Empowering The Future: A Literacy Rate Analysis For A Better Future Tomorrow (Only For Engg)

Submitted by:

Team ID : LTVIP2023TMID09490

Team Size : 5

Team Leader : S VAMSI

Team Member : BARLA SAI MEGHANA

Team Member : TELU SHANMUKHA VANI

Team Member : VADALI VENKATA SAI SAKETH

Team Member : GUDI UDAY

Objective:

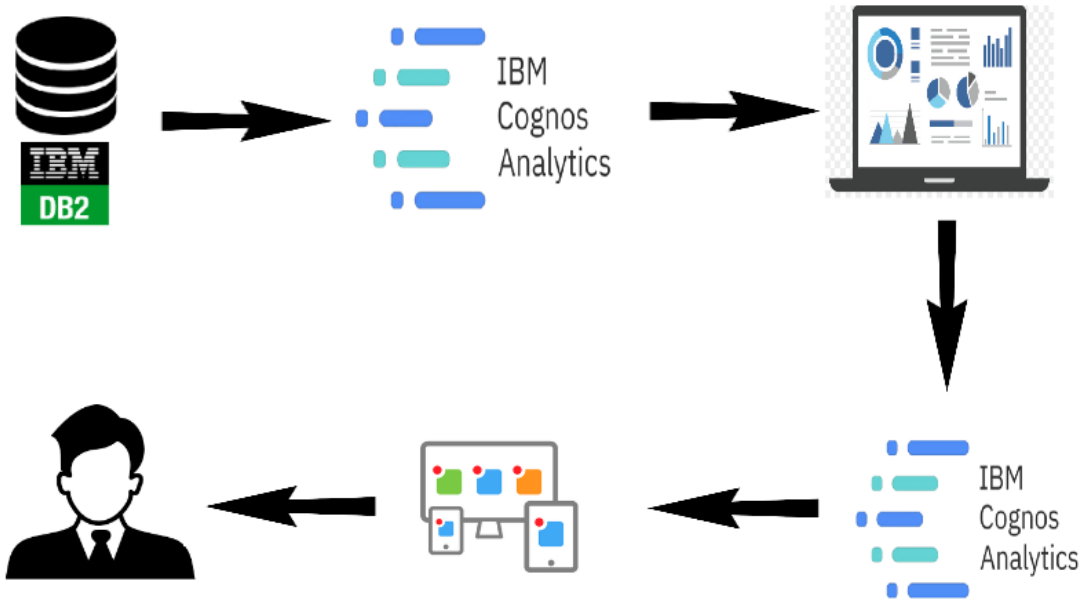
To know development in a society, Literacy is another proper indicator of economic development. For purpose of census, a person in age limit of seven and above, who can both write and read with understanding in any of the language is considered as a literate in India. Literacy plays a major role in the economic development of a nation. Although India has raised its current literacy rate of 74.04% (2021) from 12% at the time of Independence in 1947, its still lag behind the world average literacy rate of 84%. Compared with other nations, Republic of India has the largest illiterate population.

India Literacy Rate (According to 2011 Census)	
Overall	74.04%
Male	82.14%
Female	65.46%

Majority of states in India has shown majors signs of improvement in their overall illiteracy rate thus contributing towards a literate nation

Here we are analysing literacy rate in India for 2021. This dataset contains a record Literacy rate each state of India, here we are going to analyse State wise, Region wise and Overall Literacy rate among Children, Women and Men in India in India.

Technical Architecture:



Problem Understanding:

Analyzing literacy rate is crucial for various reasons, as it provides valuable insights into the educational landscape and social development of a population or region. Literacy rate analysis helps assess the effectiveness of educational systems and policies. It allows policymakers and educators to identify strengths and weaknesses in the education system and make data-driven decisions to improve it. Monitoring Progress: Regular analysis of literacy rates allows for monitoring progress over time. It helps measure the impact of various initiatives and interventions, allowing stakeholders to adjust their strategies if needed

Business Problem:

Workforce Productivity: In a business setting, low literacy levels among employees can hinder productivity. Employees with limited literacy skills may struggle to understand written instructions, safety protocols, or training materials, leading to errors, accidents, and inefficiencies in the workplace.

Online Business and E-commerce: In the digital age, businesses heavily rely on online platforms for sales and communication. Low literacy rates can impact online engagement, e-commerce transactions, and customer support interactions.

Training and Development: Employee training and professional development are critical for a company's growth. Limited literacy skills can impede the effectiveness of training programs

Business Expansion and Global Markets: Companies aiming to expand into new markets or operate internationally need to understand the literacy levels and communication preferences of their target audiences in different regions.

Literature Survey:

Demographic Information:

a. Age: [ ] years

b. Gender: [ ] Male [ ] Female [ ] Non-binary [ ] Prefer not to say

c. Educational Background:

- No formal education
- Some primary education
- Completed primary education
- Some secondary education
- Completed secondary education
- Vocational training
- Some college/tertiary education
- Completed college/tertiary education
- Graduate or post-graduate degree

Literacy Assessment:

a. Can you read and understand a simple sentence in your native language?

- Yes
- No

b. Can you write a simple sentence in your native language?

- Yes
- No

c. How confident do you feel in your ability to read and understand complex written materials (e.g., newspapers, official documents)?

- Very confident
- Confident
- Neutral
- Not confident
- Not at all confident

Social or Business Impact:

Education Equity: It helps identify disparities in educational opportunities and access to quality education across different demographic groups. This information can guide policymakers and educators in implementing targeted interventions to promote education equity, ensuring that all individuals have equal opportunities to learn and improve their literacy skills.

Poverty Reduction: Literacy is a key driver of economic empowerment. Higher literacy rates enable individuals to access better job opportunities, leading to increased income and poverty reduction. Analyzing literacy rates can inform poverty alleviation strategies and social programs aimed at improving livelihoods.

Empowerment and Inclusion: Literate individuals are better equipped to participate in societal and political processes, express their opinions, and advocate for their rights. Increasing literacy rates empowers marginalized communities and promotes social inclusion and active citizenship.

Data Collection and Extraction From Database:

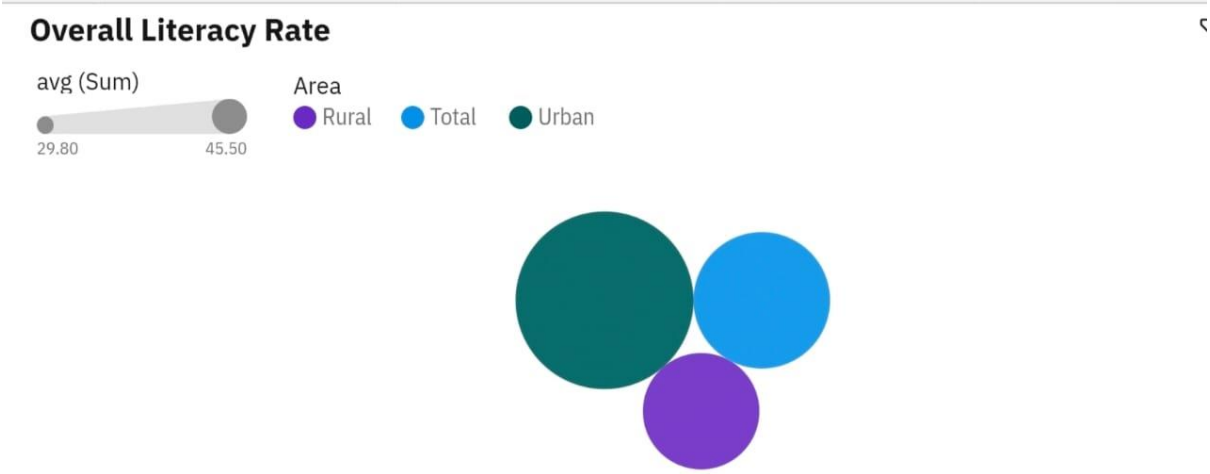
States/UTs	Area	Children a	Women(15-49)	Men(15-49)	Women (a	Men(15-49)	10 yr Schooling
India	Urban	18.1	83	89.6	56.3		62.1
India	Rural	12	65.9	81.5	33.7		43.7
India	Total	13.6	71.5	84.4	41		50.2
Andaman	Urban	0	86.6	89.3	59.7		59.4
Andaman	Rural	33.7	85.6	94.7	47.6		47.7
Andaman	Total	42.6	86	92.5	52.5		52.3
Andhra Pr	Urban	10.2	79	86.4	51.2		59.5
Andhra Pr	Rural	9.8	63.8	76.3	34.3		42.5
Andhra Pr	Total	9.9	68.6	79.5	39.6		47.9
Arunachal	Urban	8	84.7	92.1	55.4		64.1
Arunachal	Rural	5.5	71.6	85.6	36.2		45
Arunachal	Total	5.9	73.8	86.7	39.4		48.2
Assam	Urban	4.1	87.5	92.6	49		53.2
Assam	Rural	4.4	75.4	82.8	26.2		32.2
Assam	Total	4.4	77.2	84.3	29.6		35.5
Bihar	Urban	18.5	74.9	84	48		57.1
Bihar	Rural	10.5	54.5	77	25.2		38.9
Bihar	Total	11.5	57.8	78.5	28.8		42.8
Chandigarl	Urban	6.4	83.1	94.8	59.9		64.5
Chandigarl	Rural	0	-69.2	0	-30.8		0
Chandigarl	Total	6.3	83	94.8	59.6		64.5
Chhattisga	Urban	6.3	85.3	90.3	52.4		52.2
Chhattisga	Rural	4.2	71.3	86.3	32.1		38.1
Chhattisga	Total	4.6	74.6	87.3	36.9		41.5
Dadra and	Urban	6.2	87.7	95.4	48.6		58.8
Dadra and	Rural	1.3	67.9	91.6	24.2		40.7
Dadra and	Total	3.7	77.3	93.4	35.8		49.4
Goa	Urban	19.5	92.6	94.9	73		75
Goa	Rural	-18.2	93.4	98.5	69.3		79.4
Goa	Total	19	93	96.3	71.5		76.6
Gujarat	Urban	8.7	86.8	95.4	47.9		56.9
Gujarat	Rural	5.8	69	87.5	23.6		36.9
Gujarat	Total	6.9	76.5	90.9	33.8		45.6
Haryana	Urban	8.1	87.4	94.5	60.1		65
Haryana	Rural	7.4	78.8	93	44.1		60.8
Haryana	Total	7.6	81.7	93.5	49.5		62.2
Himachal	Urban	12.3	95	91.7	79.8		78.7

Preparing Data for Visualization:

https://us3.ca.analytics.ibm.com/bi/?perspective=ca-modeller&pathRef=.my_folders%2FLITERACYNEWMODULE

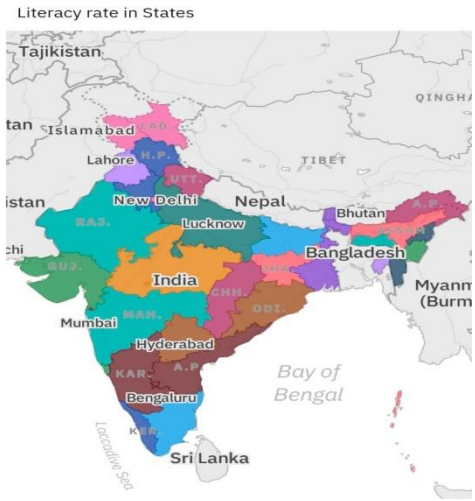
Data Visualization:

1.Overall Literacy Rate:



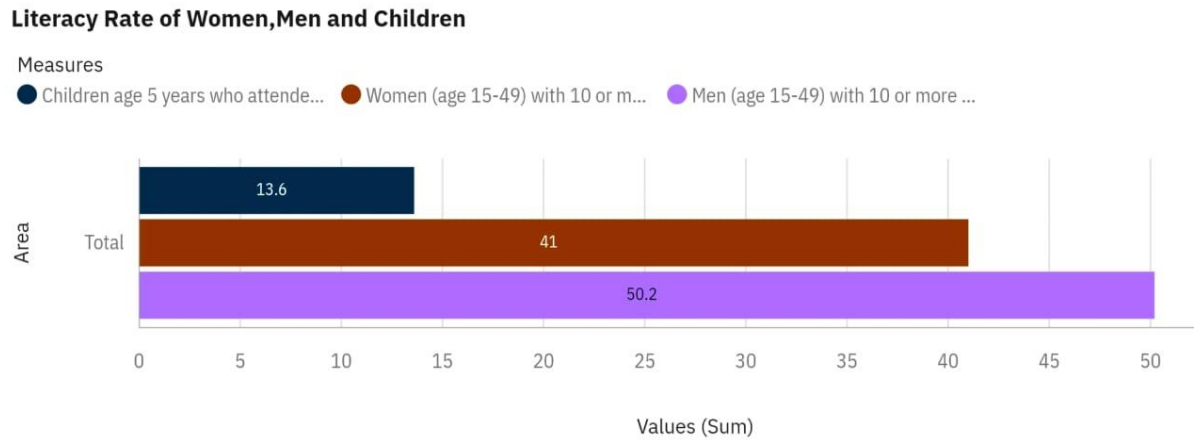
https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FOverall%2BLiteracy%2Brate&action=view&mode=dashboard&subView=model00000189ba636bff_00000002

2.Literacy Rate in States:



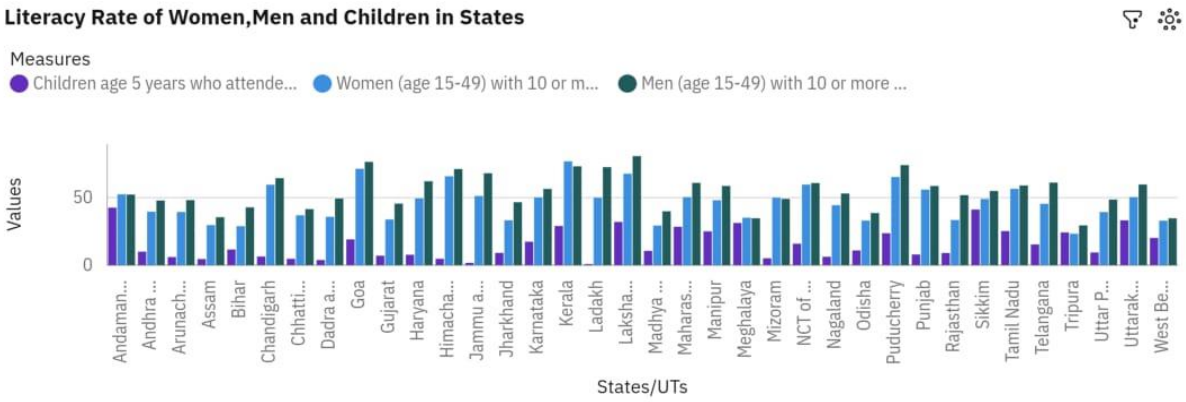
https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FLiteracy%2BRate%2Bin%2BStates&action=view&mode=dashboard&subView=model00000189ba636bff_00000002

3.Literacy Rate of Women,Men and Children:



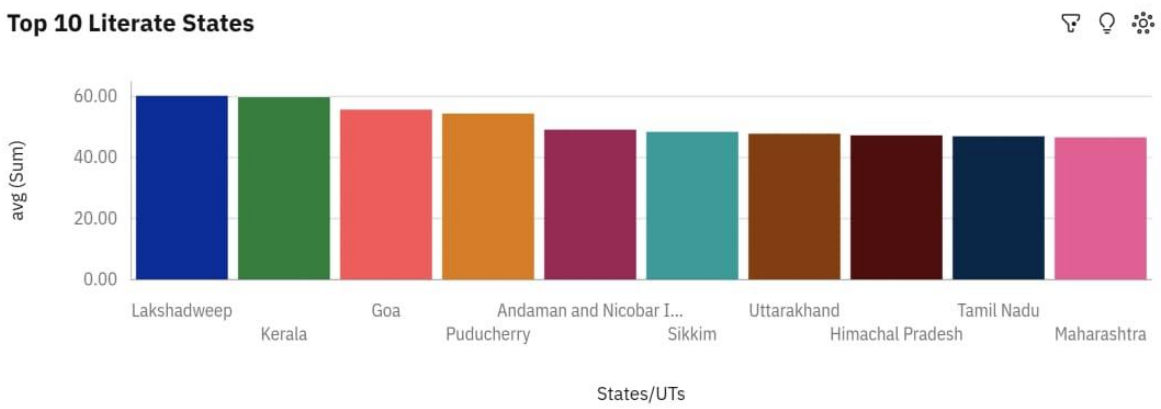
https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FLiteracy%2BRate%2Bof%2BMen%252Cwomen%252Cchildren&action=view&mode=dashboard&subView=model00000189ba636bff_00000002

4.Average Literacy Rate of Women,Men and Children:



https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FAverage%2Bliteracy%2Brate%2Bof%2Bmen...&action=view&mode=dashboard&subView=model00000189bab258a5_00000000

5.Top Literate States:

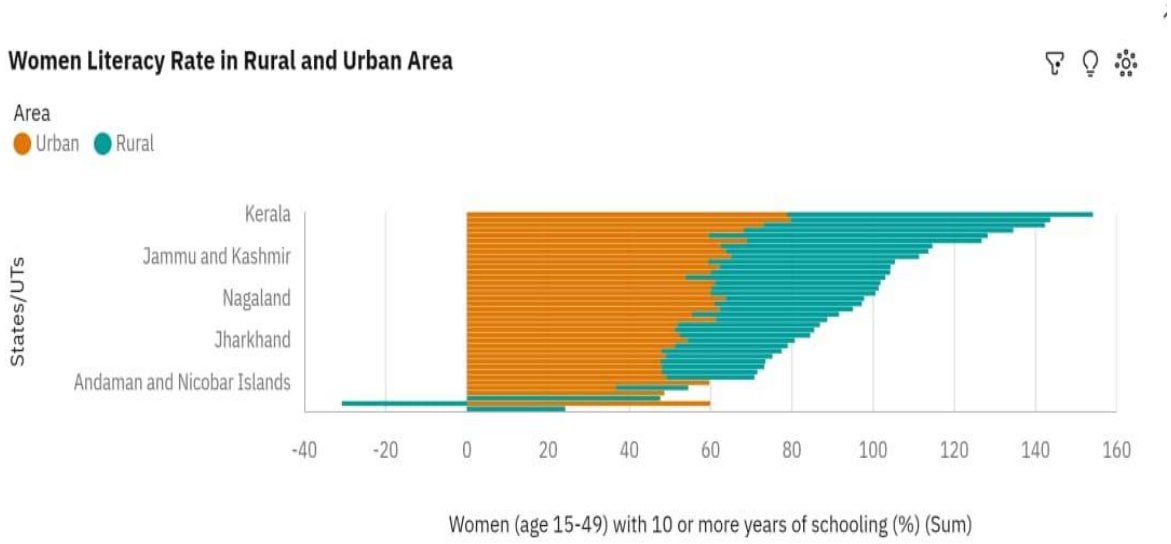


https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FAverage%2Bliteracy%2Brate%2Bof%2Bmen...&action=view&mode=dashboard&subView=model00000189bab258a5_00000000

6.Bottom Literate States:

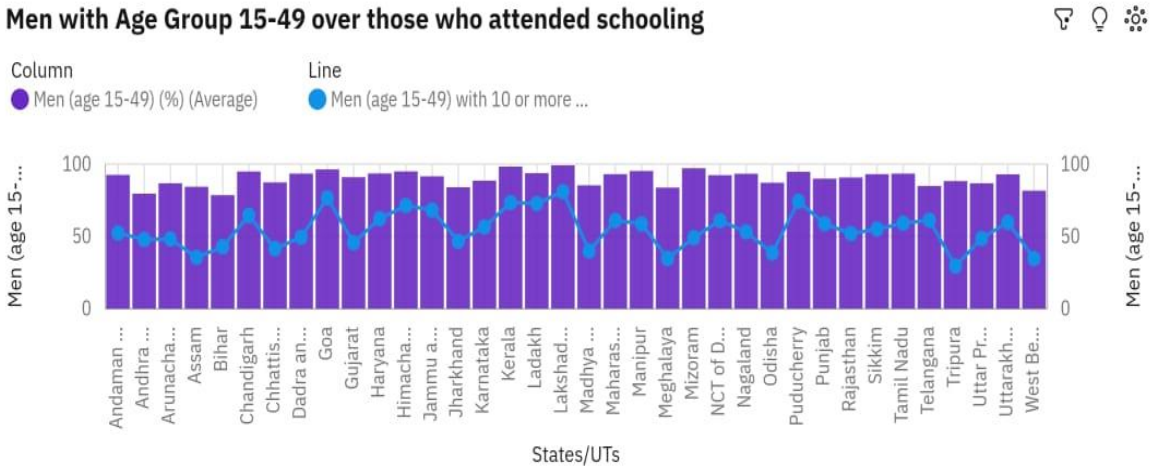
https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FAverage%2Bliteracy%2Brate%2Bof%2Bmen...&action=view&mode=dashboard&subView=model00000189bab258a5_00000000

7.Women Literacy Rate in Rural and Urban Area:



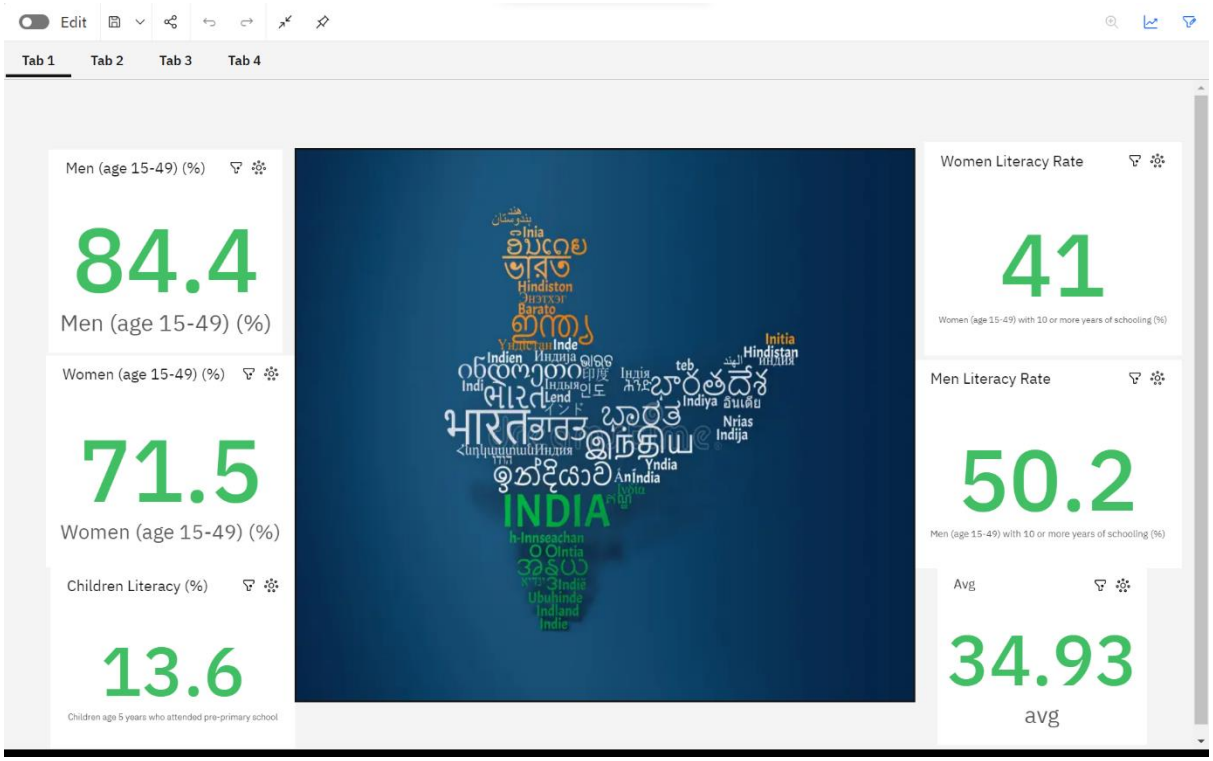
https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FAverage%2Bliteracy%2Brate%2Bof%2Bmen...&action=view&mode=dashboard&subView=model00000189bab258a5_00000000

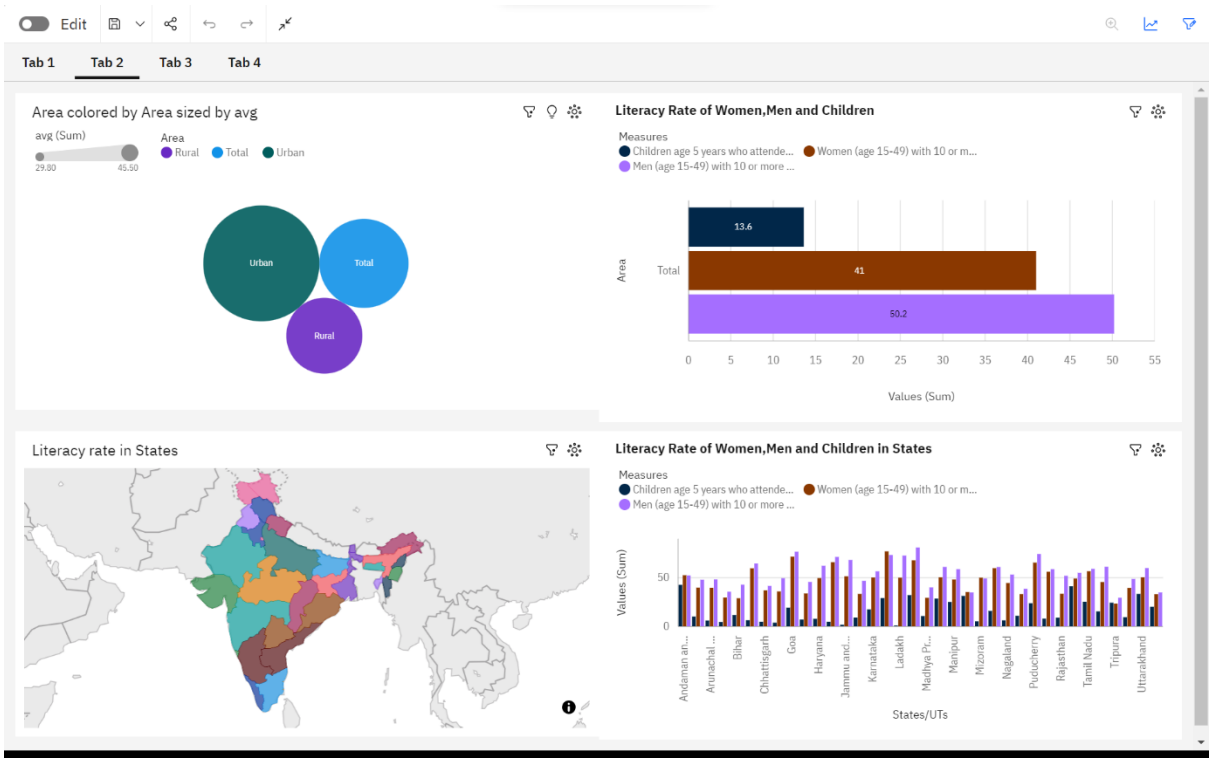
8.Men with Age 15-49 who Attended Schooling more than 10 Years

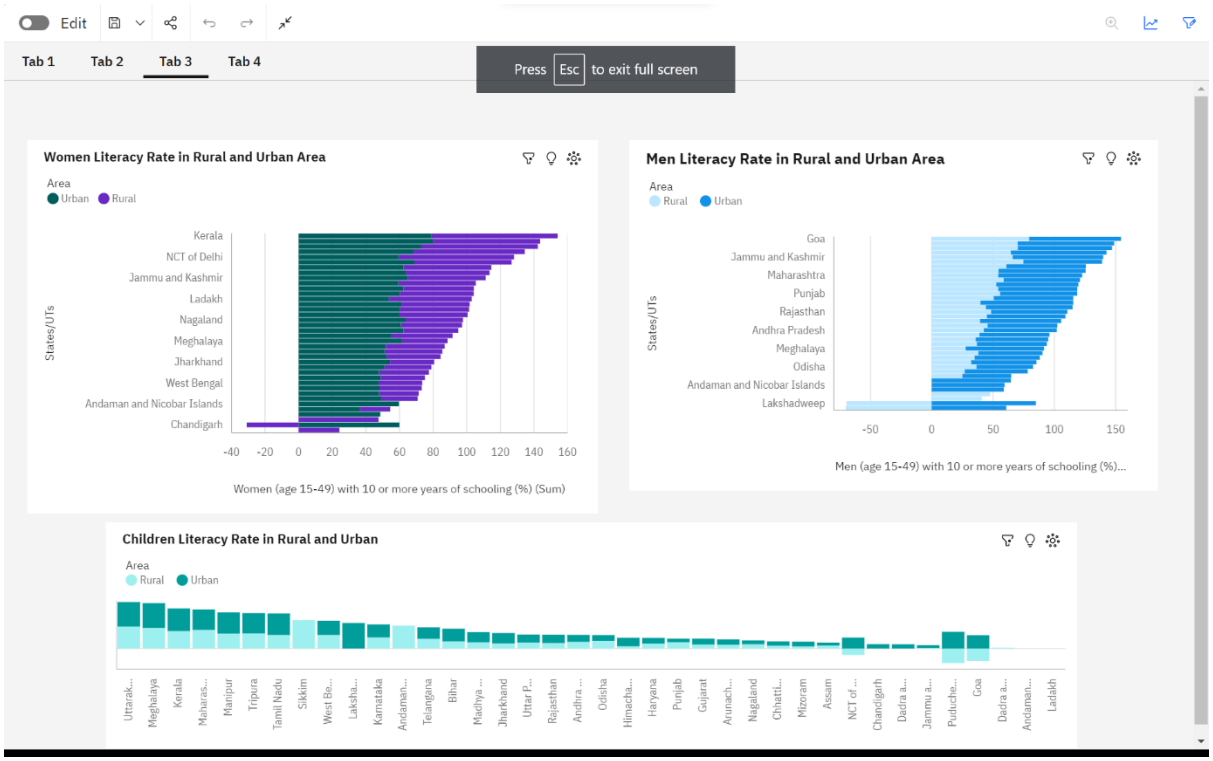


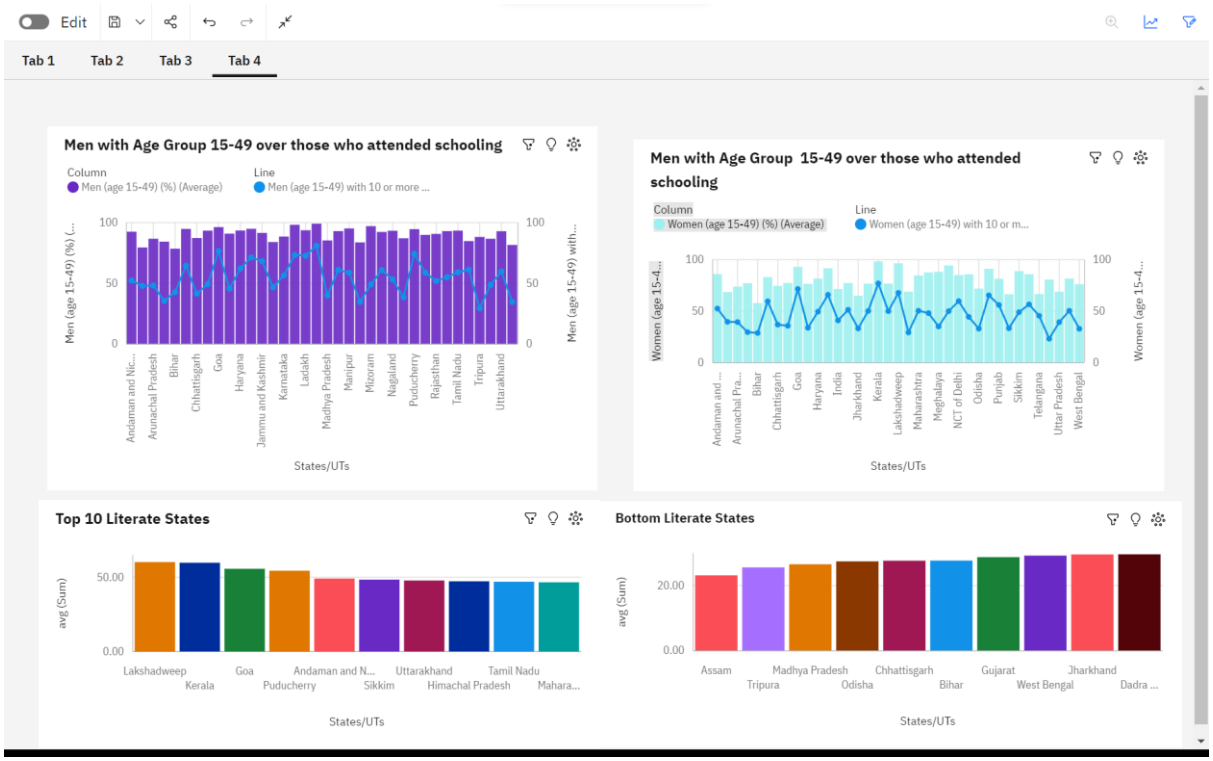
https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FAverage%2Bliteracy%2Brate%2Bof%2Bmen...&action=view&mode=dashboard&subView=model00000189bab258a5_00000000

Dashboard:


Edit
Tab 1
Tab 2
Tab 3
Tab 4
Men (age 15-49) (%)
84.4
Men (age 15-49) (%)
Women (age 15-49) (%)
71.5
Women (age 15-49) (%)
Children Literacy (%)
13.6
Children age 5 years who attended pre-primary school
INDIA
Women Literacy Rate
41
Women (age 15-49) with 10 or more years of schooling (%)
Men Literacy Rate
50.2
Men (age 15-49) with 10 or more years of schooling (%)
Avg
34.93
avg


Edit
Tab 1
Tab 2
Tab 3
Tab 4
Area colored by Area sized by avg
avg (Sum)
29.80
45.50
Area
Rural
Total
Urban
Urban
Total
Rural
Literacy Rate of Women,Men and Children
Measures
Children age 5 years who attende...
Women (age 15-49) with 10 or m...
Men (age 15-49) with 10 or more ...
13.6
41
50.2
Area
Total
0
5
10
15
20
25
30
35
40
45
50
55
Values (Sum)
Literacy rate in States
Literacy Rate of Women,Men and Children in States
Measures
Children age 5 years who attende...
Women (age 15-49) with 10 or m...
Men (age 15-49) with 10 or more ...
Values (Sum)
50
0
Andaman an...
Arunachal ...
Bihar
Chhattisgarh
Goa
Haryana
Jammu and...
Karnataka
Ladakh
Madhya Pr...
Manipur
Mizoram
Nagaland
Puducherry
Rajasthan
Tamil Nadu
Tripura
Uttarakhand
States/UTs

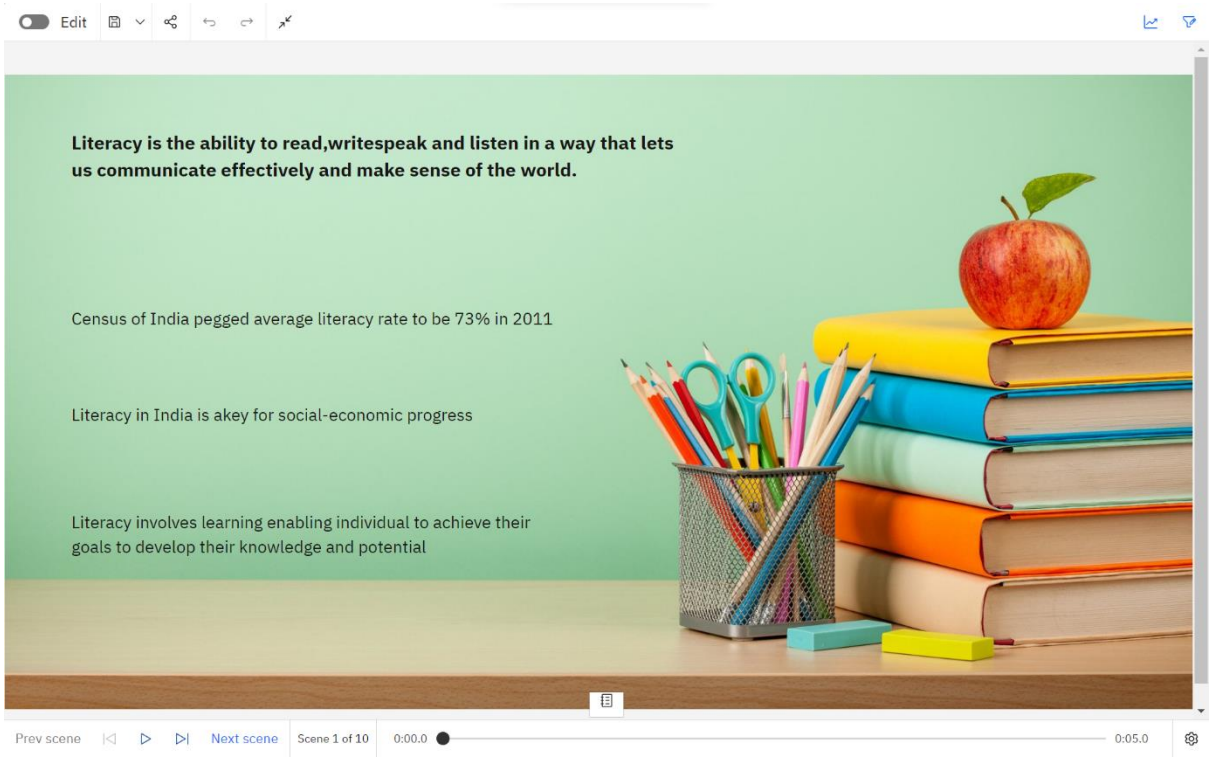


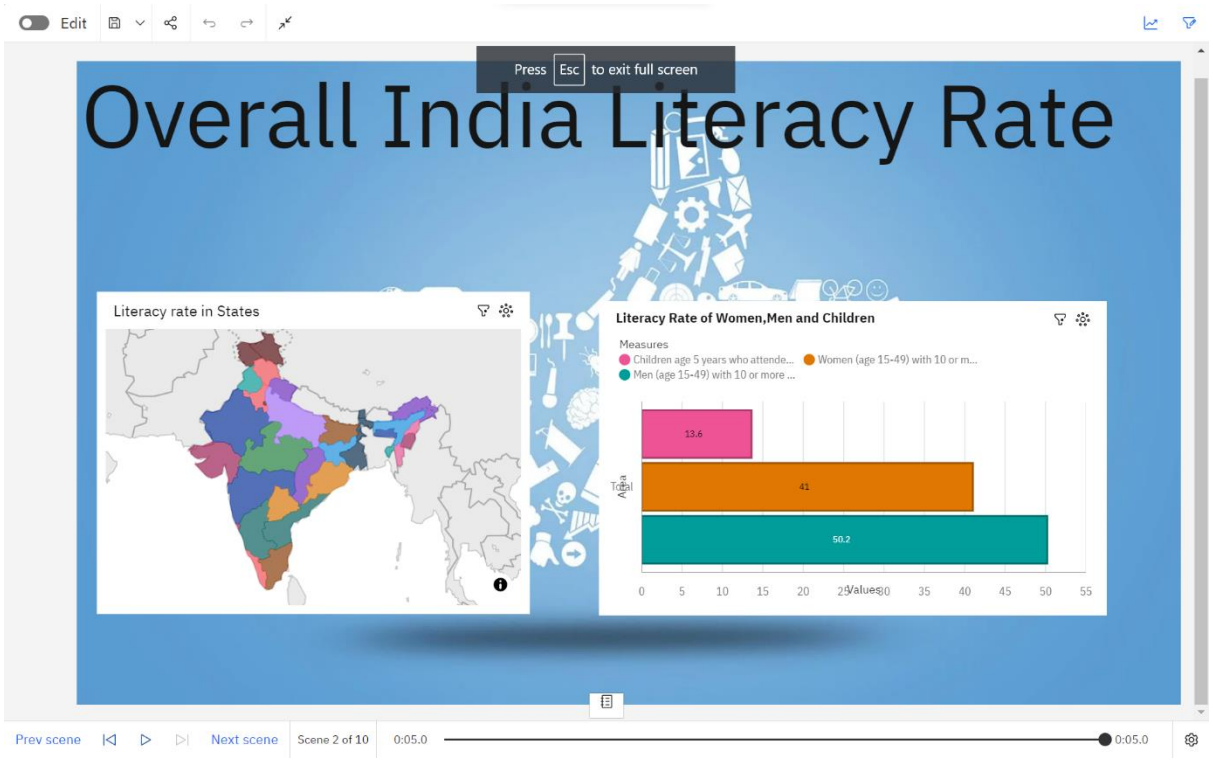


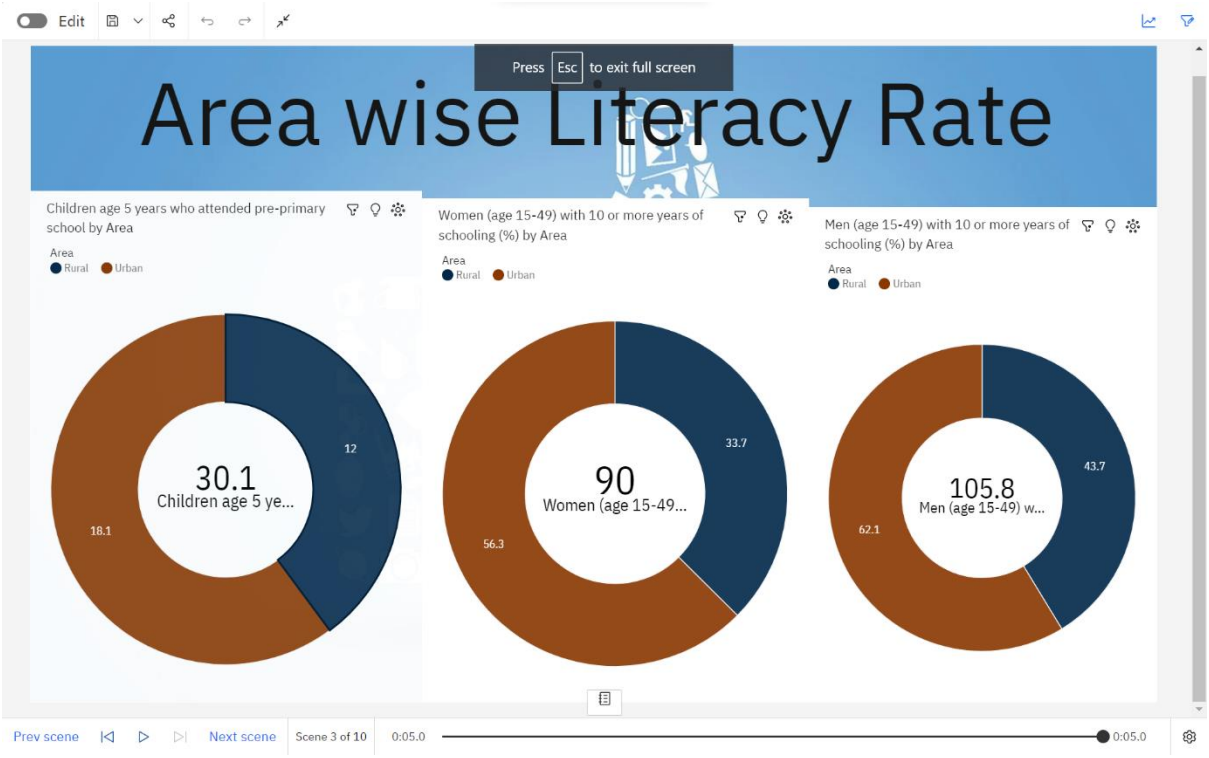
Link :

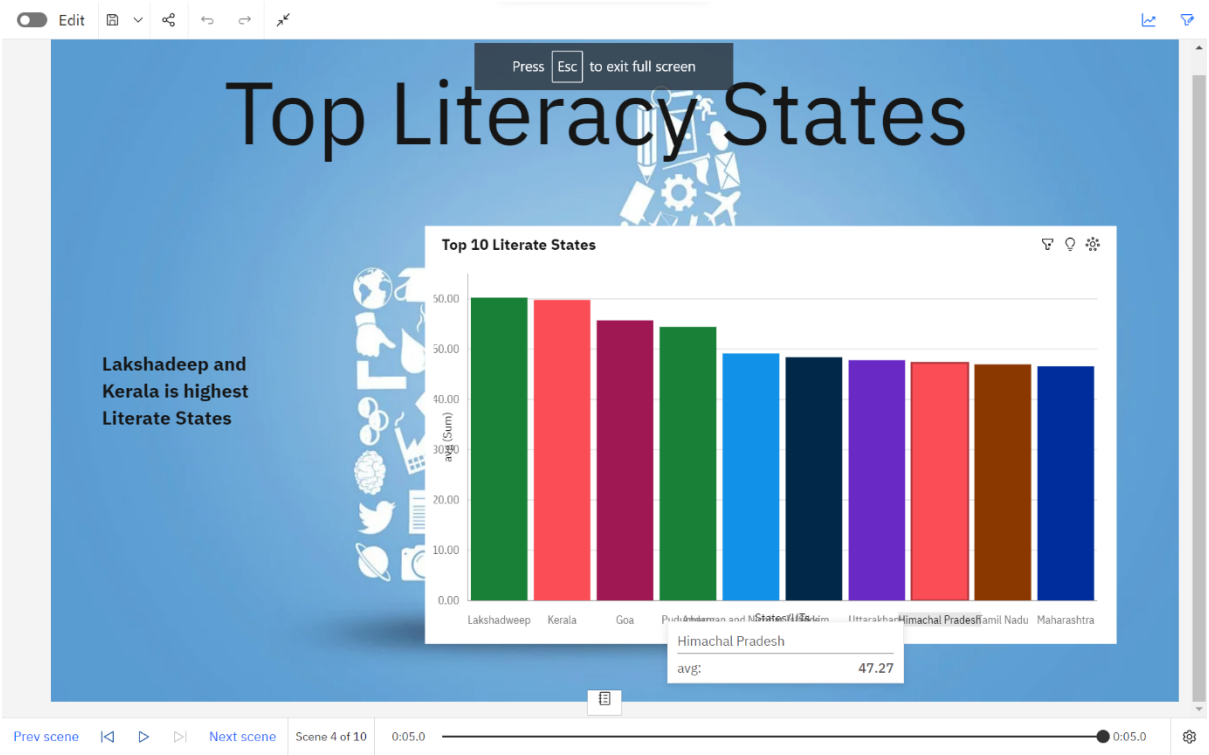
https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FNew%2Bdashboard%2528Literacy%2529&action=view&mode=dashboard

Story:


Edit
Literacy is the ability to read,writespeak and listen in a way that lets us communicate effectively and make sense of the world.
Census of India pegged average literacy rate to be 73% in 2011
Literacy in India is akey for social-economic progress
Literacy involves learning enabling individual to achieve their goals to develop their knowledge and potential
Prev scene
Next scene
Scene 1 of 10
0:00.0
0:05.0


Edit
Press Esc to exit full screen
Overall India Literacy Rate
Literacy rate in States
Literacy Rate of Women,Men and Children
Measures
Children age 5 years who attende...
Women (age 15-49) with 10 or m...
Men (age 15-49) with 10 or more ...
13.6
41
50.2
Total Age
0
5
10
15
20
25
30
35
40
45
50
55
Values
Prev scene
Next scene
Scene 2 of 10
0:05.0
0:05.0

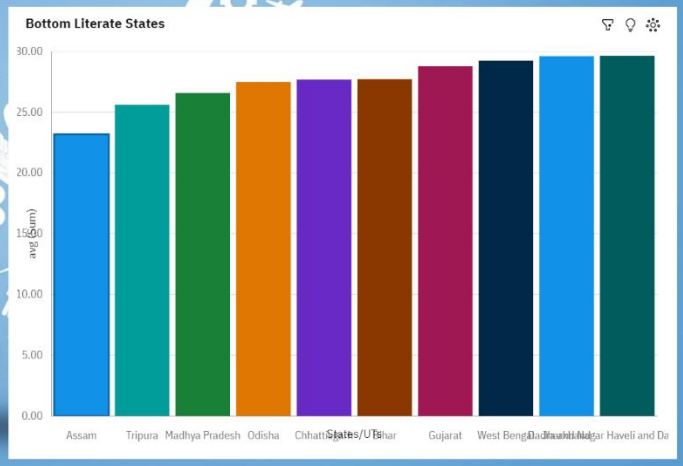

Edit
Press Esc to exit full screen
Area wise Literacy Rate
Children age 5 years who attended pre-primary school by Area
Area
Rural
Urban
30.1
Children age 5 ye...
12
18.1
Women (age 15-49) with 10 or more years of schooling (%) by Area
Area
Rural
Urban
90
Women (age 15-49...
33.7
56.3
Men (age 15-49) with 10 or more years of schooling (%) by Area
Area
Rural
Urban
105.8
Men (age 15-49) w...
43.7
62.1
Prev scene
Next scene
Scene 3 of 10
0:05.0
0:05.0


Edit
Press Esc to exit full screen
Top Literacy States
Lakshadeep and Kerala is highest Literate States
Top 10 Literate States
50.00
50.00
40.00
30.00
20.00
10.00
0.00
avg (Sum)
Lakshadweep
Kerala
Goa
Himachal Pradesh
Tamil Nadu
Maharashtra
Himachal Pradesh
avg: 47.27
Prev scene
Next scene
Scene 4 of 10
0:05.0
0:05.0

Edit

Bottom Literate States

Assam and Tripura are Bottom Literate States



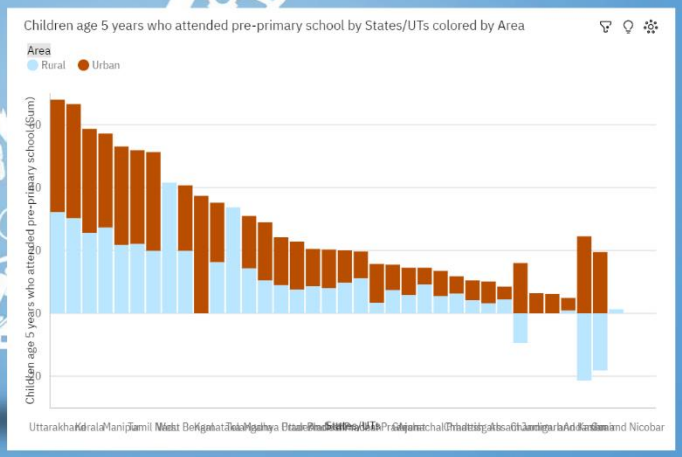
Prev scene | Next scene | Scene 5 of 10 | 0:05.0 | 0:05.0

Edit

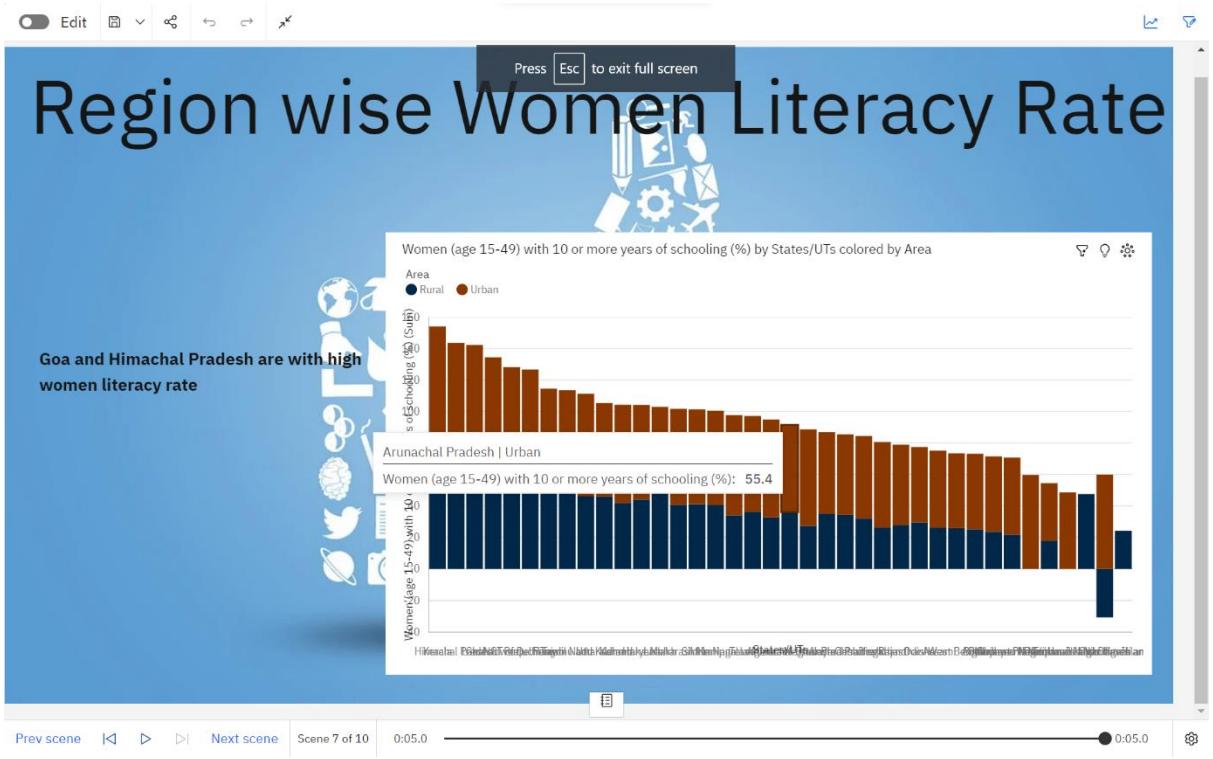
Press Esc to exit full screen

Region wise Children Literacy Rate

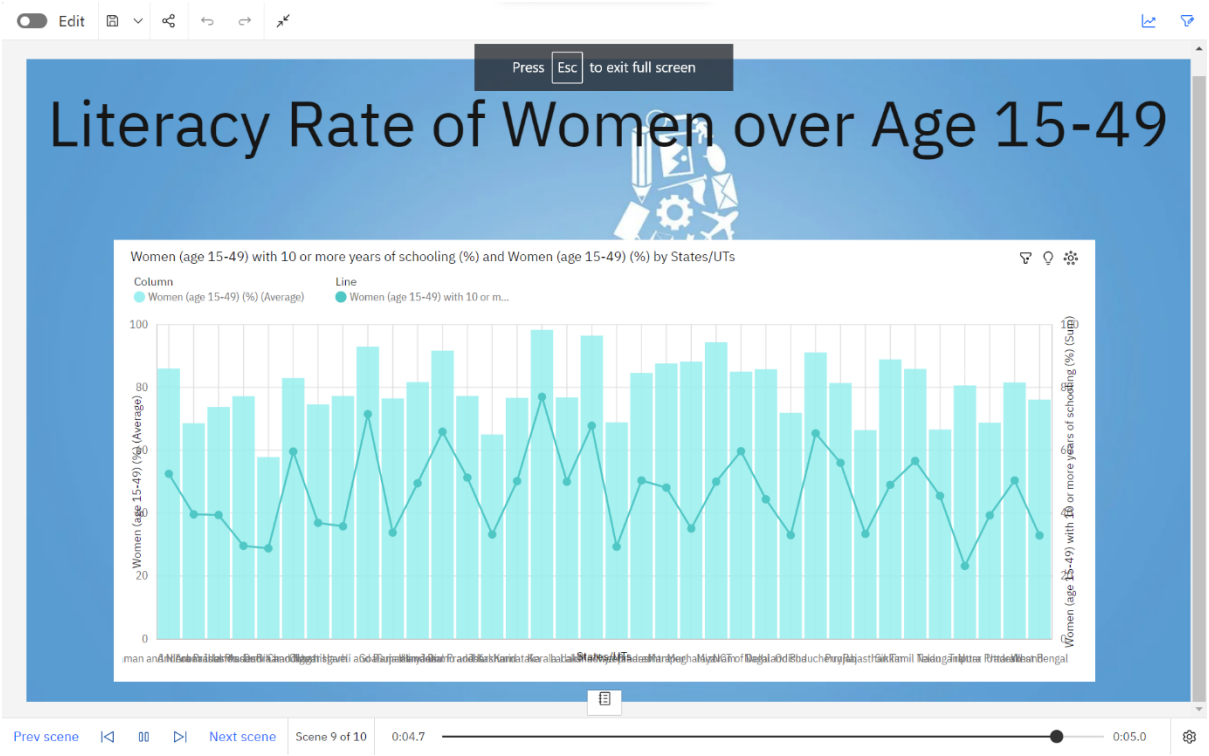
Uttarkhand and Meghalaya are states with high children literate rate

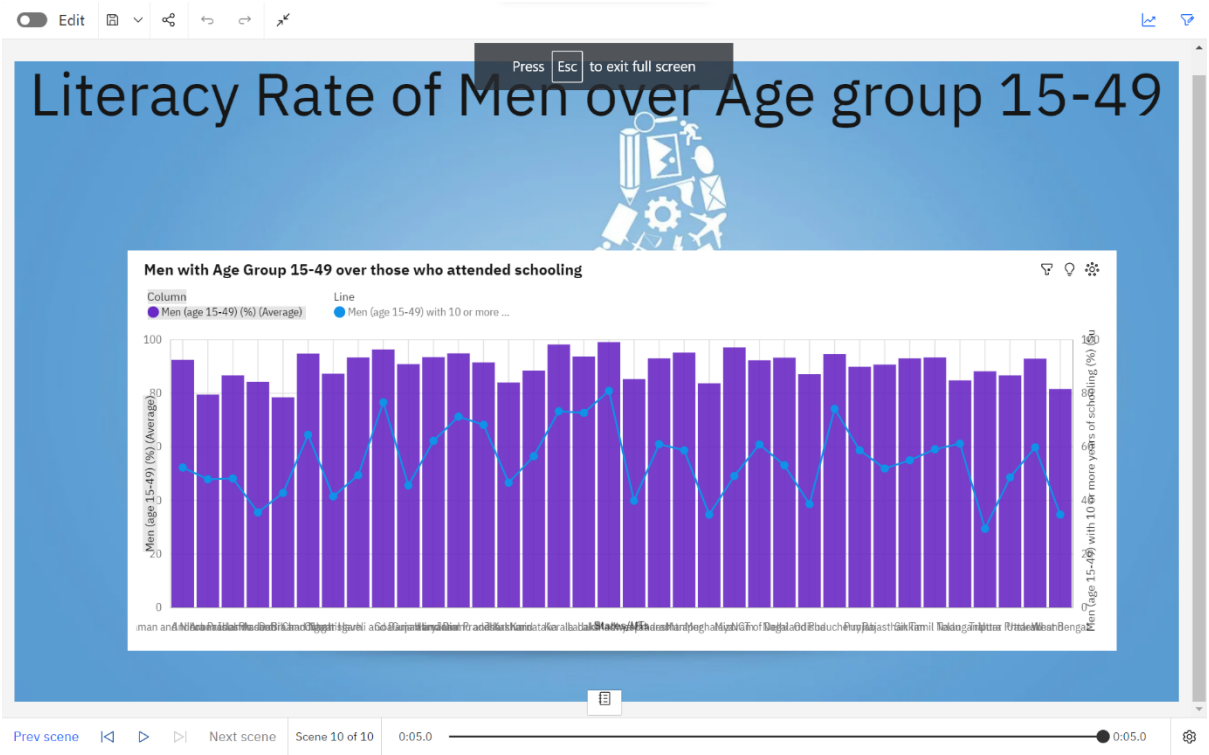


Prev scene | Next scene | Scene 6 of 10 | 0:05.0 | 0:05.0


Edit
Press Esc to exit full screen
Region wise Women Literacy Rate
Goa and Himachal Pradesh are with high women literacy rate
Women (age 15-49) with 10 or more years of schooling (%) by States/UTs colored by Area
Area
Rural
Urban
Arunachal Pradesh | Urban
Women (age 15-49) with 10 or more years of schooling (%): 55.4
Prev scene
Next scene
Scene 7 of 10
0:05.0
0:05.0

Edit
Press Esc to exit full screen
Region Wise Men Literacy Rate
Goa and Himachal Pradesh are with high men literacy rate
Men (age 15-49) with 10 or more years of schooling (%) by States/UTs colored by Area
Area
Rural
Urban
Prev scene
Next scene
Scene 8 of 10
0:04.2
0:05.0

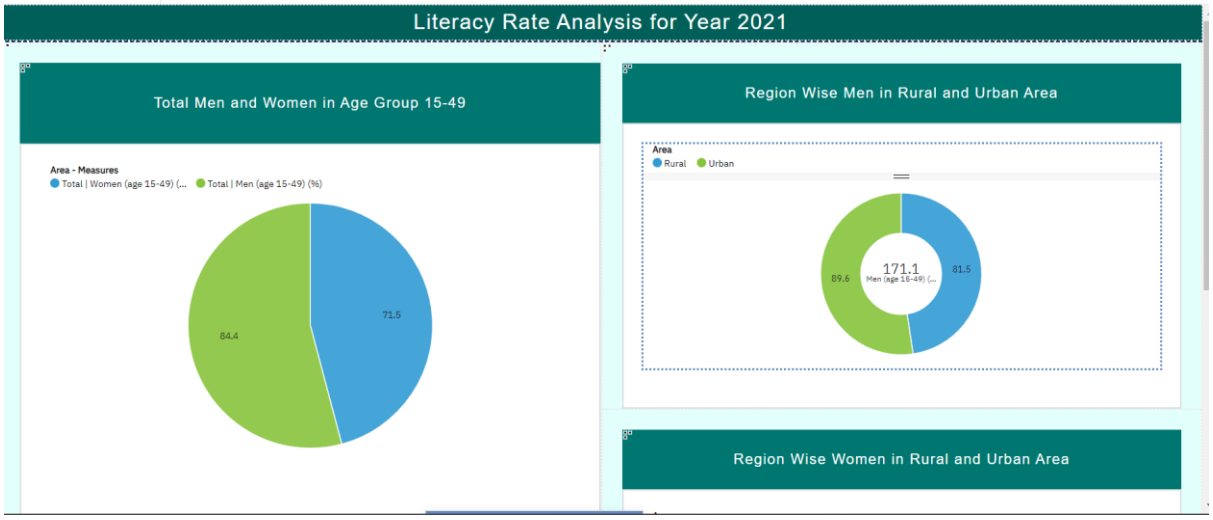


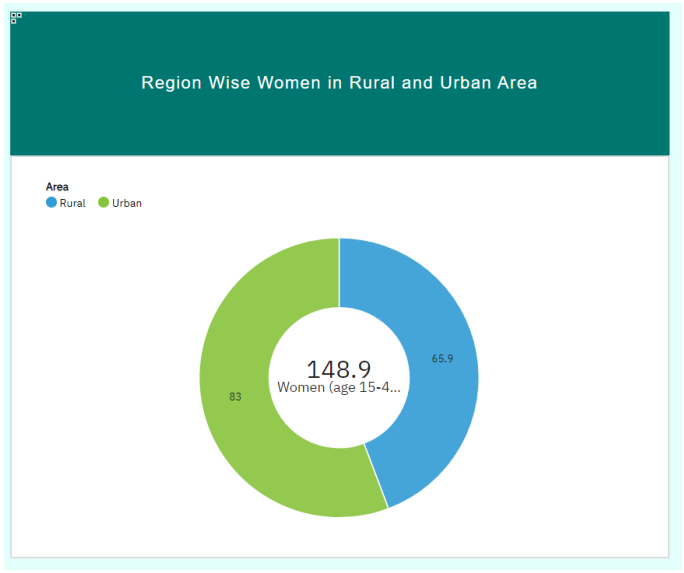


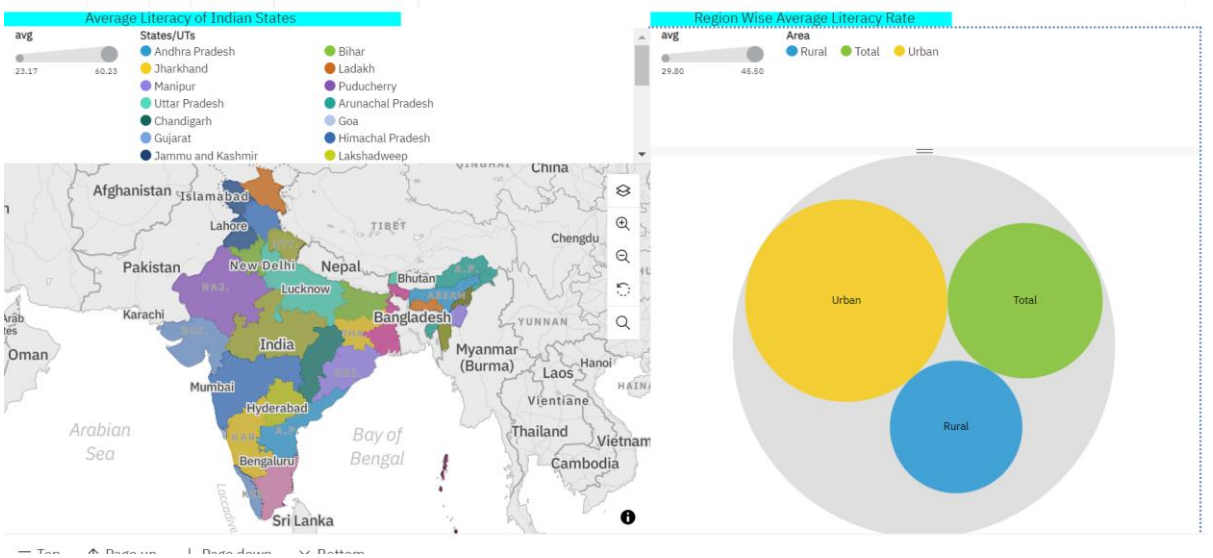
Link:

https://us3.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2FLitStory&action=view&sceneId=model00000189aaba9502_00000001&sceneTime=2150

Report:


Literacy Rate Analysis for Year 2021
Total Men and Women in Age Group 15-49
Area - Measures
Total | Women (age 15-49) (...
Total | Men (age 15-49) (%)
71.5
84.4
Region Wise Men in Rural and Urban Area
Area
Rural
Urban
171.1
Men (age 15-49) (...
89.6
81.5
Region Wise Women in Rural and Urban Area


Region Wise Women in Rural and Urban Area
Area
Rural
Urban
148.9
Women (age 15-4...
65.9
83

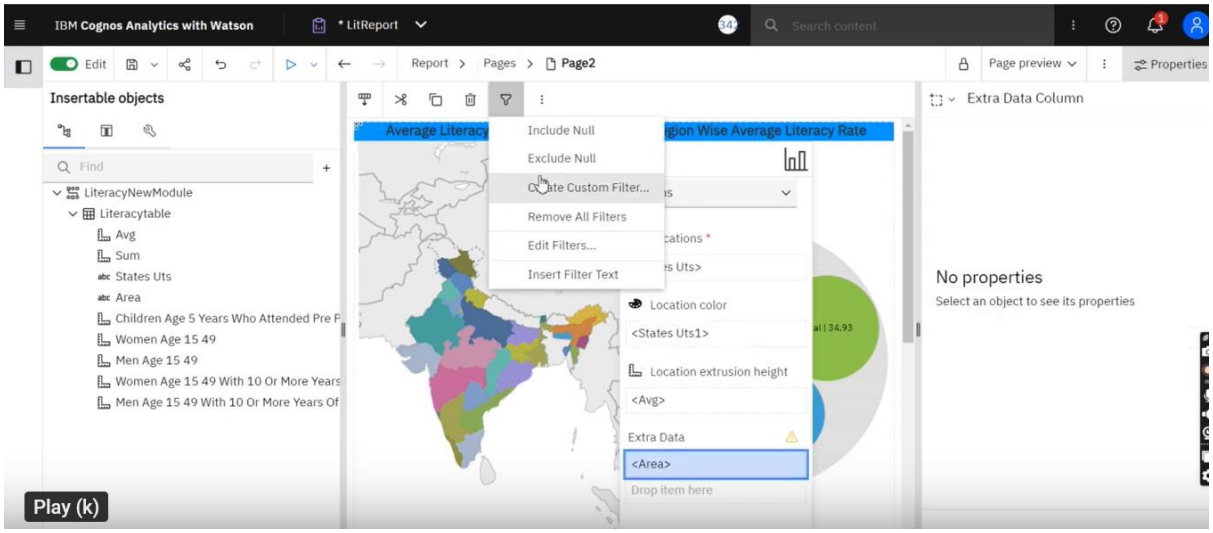

Average Literacy of Indian States
avg
23.17
60.23
States/UTs
Andhra Pradesh
Jharkhand
Manipur
Uttar Pradesh
Chandigarh
Gujarat
Jammu and Kashmir
Bihar
Ladakh
Puducherry
Arunachal Pradesh
Goa
Himachal Pradesh
Lakshadweep
Afghanistan
Islamabad
Lahore
Pakistan
New Delhi
Nepal
Lucknow
Karachi
India
Bangladesh
Bhutan
Oman
Mumbai
Hyderabad
Bengaluru
Sri Lanka
Arabian Sea
Bay of Bengal
China
TIBET
Chengdu
YUNNAN
Myanmar (Burma)
Laos
Hanoi
Vientiane
Thailand
Vietnam
Cambodia
Region Wise Average Literacy Rate
avg
29.80
46.50
Area
Rural
Total
Urban
Urban
Total
Rural

Link:

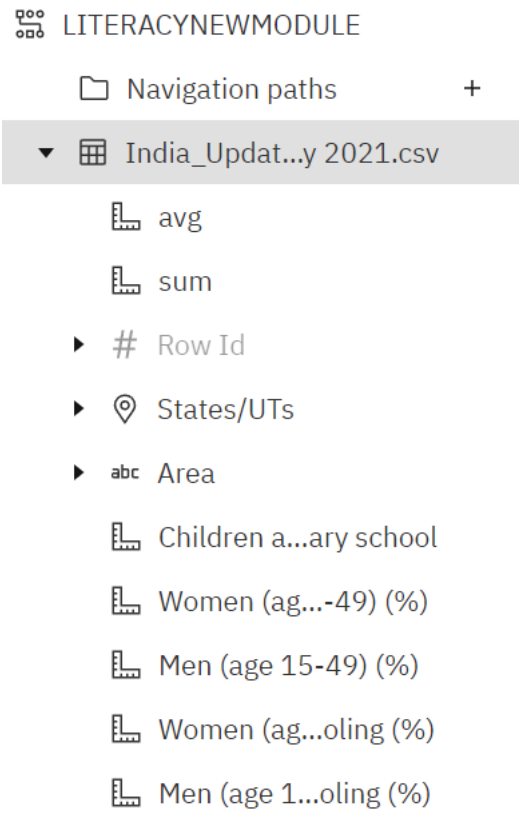
https://us3.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNew%2Breport%2528Literacy%2529&action=edit

Performance Testing

Utilization of Filters:



No of calculation fields:



No Of Visualizations/ Graphs:

- Overall Literacy Rate
- Literacy Rate in Indian States
- Literacy Rate of Women, Men and Children
- Average Literacy Rate of Women, Men and Children in States
- Top Literate States
- Bottom Literate States
- Women Literacy Rate in Rural and Urban Area
- Men with Age group 15-49 over those who attended schooling

Web Integration:

Dashboard link:

https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FNew%2Bdashboard%2528Literacy%2529&action=view&mode=dashboard&subView=model00000189aa84e4f7_00000000

Executable: <iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FNew%2Bdashboard%2528Literacy%2529&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&mode=dashboard&subView=model00000189aa84e4f7_00000000" width="1350" height="900" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>

Story Link:

https://us3.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2FLitStory&action=view&sceneId=model00000189aaba9502_00000001&sceneTime=5000

Executable:

<iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2FLitStory&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&sceneId=model00000189aaba9502_00000001&sceneTime=5000" width="1350" height="900" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>

Report Link:

https://us3.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNew%2Breport%2528Literacy%2529&action=run&format=HTML&prompt=false

Executable:

<iframe src="https://us3.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNew%2Breport%2528Literacy%2529&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=run&format=HTML&prompt=false" width="1350" height="900" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>

Website Link: http://literacyrate.rf.gd/wp-content/uploads/2023/08/index.html