Course & Revenue Report
by Rolanda Azeem

Table of Contents

__Project Description__

Project Objectives

- Analyze and present the data on course revenue.
- Understand where opportunities to increase revenue may lie and track the performance of courses.
- Test if we can safely increase charge on Web Development courses

Data Source

The data for this project was sourced from Educative for educational purposes. Educative is a massive online open course (MOOC) platform that offers both free and paid courses with a focus on tech courses. This dataset contains 3676 records of courses from 4 subjects (Business Finance, Graphic Design, Musical Instruments and Web Development) taken from Educative.

Data Structure

- course_id - Course ID
- course_title - Course Title
- subject – subject under which course is
- url - Course URL
- publish_date – day of week , full date on which course was published
- publish_time – time of day course was published
- price - Course Price
- num_subscribers - Number of subscribers
- revenue – revenue course generated
- num_reviews - Number of reviews
- num_lectures - Number of lectures
- level - Course difficulty
- rating – rating of course
- content_duration - Duration of all course materials

Design

Data Cleaning
- Duplicates within the data set were removed.
- Blank cells were removed
- Subject titles were formatted to be consistent throughout the data

Data Transformation
- Date Timestamp was split into 2 columns, creating a date column and a time column.
- Pivot tables were created in Excel to summarize data and expedite chart creation.
- Bins were created for specific data to facilitate analysis

  Created columns

  - Price Band : {free : 0 ; low : less than $50 ; medium : between $50 and $130 ; high : above $130}
  - Free_or_paid : {free : $0 ; paid: not $0}
  - Rate_band : {low : less than 0.4 ; mid : from 0.4(inclusive) to 0.7; high : 0.7 or higher}

Visualization Tools

Pie Chart
Used where a quick glance at proportions answered the question at hand.

Stacked Column Chart
Used where whole measures broken down by categories needed to be shown.

Clustered Column Chart
Used where the differences in categories within a measure needed to be shown.

Clustered Bar Chart
Used where the differences in categories within a measure needed to be shown.

Table

Used where a capture of key measures limited by filters were needed.

Area Chart
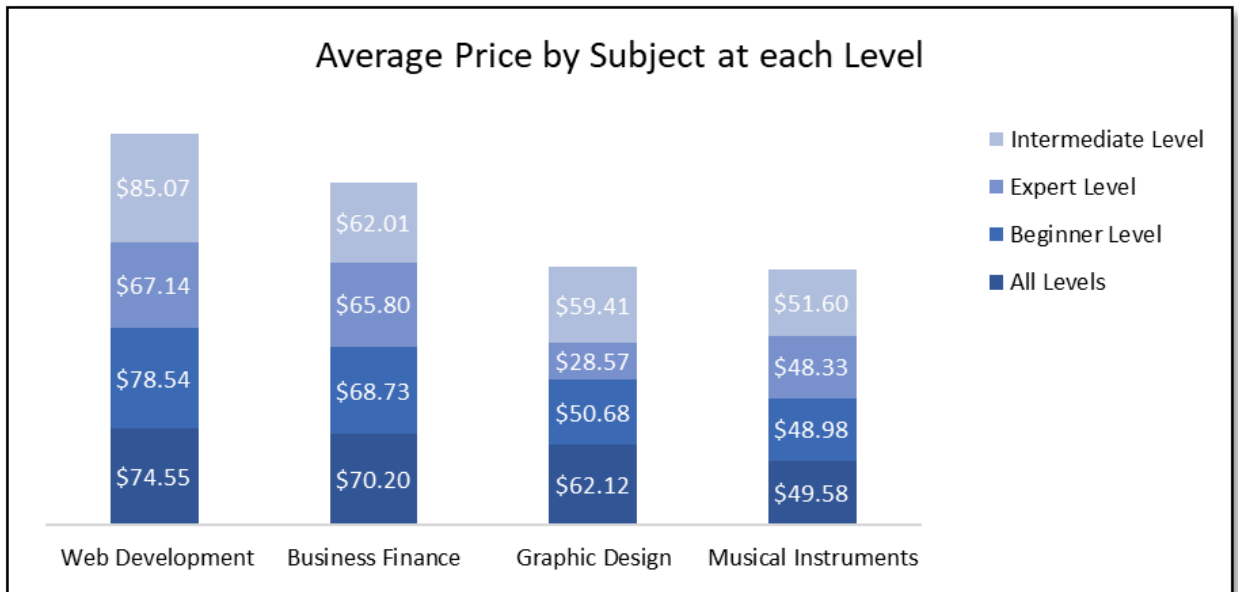Used where progression over time needed to be shown
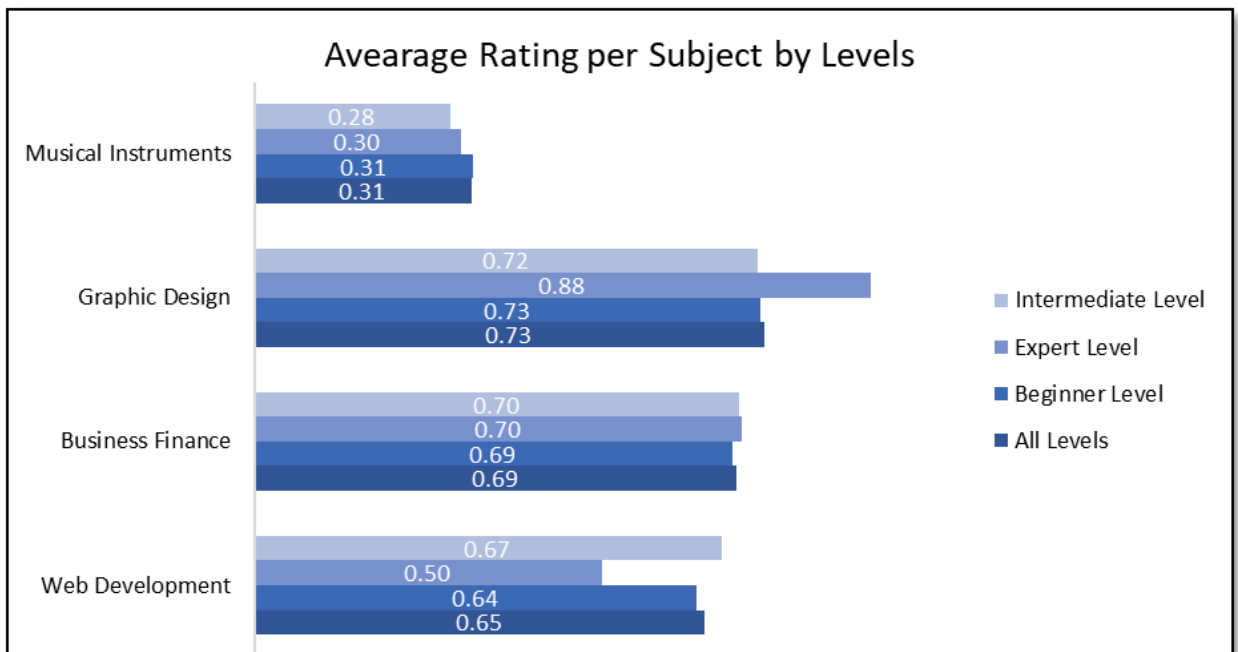
Findings

- **Web development** consistently had the most subscribers over the period despite Educative having published about as many courses in **Business finance**. It appears most of our subscribers come to us for tech courses which aligns with our mission.
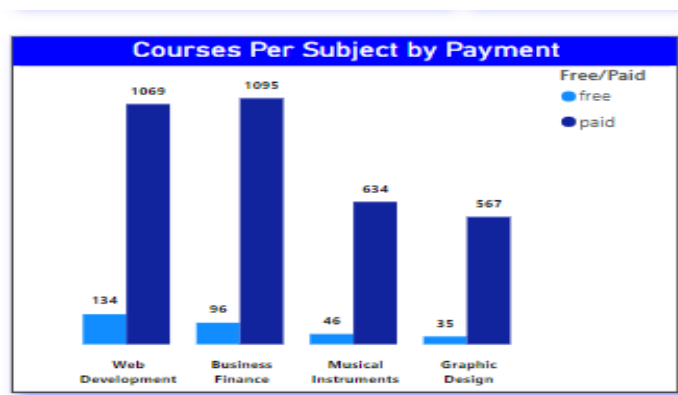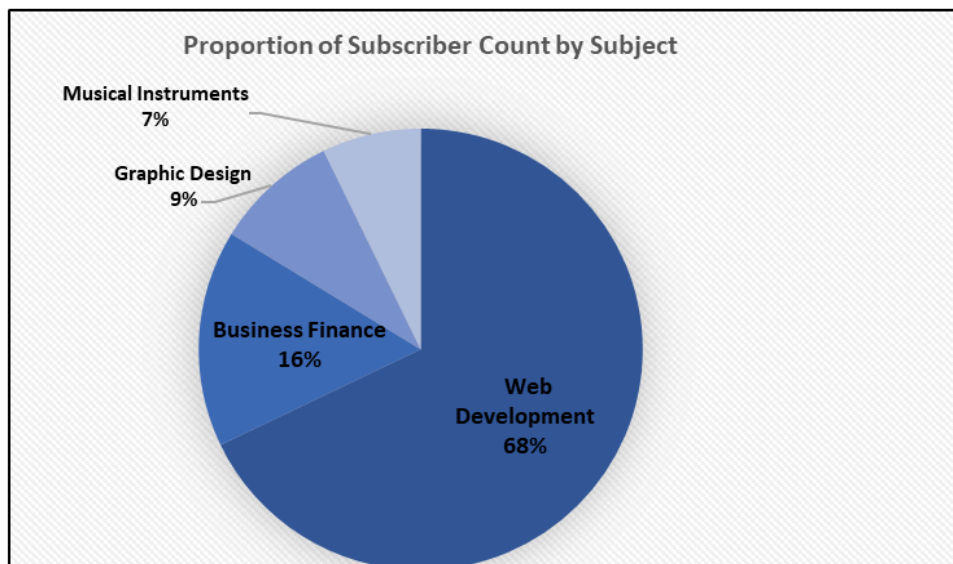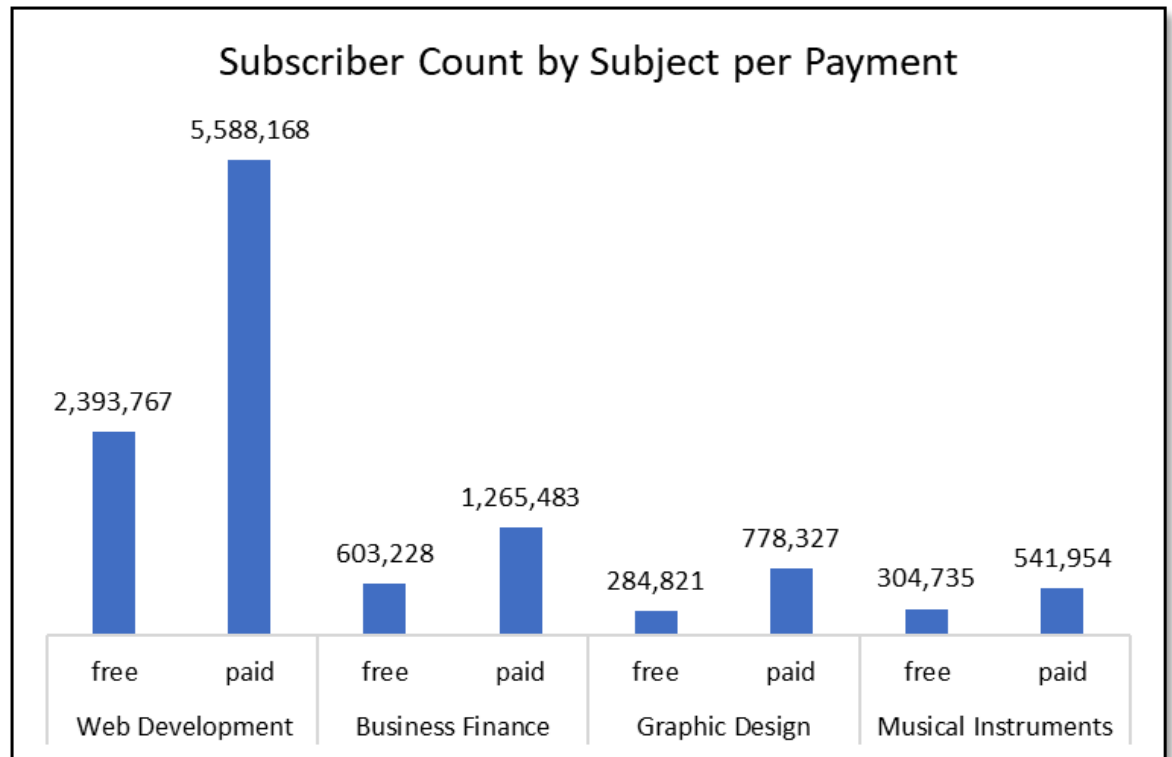
- Average price of a web development course is relatively high regardless of difficulty level. Subscribers were willing to pay more for these courses.

Average Price by Subject at each Level

|	Web Development	Business Finance	Graphic Design	Musical Instruments
Intermediate Level	$85.07	$62.01	$59.41	$51.60
Expert Level	$67.14	$65.80	$28.57	$48.33
Beginner Level	$78.54	$68.73	$50.68	$48.98
All Levels	$74.55	$70.20	$62.12	$49.58

- **Graphic design** courses received the highest ratings regardless of difficulty level especially the **Expert level courses** though said courses cost the least on average.

Avearage Rating per Subject by Levels

	Intermediate Level	Expert Level	Beginner Level	All Levels
Musical Instruments	0.28	0.30	0.31	0.31
Graphic Design	0.72	0.88	0.73	0.73
Business Finance	0.70	0.70	0.69	0.69
Web Development	0.67	0.50	0.64	0.65

- Far more people subscribed to paid courses than to free courses.

Subscriber Count by Subject per Payment

	5,588,168						
2,393,767			1,265,483		778,327		541,954
		603,228		284,821		304,735	
free	paid	free	paid	free	paid	free	paid
Web Development		Business Finance		Graphic Design		Musical Instruments	

- Interestingly, within our top 20 courses pulling the most subscribers, we saw 2 free subscribers for every paid subscriber, with the highest ranking course being a free course.

1M
Paid Subscribers in Top 20

2M
Free Subscribers in Top 20
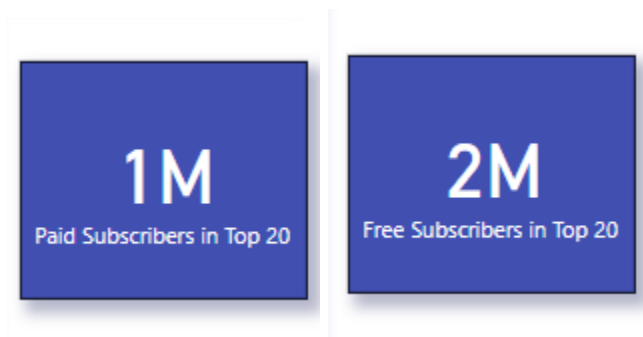
Top 20 Most Subscried Courses				
Course Title	Level	Free or	Duration	Published Da
Learn HTML5 Programming From Scratch	Beginner Level	free	10.5	2/14/2013
Coding for Entrepreneurs Basic	Expert Level	free	3.5	6/9/2013
The Web Developer Bootcamp	Beginner Level	paid	43	11/2/2015
Build Your First Website in 1 Week with HTML5 and CSS3	All Levels	free	3	4/8/2014
The Complete Web Developer Course 2.0	Beginner Level	paid	30.5	3/8/2016
Free Beginner Electric Guitar Lessons	All Levels	free	4.5	6/15/2012
Web Design for Web Developers: Build Beautiful Websites!	All Levels	free	3	4/13/2015
Learn Javascript & JQuery From Scratch	All Levels	paid	2	10/10/2013
Practical PHP: Master the Basics and Code Dynamic Websites	Intermediate Level	free	6.5	7/19/2014
JavaScript: Understanding the Weird Parts	All Levels	paid	11.5	3/12/2015
Pianoforall - Incredible New Way To Learn Piano & Keyboard	Beginner Level	paid	30	8/7/2014
Angular 4 (formerly Angular 2) - The Complete Guide	Beginner Level	paid	22	2/11/2016
Beginner Photoshop to HTML5 and CSS3	All Levels	free	2	7/27/2012
Web Development By Doing: HTML / CSS From Scratch	All Levels	free	1	9/25/2013
HTML and CSS for Beginners - Build a Website & Launch ONLINE	All Levels	free	6	3/19/2015
Become a Web Developer from Scratch	All Levels	paid	27.5	11/19/2011
Bitcoin or How I Learned to Stop Worrying and Love Crypto	All Levels	free	8	4/20/2013
Quickstart AngularJS	Beginner Level	free	1.5	11/22/2014
Learn Responsive Web Development from Scratch	All Levels	free	4.5	12/9/2013
Learn and Understand AngularJS	Beginner Level	paid	7	9/24/2014

- Far more subscribers purchased web development courses that were **highly priced** than **lowly priced**.

Web Dev Subscriber Count by Price Band

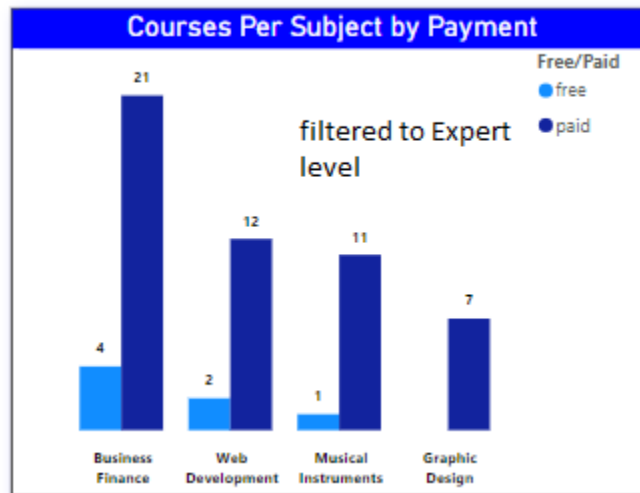|	
Free	2.39M
High	2.39M
Low	1.77M
Medium	1.43M
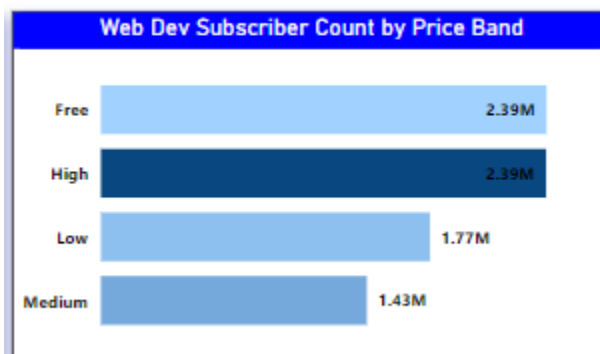
- Subscribers appeared to be gravitating towards **beginner level courses** with the advent of many tech job opportunities.
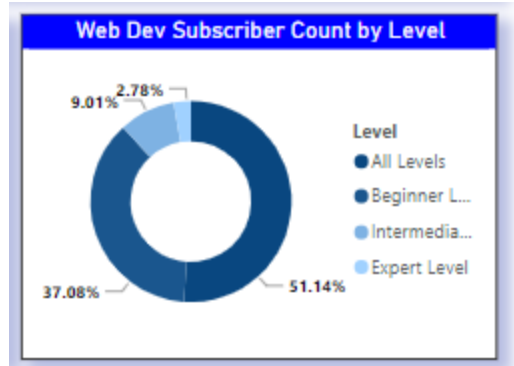
- Few courses have been categorized as **Expert Level**.

Conclusion

- Educative can look at publishing more Graphic design courses and charging higher for the **Expert Level Courses Graphic Design** courses as they received the highest ratings on average.
- Educative can look at charging a pittance (to test the waters) for **highly rated** and popular (**highly subscribed**) courses that are currently free.
- Web development courses that are in the **low price band** may be increased to the **medium price band**as we have seen that subscribers are filling to pay more.
- We can **revise the quality** of lowly rated web development courses. These courses are currently pulling substantial revenue, however, improving the quality of these courses will attract even more subscribers and consequently revenue.
- In the near future, we can invest in **Expert Level** courses as many of our users will now be at the skill level to take on such courses.