TEAM MEMBERS-

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TITLE OF THE REPORT / POSTER

"Analysis of the All-India Survey on Higher Education (AISHE) 2021–22"

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1. REPORT SELECTION

Selected Report and Source Link: Education_All India Survey_2021-22_Cover.cdr

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2. MOTIVATION FOR CHOOSING THIS REPORT

Why this problem/sector matters:

The education sector shapes the social and economic progress of any country. Strong educational access and quality help build skilled human capital, reduce inequality, and open opportunities for millions. Understanding how India's education system is expanding and improving is essential for planning better policies and interventions.

Why it is relevant today:

Post-pandemic recovery, digital learning adoption, and changing workforce demands have made educational data more important than ever. The AISHE 2021–22 report highlights current trends, gaps, and progress, helping stakeholders respond to emerging challenges and plan future improvements.

Who is affected (stakeholders):

Students, teachers, educational institutions, policymakers, government bodies, private sector employers, and parents are directly impacted by changes in the education landscape. Society as a whole is also influenced, as education outcomes affect employment, innovation, and national development.

3. ANALYTICAL OBJECTIVE (Poster Title)

Objective:

- To analyse trends, enrolment patterns, and regional variations in higher education using data from AISHE 2017 to 2022.

- Compare male–female enrolment ratios and understand gender inclusion progress.

4. DATA EXTRACTION & PREPARATION

4.1 Data Taken from the Report (Tables/Charts Used)

FROM REPORT OF YEAR 2021-2022

- Table 40: Number of Universities during last 5 years

- Table 42: Various College Indicators during last 5 years (Average Enrolment per College)

- Table 42: Various College Indicators during last 5 years (College per Lakh Population)

- Table 47: Gross Enrolment Ratio (GER) during last 5 years

- Table 52: Population in the Age Group 18-23 Years during last 5 years

4.2 Final Dataset Sheets Created

- Master Table

- State Table

- Indicator Table

- Time-Series Table

- Category Table (General/SC/ST)

4.3 Preprocessing Steps

1. **Data Extraction:**
   Extracted data from report PDF using ImageToExcel - convert image to excel, JPG to excel, convert pdf to excel tool.

2. **Cleaning:**

- Removed missing or unusable values

- Standardised column names for consistency

- Formatted numbers, percentages, and text fields

- Checked and removed duplicate records

- Corrected inconsistent data formats (dates, categories, text cases)

- Converted data types to appropriate formats (numeric, categorical, date)

- Validated and corrected data-entry errors

3. **Transformation:**

○ Created calculated fields (e.g., growth %, year-on-year change, GER difference)

○ Normalized indicators (converted values per lakh population, scaled GER values)

○ Converted raw PNG/PDF tables into structured Excel sheets with clean headers and numeric data

4. **Schema Creation:**

○ Built star schema with **Fact Table + Dimension Tables**, where:

- **Fact Table:** Enrollment, Universities count, GER, Population, Indicators (2017–2022)

- **Dimension Tables:** State Dimension, Year Dimension, Category Dimension (General / SC / ST)

5. **Export:**

- Saved final dataset as 2017-2022_data.xlsx

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5. ANALYSIS & DASHBOARD

Dashboard Contains :

Component	Visual Used	Description
KPI Panel	CARD	Total youth population, total universities growth, total enrolment, colleges per lakh population
Trend Chart	LINE CHART	Enrollment trend by year (2017–18 to 2021–22)

Component	Visual Used	Description
Comparison Chart	STACKED COLUMN CHART	GER comparison for General, SC, ST categories
Ranking Chart	BAR CHART	Top states by enrollment growth % and total enrollment (2021–22)
Map	MAP	Population per lakh across States/UTs
Extra Visual 1	LINE CHART	Enrollment comparison: 2017–18 vs 2021–22
Extra Visual 2 (optional)	COLUMN CHART	GER trend for last 5 years

Short Notes On Each Visual:

1. KPI Panel: Shows key numbers such as total youth population (2bn), total universities growth (418.33), total enrolment (148.16K), colleges per lakh population (26.02 → 28.27).

2. Trend Chart: Displays year-wise decrease in enrollment from 30.1K (2017–18) to 28.2K (2020–21).

3. Comparison Chart: GER for SC, ST, and General categories shows steady increase—highest in 2021–22.

4. Ranking Chart: Identifies top states with high enrollment growth % (Puducherry highest).

5. Map Chart: Shows distribution of population per lakh across geographic regions.

6. Additional Chart: Compares 2017–18 vs 2021–22 enrollment for each State/UT showing rise/fall trends.

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6. INTERPRETATION & INSIGHTS

a. What patterns/trends were discovered?

• GER consistently increased across General, SC, and ST categories from 2017 to 2022.

• Enrollment shows a **declining trend after 2018–19**, falling sharply in 2020–21.

• College per lakh population increased from **26.02 to 28.27**, showing expansion of institutions.

• Universities increased from **1.81K (2017–18) to 2.34K (2021–22)**.

b. What disparities or issues are visible?

• Some states show extremely low enrollment growth compared to top performers.

• Gender ratio variations remain inconsistent in certain regions.

• Enrollment decline during pandemic years is clearly visible.

c. What decisions or policies can be influenced?

• Need for targeted funding in states with low enrollment growth.

• Expand digital education infrastructure to address pandemic-related decline.

• Increase focus on SC/ST enrollment improvement strategies.

d. Any additional insights:

• Puducherry, MP, Bihar show strong growth—models for others.

• North-Eastern states show moderate but consistent progress.

• Population-to-institution ratio varies widely → indicates need for redistribution.

APPENDIX

A. Source Link(s)

1.   Sector | Open Government Data (OGD) Platform India

2.   Education_All India Survey_2021-22_Cover.cdr

3.   Additionally, reports from the year 2017 to 2021 from same source

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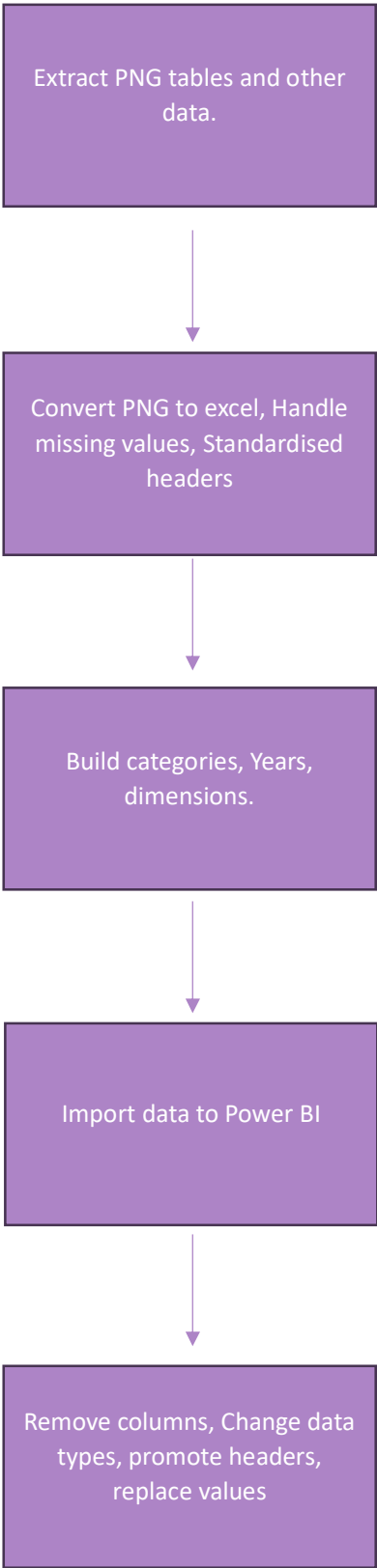**B. Raw Data (Screenshots or Tables from Report)**

Table 47: Gross Enrolment Ratio (GER) during last 5 years

Sl No	States/UTs	ALL			SC			ST		
		Male	Female	Both	Male	Female	Both	Male	Female	Both
1	2	3	4	5	6	7	8	9	10	11
19	**Madhya Pradesh**									
	2021-22	29.7	28.0	28.9	27.3	26.7	27.0	17.8	17.2	17.5
	2020-21	27.3	26.8	27.1	25.5	25.8	25.6	15.3	16.1	15.7
	2019-20	22.9	23.0	23.0	21.6	21.8	21.7	11.8	11.4	11.6
	2018-19	20.8	20.2	20.5	19.1	18.5	18.8	11.2	10.5	10.8
	2017-18	20.8	19.5	20.2	19.8	17.9	19.0	10.7	9.2	9.9
20	**Maharashtra**									
	2021-22	37.1	33.3	35.3	37.6	34.9	36.3	19.4	15.2	17.3
	2020-21	36.2	33.5	34.9	34.6	33.1	33.9	18.6	14.4	16.5
	2019-20	33.5	31.7	32.6	30.9	31.4	31.1	17.6	13.8	15.7
	2018-19	33.5	30.9	32.2	31.9	30.9	31.4	17.4	13.2	15.3
	2017-18	32.5	30.0	31.4	32.0	29.7	30.9	17.8	12.7	15.2
21	**Manipur**									
	2021-22	35.3	35.5	35.4	60.3	61.0	60.6	22.0	24.2	23.0
	2020-21	36.9	38.6	37.8	79.2	68.9	74.2	18.5	20.0	19.2
	2019-20	32.8	35.4	34.1	52.2	53.3	52.7	17.5	19.4	18.4
	2018-19	29.6	31.1	30.3	52.0	49.6	50.8	18.3	18.6	18.4
	2017-18	27.9	29.9	28.9	55.4	51.2	53.4	17.7	17.2	17.4
22	**Meghalaya**									
	2021-22	22.7	28.1	25.4	101.9	119.4	110.0	20.2	26.4	23.3
	2020-21	22.6	29.0	25.8	164.5	155.0	160.1	18.7	25.5	22.1
	2019-20	21.0	25.4	23.2	87.9	75.5	82.2	18.2	24.1	21.2
	2018-19	20.9	25.4	23.1	71.5	193.9	128.0	18.5	23.6	21.1
	2017-18	21.5	23.3	22.4	44.9	34.6	40.2	16.3	19.1	17.7
23	**Mizoram**									
	2021-22	31.4	33.2	32.3	206.5	304.8	241.1	31.8	33.3	32.5
	2020-21	26.2	27.5	26.8	163.9	168.2	165.4	26.3	27.5	26.9
	2019-20	23.5	22.7	23.1	132.0	92.4	118.1	23.4	23.2	23.3
	2018-19	23.2	22.7	22.9	118.2	116.7	117.6	23.4	22.8	23.1
	2017-18	22.0	19.4	20.7	108.3	92.4	102.7	22.2	19.6	20.9
24	**Nagaland**									
	2021-22	16.5	21.2	18.8				17.2	21.5	19.3
	2020-21	15.4	19.3	17.3				15.2	18.9	17.0
	2019-20	14.4	18.7	16.4				15.3	19.4	17.4
	2018-19	15.7	18.1	16.8				15.6	18.6	17.1
	2017-18	15.9	16.6	16.2				14.8	16.5	15.7
25	**Odisha**									
	2021-22	23.5	20.6	22.1	25.2	19.9	22.6	16.7	14.3	15.5
	2020-21	21.3	20.1	20.7	21.4	18.4	20.0	14.2	12.8	13.5
	2019-20	21.6	19.5	20.5	20.5	16.9	18.8	13.7	12.0	12.8
	2018-19	22.8	19.3	21.1	21.4	16.7	19.1	13.6	10.9	12.2
	2017-18	22.6	19.5	21.1	20.6	15.3	18.0	13.6	10.4	11.9
26	**Puducherry**									
	2021-22	61.0	62.1	61.5	43.0	43.4	43.2			
	2020-21	60.3	61.1	60.8	45.5	45.6	45.6			
	2019-20	54.8	54.5	54.6	40.3	38.1	39.1			
	2018-19	54.5	53.7	54.1	42.5	39.5	40.9			
	2017-18	54.8	50.2	52.4	39.4	35.1	37.1			
27	**Punjab**									
	2021-22	25.2	30.1	27.4	16.2	22.8	19.2			
	2020-21	23.9	29.1	26.3	14.3	21.3	17.5			
	2019-20	24.1	30.8	27.1	15.5	22.1	18.5			
	2018-19	24.4	33.1	28.3	17.0	24.3	20.3			
	2017-18	26.5	32.5	29.2	18.6	23.0	20.6			

Table 44: Student Enrolment at various levels through Regular mode during last 5 years

Sl No	States/UTs	Certificate			Integrated			Grand Total		
		Male	Female	Both	Male	Female	Both	Male	Female	Both
1	2	21	22	23	24	25	26	27	28	29
16	**Kerala**									
	2021-22	393	614	1007	5115	7009	12124	423500	591585	1015085
	2020-21	1226	3429	4655	4226	5505	9731	412322	593415	1005737
	2019-20	780	2510	3290	3701	4094	7795	358811	522666	881477
	2018-19	857	2626	3483	2828	2864	5692	346232	502011	848243
	2017-18	740	2918	3658	2252	2159	4411	338971	493229	832200
17	**Ladakh**									
	2021-22							1541	2722	4263
	2020-21				47	91	138	1108	2039	3147
	2019-20				57	98	155	999	1898	2897
18	**Lakshadweep**									
	2021-22							14	74	88
	2020-21							133	427	560
	2019-20							133	427	560
	2018-19							127	418	545
	2017-18							116	436	552
19	**Madhya Pradesh**									
	2021-22	1492	834	2326	19680	15653	35333	1359279	1190452	2549731
	2020-21	2269	1258	3527	16402	13083	29485	1292550	1170726	2463276
	2019-20	845	837	1682	10498	8326	18824	1048111	977758	2025869
	2018-19	1253	673	1926	8300	6086	14386	912258	832905	1745163
	2017-18	1224	819	2043	6118	3859	9977	911930	793236	1705167
20	**Maharashtra**									
	2021-22	3135	3013	6148	10636	9599	20235	2113993	1763849	3877842
	2020-21	4706	4266	8972	8314	7527	15841	2017738	1718515	3736253
	2019-20	6100	6516	12616	8085	7837	15922	1885407	1714264	3599671
	2018-19	6034	5978	12012	7053	6470	13523	1908512	1680756	3589268
	2017-18	5385	4725	10110	6076	5868	11944	1818692	1593728	3412420
21	**Manipur**									
	2021-22	161	125	286				63258	61789	125047
	2020-21	160	186	346				66082	67229	133311
	2019-20	55	90	145				57618	60974	118592
	2018-19	46	72	118				51369	52985	104354
	2017-18		30	30				46944	51153	98097
22	**Meghalaya**									
	2021-22	31	55	86	203	180	383	40543	48913	89456
	2020-21	172	214	386	73	54	127	40497	51476	91973
	2019-20	47	47	94	70	52	122	36841	43712	80553
	2018-19				52	42	94	36119	43057	79176
	2017-18	5	73	78	40	27	67	35453	39755	75208
23	**Mizoram**									
	2021-22				15	10	25	19383	19095	38478
	2020-21		20	20	29	23	52	16184	16101	32285
	2019-20	304	159	463	47	26	73	13635	12387	26022
	2018-19	285	171	456	66	44	110	13520	12076	25596
	2017-18	190	143	333	66	37	103	12714	11737	24451

C. Preprocessing Flowchart

Extract PNG tables and other data.

↓

Convert PNG to excel, Handle missing values, Standardised headers

↓

Build categories, Years, dimensions.

↓

Import data to Power BI

↓

Remove columns, Change data types, promote headers, replace values

D. Final Dataset Structure

Various College Indicators during last 5 years

SI No	States/UTs	Average Enrolment per College				
		2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
	India	698	693	680	646	709
1	Andaman and Nicobar Islands	928	914	739	845	808
2	Andhra Pradesh	493	524	547	541	554
3	Arunachal Pradesh	810	551	553	547	666
4	Assam	983	971	870	795	906
5	Bihar	1686	1616	1703	1881	2088
6	Chandigarh	2052	2034	2022	1890	1888
7	Chhattisgarh	550	565	557	546	606
8	Delhi	1531	1562	1620	1567	1752
9	Goa	640	700	670	684	680
10	Gujarat	519	513	528	526	537
11	Haryana	611	610	590	584	614
12	Himachal Pradesh	553	558	541	510	577
13	Jammu and Kashmir	720	799	721	594	633
14	Jharkhand	1786	1875	1938	1761	1848
15	Karnataka	416	426	415	392	413
16	Kerala	554	568	575	531	594
17	Ladakh	590.3333333	590.3333333	480	777	514
18	Lakshadweep	Unknown	Unknown	Unknown	Unknown	Unknown
19	Madhya Pradesh	646	734	771	666	808
20	Maharashtra	678	681	670	672	685
21	Manipur	1156	1039	1056	1090	1013
22	Meghalaya	1087	1039	1105	817	909
23	Mizoram	612	603	559	650	669
24	Nagaland	484	497	507	490	533
25	Odisha	685	682	659	573	576
26	Puducherry	569	600	668	611	760
27	Punjab	576	546	521	484	494
28	Rajasthan	526	521	517	467	513
29	Sikkim	737	751	634	578	712
30	Tamil Nadu	919	924	872	838	808
31	Telangana	558	554	545	556	611
32	ra and Nagar Haveli and Daman	1026	1069	1154	589	654
33	Tripura	1156	1153	1175	1198	1387
34	Uttar Pradesh	816	743	692	614	761
35	Uttarakhand	621	641	634	546	646
36	West Bengal	1170	1170	1179	1161	1189

Gross Enrolment Ratio (GER) during last 5 years

SI No	States/UTs	ALL			SC			ST		
		Male	Female	Both	Male	Female	Both	Male	Female	Both
1	2	3	4	5	6	7	8	9	10	11
	India									
1	2021-22	28.3	28.5	28.4	25.8	26	25.9	21.4	20.9	21.2
2	2020-21	26.7	27.9	27.3	22.4	23.9	23.1	18.8	19.1	18.9
3	2019-20	24.8	26.4	25.6	21.5	23.2	22.3	17	17	17
4	2018-19	24.4	25.5	24.9	21.4	22.8	22	16.7	16.1	16.4
5	2017-18	24.5	24.6	24.6	21	21	21	16	14.5	15.3