Survey Data Analysis

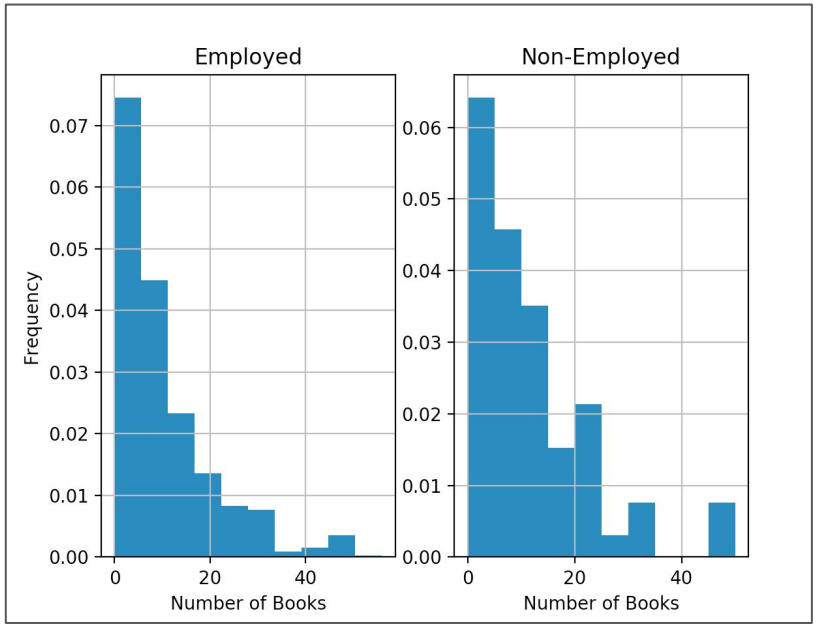
P2 Data Foundations Nanodegree

Seif

Example: Does the Number of Books read vary based on Employment?

Number of Books Read

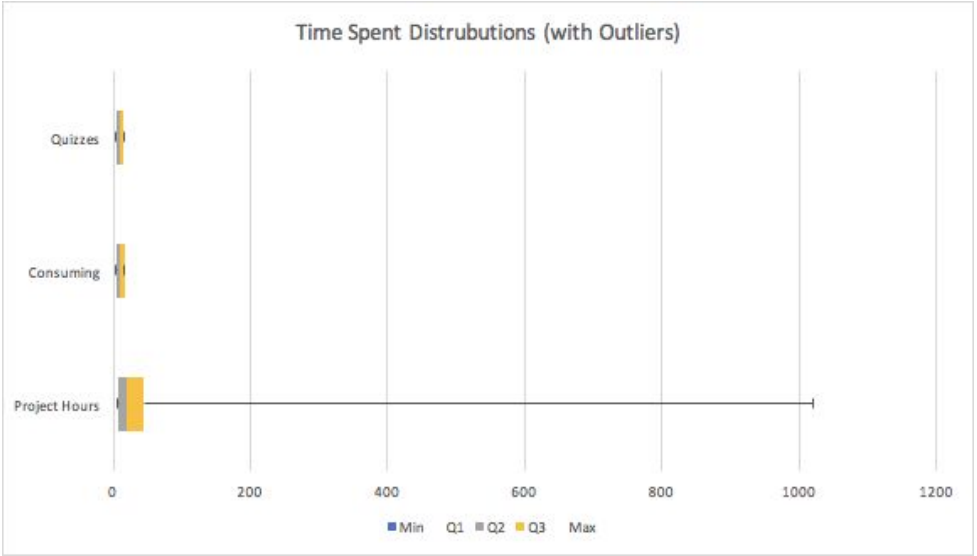
	Employed	Unemployed
Minimum	0	0
Q1	4	4
Q2	8	6
Q3	15	15
Maximum	600	100



Comparing the employed to unemployed, there does not appear to be much of a difference between the number of books they read. If we didn't pay attention to the extreme readers (those that read a ton) in each group, they are very similar in distribution and summary statistics.

How does time spent on NDs vary between students?

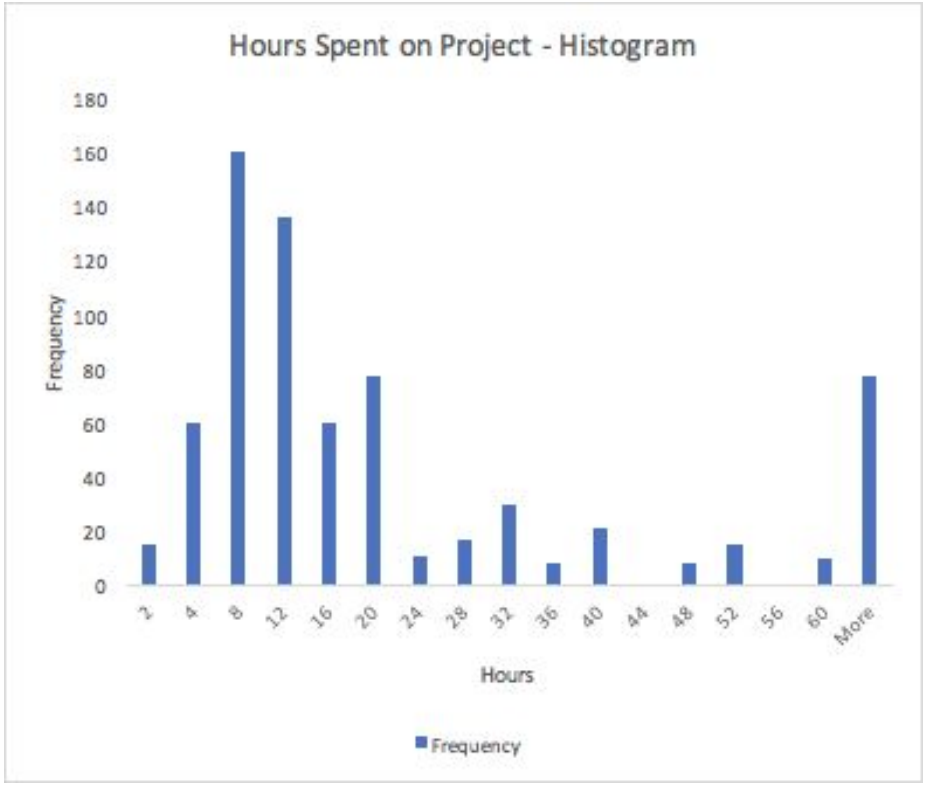
	Project Hours	Consuming	Quizzes
Min	1	1	1
Q1	7	4	3
Q2	12	5	5
Q3	25	6	6
Max	1000	6	6



As expected, students spend more time on Projects. The majority of students spending ~5 hours consuming materials/quizzes.

The boxplot for Projects requires more investigation (next slide)

Time spent on Projects

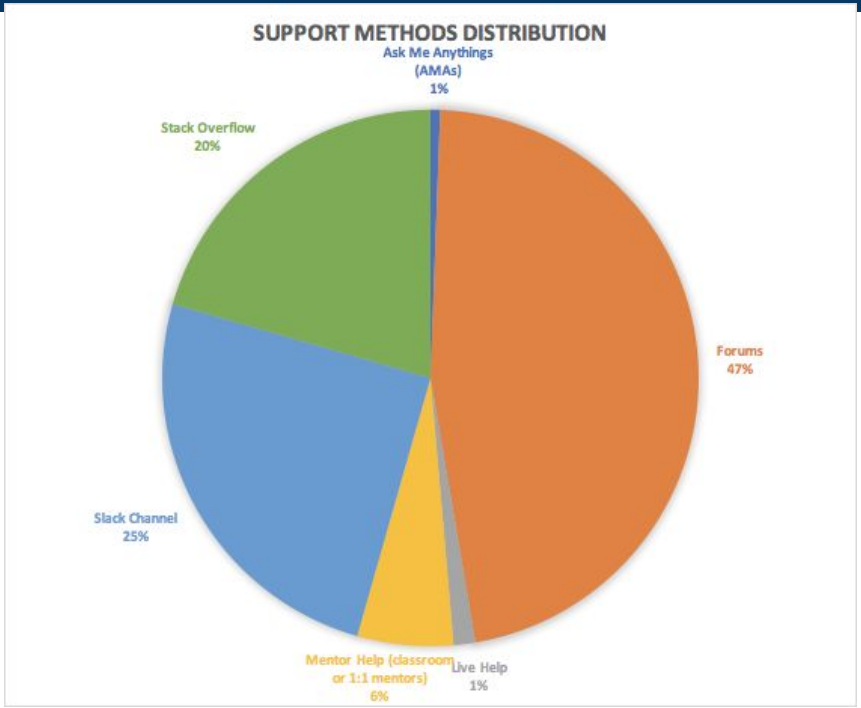


Looking further into the hours spent finishing a project, we see that the majority of students finish a project between 8-16 hours, with the most reported # of hours (mode) being 22 hours. The Mean however is 33.65 due to the presence of outliers which pull the mean towards them.
The high value of Standard Deviation indicates a wide spread in the data, the reason being students reporting very different hours.

Mean	33.65815603
Std. Dev	77.52421374
Median	12
Mode	10
Range	999

What is the most common support method used by students?

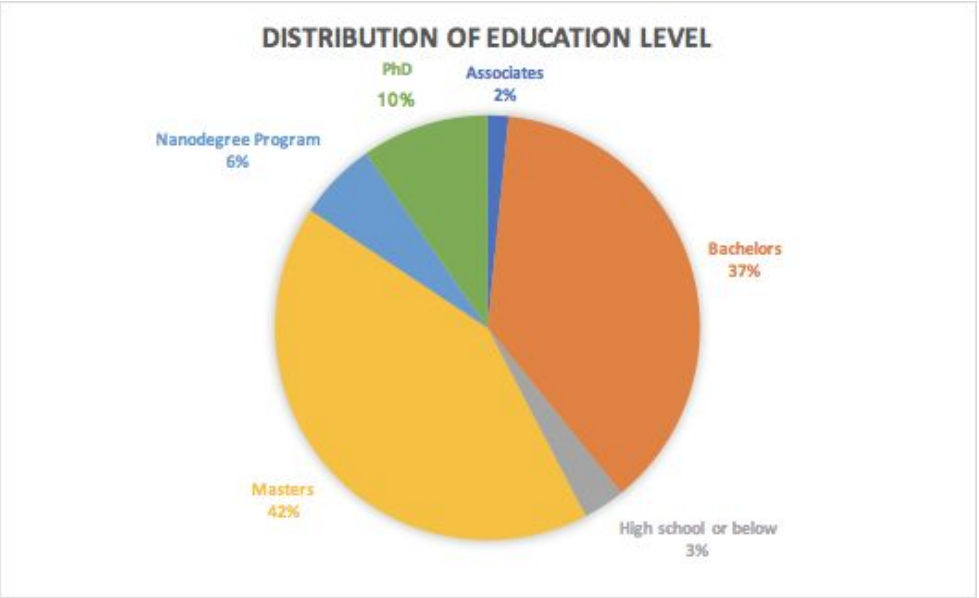
Support Method	Count
Ask Me Anythings (AMAs)	4
Forums	323
Live Help	9
Mentor Help (classroom or 1:1 mentors)	40
Slack Channel	173
Stack Overflow	142
Grand Total	691



The majority of students prefer using Forums. There is also a number of students who didn't answer this question or left it blank. Slack Channel and Stack Overflow seem equally as helpful trailing just behind the Forums.

What is the highest level of education students who take Nanodegrees reached?

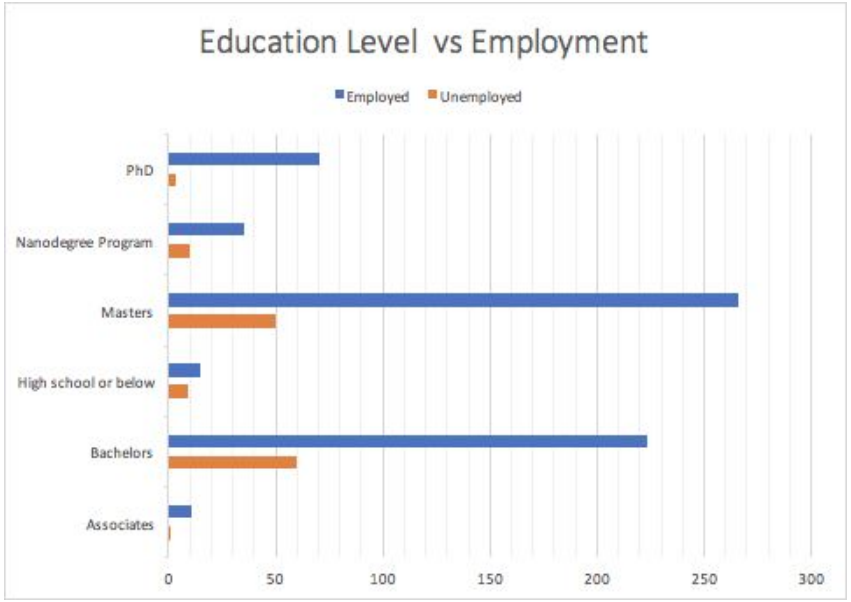
Education Level	Count
Associates	12
Bachelors	283
High school or below	24
Masters	316
Nanodegree Program	45
PhD	73
Grand Total	753



It's evident from our data that Masters holders constitute the biggest portion of students. This is interesting as from my personal experience, Masters' holders in an academic setting usually seek more practical hands-on experience which is exactly what Udacity offers. Also, 6% of the students surveyed consider a previous ND an "Education Level".

How does education level affect employment?

Education Level	Unemployed	Employed	Grand Total
Associates	1	11	12
Bachelors	60	223	283
High school or below	9	15	24
Masters	50	266	316
Nanodegree Program	10	35	45
PhD	3	70	73
Grand Total	133	620	753



Across all education levels, the number of employed individuals is higher than those unemployed. The percentage of PhD holders who are unemployes is significantly lower compared to the rest. An interesting observation is the number of High School Students who are employed.