# PAKISTAN EDUCATION DATA ANALYSIS REPORT 2024



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#### INTRODUCTION

In this case study we explore a comprehensive dataset of schools from various districts across Punjab, Pakistan offering a detailed analysis of educational infrastructure, enrollment, and school performance. The primary objective of this study is to assess the current state of the education system in Pakistan focusing on important factors such as student enrollment, gender representation, available facilities such as electricity, drinking water and overall school conditions.

By examining these important educational metrics, we hope to reveal patterns and trends that will guide decision-makers in making informed investments where they can have the most significant impact. The analysis will also highlight differences in access to quality education between urban and rural areas, giving insights that are essential for identifying regions that need targeted support.

A crucial part of this study involves figuring out how to effectively allocate a \$3 million fund from an international ed-tech company that aims to bridge the educational gaps in Punjab. We'll assess the existing infrastructure—like classrooms, sanitation facilities, and security measures—to suggest initiatives that will ensure the funds are used effectively. Additionally, we'll look into gender based enrollment trends and the distribution of teachers to promote equitable educational opportunities for every student, regardless of where they live or their gender.

Alongside our recommendations for fund allocation, this report will offer data-driven marketing strategies to help promote these initiatives effectively. Ultimately, our goal is to provide actionable insights that can enhance educational outcomes in Punjab, benefiting educators, policymakers, and students alike.

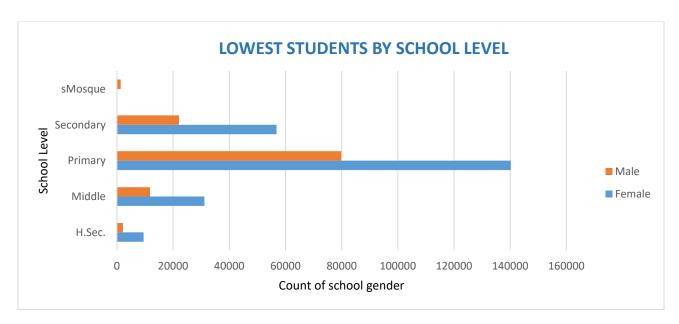
# DATA ANALYSIS & FINDINGS QUESTIONS

 ${\bf 01}$  Determine the total number of schools present in the dataset.

The dataset contains a total of 48,181 Schools in Punjab Pakistan.

**02** Identify the lowest students of school\_Gender (male & female) by school level of schools established in the 2000s.

Sum of enrollment	Column Labels		
Row Labels	Female	Male	<b>Grand Total</b>
H.Sec.	9467	2157	11624
Middle	31114	11789	42903
Primary	140200	79863	220063
Secondary	56831	22086	78917
sMosque		1349	1349
Grand Total	237612	117244	354856

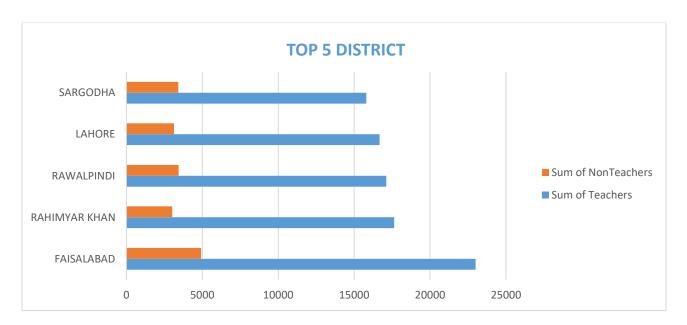


Based on the data for schools established in the 2000s, the school level with the lowest number of students is sMosque schools, which have only 1,349 male students and no female students. In terms of other school levels, Higher Secondary (H.Sec.) schools also have relatively low

enrollment figures, with 9,467 female students and 2,157 male students, totaling 11,624 students. These numbers highlight that sMosque schools, in particular, have the least number of students, especially for female students, who are completely absent from this school level. This suggests a significant gap in enrollment at the sMosque level, especially for females, while higher secondary schools also show lower student numbers compared to primary and secondary levels. Addressing these gaps can help improve educational access and participation across all school levels.

**03** Determine the top 5 districts with the highest number of teachers and non-teachers in schools.

Security	Sum of Teachers	Sum of NonTeachers
FAISALABAD	22996	4918
RAHIMYAR KHAN	17641	3013
RAWALPINDI	17120	3438
LAHORE	16676	3130
SARGODHA	15798	3418
<b>Grand Total</b>	90231	17917

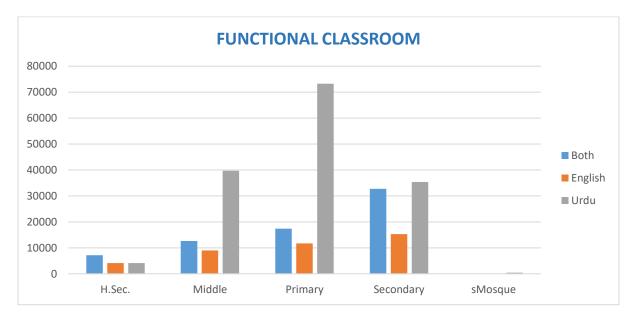


The top 5 districts with the highest number of teachers and non-teachers in schools are as follows: Faisalabad leads with the highest numbers, having 22,996 teachers and 4,918 non-teachers, showing a significant workforce in the district's schools. Rahimyar Khan comes next, with 17,641 teachers and 3,013 non-teachers, followed by Rawalpindi, which has 17,120 teachers and 3,438 non-teachers. Lahore ranks fourth with 16,676 teachers and 3,130 non-teachers, while Sargodha rounds out the top five with 15,798 teachers and 3,418 non-teachers. This data highlights the districts where the educational workforce is most concentrated, particularly in

Faisalabad, which has the largest number of both teachers and non-teachers. These figures suggest that these districts have a strong support system for educational activities, with a large number of both teaching and non-teaching staff ensuring the smooth operation of schools.

**04** Explore the school level and medium that have the lowest number of functional classrooms.

Sum of functional_classrooms	Column Labels			
Row Labels	Both	English	Urdu	<b>Grand Total</b>
H.Sec.	7149	4135	4146	15430
Middle	12611	8981	39706	61298
Primary	17364	11697	73212	102273
Secondary	32748	15276	35406	83430
sMosque	81	29	403	513
<b>Grand Total</b>	69953	40118	152873	262944

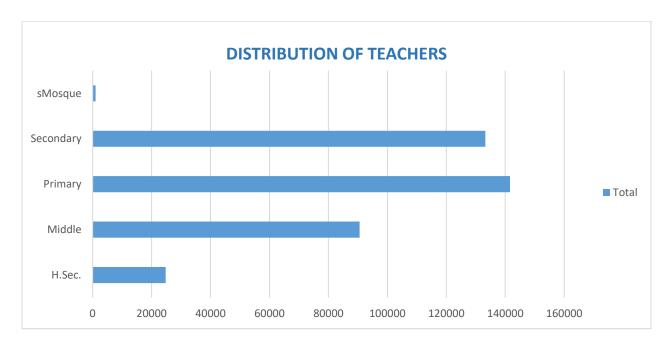


The table presents the distribution of functional classrooms across different school levels and mediums of instruction. At the Higher Secondary level, schools with both English and Urdu mediums have 7,149 classrooms, while English medium schools have the fewest at 4,135, compared to 4,146 in Urdu medium schools. At the Middle level, schools offering both mediums report 12,611 classrooms, with English medium schools at 8,981 and Urdu medium schools significantly ahead with 39,706 classrooms. For the Primary level, both mediums have 17,364 classrooms English medium schools have 11,697, while Urdu medium schools lead with 73,212 classrooms. At the Secondary level, schools with both mediums total 32,748 classrooms, with English medium schools at 15,276 compared to 35,406 in Urdu medium schools. In Mosque

schools, the gap is even wider, with both mediums having 81 classrooms and English medium schools only 29, while Urdu medium schools have 403. Overall, English medium schools consistently have the lowest number of functional classrooms across all levels compared to both medium and Urdu medium schools.

05 Create a bar chart showcasing the distribution of teachers across different schools.

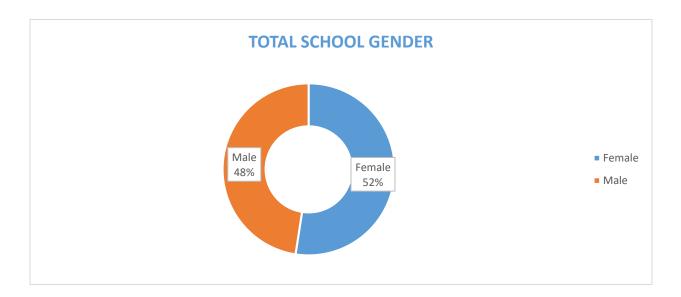
Row Labels	Sum of Teachers
H.Sec.	24794
Middle	90577
Primary	141588
Secondary	133246
sMosque	1011
Grand Total	391216



The bar chart shows the distribution of teachers across different school types. Primary schools have the most teachers, with a total of 141,588, indicating a strong focus on early education. Secondary schools follow closely with 133,246 teachers, reflecting the importance of education during this stage. Middle schools employ 90,577 teachers, while higher secondary schools (H.Sec.) have 24,794 teachers. In comparison, sMosque schools have the least number of teachers, with only 1,011. This chart clearly highlights the differences in teacher distribution, showing that primary and secondary schools have significantly more teachers than other type.

# ${f 06}$ Calculate the number of male and female students (School\_Gender).

Row Labels	Count of gender_studying
Female	25270
Male	22921
Grand Total	48191

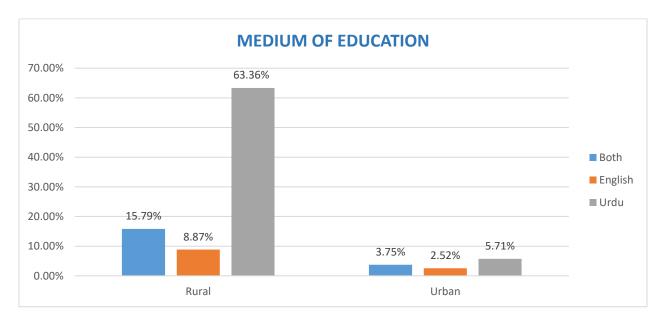


This data shows the gender distribution within the school there are a total of 25,270 female students and 22,921 male students indicating that there are significantly more female students compared to male students

07 Count the number of schools in rural and urban areas and calculate the percentage of schools offering Urdu and English medium education or both in each category.

Security	Count of school_name
Rural	42416
Urban	5775
<b>Grand Total</b>	48191

Count of school_name	Column Labels			
Security	Both	English	Urdu	<b>Grand Total</b>
Rural	15.79%	8.87%	63.36%	88.02%
Urban	3.75%	2.52%	5.71%	11.98%
Grand Total	19.54%	11.39%	69.07%	100.00%

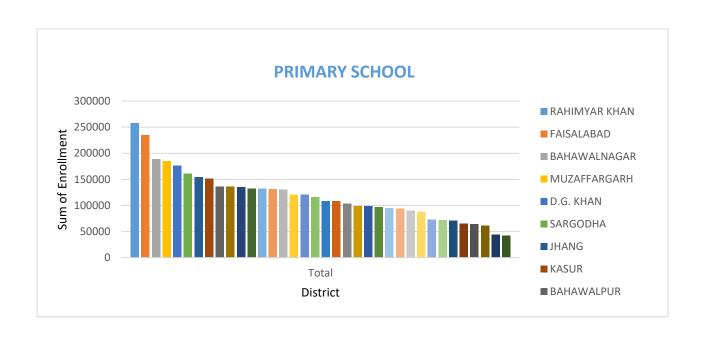


In the provided data, there is a distribution of schools between rural and urban areas. A total of 42,416 schools are located in rural areas, while 5,775 schools are in urban area making a total of 48,191 schools. When looking at the types of education offered, rural schools mainly focus on Urdu medium instruction, with 63.36% of schools providing this option. In comparison, 8.87% of rural schools offer English medium education, and 15.79% offer both. For urban schools, the percentages are much lower. Only 5.71% of urban schools provide Urdu medium education, 2.52% offer English medium, and 3.75% offer both. This data highlights that rural schools tend to have a higher percentage of Urdu medium education compared to urban schools.

**08** Identify the district with the highest enrollment in primary schools since their establishment.

Row Labels	Sum of enrollment
RAHIMYAR KHAN	257968
FAISALABAD	234888
BAHAWALNAGAR	188827
MUZAFFARGARH	185098
D.G. KHAN	176390
SARGODHA	160621
JHANG	154098
KASUR	151602
BAHAWALPUR	136521
MULTAN	136261
SIALKOT	135319
VEHARI	132376

OKARA	131889
KHANEWAL	131434
GUJRANWALA	129889
LAYYAH	120579
LAHORE	120464
T.T.SINGH	115610
GUJRAT	108560
PAKPATTAN	108198
BHAKKAR	103008
SHEIKHUPURA	98575
RAJANPUR	98489
RAWALPINDI	97003
NAROWAL	94576
SAHIWAL	93815
MIANWALI	89693
CHINIOT	87974
NANKANA SAHIB	73190
ATTOCK	72092
MANDI BAHA UD DIN	70658
LODHRAN	64909
KHUSHAB	64270
HAFIZABAD	61044
JHELUM	44161
CHAKWAL	42152
Grand Total	s4272201

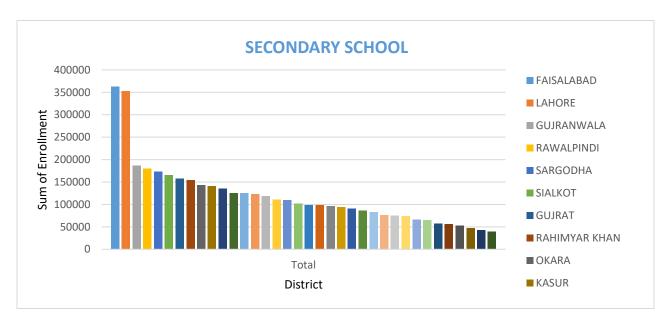


The district with the highest enrollment in primary schools since their establishment is Rahim Yar Khan, with a total enrollment of 257,968 students. This district leads significantly compared to other districts, with Faisalabad following in second place with 234,888 students, and Bahawalnagar in third with 188,827 students. Other districts like Muzaffargarh and D.G. Khan also show strong enrollment figures, with 185,098 and 176,390 students, respectively. This data highlights Rahim Yar Khan as the district with the largest number of students enrolled in primary schools, reflecting a strong demand for education in the area.

**09** Determine the district with the highest enrollment in secondary schools since their establishment.

Row Labels	Sum of enrollment
FAISALABAD	36286
LAHORE	35338
GUJRANWALA	18659
RAWALPINDI	18064
SARGODHA	173750
SIALKOT	16543
GUJRAT	15720
RAHIMYAR KHAN	154070
OKARA	143249
KASUR	141328
KHANEWAL	13510
SHEIKHUPURA	125310
MULTAN	124820
T.T.SINGH	12268
SAHIWAL	119178
BAHAWALNAGAR	110662
JHANG	109509
ATTOCK	101752
VEHARI	9916
BAHAWALPUR	9906
MANDI BAHA UD DIN	96709
CHAKWAL	94390
NAROWAL	9067
LAYYAH	8658:
MUZAFFARGARH	8284
MIANWALI	7616:
D.G. KHAN	75440
JHELUM	7473
BHAKKAR	6666
PAKPATTAN	65486

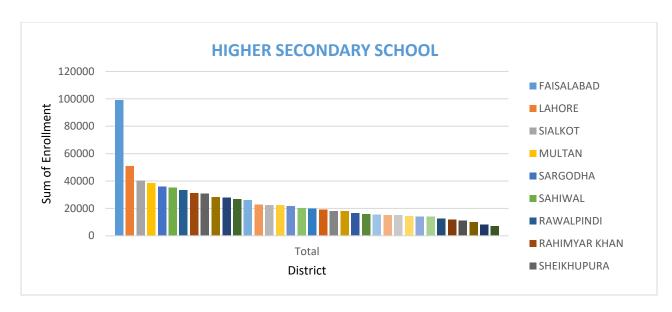
NANKANA SAHIB	57784
CHINIOT	56857
KHUSHAB	53342
LODHRAN	47296
HAFIZABAD	42826
RAJANPUR	39269
Grand Total	4272849



In this data, Faisalabad stands out as the district with the highest total enrollment, recording 362,868 students. Lahore closely follows with 353,382 students. These two districts have significantly larger enrollments compared to others, highlighting their importance in the education landscape. Other districts such as Gujranwala and Rawalpindi show relatively high numbers, with 186,595 and 180,642 students, respectively. Rahim Yar Khan, which had the highest enrollment in primary schools, records a lower overall total with 154,070 students in this dataset. This data illustrates how enrollment varies widely across districts, with Faisalabad and Lahore clearly leading in student numbers, likely due to their larger populations and more extensive educational infrastructure.

Find the district with the highest enrollment in higher secondary schools since their establishment.

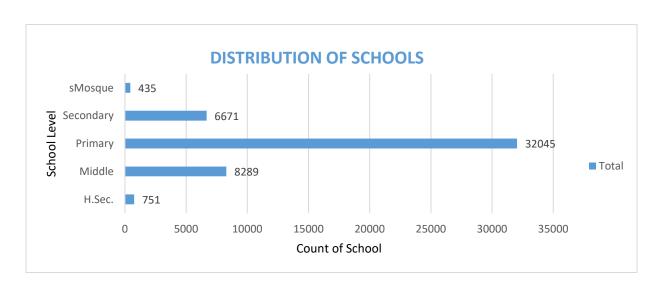
Row Labels	Sum of enrollment
FAISALABAD	99227
LAHORE	50918
SIALKOT	40423
MULTAN	38429
SARGODHA	36088
SAHIWAL	35339
RAWALPINDI	33499
RAHIMYAR KHAN	31133
SHEIKHUPURA	30830
BAHAWALPUR	28322
KHANEWAL	28009
VEHARI	27048
GUJRANWALA	25971
BAHAWALNAGAR	22815
GUJRAT	22618
JHANG	22285
D.G. KHAN	21770
KASUR	20300
NAROWAL	19752
HAFIZABAD	19179
T.T.SINGH	18219
ATTOCK	17879
MUZAFFARGARH	16695
RAJANPUR	16034
PAKPATTAN	15474
CHAKWAL	15162
OKARA	15081
MANDI BAHA UD DIN	14492
NANKANA SAHIB	14021
JHELUM	13932
LODHRAN	12786
KHUSHAB	11998
MIANWALI	11274
LAYYAH	10050
BHAKKAR	8093
CHINIOT	7050
Grand Total	872195



The district with the highest enrollment in higher secondary schools since their establishment is Faisalabad, with a total enrollment of 99,227 students. Lahore follows with 50,918 students, and Sialkot is third with 40,423 students. Faisalabad leads significantly in higher secondary school enrollment, indicating its strong focus on education at this level compared to other districts

11 Create a bar chart displaying the distribution of schools according to school\_level.

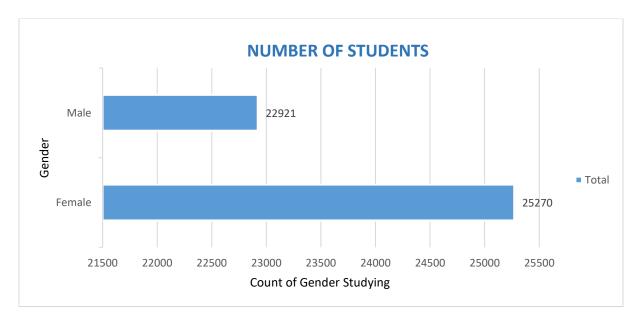
Row Labels	Count of school_name
H.Sec.	751
Middle	8289
Primary	32045
Secondary	6671
sMosque	435
<b>Grand Total</b>	48191



The bar chart displays the distribution of schools according to different school levels, highlighting a clear emphasis on primary education. Primary schools make up the largest portion, with 32,045 schools, indicating a strong focus on foundational education. This is followed by Middle schools, with 8,289 schools, and Secondary schools have 6,671 schools. The number of Higher Secondary schools is significantly lower, with only 751 schools. Lastly, Mosque schools represent the smallest category, with 435 schools. This distribution shows a gradual decline in the number of schools as the education level increases.

12 Generate a bar chart representing the number of students categorized by gender (School Gender).

Row Labels	Count of gender_studying
Female	25270
Male	22921
<b>Grand Total</b>	48191



The bar chart shows the number of students by gender. There are 25,270 female students and 22,921 male students, meaning there are more female students than male students. The chart gives a view of the difference in the number of male and female students.

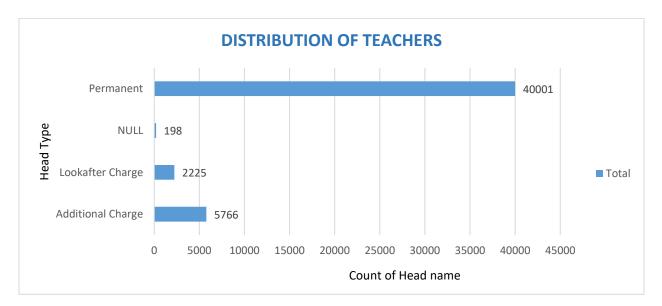
# 13 Create a table showcasing the school\_ownership with respect to schools.

Row Labels	Count of school_name
Building Provided By Local Residents	1029
Education Department	45671
Municipal Building	537
On Rent	184
Property Of Any Other Institution Besides The Municipal Institution	132
Running In The Mosque	128
School Council provided building	84
Some Other Govt. School	149
(blank)	277
Grand Total	48191

The table provides an overview of school ownership based on the type of institution or organization that owns or provides the school buildings. The Education Department accounts for the majority, owning 45,671 schools, which is a significant portion of the total. Schools where the building is provided by local residents make up 1,029 schools, while municipal buildings host 537 schools. A smaller number, 184 schools, operate in buildings that are rented. Additionally, 132 schools are housed in properties owned by institutions other than municipal organizations, and 128 schools are running in mosques. The School Council provided buildings for 84 schools, and 149 schools are hosted by other government schools. There are also 277 schools for which the ownership details are not specified (blank). Overall, the total number of schools in this dataset is 48,191.

14 Visualize the distribution of teachers based on their respective job posts using a bar chart.

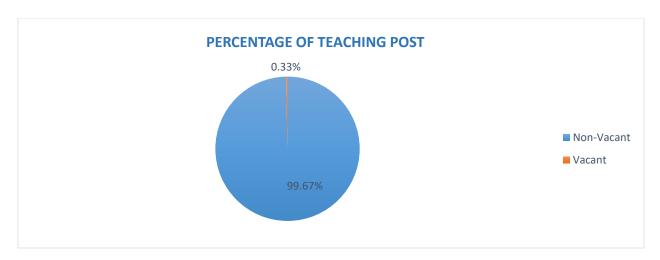
Row Labels	Count of head_name
Additional Charge	5766
Look after Charge	2225
NULL	198
Permanent	40001
Grand Total	48190



The bar chart shows the distribution of teachers based on their job posts. Most teachers, 40,001 in total, have Permanent positions, making up the largest group by far. This indicates a stable and consistent workforce in most schools. There are 5,766 teachers with Additional Charge, meaning they have extra responsibilities. Another 2,225 teachers are assigned Look after Charge, meaning they are temporarily handling certain duties. Lastly, 198 teachers have missing job information, marked as NULL. This chart helps us see that most teachers are permanently employed, with a smaller number handling extra or temporary roles.

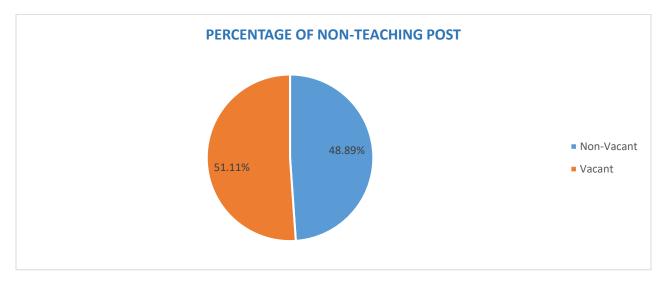
15 Create a pie chart to show the percentage of vacant and filled teaching and non-teaching posts.

Row Labels	Count of teachers-vac/non
Non-Vacant	99.67%
Vacant	0.33%
Grand Total	100.00%



The pie chart shows the percentage of vacant and filled teaching posts. The majority of teaching positions are filled, with 99.67% of the posts being non-vacant. Only a small portion, 0.33%, of the teaching posts remain vacant. This shows that almost all teaching positions are occupied, indicating stability in the teaching workforce.

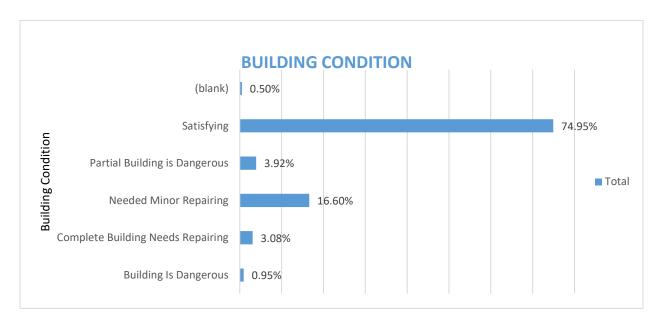
Row Labels	Count of nonteachers-vac/non
Non-Vacant	48.89%
Vacant	51.11%
<b>Grand Total</b>	100.00%



The pie chart shows the percentage of vacant and filled teaching posts. For non-teaching posts, the situation is different, with 48.89% of the posts filled and 51.11% remaining vacant. This near-equal split between vacant and filled positions suggests that there is a greater need to hire more non-teaching staff to support school operations effectively.

# $16 \ \, {\tt Determine} \ \, {\tt the} \ \, {\tt percentage} \ \, {\tt of} \ \, {\tt schools} \ \, {\tt with} \ \, {\tt satisfactory} \ \, {\tt building} \ \, {\tt conditions} \ \, {\tt bldg\_condition}).$

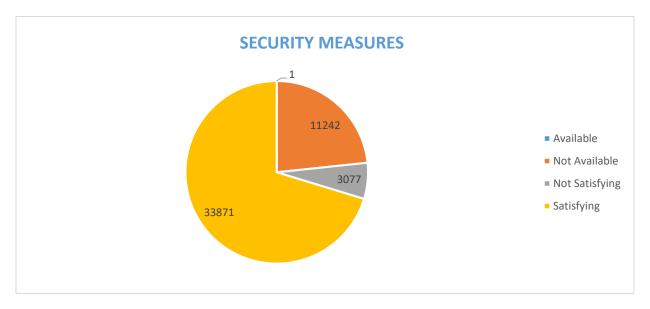
Row Labels	Count of school_name
Building Is Dangerous	0.95%
Complete Building Needs Repairing	3.08%
Needed Minor Repairing	16.60%
Partial Building is Dangerous	3.92%
Satisfying	74.95%
(blank)	0.50%
Grand Total	100.00%



The data indicates that 74.95% of schools have satisfactory building conditions, which means that the majority of schools are in good or acceptable condition. The remaining 25.05% of schools have some form of issue, with 16.60% needing minor repairs, 3.92% having partially dangerous buildings, and 3.08% requiring complete building repairs. A small percentage, 0.95%, of schools have buildings classified as dangerous, while 0.50% of schools have missing data on their building condition. This shows that although most schools are in satisfactory condition, a portion still requires varying levels of attention and repair.

# 17 Calculate the number of schools with satisfactory security measures.

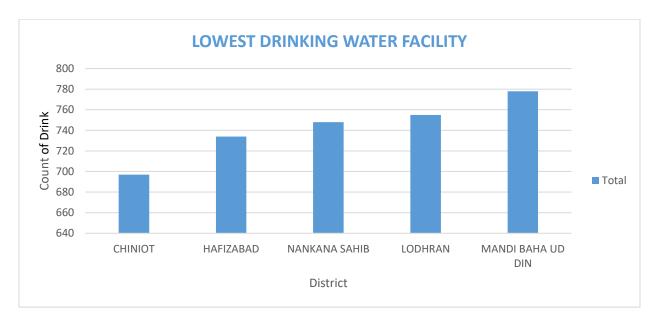
Security	Count of school_name
Available	1
Not Available	11242
Not Satisfying	3077
Satisfying	33871
Grand Total	48191



The number of schools with satisfactory security measures is 33,871. This means that a significant majority of schools have adequate security in place. However, 3,077 schools have unsatisfactory security measures, while 11,242 schools lack security altogether. Only 1 school has available security without any further classification.

18 List the names of the 5 districts with the lowest availability of drinking water facilities in schools.

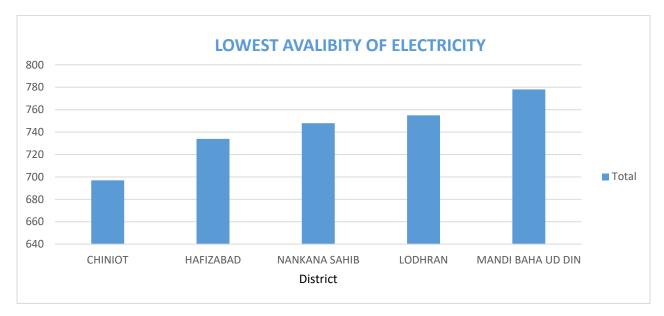
Security	Count of drink_water
CHINIOT	697
HAFIZABAD	734
NANKANA SAHIB	748
LODHRAN	755
MANDI BAHA UD	
DIN	778
Grand Total	3712



The five districts with the lowest availability of drinking water facilities in schools are Chiniot, with 697 facilities, followed by Hafizabad at 734 facilities. Nankana Sahib has 748 facilities, while Lodhran has 755. Lastly, Mandi Baha Ud Din has 778 facilities. These figures highlight a significant gap in access to drinking water in these districts, indicating a critical area for improvement in school infrastructure to ensure that all students have access to safe drinking water.

# 19 Identify the names of the 5 districts with the lowest availability of electricity in schools.

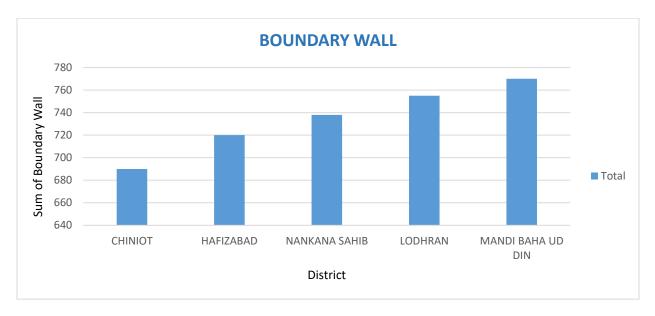
Security	Count of electricity
CHINIOT	697
HAFIZABAD	734
NANKANA SAHIB	748
LODHRAN	755
MANDI BAHA UD DIN	778
Grand Total	3712



The five districts with the lowest availability of electricity in schools are led by Chiniot, which has 697 facilities. Hafizabad follows with 734 facilities, while Nankana Sahib has 748 facilities. Lodhran has 755 facilities, and Mandi Baha Ud Din has 778 facilities. These figures highlight a significant need for improvement in access to electricity in schools within these districts.

20 Determine the names of the/ 5 districts with the lowest presence of boundary walls in schools.

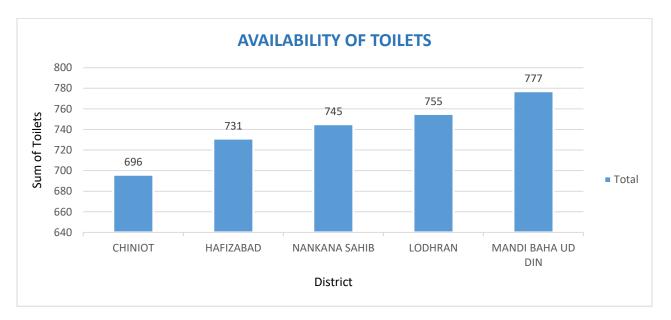
Security	Sum of boundary_wall
CHINIOT	690
HAFIZABAD	720
NANKANA SAHIB	738
LODHRAN	755
MANDI BAHA UD	
DIN	770
<b>Grand Total</b>	3673



The analysis of boundary wall presence in schools reveals that the five districts with the lowest numbers are led by Chiniot, which has only 690 boundary walls. Following Chiniot is Hafizabad, with 720 boundary walls, and Nankana Sahib, which has 738 boundary walls. Lodhran comes next with 755 boundary walls, while Mandi Baha Ud Din with 770 boundary walls. These figures indicate a significant lack of security infrastructure in these districts, particularly in Chiniot, which has the fewest boundary walls. The limited presence of boundary walls poses challenges to the safety and protection of school premises, underscoring the need for improvements in infrastructure to create a secure learning environment for students. Addressing this issue is essential for enhancing the overall safety of educational institutions in these areas.

# 21 List the names of the 5 districts with the lowest availability of toilets in schools.

Security	Sum of toilets
CHINIOT	696
HAFIZABAD	731
NANKANA SAHIB	745
LODHRAN	755
MANDI BAHA UD DIN	777
<b>Grand Total</b>	3704



The analysis of toilet availability in schools shows that the five districts with the lowest numbers are Chiniot, with only 696 toilets, followed by Hafizabad, which has 731 toilets. Nankana Sahib comes next with 745 toilets, while Lodhran has 755 toilets. Finally, Mandi Baha Ud Din rounds out the list with 777 toilets. These numbers indicate a significant lack of toilet facilities in these districts, especially in Chiniot, where access is particularly limited. This shortage can affect students' health and hygiene, making it harder for them to attend school regularly. Improving toilet availability is crucial to creating a safe and healthy environment for all students.

#### **Recommendations for Fund Allocation**

Based on the analysis of functional classrooms across different school levels and mediums of instruction, the allocation of the \$3 million fund should prioritize areas that will have the most immediate and long-term impact on improving educational infrastructure and outcomes. The following proposed initiatives are strategically designed to address critical gaps identified in the data.

#### School Level Upgradation (10 Million Rs):

Upgrading schools across different levels is essential to ensuring a smooth progression for students as they move from primary to secondary and higher education. According to the data, middle and secondary levels, especially in English medium schools, have a lower number of functional classrooms. By upgrading schools, particularly focusing on these levels, we can increase the capacity to accommodate more students, thereby improving the quality of education and reducing dropout rates. This allocation will address overcrowding in critical levels and enhance the learning environment.

#### Infrastructure Improvements (5 Million Rs):

Many schools, especially those with both mediums of instruction, have suboptimal infrastructure. To maximize educational improvement, investing in physical infrastructure is crucial. Infrastructure improvements should target the most neglected schools, especially those with the lowest functional classroom numbers. The data suggests that schools offering both mediums, particularly in rural areas, have room for improvement in terms of facilities. This fund allocation will ensure that classrooms are well-maintained and can accommodate more students comfortably, fostering a conducive learning environment.

#### Facilities (Drinking Water, Playgrounds, Labs) (2 Million Rs):

Access to basic facilities is a key determinant of a school's overall functionality. The dataset reveals a gap in essential facilities such as drinking water and playgrounds, especially in rural and Urdu medium schools. Allocating funds towards improving these facilities can have a direct impact on the students' well-being and academic performance. Moreover, establishing science labs in schools can enhance students' exposure to practical knowledge, particularly at the secondary level where science subjects become critical. By focusing on facilities, the overall learning experience will improve, leading to better educational outcomes.

#### New Middle and High Schools in Rural Areas (20 Million Rs):

The dataset highlights a significant gap in the availability of functional classrooms between urban and rural areas. Rural schools, especially at the middle and high levels, face a severe shortage of resources. Building new middle and high schools in these regions will directly address the need for more educational institutions in underserved areas. This initiative will increase access to education for students who may otherwise drop out due to a lack of nearby schools. The focus

on rural development is essential to bridging the urban-rural educational gap, ultimately contributing to more equitable education across regions.

#### New Primary Level Schools (10 Million Rs):

The primary level has the largest number of students. However, the high student-to-classroom ratio suggests a need for additional primary schools, particularly in rapidly growing areas. Building new primary schools will relieve pressure on existing schools, ensuring that young children have a strong foundation to continue their education. By investing in primary education, we set the stage for long-term educational improvements as these students advance through the school system.

#### **Data-Driven Marketing Strategies**

To promote the proposed initiatives effectively, targeted campaigns should focus on areas with the greatest need, as identified by the dataset. For example, districts with poor infrastructure, low classroom functionality, and inadequate facilities should be prioritized for outreach. Marketing campaigns could emphasize the benefits of improved infrastructure and facilities, particularly highlighting how these changes can directly impact student outcomes, reduce dropout rates, and enhance educational quality. Furthermore, social media and community engagement programs can be employed to raise awareness and gather community support for the initiatives. By engaging local leaders and stakeholders, these campaigns will foster a sense of ownership and urgency in improving the educational landscape.

#### **Budget Plan**

To ensure that the \$3 million fund is used optimally, the following budget plan outlines how resources will be allocated across all proposed initiatives:

- School Level Upgradation: (10 Million Rs) to upgrade schools, with a focus on expanding capacity in middle and secondary levels where functional classrooms are limited.
- Infrastructure Improvements: (5 Million Rs) for improving infrastructure, targeting schools with both mediums and ensuring classroom conditions are conducive to learning.
- Facilities: (2 Million Rs) to improve essential facilities like drinking water, playgrounds, and science labs, with an emphasis on rural and Urdu medium schools.
- New Middle and High Schools in Rural Areas: (20 Million Rs) to construct new schools, focusing on underserved rural areas to improve access to middle and high school education.
- New Primary Level Schools: (10 Million Rs) to build new primary schools, addressing overcrowding and ensuring adequate educational resources for young children.

This budget plan ensures that all critical areas identified in the analysis are covered, with no resources left unused. It focuses on addressing both immediate infrastructural needs and long-term educational development.

#### Conclusion

In conclusion, the comprehensive analysis of functional classrooms and educational infrastructure underscores several critical areas requiring attention and investment. By directing funds towards the upgradation of existing schools, enhancing infrastructure, and providing essential facilities such as safe drinking water and functional classrooms, we can significantly improve educational outcomes across Punjab. Additionally, the construction of new schools, particularly in rural and underserved regions, will expand access to education and reduce dropout rates among students who face barriers due to a lack of nearby institutions.

The strategic allocation of resources through targeted marketing and a well defined budget plan ensures that funds will be utilized efficiently, maximizing the impact of these initiatives. Datadriven decision-making plays a vital role in identifying the most pressing issues and implementing solutions that address the educational differences between urban and rural areas. By focusing on these key areas, we are not only improving the immediate quality of education but also contributing to a long-term vision of a more equitable, inclusive, and effective educational system across the province.