

DATA ANALYSIS OF

RATE MY PROFESSORS

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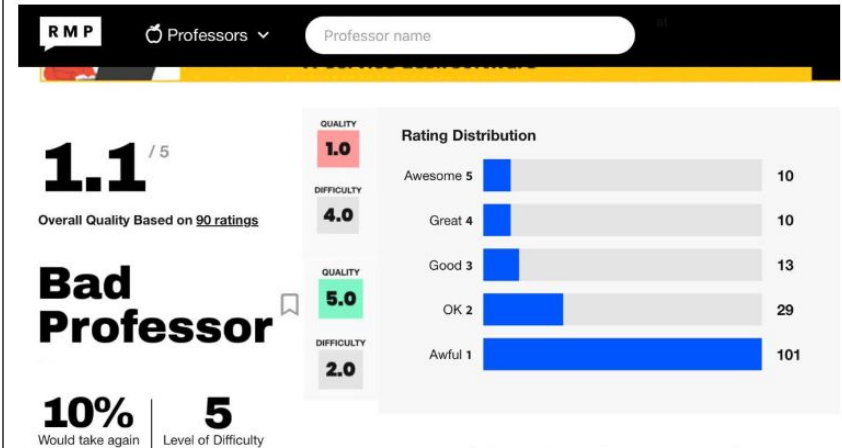


Motivations

- RateMyProfessors.com is a review site which allows students to assign ratings to professors and campuses.
- College students regularly use the site when registering for classes.
- Would be interesting to what trends drive higher or lower ratings.
- News articles speculate that students will give professors ratings that aren't entirely accurate.

“Damaging,” “Detrimental,” “Useful”: What Teachers and Students Say About Rate My Professors

Yelyzaveta Voronina, Staff Writer · October 13, 2023



[https://dvcinquirer.com/af/2023/10/13/damaging-detrimental-useful-
teachers-and-students-have-mixed-reviews-of-rate-my-professors/](https://dvcinquirer.com/af/2023/10/13/damaging-detrimental-useful-teachers-and-students-have-mixed-reviews-of-rate-my-professors/)

“[...] Reviews and ratings on the site could be deceiving due to students’ own lack of discipline — for example, when students give a professor a low rating simply because they didn’t put in the effort to study, or because the professor gave them a low final grade.”

- Valerija Sedliar, a 22-year-old mathematics graduate

Data

- Categorical, quantitative, geographical, and comments made by students.
- Large data set with 20,000 observations from 2001-2020
 - From Mendeley Data, Dr. Jibo HE
 - I focused on about 20 variables
- Most notable unit of measurement is the quality rating of professors which ranges from 1 as the lowest rating and 5 as the highest rating.
 - 3.5-5.0 is good, 2.5-3.4 is average and 1.0-2.4 is poor
- Other variables: professor difficulty, university, department, city, state, date posted, grades, professor gender/race, and more.

	Min.	Q1	Median	Mean	Q3	Max.
star_rating	1	3.0	3.7	3.643825	4.3	5
diff_index	1	2.4	3.0	2.956345	3.5	5
student_star	1	2.5	4.0	3.616879	5.0	5
student_difficult	1	2.0	3.0	2.988147	4.0	5

Objectives and Goals

Hypothesis:

What are the main factors that cause students to give professors higher or lower ratings? Are students opinions skewed by easier classes or better grades?

Will investigate professor department/gender, student grades, attendance, credits, and word analysis on student comments.

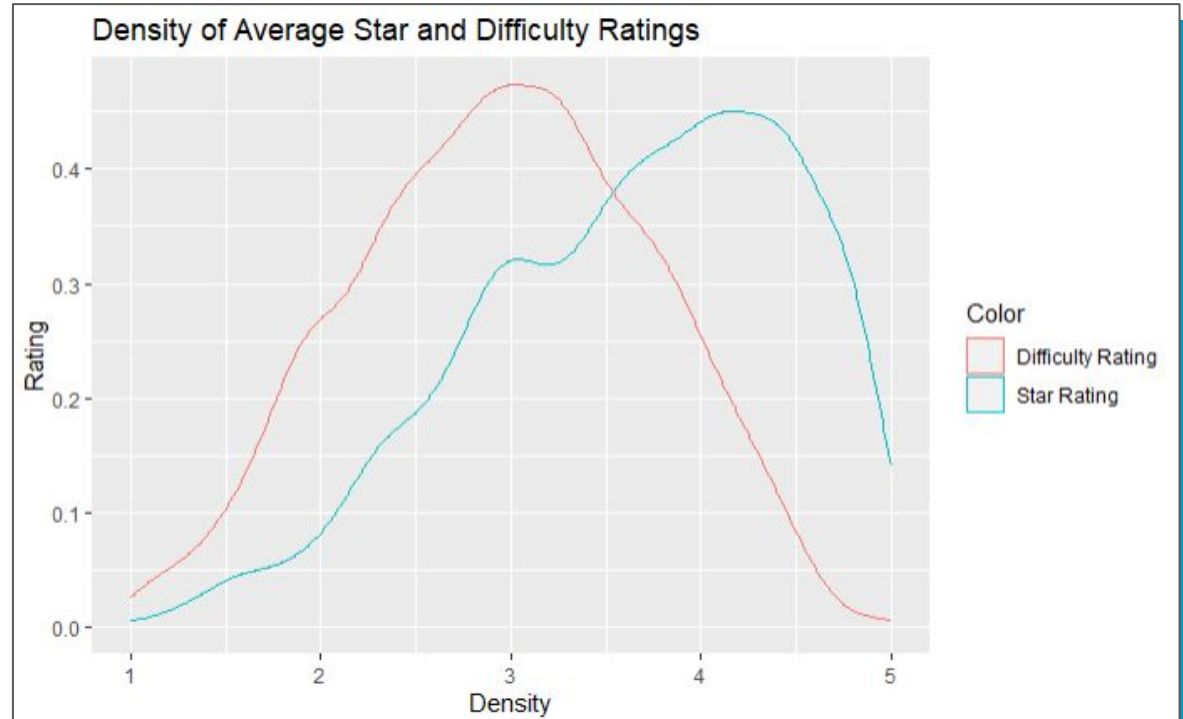
Possible Students Preferences	
More Positive	More Negative
Received High Grade	Received Lower Grade
Not For Credit	For Credit
Attendance Not Required	Attendance Mandatory
Non-STEM courses	STEM courses
Less Homework	Lots of homework

VISUALIZING THE DATA

Density Plot of Ratings

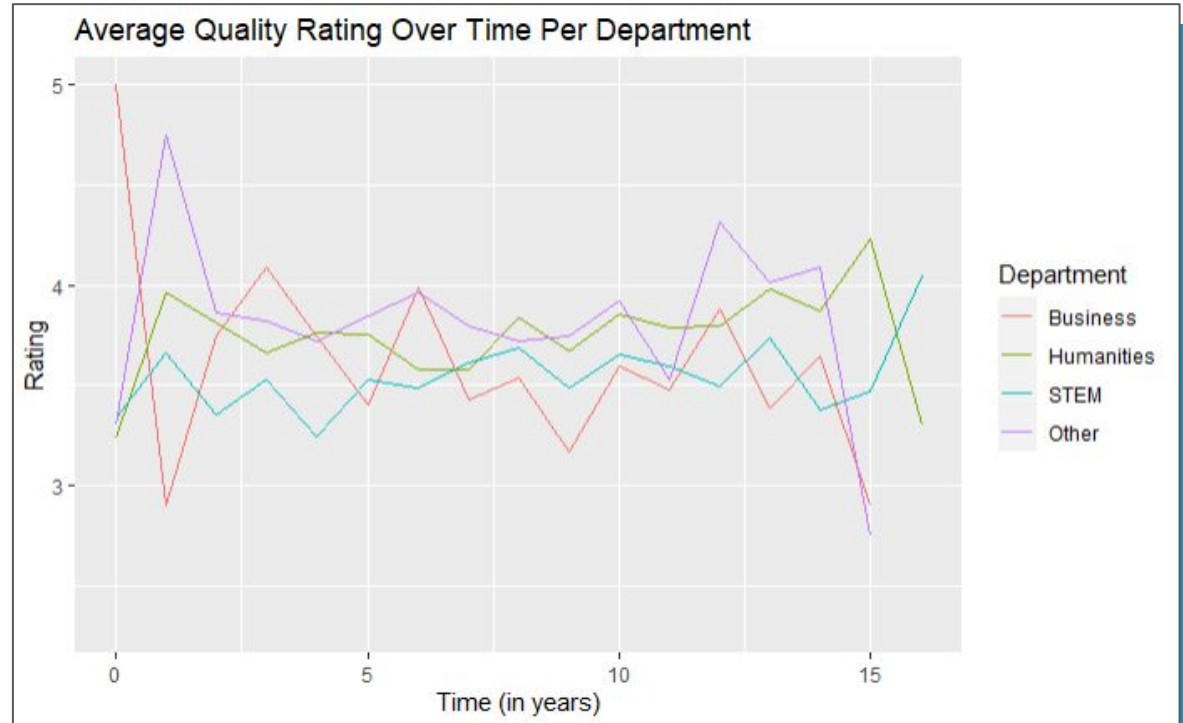
Doesn't seem like difficulty of the class aligns with the quality rating of professors.

Quality ratings tend to be higher than lower.



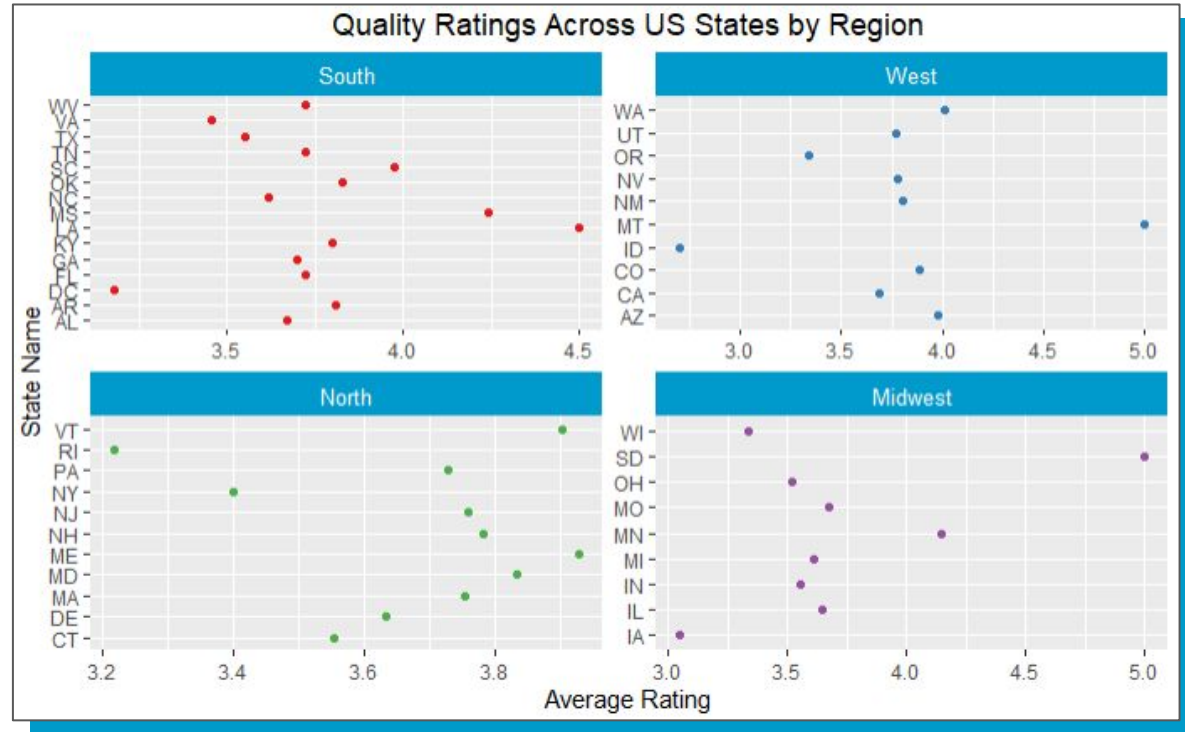
Change in Average Quality Rating Over Time

This was used to see if professor's ratings improved the longer they were professors. However, it doesn't seem like it makes a difference.



Average Quality Rating By State

Quality ratings by state are quite scattered, but most states seem to align with the overall average. Smaller states tend to have less universities which could explain why some stray from the center.



Attendance and For Credit

No big differences here.

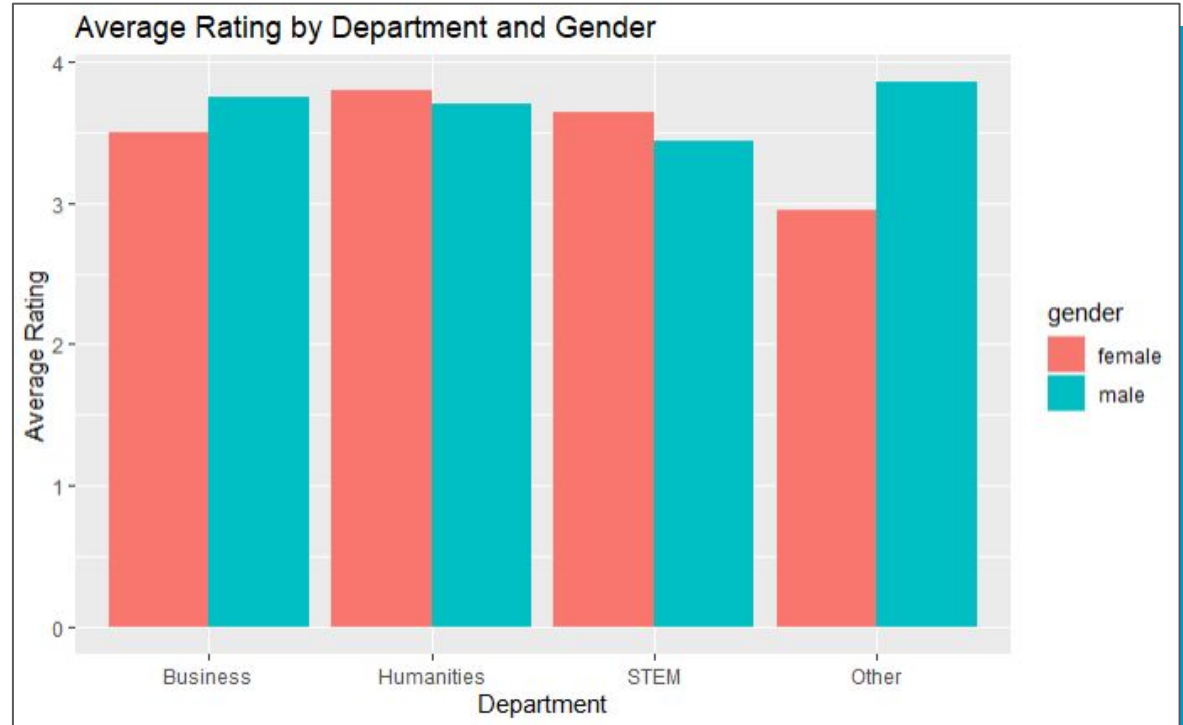
Can infer that mandatory attendance leads to higher grades, and therefore, higher ratings.

Can infer that “For Credit” classes lead to more motivated students and therefore, higher ratings.



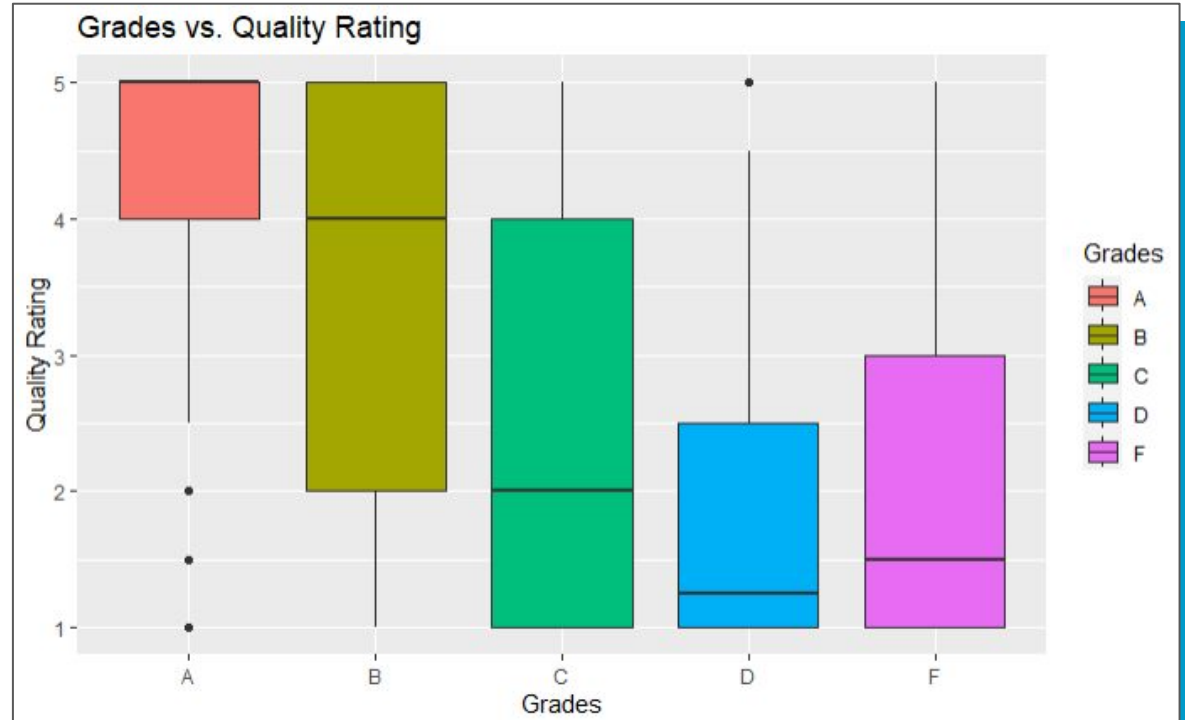
Average Quality Rating By Gender and Department

Only slight differences in rating by gender, but the data also had a significantly smaller proportion of female professors to male professors.

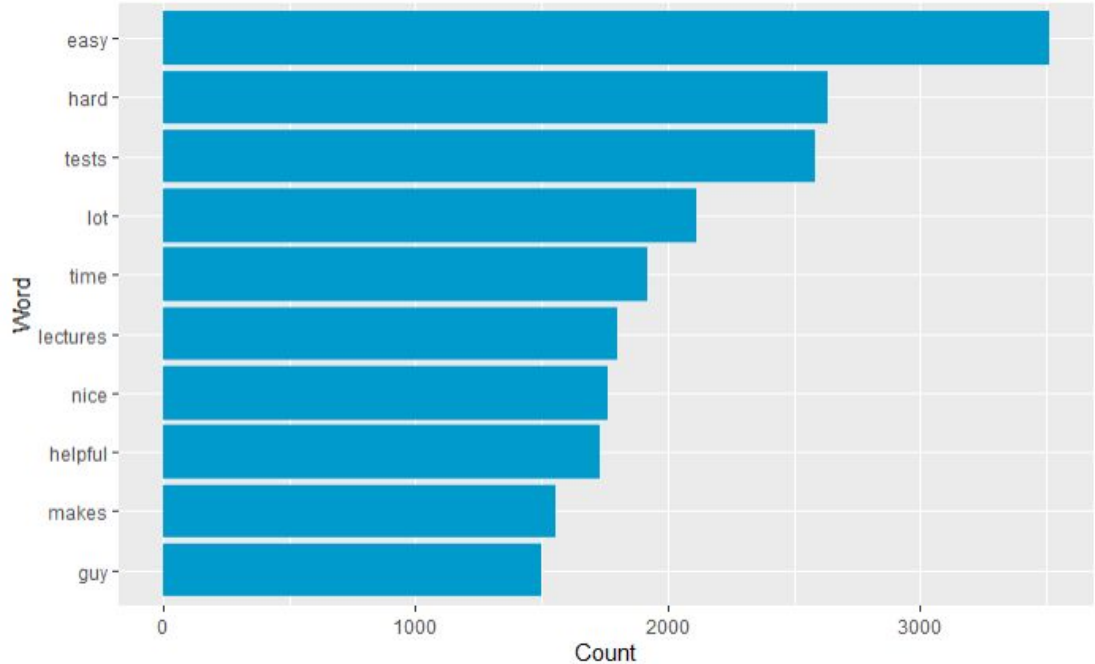


Average Rating per Grade Received

Clearly, higher grades received lead to higher professor ratings and low grades received lead to poor professor ratings.

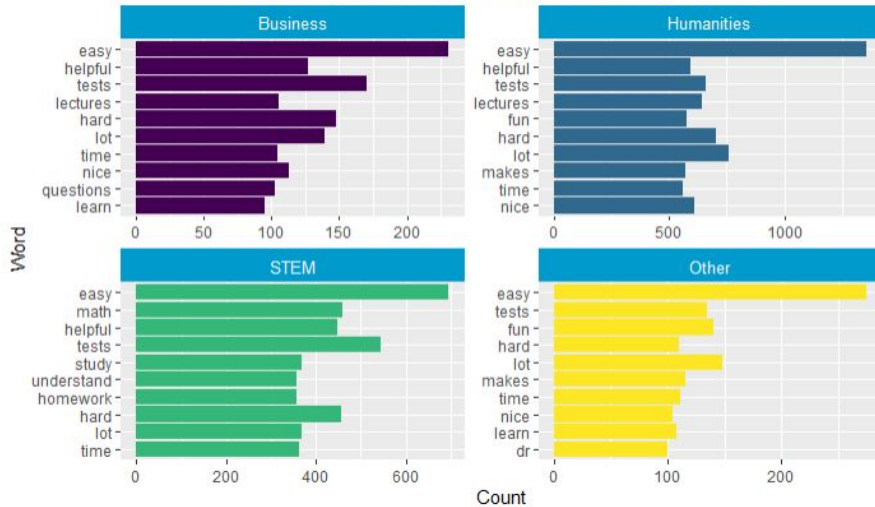


Common Words Across All Comments

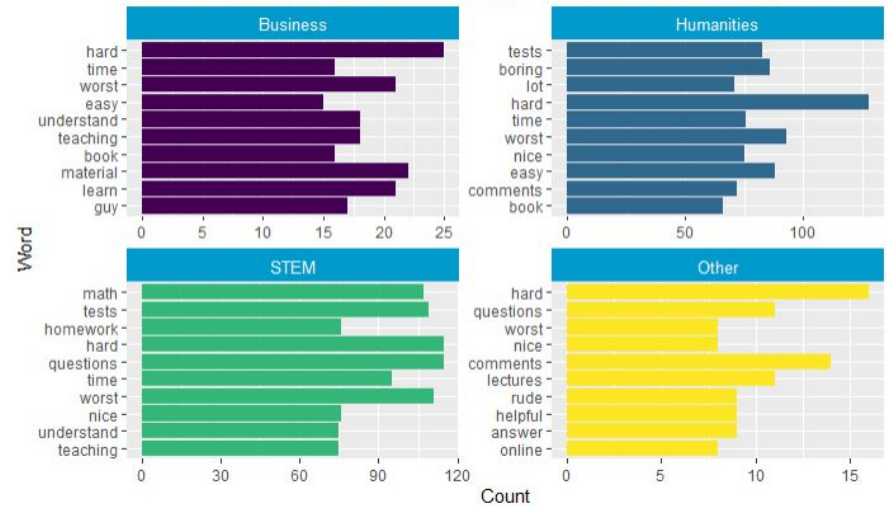


Common Words in Comments by Department

Common Words Across Well Rated Comments (>3.4)



Common Words Across Poor Rated Comments (<2.5)



Unfortunately it's difficult to discern whether some words were used in a negative context for example if someone said "not helpful", or "not nice".

CONCLUSIONS

Conclusions

- My research topic focused on the Rate My Professor data set.
- Hypothesis: Investigate the main factors that cause students to give professors higher or lower ratings.
- Students tend to give professors better ratings if the student received a good grade in the class above anything else.
 - Also the professor's often received higher ratings if the student found the class easy.
- However, I think this would not be an accurate representation of the professor's actual teaching quality as lower grades could be a result of a student's will to study or clashes between learning style and teaching style.
- This is important because professors sometimes report being hurt by harsh ratings, and ratings can drive down enrollment for their classes.

References

He, Jibo (2020), “Big Data Set from RateMyProfessor.com for Professors' Teaching Evaluation”, Mendeley Data, V2, doi: 10.17632/fvtfjyvw7d.2

<https://data.mendeley.com/datasets/fvtfjyvw7d/2>

Voronina, Yelyzaveta. “‘Damaging,’ ‘Detrimental,’ ‘Useful’: What Teachers and Students Say about Rate My Professors.” The Inquirer, Diablo Valley College, 13 Oct. 2023,

www.dvcinquirer.com/af/2023/10/13/damaging-detrimental-useful-teachers-and-students-have-mixed-reviews-of-rate-my-professors/.