



**Organization:** 321 Education Foundation

**Website:** <https://321-foundation.org/>

### Mission

321 Education Foundation is a non-governmental organization registered under the Indian Trusts Act that was founded in 2012. Over the past 7 years, the organization worked with over 900 schools and impacted 13000 educators and 2,70,000 students across 400 towns and cities and 4 countries. Their aim is to magnify the potential of children by magnifying the potential of teachers and schools.

### Context

321 Education Foundation runs two programs:

- a) Ignite!
- b) CAPE

CAPE is a free online lesson bank where educators can find complete lessons that can be easily sent on Whatsapp. These lessons are aligned to their respective boards (CBSE/ Maharashtra/ Telangana/ Karnataka state boards) and there is no sign-up/login/download required. Since its launch in 6 weeks ago, they have seen over 5000 teachers from all over India use their lessons to teach approximately 100,000 children.

In CAPE, lessons links are published on Google Slides and shared with each school. For each board, there is a common lesson index. Copies of the lesson index are created by adding a UTM Parameter and a unique lesson index link is created for each school (which points to the common lesson index mentioned above). Lessons can be accessed via a lesson index. Inside a lesson index, there is a menu of lessons, and the teacher clicks on the lesson link and shares it with the students. Below, is a clearer distinction between a lesson index link and a lesson link.

1. Lesson Index Link - The Lesson Index Link is unique for each school. Unique links are created by adding a UTM parameter to the main link (in order to make it unique) and using Bitly as a URL Shortener. Teachers open the Lesson Index Link, select the lesson link and share the lesson links with the students.
2. Lessons Links - Teachers access the lessons via Lesson Index. The links for each lesson are not at a school level. Lesson links are created at a board level and the same link is shared for all the schools relevant to that board. This is done because -
  - a. A huge number of lesson links would need to be created per school level (~270 each week/school).
  - b. Bitly has a limit of 1500 links for each month and it's expensive to create multiple Bitly links.
  - c. Adding a UTM parameter to make a unique link also takes time. Each link is created manually by the team members which is time consuming.



### Challenge Statement

Design a system to track student level data and engagement on different lessons without adding sign up and login functions. The system should also house a dashboard to view insights at a school level using the collected data. The goal is to identify patterns and trends from the usage and engagement data, to help them improve the program, drive results, increase usage and broaden the customer base.

### Additional Considerations

- Think about ways to move away from Bitly as it expensive.
- How would you create a visual representation to slice data based on the following filters:
  1. High tech lessons
  2. Low tech lessons
  3. City Level
  4. Grade Level
  5. Week Level
- Think of any extra information that might be vital to portray on the dashboard using user profiles, number of schools, etc.

### Technology Baseline

In CAPE, lessons are created on google slides and are shared with the teachers in the form of sharable links. Teachers access the content in low tech and high tech formats and forwards the link to the student using API. The only difference between low tech lessons and high tech lessons is the multimedia file. In low tech version, images are used and in high tech version, videos are used to deliver the content. For each lesson a Bitly link is generated for tracking purposes. The current process involves-

Link creation:

1. Converting lesson links from long-url google drive links to Bitly links

Dashboard:

1. Exporting Bitly links from different accounts
2. Cleaning the raw data and filtering out only relevant links
3. Match the link with the correct lesson
4. Use look-up to find out all time clicks and then calculate clicks per day
5. Use data in point 4 to answer some questions on the dashboard

Currently all of this is done manually.