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

**Introduction**

This report presents an analysis of Early Childhood Development Education (ECDE) enrollment trends in Kibwezi West Sub-County, focusing on six wards: Makindu, Nguu/Masumba, Emali/Mulala, Nguumo, Kikumbulyu North, and Kikumbulyu South. The data covers 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:

Makindu

Nguu/Masumba

Emali/Mulala

Nguumo

Kikumbulyu North

Kikumbulyu South

Total Enrollment Trends (2018–2022)

The analysis reveals significant variations in 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)** |
| --- | --- | --- | --- |
| Makindu | 9,203 | 2,849 | 12,052 |
| Nguu/Masumba | 6,085 | 547 | 6,632 |
| Emali/Mulala | 4,028 | 2,123 | 6,151 |
| Nguumo | 7,011 | 547 | 7,558 |
| Kikumbulyu North | 4,781 | 1,160 | 5,941 |
| Kikumbulyu South | 7,160 | 1,013 | 8,173 |

Makindu recorded the highest total enrollments, both public and private, across the five-year period.

Nguu/Masumba had the lowest private enrollments, with a total of 547 students.

Emali/Mulala had a relatively high private enrollment compared to other wards, contributing a significant share of the total enrollments.

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: 75.11%

Private Enrollment: 24.89%

These figures highlight the dominance of public ECDE centers in Kibwezi West, 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 six wards. Public enrollments far surpass private enrollments, particularly in Nguu/Masumba.



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

Makindu: Public enrollment constitutes 76.36%, while private enrollment stands at 23.64%.

Nguu/Masumba: Public enrollment constitutes 91.75%, while private enrollment stands at 8.25%.

Emali/Mulala: Public enrollment constitutes 65.49%, while private enrollment stands at 34.51%.

Nguumo: Public enrollment constitutes 92.76%, while private enrollment stands at 7.24%.

Kikumbulyu North: Public enrollment constitutes 80.47%, while private enrollment stands at 19.53%.

Kikumbulyu South: Public enrollment constitutes 87.61%, while private enrollment stands at 12.39%.















These pie charts emphasize the dominance of public ECDE enrollments across all wards, with the exception of Emali/Mulala, which shows a notable contribution of private enrollments.

Correlation Analysis

**Correlation between Public and Private Enrollment (2018–2022)**

The correlation between public and private enrollments across the wards from 2018 to 2022 is 0.389, indicating a weak positive correlation. This suggests that increases in public enrollments are occasionally accompanied by increases in private enrollments, though the relationship is not strong.

Scatter Plots

**Scatter Plot:** Public vs Private Enrollment The scatter plot reveals a weak positive correlation between public and private enrollments, with points showing only slight clustering.



**Scatter Plot:** Public vs Total Enrollment The scatter plot shows a strong relationship between public enrollments and total enrollments, indicating that public enrollments are the main driver of total enrollment figures in all wards.



**Scatter Plot:** Private vs Total Enrollment The scatter plot shows a moderate positive trend for private enrollments, indicating that they also contribute to total enrollments, though to a lesser extent compared to public enrollments.



Conclusion

The analysis of ECDE enrollments in Kibwezi West Sub-County reveals that public enrollments dominate across all wards, with private enrollments playing a smaller, though still notable, role. Makindu had the highest total enrollments, while Nguu/Masumba had the lowest private enrollments. The weak positive correlation between public and private enrollments suggests that there is some alignment between the two categories, though it is not a strong relationship.