**Report on ECDE Enrollment Trends in Kibwezi East Sub-County (2018–2022)**

**Introduction**

This report presents an analysis of Early Childhood Development Education (ECDE) enrollment trends in Kibwezi East Sub-County, focusing on four wards: Ivingoni/Nzambani, Mtito Andei, Thange, and Masongaleni. The data encompasses both public and private ECDE enrollments across a five-year period (2018–2022). The purpose of this report is to examine total enrollments, identify trends, and explore the relationship between public and private enrollments in these wards.

Data Summary

The enrollment data was analyzed for both public and private ECDE centers, considering the following parameters:

Public enrollments from 2018 to 2022

Private enrollments from 2018 to 2022

Total enrollments, computed as the sum of public and private enrollments

The wards included in this study are:

**Ivingoni/Nzambani**

**Mtito Andei**

**Thange**

**Masongaleni**

Total Enrollment Trends (2018–2022)

The analysis reveals significant variations in the public and private enrollments across the wards for the years 2018 to 2022:

| **Ward** | **Total Public Enrollment (2018–2022)** | **Total Private Enrollment (2018–2022)** | **Total Enrollment (2018–2022)** |
| --- | --- | --- | --- |
| Ivingoni/Nzambani | 6,865 | 1,666 | 8,531 |
| Mtito Andei | 8,351 | 1,682 | 10,033 |
| Thange | 7,020 | 1,551 | 8,571 |
| Masongaleni | 8,351 | 88 | 8,439 |

**Mtito Andei** recorded the highest total public enrollments (8,351) and the highest total private enrollments (1,682) over the five-year period.

**Masongaleni** had notably low private enrollments, with a total of just 88 students across all five years.

**Thange** had a relatively balanced distribution between public and private enrollments compared to the other wards.

Proportions of Public vs. Private Enrollment

Overall, public enrollments outnumber private enrollments across all wards. The proportions of public vs. private enrollment for all wards from 2018 to 2022 are as follows:

Public Enrollment: 82.76%

Private Enrollment: 17.24%

These figures underscore the dominance of public ECDE centers in Kibwezi East, with private enrollments contributing a smaller share of the total.

Visual Representation

Bar Plot: Public vs Private Enrollment by Ward (2018–2022)

The bar plot visually represents the distribution of public and private enrollments across the four wards. Public enrollments far surpass private enrollments, especially in Masongaleni where private enrollment is particularly low.



Pie Charts: Public vs Private Enrollment per Ward (2018–2022)

Pie chart for total vs public



**Ivingoni/Nzambani**: Public enrollment constitutes 80.48%, while private enrollment stands at 19.52%.



**Mtito Andei**: Public enrollment constitutes 83.23%, while private enrollment stands at 16.77%.



**Thange**: Public enrollment constitutes 81.91%, while private enrollment stands at 18.09%.



**Masongaleni**: Public enrollment is overwhelming at 98.96%, while private enrollment is only 1.04%.



These pie charts highlight the overall dominance of public ECDE enrollments across all wards, with Masongaleni having almost no private enrollments.

Correlation Analysis

Correlation between public and private (2018–2022)

Correlation between public and private enrollment (2018–2022): -0.54226922

A correlation value of **-0.542** between public and private enrollments indicates a **moderate negative correlation**.

Scatter Plots

The scatter plot showing **Public vs Private Enrollment** reveals a negative slope, with the points spread far from each other. This visual indicates a **negative correlation** between the two variables, where increases in public enrollment are typically associated with decreases in private enrollment.



Scatter Plot: Public vs Total Enrollment

The analysis shows a **weak correlation** between public and private enrollments. The few dots close to the line indicate occasional alignment, but overall, public enrollments do not strongly predict private enrollments in these wards.



Scatter Plot: Private vs Total Enrollment

The scatter plot shows a similar upward trend, though slightly weaker compared to public enrollment, indicating that private enrollments also contribute to total enrollments, albeit to a smaller extent.



Conclusion

The analysis of ECDE enrollments in Kibwezi East Sub-County reveals that public enrollments dominate across all wards, with private enrollments playing a smaller, though still notable, role. Mtito Andei had the highest total enrollments, while Masongaleni had the lowest private enrollments. The strong correlation between public and private enrollments suggests that a balance in enrollment between the two categories could potentially improve overall ECDE enrollment rates.

This report provides insights into enrollment trends, which can aid in the development of educational policies aimed at enhancing ECDE access and quality in the sub-county.