# **📊 Power BI Dashboard Report – Educational Course Analysis**

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## **🔹 Overview**

This Power BI project is focused on analyzing educational course data from various colleges and universities across different districts and talukas in Maharashtra. The goal was to transform raw data into a meaningful, interactive dashboard that can help stakeholders make data-driven decisions.

## **🔹 Key Insights from the Dashboard**

### **✅ KPI Highlights:**

I started by creating KPI cards to display key metrics:

* **Total Number of Colleges:** Over 15,000 colleges
* **Unique Courses Offered:** More than 1,250
* **% of Professional Courses:** Around 18.1% of the courses are classified as professional
* **Average Course Duration:** Approximately 21.2 months

These cards helped set the context for further analysis.

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## **🔹 Visual Analysis**

### **📊 Bar Charts**

I used bar charts to explore patterns such as:

* The distribution of courses across **different categories** like Arts, Science, and Commerce.
* **District-wise college count** revealed that Pune, Nagpur, and Thane are among the districts with the highest number of colleges.
* A **Top 10 list of colleges** by course offerings helped highlight institutions with diverse academic portfolios.

### **🍩 Pie Charts**

I added pie charts to visualize:

* The proportion of **Aided vs Unaided** courses — which turned out to be almost balanced.
* The breakdown of **UG vs PG programs**, where undergraduate courses made up the majority.

### **📈 Line Chart**

A line chart helped track the **average course duration by district**, where Solapur and Satara stood out with higher averages.

### **🧮 Matrix Table**

I included a matrix to compare **Universities vs Course Types** and used it to analyze **average duration** trends.

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## **🔹 Interactivity**

To make the dashboard dynamic, I used slicers to filter the visuals based on:

* **Course Category**
* **College Type**
* **Course Type**
* **Professional/Non-Professional status**

This allowed the user to explore different views and understand the data from various angles.

## **🔹 What Could Be Improved**

Due to some security settings in Power BI, I couldn’t enable the map visual for college distribution by district. However, this can be fixed easily through settings.

I also plan to add:

* A **Specialization** column extracted from course names (after the hyphen)
* A **Duration Category** column to classify courses as Short, Medium, or Long
* A dedicated **Q&A page** to answer specific business questions like:  
  + Which district has the most colleges?
  + What is the most popular course specialization?
  + Are unaided courses more common in professional streams?

## **🔹 Conclusion**

Working on this Power BI project helped me understand how to clean, transform, and visualize data effectively. It also improved my ability to think analytically and present data in a way that makes sense to different users.

* Which district has the most colleges? **Pune**
* What are the most common course categories? **Arts, Science**
* Which universities offer the widest course types? **Mumbai University, Pune University**
* Are unaided courses more common in professional streams? **Nearly balanced**
* Which college has the longest average duration? **Engineering Colleges**
* Most popular specialization? **Computer Science**

### **Key Insights:**

* Districts like Pune and Nagpur have the highest college density
* Undergraduate courses dominate the dataset
* Course categories like Arts, Science, and Commerce are most frequent
* Aided and unaided courses are equally distributed
* Professional courses make up a smaller portion (~18%)