



PLATFORMS & WEBSITES ONLINE COURSES ANALYSIS REPORT:



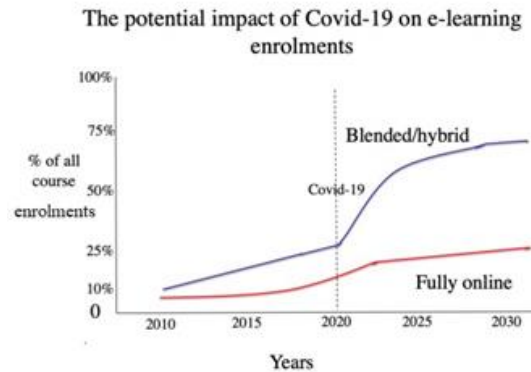
DATA ANALYST: ALAN MYSLER

A BRIEF HISTORY OF ONLINE EDUCATION:

Online learning is no longer just limited to colleges and universities. Right since primary school, online learning is gradually being incorporated into the curriculum.

The recent COVID-19 pandemic illustrates the importance of online learning in today's school system.

Source: University Affairs Magazine



Recent Developments in Online Learning

Online learning has evolved far beyond its original capabilities. It is no longer limited to a didactic method, which had a one-way monologue from the teacher to the student. Current advances in online learning enable the student to play an active role in the learning process, with regular feedback and assessments. This has greatly improved the effectiveness of the teaching system, bringing it on par with classroom-based learning. Some of the features that give an edge to online education are:

- **Less expensive than traditional teaching methods:** As the cost of teaching is low, the expenses borne by the students inevitably come down. This makes education far more widespread and economical.
- **Vast variety of available courses:** These days, online courses on everything are available at the touch of a button – from religion to commerce, philosophy to fashion designing, programming to painting, photography to yoga – there is hardly any field that hasn't been touched by e-learning.
- **Study groups:** There is a scope of engaging with like-minded students across the world, sharing information and ideas.
- **Flexibility:** This can be in terms of time, money, and location. Online learning enables the student and the teacher to be present at opposite ends of the world, in different time zones, and yet have the knowledge imparted effectively.
- **Much less infrastructure required:** This is a huge incentive to the education providers, as the additional costs are largely minimized.
- **Standardized quality:** Since the content available online can be evaluated and revised at any point in time, it helps maintain a reasonable standard of quality.



CHEAPER THAN TRADITIONAL METHODS



VARIETY



STUDY GROUPS



FLEXIBILITY



LESS INFRASTRUCTURE

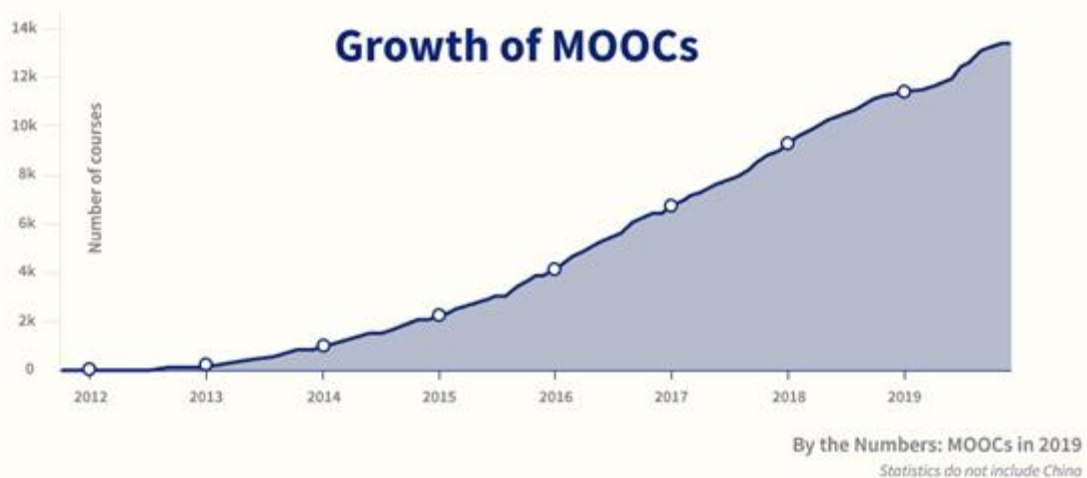


STANDARDIZED QUALITY

Smartphones have played a crucial role in making online learning viable. It is rapidly gaining ground even in rural areas, bringing high-quality education, at par with the best in the world, available to the masses. Massive open online courses (known as MOOCs) are a promising new field. The *New York Times* had declared 2012 as “the year of the MOOC”, and there has been no stopping since then. The total number of students enrolled in MOOCs has risen to about 100 million now. Thus, the recent developments in online learning can be broadly attributed to the following factors:

- Innovation in smartphone technology
- High-speed data access
- Interactive learning models
- Rising number of startups in the e-learning field

CLASS CENTRAL



Source: Class Central Inc.

The Future of Online Learning

The global online learning market is projected to grow at a CAGR of 9.23% within the next five years, bringing the overall market share to \$319 billion by 2025, increasing from \$187.87 billion in 2019. This is an astounding amount that is full of potential. It is imperative for currently existing market players as well as new entrants to seize this opportunity and usher in a modern era in the field of education. The following factors are expected to play a central role in this rapidly ongoing transformation:

- The rise of AI (Artificial Intelligence)
- Cloud-based solutions
- Massive investments by major market players
- Use of VR (virtual reality) technology in education
- Growth of IoT (Internet of Things)

To summarize, online learning is one of the most life-changing innovations of the present century. Education is perhaps the biggest asset of the modern era and online learning has provided a medium to disseminate it among the entire population. This presents a situation full of potential, which if properly harnessed, can catapult the entire world into a new dawn of development and prosperity.

Source: <https://adamasuniversity.ac.in/a-brief-history-of-online-education/>

WORKING WITH THE DATA:

A technology startup is interested in joining the online MOOC's (Massive online open courses) market. To do so in an efficient way, it bought datasets from potential competitors to analyze and draw conclusions from the collected data.

We were provided with three different platforms/websites databases accountable for the following number of courses:

- Udemy: **3678**
- Coursera: **604**
- EDX: **850**

In total, **5132** courses were analyzed.

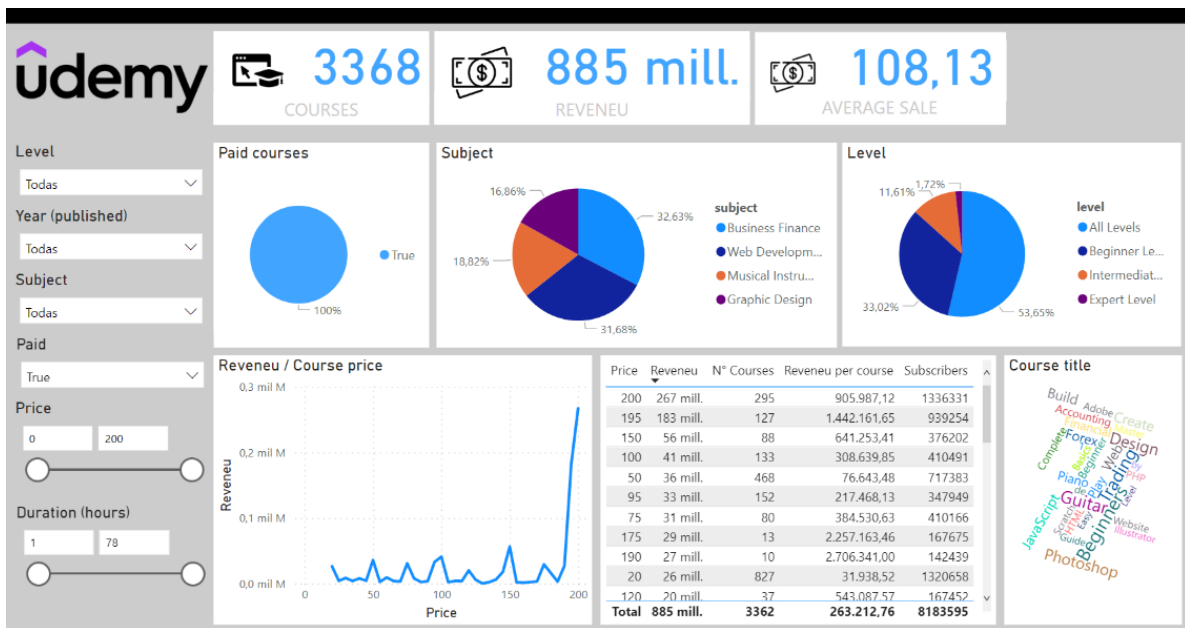
The Udemy logo features a purple house-like icon above the word "udemy" in a black, lowercase, sans-serif font.The edX logo consists of the letters "ed" in a pinkish-red color and "X" in a blue color, with a grey "d" in the background.The Coursera logo is the word "coursera" in a bold, blue, lowercase, sans-serif font.

The fundamental premises given by the "Product owner" were:

- ❖ Segmentate courses "**sales**" by "**price, language, level and rating**" (whenever data allowed us to do so) in order to get insights for how much these variables influence the demand of the sold products.
- ❖ Graph a WordCloud for the most repeated keywords within the title
- ❖ Establish at least one KPI ("Key performance indicator") and visualize it within the dashboard
- ❖ Perform a demonstration: Dashboard functionalities and conclusions/recommendations (Time frame no more than 10 minutes)

For the purpose of this report, platforms will be analyzed separately. Final recommendations will be made at the end point.

UDEMY:



UDEMY (1) From 3678 courses:

- 91.57% where paid
- Subject: 32% Web development & other 32% Business Finance
- Level: 52% All levels, 35% Beginner, 2% Expert
- The more expensive courses made the most revenue
- KPI (AVERAGE SALE): $\text{Revenue} / \text{num_subscribers}$ (Conditional: Paid = True)
- KPI (Revenue per course): $\text{Revenue} / \text{num_courses}$

UDEMY(1) REVENUE by PRICE:

- Top 5 "Price" where 200, 195, 150, 100 and 50 Total revenue: 584 mill
- However, the majority of courses (1298 of 3368) have a price of 20 and 50 Total revenue: 62 mill

UDEMY (1) REVENUE by LEVEL:

- All levels hold up for revenue of 610 mill. KPI: 115.40
- Beginner: 220 mill KPI: 95.12
- Intermediate 50 mill KPI: 92.50
- Expert: 5 mill KPI: 108.95

UDEMY (1) REVENUE by SUBJECT:

- Web development hold up for revenue of 631 mill KPI: 112.69
- Business finance 124 mill KPI: 97.78

UDEMY (1) REVENUE by SUBJECT and LEVEL:

- Web development, all levels hold up for revenue of 440 mill with KPI: 118.98 (611 courses / 721 revenue per course)
- Web development, beginner level hold up for revenue of 155 mill with KPI: 100.24 (323 courses / 481 revenue per course)

UDEMY (1) REVENUE by CONTENT DURATION and LEVEL:

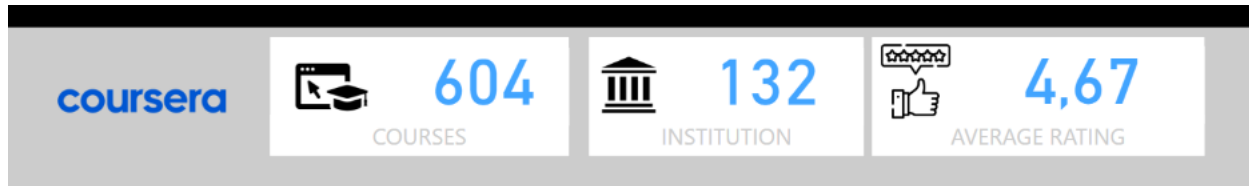
- Content duration from 1 to 20 hours is responsible for 715 mill revenue. In this selection, all levels hold 448 mill revenue, and beginner level 213 mill (Web development alone 149 mill).

Udemy insights:

- “All levels” courses are responsible for almost 70% of the all time revenue. Also “All levels” have more subscribers than beginner, intermediate and expert levels combined.
- Subject “web development” and “business finance” are responsible for the 71% (631 mill) and 14% (124 mill) of all time revenue, respectively. Both combined are accountable for the 85% (755 mill). They should be offered 3 or 4 times more than other
- 20 US\$ price courses have the top number of courses (827) with average content duration of 2.5 hours. Also, they are the 2nd course with the highest number of subscribers. However, they are responsible for only 20 mill revenue (<5% of all time). This can be seen as a “must have” type of courses to generate publicity and get people to know the brand.
- The average duration of 7 hours has a great number of subscribers and has > 50% of all time profits (>400mill)
- Top 5 course titles by revenue and number of subscribers are IT related (Java, Angular and Website building)
- Terms like HTML, Javascript and Trading, should appear in a good percentage of course’s titles.

COURSERA:

Product **course** has attributes **Rating** and **Institute** (University yes or no)



Courses filter by Institution:

- 404 courses from 74 universitys with average rating 4.69
- Top 5 courses filter by N° reviewers filter and university: Python, machine learning, programming related...
- 200 courses from 58 institutions with average rating 4.64
- Top 5 courses filter by N° reviewers and “no university”: Neural networks and deep learning, Data science, AI for everyone...

*Desired distribution of 65% university courses and 35% other type of institution

- The N° of reviewers filter by institution shows that “university” courses have almost the double amount of reviewers. In this scenario we could say that, if more reviewers means more sales, university are much more profitable.

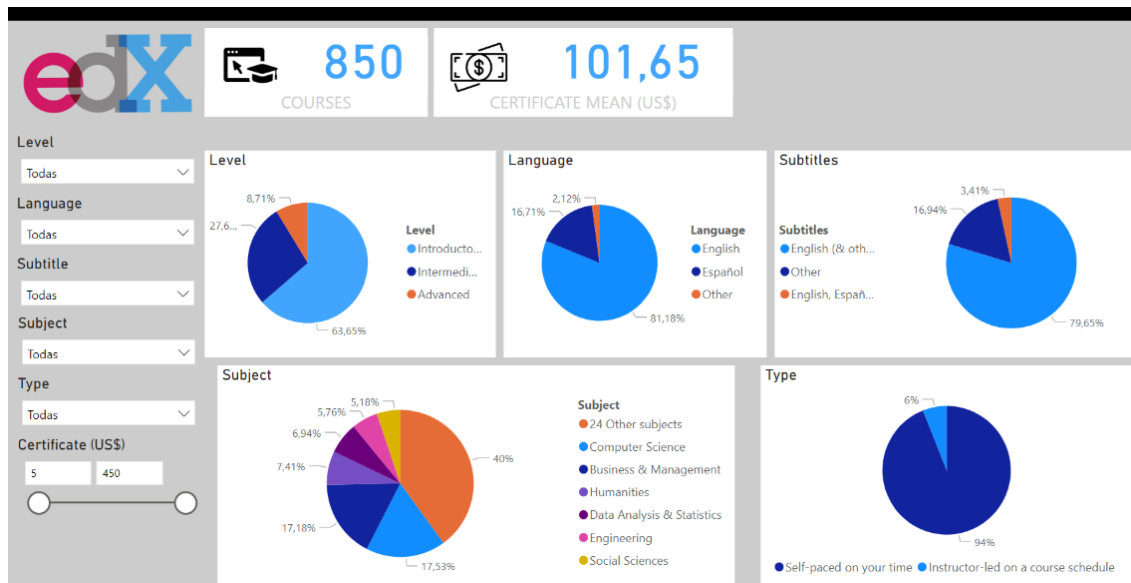
Wordcloud:

- Reviews: words like “Learning, thanks, good, very, understand” are frequently used to express the positive ratings.
- Course names: “introduction”, “data” and “fundamentals” seems to be one of the most used terms on course titles for all ratings.
- If “introduction” is selected on the “course name” wordcloud review wordcloud is filled up with positive reviews and the average rating is stil positive (4.61 avearge)

Insights:

- University gather 50% more reviewers than other institutions (more reviewers = more sales)
- Course related to programming(python), machine learning, neural networks and deep learning, Data science, AI, hold the highest number of reviewers

EDX:



- Each course has a “certificate price (US\$)”, “level”, “language”, “subject”, “type”
- All 850 courses are FREE with the possibility of buying a certificate for “X” price.

Insights:

- Average effort for most enrolled courses is between 4 and 7 (hours a week).
- Certificate Price 49, 99 and 199 show the highest number of enrolled students (other smaller peaks are seen on 25 and 149) which means they are responsible for the 54% of enrollment. *Price certificate 50-100-150-200 should be rounded to 49-99-149-199 to achieve more sales.
- 49 certificates have an AVG length of 6 weeks with an AVG 4.2 hours per week effort. These courses are 99% “self-paced on your time” type. Level is 75% introductory and 25% Intermediate with a mere 1.69% advanced. Language and subtitles are mainly English and Spanish. For the subject, Computer science, Data analysis and statistics, Business and management, Humanities holds up for 45% of all themes.

FINAL RECOMMENDATIONS:

- “All levels” > (Beginner + Intermediate + Expert)
- Shorter content duration (1 - 20 hours) = ↑↑↑ Profit / AVG 4 - 7
- University institutions 2/3 vs Other institutions 1/3
- Subjects: IT (Web development) & Business finance
- 20 USD\$ hook (Publicity), with a best offer of 49, 99 and 199 US\$ courses (Profit)
- The gold standard: 49 US\$ - IT related – University - 6 Weeks - 4 Hours - Self-Paced - English&Spanish
- Demanded terms (Introduction, Fundamentals, programming "languages", etc)

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