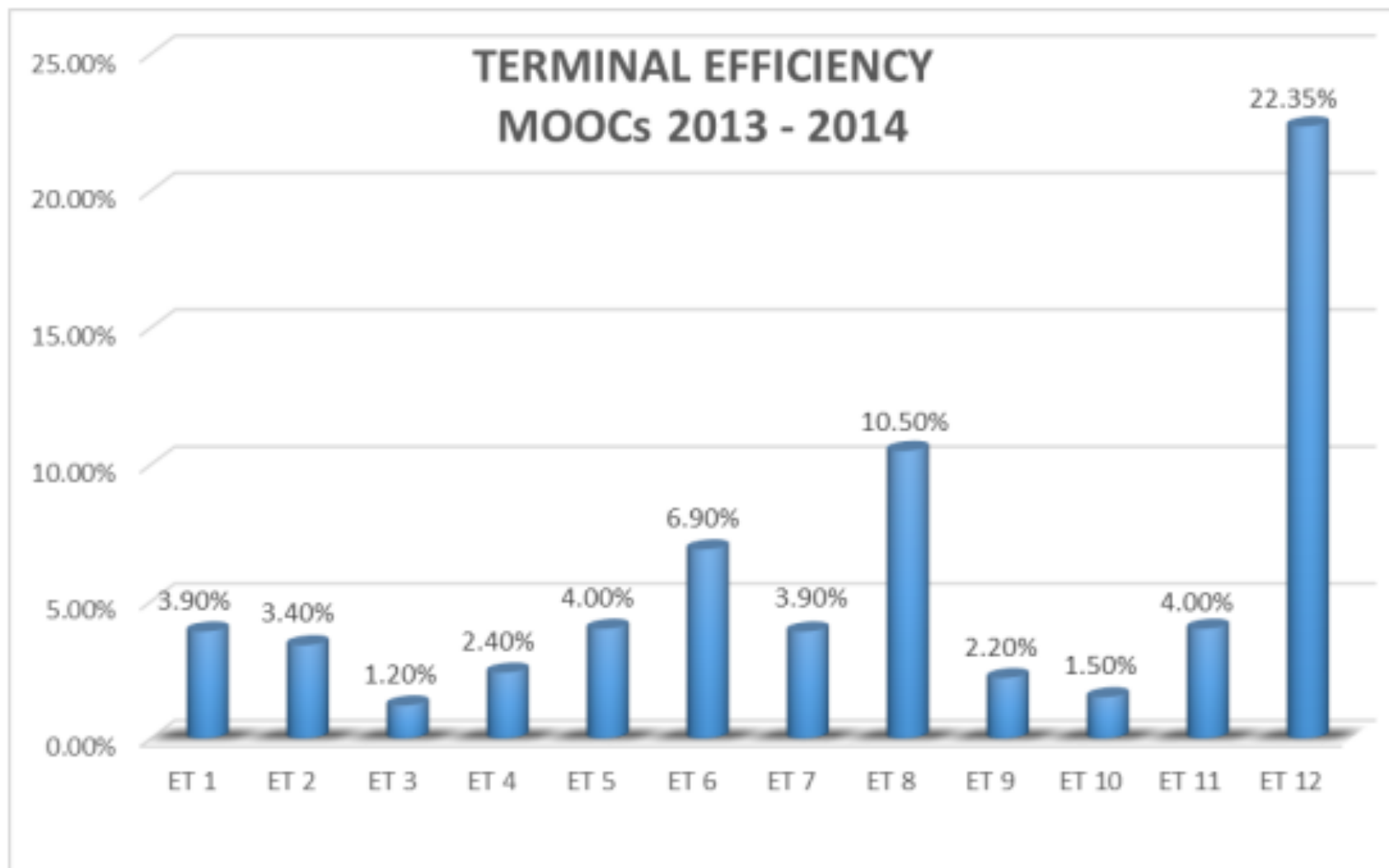
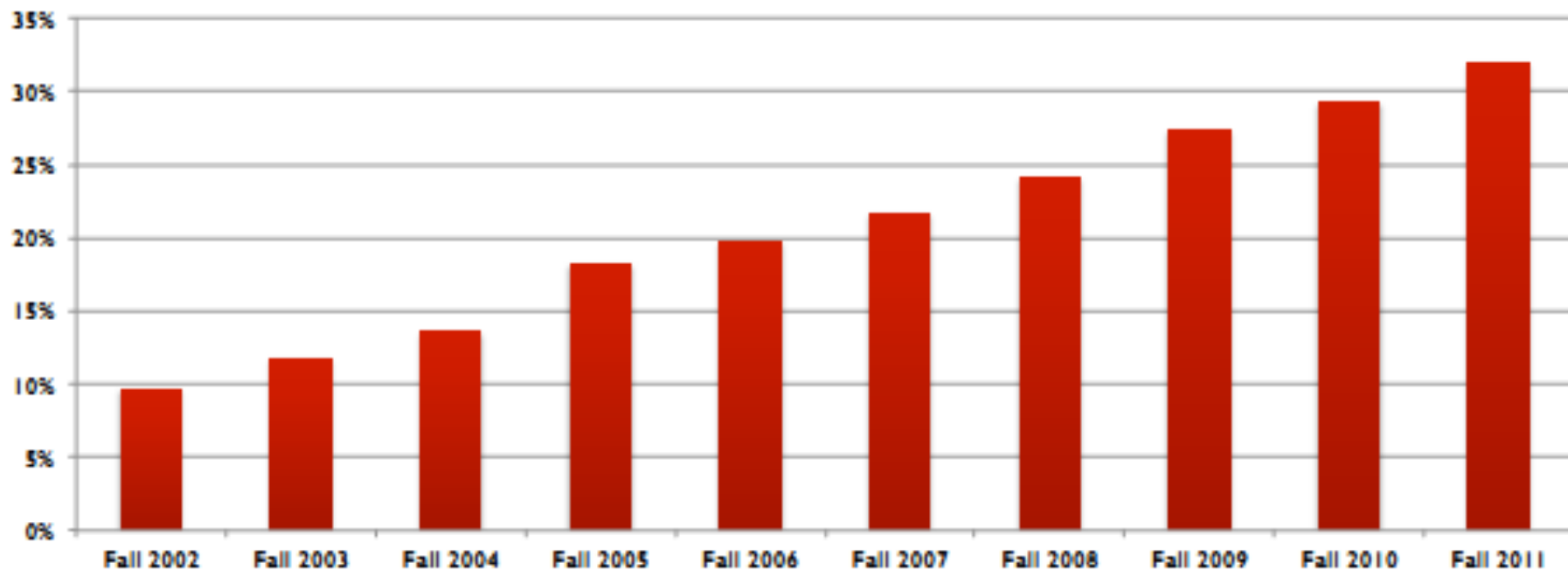


Figure 2. Rate of terminal efficiency with respect to the registered total per course maximum.

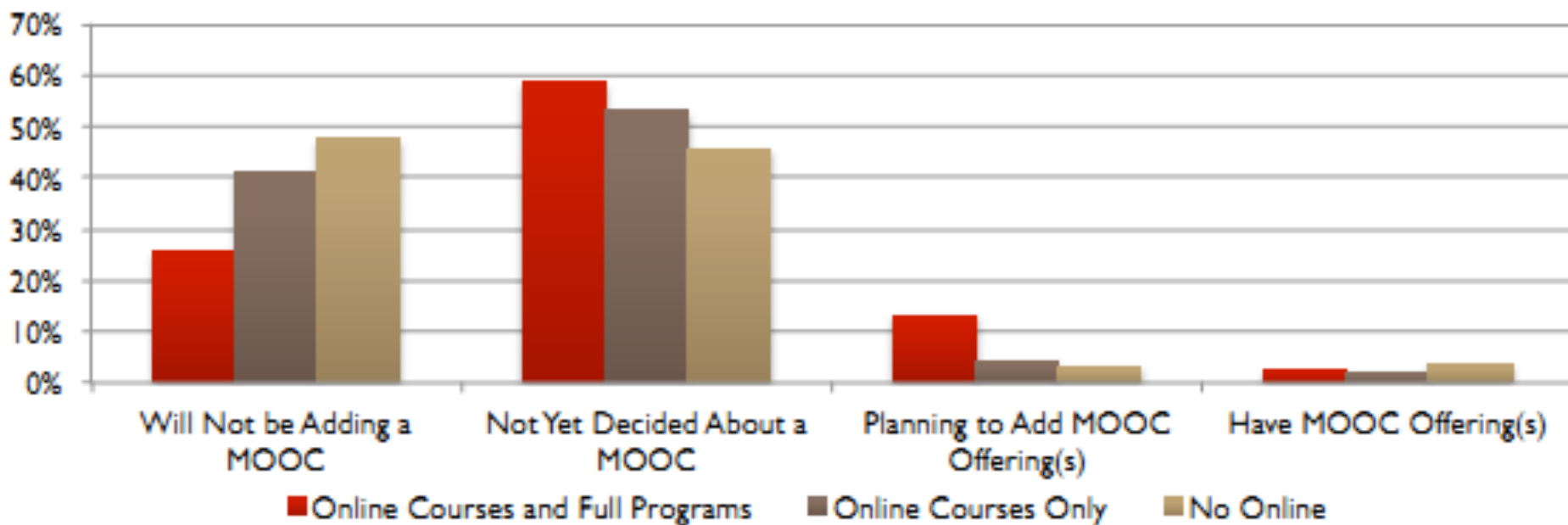
# Динамика % студентов, выбравших онлайн курсы

**Online Enrollment as a Percent of Total Enrollment: Fall 2002 - Fall 2011**



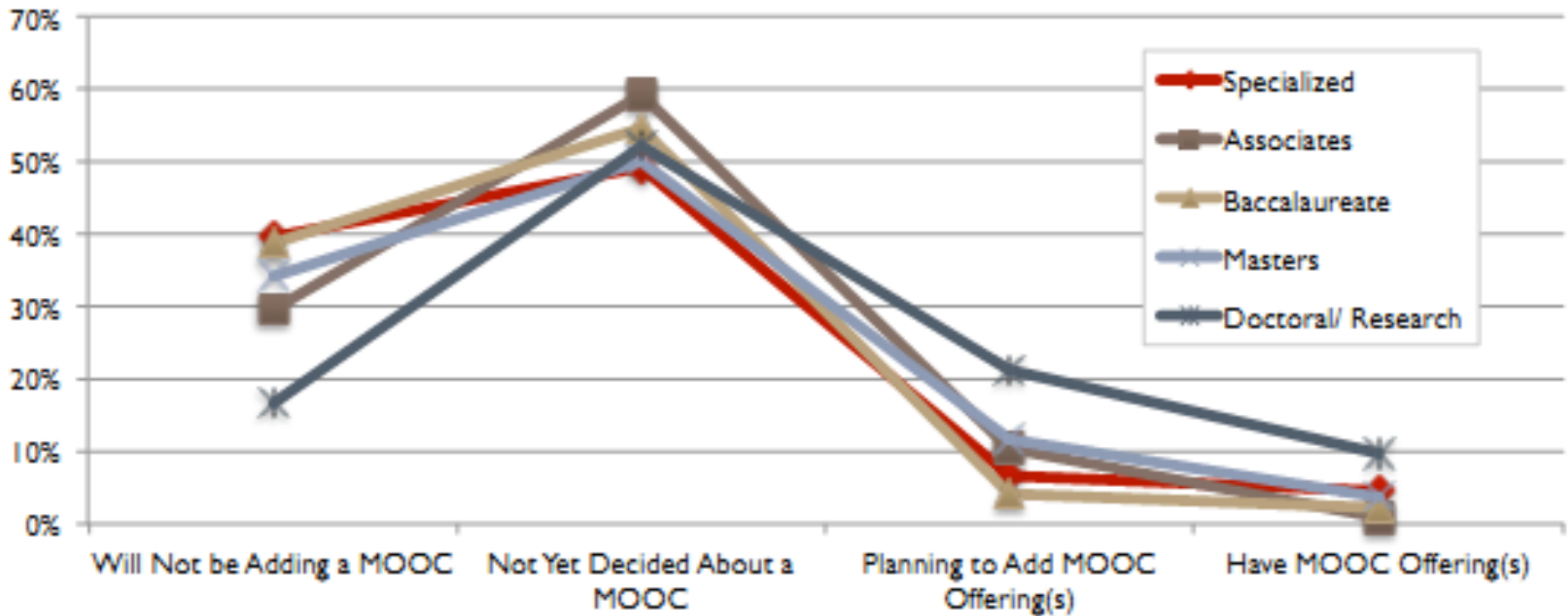
# Планы участия в MOOC слабо зависят от того, насколько в данный момент развиты онлайн программы в вузе

## Plans for MOOCs - 2012



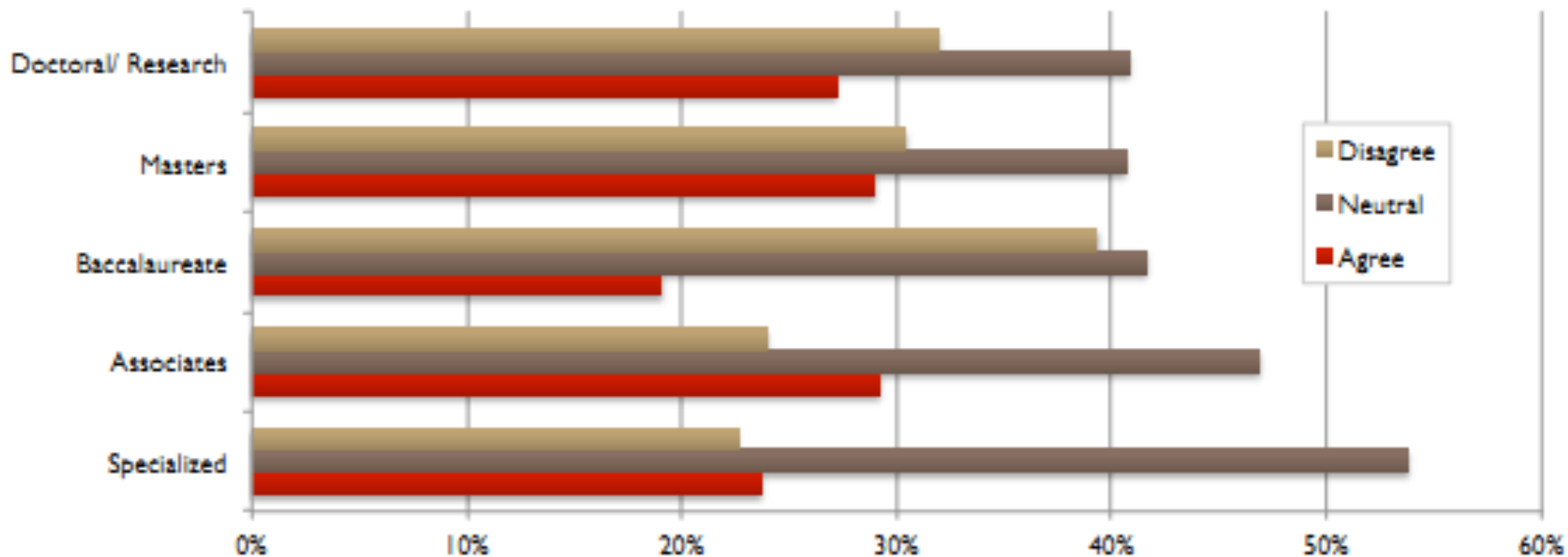
# Планы участия в Массовом Онлайн Обучении (вузы США – 2011 г)

## Plans for MOOCs - 2012



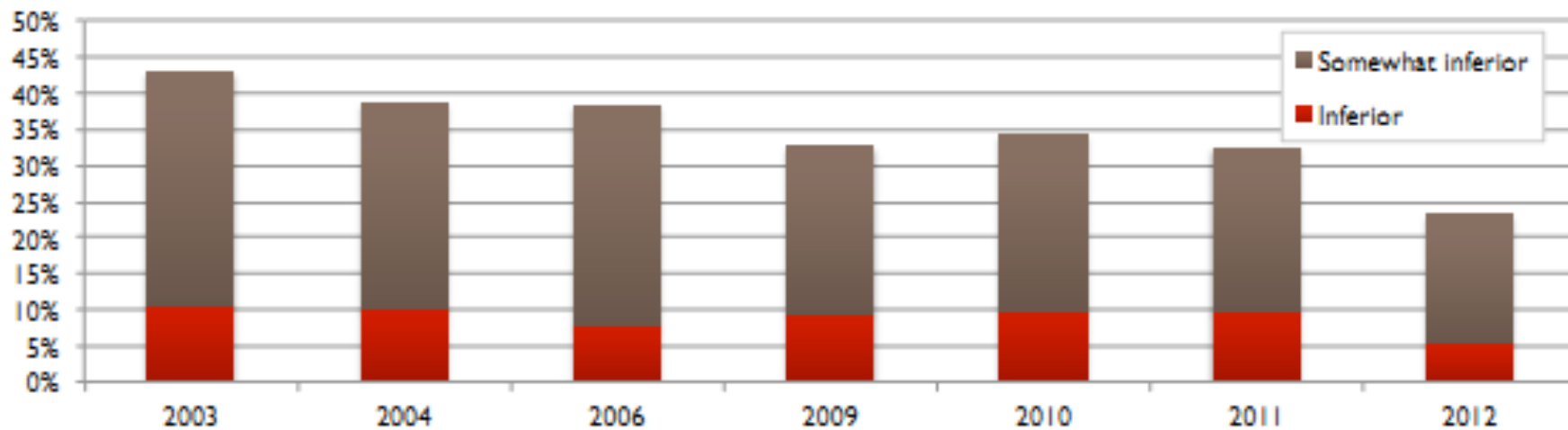
# Соотношение сторонников и противников МООС не зависит от уровня программы обучения

## MOOCs Are a Sustainable Method for Offering Courses - 2012



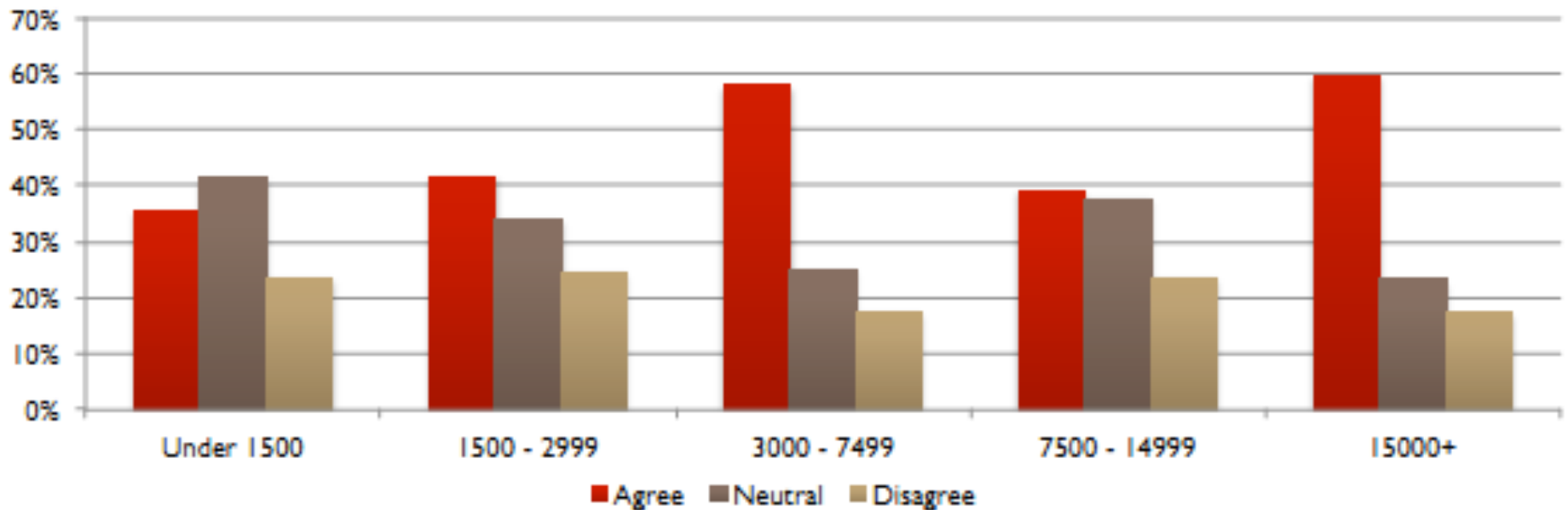
# Насколько онлайн курсы занимают подчиненное положение по отношению к традиционным

**Proportion Reporting Learning Outcomes in Online Education as Inferior Compared to Face-to-face: 2003 - 2012**



# Привлекательно ли MOOC для абитуриентов

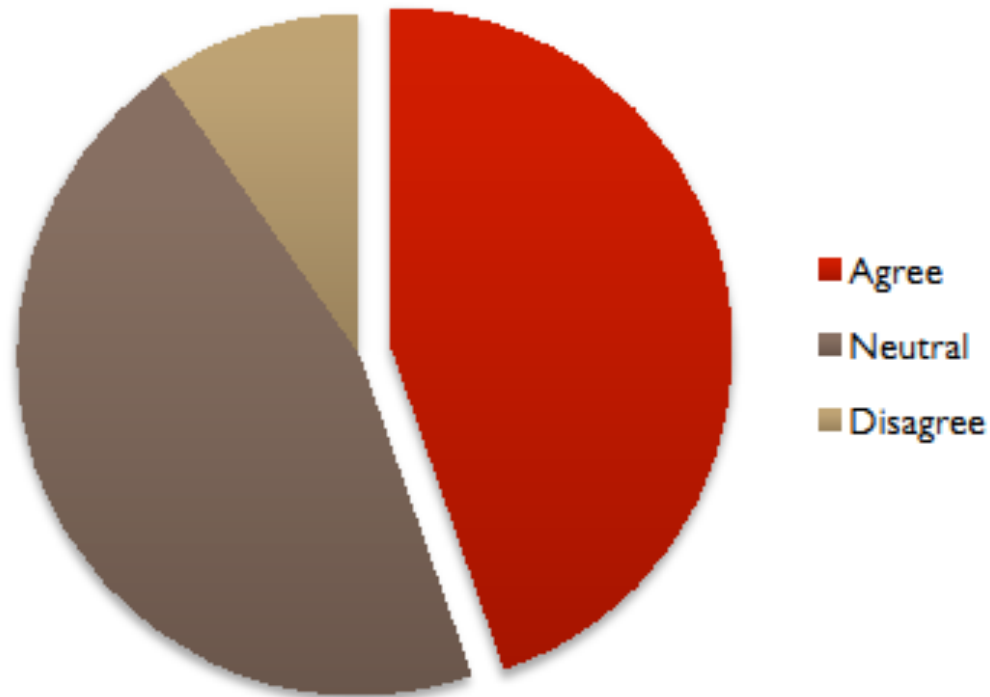
## MOOCs Can be Used to Attract Potential Students - 2012

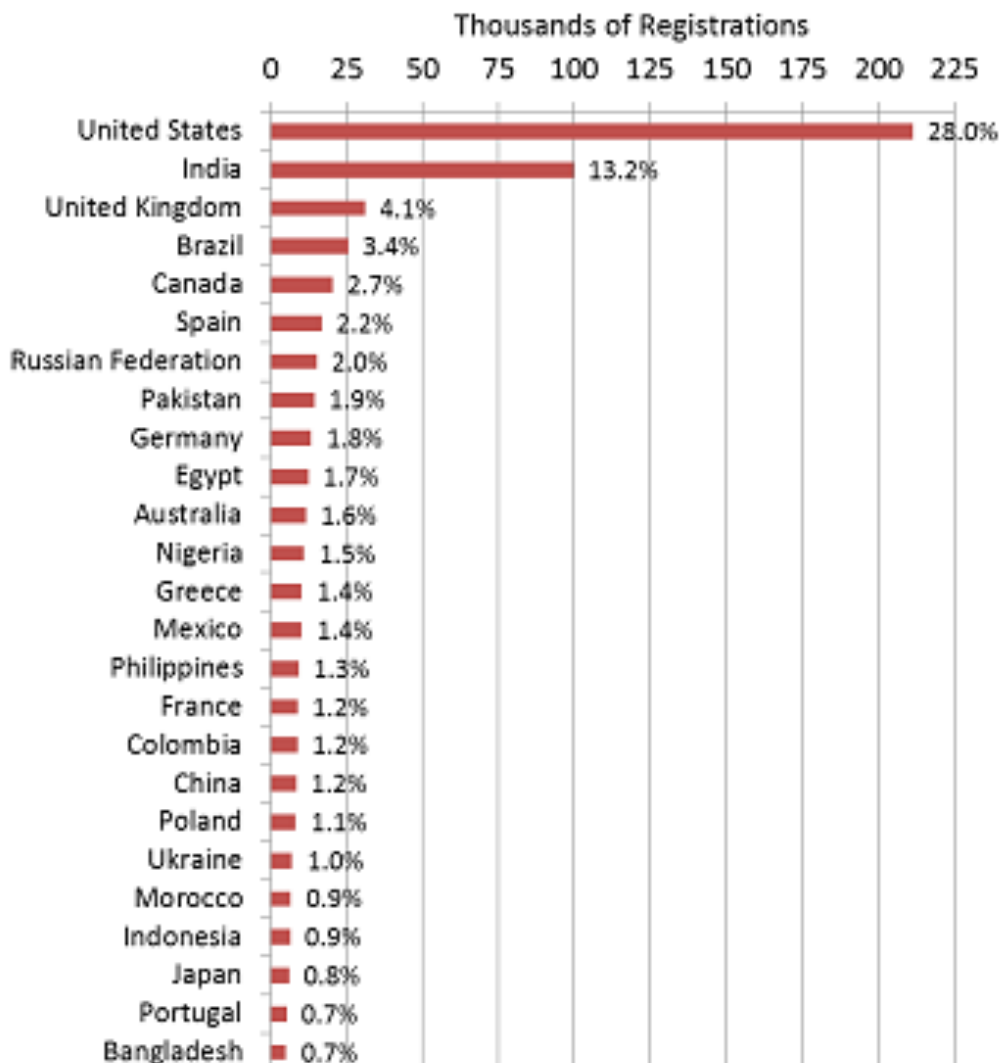




# Преподавание онлайн требует больше времени

**It Takes More Faculty Time and Effort to Teach an Online Course Than a Face-to-Face Course - 2012**

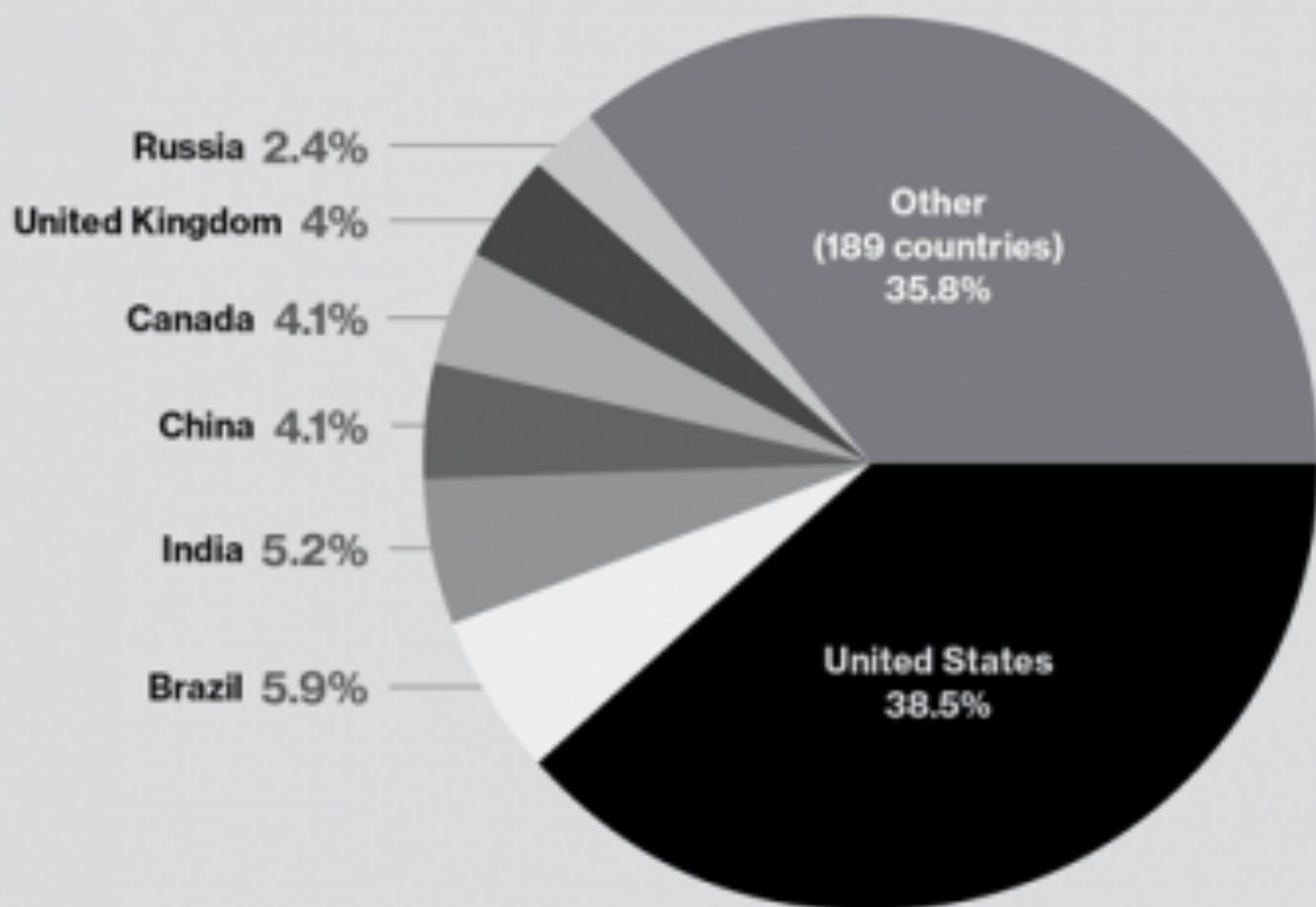




**Figure 10.** The top 25 countries, by numbers of registrants, for all HarvardX and MITx registrants. The country was located by modal IP address or, if the IP address is missing, the country was located by the parsed mailing address submitted at initial edX registration. This process estimates countries for 90% of registrations.

## Foreign Legion

Where users of free online college courses come from



# Состав участников четырех астрофизических онлайн курсов в Австралии (2015 г)

**Table 2: Top 10 Countries of students enrolled in first course during its first run.**

| <b>Country</b>   | <b>% of enrolled students</b> | <b>% of students who started</b> | <b>% of students who passed Homework 1</b> | <b>% of those who passed course</b> |
|------------------|-------------------------------|----------------------------------|--|-------------------------------------|
| <b>USA</b>       | 22.7                          | 25.8                             | 22.9                                       | 23.2                                |
| <b>India</b>     | 17.1                          | 13.6                             | 10.6                                       | 8.0                                 |
| <b>UK</b>        | 8.1                           | 8.4                              | 9.6  | 12.0                                |
| <b>Australia</b> | 6.2                           | 9.4                              | 11.2                                       | 9.6                                 |
| <b>Spain</b>     | 3.6                           | 3.0                              | 3.7  | 3.2                                 |
| <b>Canada</b>    | 2.7                           | 2.6                              | 4.3  | 3.2                                 |
| <b>Brazil</b>    | 2.4                           | 2.2                              | 1.6  | 1.6                                 |
| <b>Russia</b>    | 2.1                           | 1.8                              | 1.6  | 1.6                                 |
| <b>Pakistan</b>  | 2.1                           | 1.8                              | 1.6  | 1.6                                 |
| <b>Mexico</b>    | 1.9                           | 2.6                              | 3.2  | 2.4                                 |
| <b>Other</b>     | 33                            | 31                               | 33   | 36                                  |

# Эффективность дистанционного обучения

- Дистанционное обучение играет важную роль в непрерывном образовании.
- В последнем отчёте Департамента образования США говорится о том, что *"в классах дистанционного обучения (независимо от того, полностью ли это дистанционное обучение или смешанное) в среднем результаты обучения студентов выше, чем в классах, где преподавание осуществляется исключительно в ходе личного общения."*



# Кто они, онлайн-студенты?





***Благодарю за внимание***

[marf47@mail.ru](mailto:marf47@mail.ru)