

A GIS APPLICATION IN COMPETENCY-BASED CURRICULUM SCHOOLS ACCESSIBILITY MAPPING AND PROPOSING FUTURE SECONDARY SCHOOLS LOCATIONS: CASE STUDY OF MAKADARA SUB-COUNTY.

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PRESENTATION OUTLINE

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- Conclusion and Recommendations



INTRODUCTION

- The Kenyan Constitution from 2010 identifies education as a guaranteed right to every Kenyan.
- In 2017, KICD introduced the CBC which targets to be a more student-based system.
- The Distribution of CBC schools centers has not been carried effectively to meet the demographic demands.
- GIS is a powerful tool for developing and planning spatial events because they are designed to capture, handle, analyze, manage, store, and display geographical data.

PROBLEM STATEMENT

• Makadara sub-county has 51 primary schools, and 15 secondary schools.

• The research problem is thus to determine the relationship between schools

distribution in the area, physical accessibility, and school enrolment.

• As a result, GIS will be used to analyze the distribution of schools, identify

disparities in the CBC school's location accessibility, and propose future areas

for secondary schools based on suitability analysis.



AREA OF STUDY





OBJECTIVES

Main Objective

• The main objective of this project is to show the use of GIS in mapping out the distribution of primary and secondary schools in Makadara Subcounty.

Specific Objectives

- i. To collect spatial data on the schools and roads in the Makadara subcounty.
- ii. To identify the existing disparities in the distribution of CBC schools, and determine their proximity and accessibility in Makadara subcounty
- iii. To carry out a suitability analysis to determine and propose the locations of new CBC secondary schools in the future.



METHODOLOGY





RESULTS AND DISCUSSION i. The distribution of Primary schools in Makadara sub-county.





II) CBC SCHOOL'S ENROLLMENT TO POPULATION





III) PROXIMITY ANALYSIS(NEAR ANALYSIS OF ROADS AND <u>SCHOOLS</u>)

NAME OF SCHOOL	STATUS	LOCATION	NEAR DISTANCE
AGBON ACADEMY – PRI	PRIVATE	MARINGO	48.31695
CANON APOLO PRI SCH	PUBLIC	MARINGO	44.211007
JOSEPH APUDO PRI SCH	PUBLIC	MAKONGENI	25.70015
SHEKINAH GLORY EDUCATION CENTRE – PRI	PRIVATE	MARINGO	3.490718
ST PAULS PRI SCH	PUBLIC	MARINGO	26.963696
ST. JOHNS KALOLENI PRI SCH –PRI	PUBLIC	MAKONGENI	28.394253
ALIMUS LEARNFIELD ACADEMY	PRIVATE	MAKADARA	23.813176
JOKEN PRI SCH	PRIVATE	MARINGO	1.30777
PAVID JUNIOR SCH – PRI	PRIVATE	MARINGO	16.244569
JOGOO ROAD PRI SCH	PUBLIC	MAKADARA	33.974993
NPC BURUBURU PRIMARY SCHOOL	PRIVATE	MAKADARA	25.191233
THREE IN ONE CHILDREN CENTRE PRI	PUBLIC	MARINGO	52.202862
ST. MICHAELS PRI SCH	PUBLIC	MAKADARA	36.958758
ST. PATRICKS PRI SCH	PUBLIC	MARINGO	36.727539
MARTIN LUTHER PRI SCH	PUBLIC	MAKADARA	32.916513
CHURCH ARMY ACADEMY – PRI	PRIVATE	MARINGO	43.664271
ST ANNES PRI SCH	PUBLIC	MARINGO	60.293927
CHURCH ARMY PRI SCH	PRIVATE	MARINGO	53.993611
BLESSINGS ACADEMY	PRIVATE	MARINGO	12.681435
NILE ROAD SPECIAL SCH – PRI	PUBLIC	MAKADARA	16.255652
WOODPECKER SCHOOL (PRI)	PRIVATE	UHURU	51.734237
MARY IMMACULATE EDU CENTRE (PRI)	PRIVATE	MARINGO	71.462881
DR. KRAFT PRI SCH	PUBLIC	MARINGO	37.512429
PCEA BAHATI MATYRS ACADEMY (PRI)	PRIVATE	MARINGO	21.99114
BAHATI PRI SCH	PUBLIC	MARINGO	41.286692
THOMAS BURKE PRI SCH	PRIVATE	MAKADARA	62.771014
MORRISON PRI SCH	PRIVATE	BAHATI	28.790043
RABAI ROAD PRI SCH	PUBLIC	MAKADARA	49.831369
BURU BURU COMMUNITY CENTRE PRI SCH	PRIVATE	MAKADARA	20.657882
DONKIM GLORIOUS JUNIOR SCH (PRI)	PRIVATE	BAHATI	3.733764
OFAFA JERICHO PRI SCH	PUBLIC	MAKADARA	7.224612
JERICHO BAPTIST CHURCH –PRI	PRIVATE	MAKADARA	7.224612
BURUBURU CHURCH OF GOD PRI SCH	PRIVATE	MAKADARA	34.765808
KIMATHI PRI SCH	PUBLIC	BAHATI	13.217388
DR LIVINGSTONE PRIMARY	PUBLIC	KIATATHI	50.944824
TWIN BIRDS ACADEMY (PRI)	PRIVATE	BAHATI	35.97879
SOS TECHNICAL SCH. – PRI	PUBLIC	BURUBURU	58.49354
BIDII PRI SCH	PUBLIC	MAKADARA	46.324635
HAPPYLAND PREP SCH	PRIVATE	MAKADARA	19.314899
TERYSAM MONTESSORI ACADEMY – PRI	PRIVATE	MAKADARA	19.320768
DOMINIQUE JUNIOR ACADEMY – PRI	PRIVATE	MAKADARA	16.862815
WANJA & KIM COMP SCH	PRIVATE	MAKADARA	9.98038
MAGODO CHILDRENS HOME - PRI	PRIVATE	MAKADARA	1.237152
SILVERGATE ACADEMY – PRI	PRIVATE	MAKADARA	3.374039
HARAMBEE PRI SCH – PRI	PUBLIC	HARAMBEE	25.678619
SHEPHARDS JUNOIR SCH – PRI	PRIVATE	MAKADARA	18.097958



IV) PRIMARY SCHOOLS CATCHMENT AREAS IN MAKADARA SUB-COUNTY





V) PROPOSED CBC (PRIMARY) SCHOOLS



VI) DISTRIBUTION OF SECONDARY SCHOOLS IN MAKADARA SUB-COUNTY





VII) PROPOSED SECONDARY SCHOOLS





CONCLUSION

• Access to education as indicated by school enrolments has a direct

relationship with the population's physical access as measured by the

proximity of schools to roads.

Increasing the number of schools and improving the condition of roads

will increase the chances of school children accessing education.



RECOMMENDATIONS

- Road network accessibility can be enhanced to increase the accessibility of schools. The road network is a key factor to evaluate the accessibility of schools and therefore reconnaissance of physical access is important before the establishment of the institutions
- The implementation of the proposed schools if well done is an assurance that the schools will be almost evenly distributed within the area's population to ensure that efficient and quality education is delivered.

