Online Education

A Case Study





30 Live Telecast Classes/ Videos

2200 Users

5 Subjects

6000 user comments

2.2 Million Views

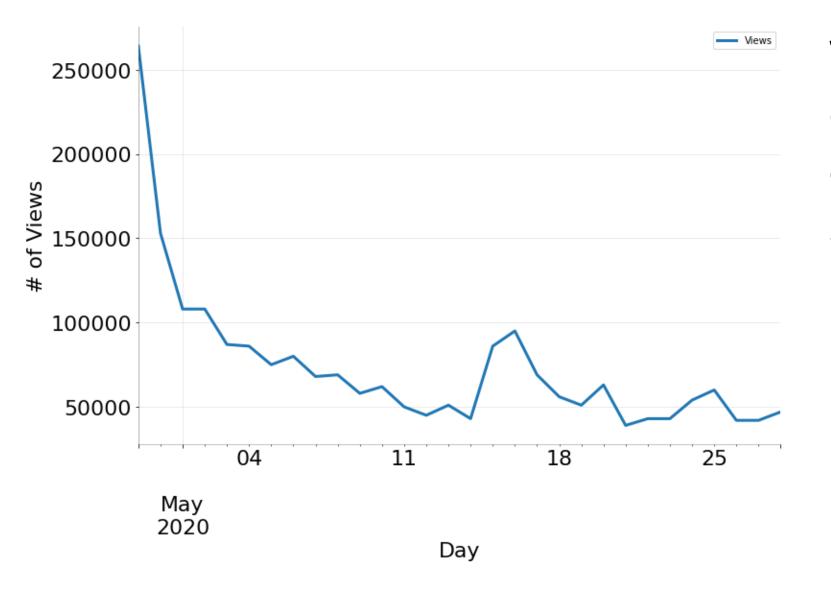
Vernacular language

Data: 30 classes for 10th Standard; delivered by state government in India via TV and streaming 5 subjects, taught in vernacular language Video comments and trends analyzed Each class has a live telecast



Vectorized User Comments





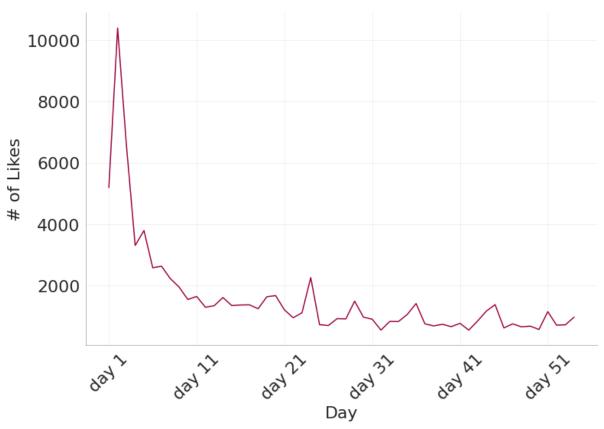
Views have dramatically fallen overtime

High peak and consistent drop overtime



The pattern repeats for other levels & views is even lower



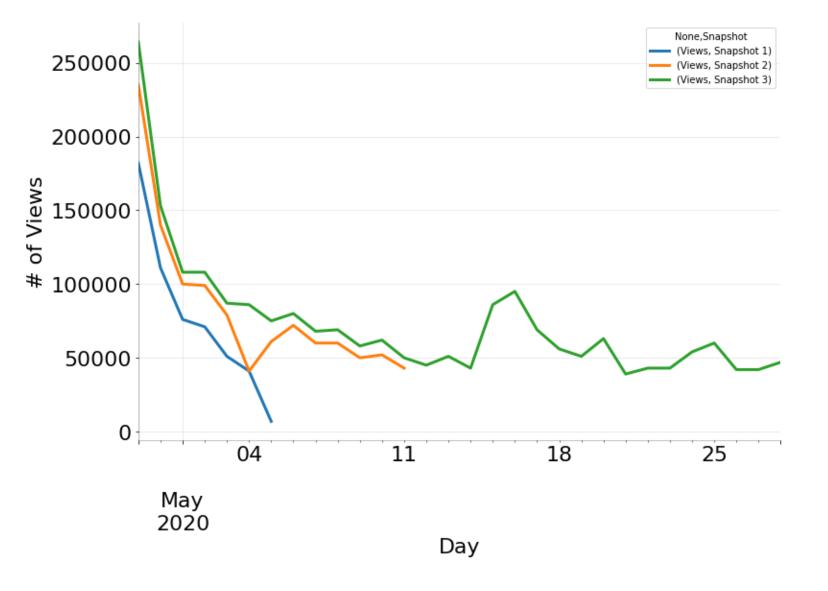


Class 10th v/s 12th views



Note: Class 12th spread across 54 classes versus 30 classes of Class 10th

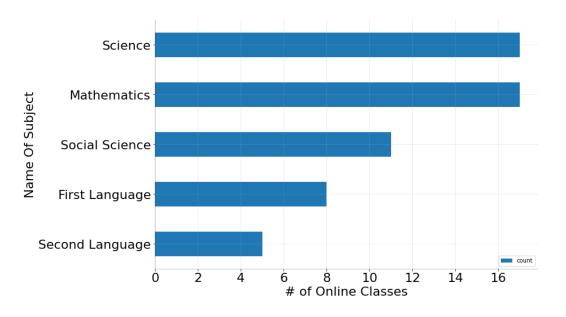


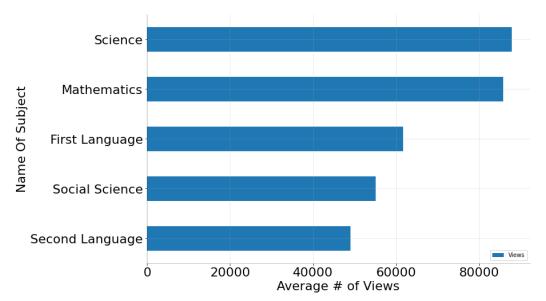


38% of people watch replays...

- 3 snapshots taken (5th May 2020, 11th May 2020, 11th June 2020)
- 14% of views came between
 1st and 2nd snapshot
- A month later 38% of views were added as compared to the 1st snapshot
- Replays play a significant role







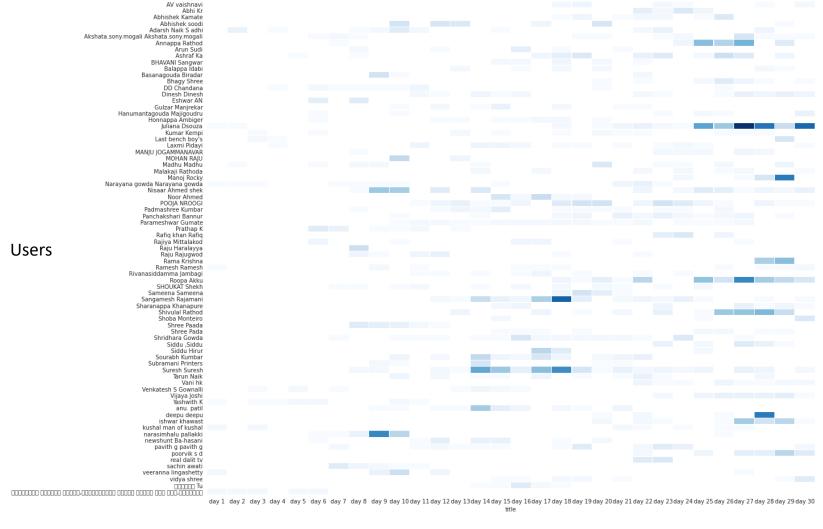


Students skip subjects

- Mathematics & Science given dominant class time
- They also receive most views
 - Languages lag far behind

Data: 30 classes for 10th Standard; delivered by state government in India via TV and streaming

Users vs Class Days Heat map

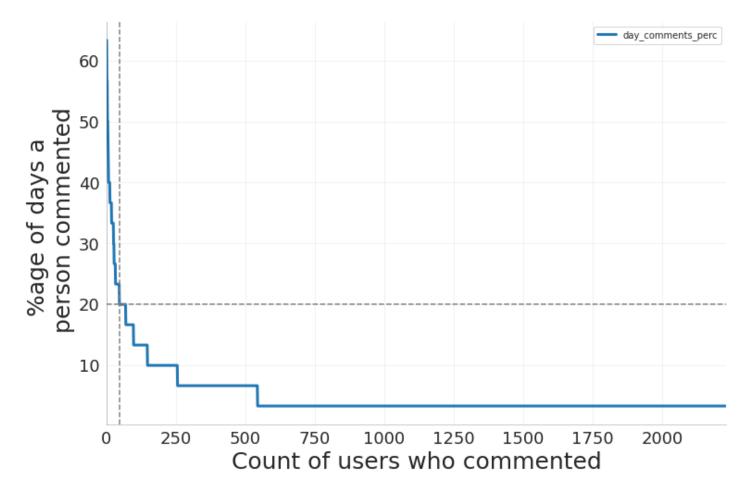


Class Days

Most students do not engage over time

- Very few students login and comment in every class
- Consistent engagement is a sparse matrix





2% of students comment in >20% of classes

- Very few students engage across classes
- Most don't leave a comment



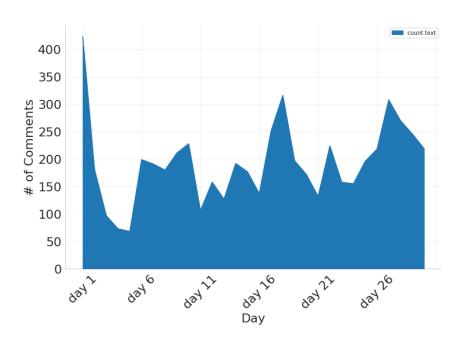
Comments **Engagement Time Heatmap** day 2 day 3 day 4 day 5 day 6 day 7 day 8 day 9 day 10 day 11 day 12 day 13 Nay 14 day 15 day 16 day 17 day 18 day 19 day 20 day 21 day 22 day 23 day 24 day 25 day 26 day 27 day 28 day 29 day 30 30 27 20 13 How many days ago? Comments

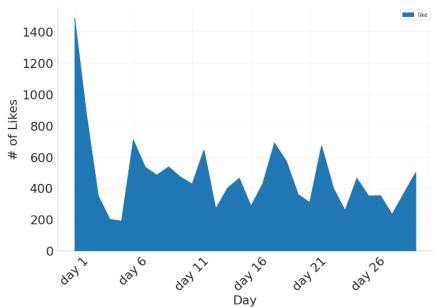
More

Most comments are immediately post telecast

- Maximum interaction (posting comments) during first few days of telecast
- Students posing questions or providing feedback tapers down later
- Student engagement is short lived



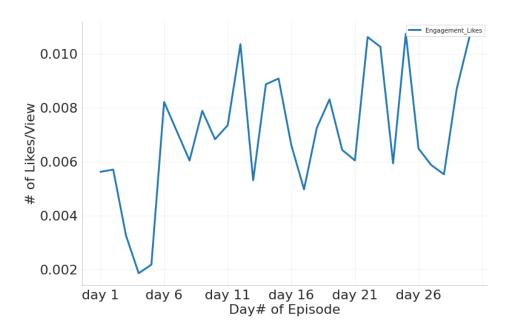


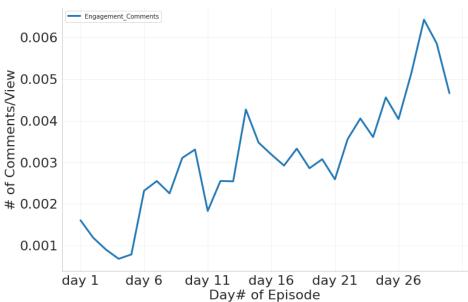


Overall engagement declines overtime

- Both likes & comments have reduced as the days have passed
- New feedback on effectiveness of the course reduces over time

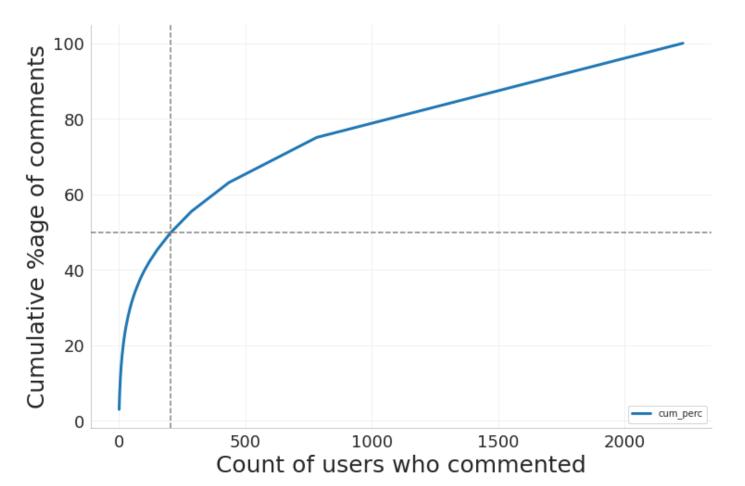
Data: 30 classes for 10th Standard; delivered by state government in India via TV and streaming





However, those who view multiple classes increase their engagement

- Those who attend seem to have better engagement measured as likes and comments left per view
- They leave more likes and comments



9% of students contribute 50% of feedback

- Very few students engage multiple times
- Engaging with the core group can provide valuable inputs

Junk comments dominate: add to distraction

9% of comments is "hi"

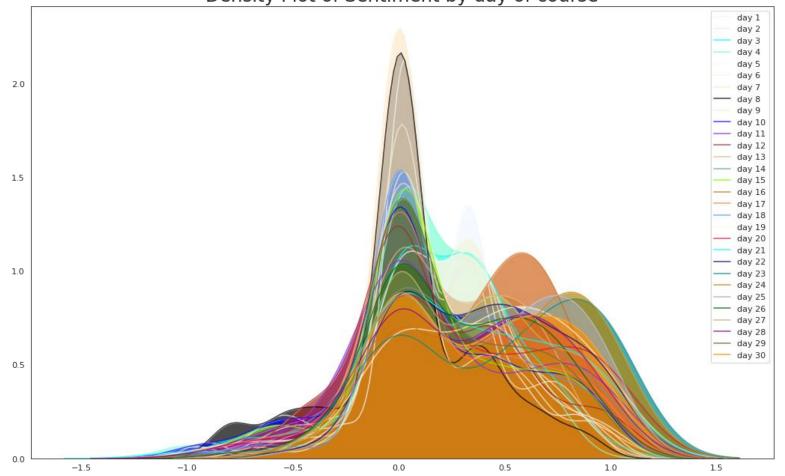
2% of comments is "thank you"

50% of comments is less than 3 words or less





Density Plot of Sentiment by day of course



Feedback sentiment varies across classes

 Multiple aspects influence sentiment such as language, tutoring, comprehensibility, video quality, distractions etc

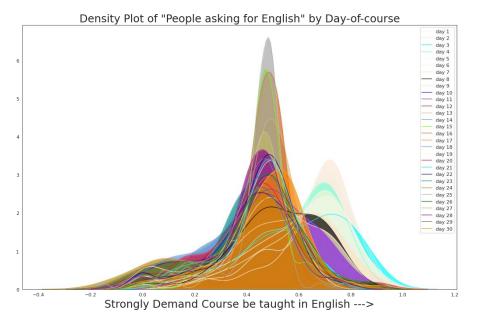
Machine Generated Insights

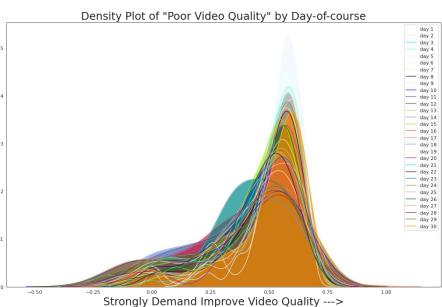
english tutor video subject language quality -ve←Sentiment→+ve

Video, quality & language have most negativity

- Students show general positivity towards online
- Certain aspects bothersome

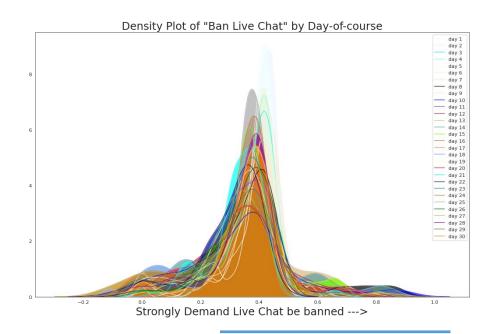






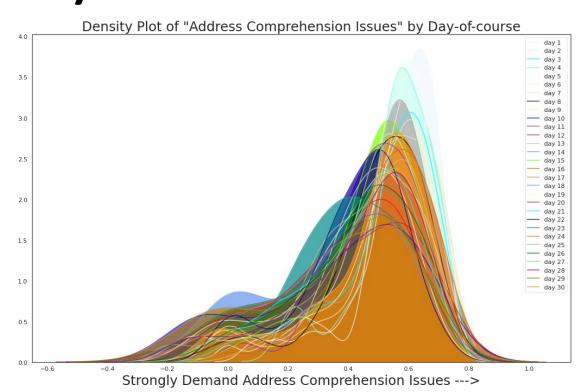
English Subtitles, Higher Video Quality, Banning Live Chat

... key interventions in that order





Addressing these and increasing comprehension a key demand...



...and additionally some points to ponder exist for improving delivery

- Is live streaming a must?
- Since "replays" mode is popular, then infrastructure needed for telecast and reception by students can be dramatically reduced?
- Interactivity key but not via live chat
- Auto detect and reject junk comments
- Multi language telecast... record once... translate to multiple?
- Student feedback mechanisms needed

The Future

Insights is here...

















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