

Education Inequality between Urban Slum and Rural Arid and Semi-Arid Areas of Kenya

Jafred Muyaka

Department of Foundations of Education, School of Education, University of Eldoret, P.O. BOX 1125-30100, Eldoret, Kenya

Abstract: - The purpose of the current paper was to determine the relationships between marginalised school location (Urban Slums versus Arid and Semi-Arid Lands) and girls' performance in literacy and numeracy in Kenya. The study sampled 5,185 girls in Grades 5,6, 7 and 8 in the Urban slums of Nairobi and Mombasa Counties and ASAL areas of Turkana, Tana River, Kwale, Samburu, Marsabit and Kilifi Counties. The findings show significant differences in the performance of girls in Urban slums and ASALs in favour of the former. In addition, girls' performance in middle grades (5&6) was better in numeracy than literacy while upper grades (7&8) the performance was better in literacy than numeracy. The study recommends the need to have quality education as one of the educational metrics to direct the education policy for the marginalised groups in Kenya.

Key Words: Marginalisation, Literacy, Numeracy, Urban slums, ASALs; Learning Outcomes

I. INTRODUCTION

Three decades ago during the 'World Conference on Education for All' held in Thailand, it was resolved that every citizen of the world has a right to education. The success of these pronouncements cannot be gain said particularly in the increased enrolment witnessed in basic education. However, global educational statistics still show that Education for All goal remains elusive. Globally, we have over 100 million children out of schools with 60% being girls. Further, we have about one billion adults observed to be illiterate. Again, women are the majority estimated to be about 67.7% of the illiterate adults [1].

The quality of education in schools has been the other concern. Not all pupils who enroll and attend schools regularly attain the skills and knowledge necessary to be useful members of the society [1]. Functional illiteracy is still prevalent in some of the education systems for both low income and also industrialised and developing countries. Drop-out rate is still high with the United Nations Educational, Scientific and Cultural Organization (UNESCO) estimating that about 100Mpupilsdropped out of basic education cycle [1]. In sub-Saharan Africa, 9% of the enrolled pupils dropped out of school before they completed the first year of school [2].

These statistics cast aspersions on the impact of increased enrolments in basic education. The cautionary approach to use of improved enrolment as indicators of success for EFA are made stronger with an admission that

pupils enrolled in schools are satisfying the attendance requirements but do not attain the requisite knowledge to help them fit in the dynamic society[1], [3], [4].

In Kenya, the political decision in early 2000s by the National Rainbow Coalition (NARC) government to introduce Free Primary Education (FPE) led to an unplanned surge in national enrolment as well as retention rates up to grade five. In 2003, it was reported that enrolment increased sharply by 22% in the first year of FPE implementation [5]. Since then enrolment in primary schools in Kenya has been on the rise. The period between 2008 to 2016, enrolment rose by 21.2% moving from 8.5 million in the year 2008 to 10.3 million in 2016 [6]. Adoption of FPE policy in Kenya in 2003 was by a political decree devoid of any planning. However, subsequent years saw an attempt to match the upsurge in enrolments with investments in infrastructure and human resource. In the year 2008, Kenya had a total of 21,702 private and public primary schools. In2016, private and public primary schools had increased to 33,202 schools. The investment has not only been in primary schools but also in creation of new teacher training centres (TTCs). In the period between 2008 and 2016, there were additional 150 TTCs established. In total, the TTCs had a population of over 41,707 teacher trainees up from the 24,426 in the year 2008[6]. This was necessary to supply trained teachers to the new primary schools and the old existing primary schools that had been affected with the increased enrolment.

Kenya faces many challenges as relates to social-economic development; since 2013,the overall debt has been burgeoning while the economy growth has not been such robust to cushion the citizens and guarantee improved living standards[7]. Hence, the growing economic disparities among the rich and the poor, marginalisation of the ASAL communities especially in access to quality education, water and security [8]. Additionally, there is also insecurity with threats from the terrorist group 'Al-Shabaab'. The noted challenges have had varying impact on the efforts of government of Kenya to provide basic education to its population. This is worrying since lack of basic education for significant number of the citizens particularly one that equips children with needed competences to tackle societies' problems undermines to a great extent the ability of the same Kenyan society to address the identified problems with strength and purpose.

Despite the unique challenges that Kenya face, the country is credited to be on track of reaching two of the United Nations Sustainable Development Goals (SDGs). One is goal 4 that seeks to ‘ensure inclusive and equitable quality education and promote lifelong learning opportunities for all’ and goal 5 that aspires to ‘achieve gender equality and empower all women and girls’. The country has opened up more opportunities for girls to access basic education. In the year 2014, Kenya had closed the gender gap with a parity index of girls to boys at 0.97 for primary schools and 0.92 for secondary schools [9]. A few counties like Nairobi, Kakamega, Busia, Embu, Kirinyaga, and Mombasa had either more girls enrolled than boys or had attained gender parity in their primary school cycle [10]. The national enrolment statistics in Kenya paint a country that has done extremely well on matters gender and access to education. However, the sensational statistics have hidden regional disparities. In reality, bolder efforts are still needed particularly in ASALs if Kenya has to achieve EFA goals. This is particularly so for girls living in low income households and in the ASAL regions of Kenya. In 2000, there were just over 13.5% of girls enrolled for primary education compared to 26% boys in these areas. Further, the completion rates were reported to be low in ASAL areas, in the urban slums and among girls [11]. Cultural practices such as Female Genital Mutilation and early marriages are some of the factors cited to hinder girls’ schooling in marginalised ASAL areas [12].

In the last decade, critiques have questioned the use of enrolment statistics as a measure of success of education system in Kenya. There is the need for schools to cultivate the right competences, skills and knowledge to pupils. After all, access to schooling and their related opportunities does not necessarily translate into meaningful interactions that guarantee children the needed knowledge and skills for their individual development. Rather, a function of many other factors, among them, whether the nation’s adapted school system ensures that children who regularly attend schools learn. The question that many policy makers grapple with is how to ensure that their basic education cycle transmit knowledge, prepares children as critical thinkers who systematically find solutions to their daily problems, and enhance learning pedagogies that stress on skills and values for problem solving than accumulation of facts. This paradigm shift moves the discussions on ‘education for all’ from access measured along enrolment trends and completions rates to focus on learning that supports acquisition of knowledge and skills. This ultimately calls for some form of measuring learning outcomes.

Education and Learning Outcomes

Globally, learning outcomes is one area in education with growing volumes of a robust literature. Measuring and putting in place structures to improve learning were key components of quality that were discussed at the two World Conferences on Education for All that were held in Thailand and Senegal. In most developing nations, the discourse on

education seems to be around access, wastages and completion rates. This approach, although credited with commendable results especially the widespread access to free and sometimes-compulsory education is found to be inadequate in guiding policy agenda in education. As a complimentary strategy, establishing learning outcomes has been adapted to inform on how best pupils learn in schools. The suggestions at Jomtien Education meeting were to have targets of learning achievement to form part of the national educational goals. This was to be guided by establishment of minimum achievements for various cohorts [13]. One of the outcomes at global stage was joint efforts by United Nations Educational, Scientific and Cultural Organisation (UNESCO) and United Nations International Children’s Emergency Fund (UNICEF) to design a monitoring and learning achievement project to help low income countries to measure and meet learning target [14].

It is within this foregoing context that the United States Agency for International Development (USAID) commissioned to design an assessment tool that would assist poor countries to measure and improve learning outcomes [15]. The interest was to design a simple, effective, and low cost tool that would assess the extent to which primary school pupil in formative grades are learning to read with acceptable degree of comprehension and at an acceptable rate of fluency’ [15]. This is how RTI International (formerly Research Triangle Institute) designed a protocol that is now commonly known as Early Grade Reading Assessment (EGRA) whose model was adapted in this study. More literature on EGRA and EGMA can be found in [15], [16], [17].

There is adequate literature on determinants of student learning outcomes. These studies have identified factors that can be classified into three main categories. There are individual characteristics where variables like pupil’s nationality and main language have been reported. Then, there is the family background where parents’ highest level of education, Socioeconomic Status of the pupils’ families, types of families classified as main variables. The last category is the school type where pupils attend. Examples have been studies on urban versus rural, public versus private, school size and the number and quality of teachers versus pupils’ population [18]. These categories are cited for two main reasons. First to show that studies on educational outcomes have become common and isolation of various determinants and their impacts on performance on the rise. Secondly, to highlight the fact that three categories of variables influencing pupils’ educational outcomes have received varying emphasis in research. But, for some reasons, few studies have explored the relationship of school location on pupils learning outcomes. This is strange given that schools serve an important place to equalise learners.

In the scarcity of studies on school location and pupils’ learning achievement, attention particularly in North America, Europe and some Asian nations has been on the relationship of rural-urban and educational achievements. In

most of these studies, findings indicate differences in the achievements and schooling conditions [19], [20], [21]. However, there are few studies that have looked at the marginalised groups within these two common locations of rural and urban settings. This is the case despite evidence that even within urban settings, the conditions of schools particularly in slum areas are worse to warrant categorisation as urban schools. This can still be said of rural areas. How is the learning in marginalised urban slums as compared to marginalised ASAL areas of Kenya? Is it true that the competences of the two categories of educational marginalisation are comparable and are the competences in literacy and numeracy the same? These questions are yet to be satisfactorily answered and thus formed the basis for this study.

Statement of the Problem

In Kenya, research has reported a consistent relationship between the location of schools and the learning outcomes of pupils. Overall, urban school settings have been reported to promote better learning outcomes among pupils than the disadvantaged rural school settings. There have been few intra-setting studies done and have exposed poor learning outcomes among the disadvantaged groups. Very few studies have compared learning outcomes among pupils enrolled in marginalised urban slums and those in marginalised ASAL areas. There is still a gap particularly on how the pupils in marginalised urban slum areas compare with the marginalised ASAL regions.

II. RESEARCH METHODOLOGY

The aim of the current study was to determine the relationships between marginalised school location (Urban Slums versus Arid and Semi-Arid Lands) and girls' performance in literacy and numeracy. The study was guided by three research questions:

1. Is girls' performance in Literacy better than in Numeracy?
2. Is girls' performance in literacy and numeracy better in Urban Slum than ASALs?
3. Is girls' performance in middle grades same as upper grades?

In determining the learning outcomes of the school going girls in the selected areas in Kenya, the study used cross-sectional research design. The design involved selection of a representative random sample of primary schools in the ASAL counties (Turkana, Marsabit, Kilifi, Kwale, Tana River and Samburu) and Urban Slum counties (Nairobi and Mombasa). To establish whether there were differences in the learning outcomes of literacy and numeracy, a paired t-test was used while to find out if there were differences in performance between ASAL and Urban Slums an independent t-test was used.

Sampling of the Primary Schools

The total number of primary schools in the eight counties was 3,710 [10]. Out of which 658 primary schools (17.7%) were sampled to participate in the study.

Sample Size of Girls Selected for Learning Tests

There were 356,411 girls in grades 5, 6, 7 and 8 in the eight counties [10]. The sample of girls that were selected for assessment was calculated by use of survey system software as shown in Table 1.

Table 1: Sample Size by Survey System Software

Sample Size by Survey System Software	
Confidence Level:	95%
Confidence Interval:	1.34
Population:	356,411
Sample size needed:	5270

The study target was 5,270 girls but the study managed to assess 5,185 girls (1277 girls each for grade 5 & 6; 1177 girls for grade 7 and 1224 for grade 8).

Research Tools

This study utilised a learning test as the only tool for data collection. The tool had basic characteristic section that required the girls to fill. The learning tool had a set of adapted EGRA (literacy) and EGMA (numeracy) for middle grades 5&6 and another set for upper grades 7&8.

Ethical Considerations

The assessment of pupils was conducted in their best interest and their participation was voluntary. In addition, the study sought consent from the school administrators and informed assent from the girls and assured them of their confidentiality and anonymity.

Demographics of the Study

The age variation of the sampled girls was as shown in Table 2.

Table 2: Age Categories of Girls

Age Group in Years	Percentage
9 and below	2.2
10-13	82.9
14 & above	14.8
Total	100.0

Majority of the enrolled girls (82.9%) were within the appropriate primary age category. In Kenya, the appropriate entry age for Grade 1 is six years, thus learners in grade 5 to grade 8 lie between age 10 and 13 years. However, the sample had underage girls (2.2%) and overage (14.8%).

Most of the overage enrolment was in ASAL counties (87.6%) while most of the underage enrolment (73.7%) was recorded in Urban Slums than ASALs (26.3%).

The study reported on the percentage of girls whose main language of instruction at school was different from the main language spoken at home. Majority of the sampled girls (68.6%) came from households whose main language of communication was different from what was used in schools. The population was more in ASAL communities (54.8%) as compared to Urban Slums (45.2%).

The study investigated the education levels of parents and guardians. Girls in these two marginalised regions lived with guardians and parents with low level of education. About 64.1% of the sampled girls lived with parents whose highest level of education was primary. A further 46.4% lived with parents/guardians with no formal education or a few years of primary education. These percentages of girls were disadvantaged when it comes to role models and aspirations. Pupils' educational and career aspirations are products of their backgrounds.

Guardians and parents are expected to make a personal commitment to education of their children. In the past one-year, majority of parents/guardians (68.8%) had visited the schools of their children. However, one (1) out of every 10 parents/guardians had not visited the school of the girl.

III. RESULTS OF THE STUDY

1. Comparison of Girls' Performance in Literacy and Numeracy

The first task of this study was to find out if there are differences in performance of literacy and numeracy among girls in the eight selected marginalised counties. A paired-sample t-test was conducted to compare girls' performance in numeracy and literacy.

The paired sample statistics for grade 5 and 6 were as shown in Table 3.

Table 3: Paired Sample Statistics for Grade 5 and 6

		Mean	N	Std. Deviation	Std. Error Mean
Pair	Numeracy	57.6984	2557	29.07047	.57489
	Literacy	51.5216	2557	21.05243	.41633

Grade 5 and 6 girls performed better in numeracy (mean = 57.70, SD = 29.07) than literacy (mean = 51.52, SD = 21.05). The paired-sample t-test findings were as shown in Table 4.

Table 4: The Paired Samples Test

		Paired Differences			T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair	Numeracy Vs Literacy	6.17683	27.49254	.54369	11.361	2556	.000

The study found the t-statistic to be significant as the p-value was less than 0.05, $t(2556) = 11.36$, $p < 0.001$. These results suggest that the girls' performance in numeracy was better than literacy indicating that in grades 5 and 6 girls had accumulated more skills in numeracy than literacy.

The paired sample statistics for grade 7 and 8 was as shown in Table 5.

Table 5: Paired Sample Statistics for Grade 7 and 8

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Literacy	30.7285	2306	19.30182	.40195
	Numeracy_	18.3770	2306	14.42433	.30038

Grade 7 and 8 performance suggest girls were better in literacy (mean = 30.73, SD = 19.30) than numeracy (mean = 18.38, SD = 14.42).

The paired-sample t-test findings were to test whether the differences were significant was as shown in Table 6.

Table 6: The Paired Samples Test

		Paired Differences			T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	Literacy vs Numeracy	12.35157	16.76790	.34918	35.373	2305	.000

The t-statistic was significant as the p-value was less than 0.05, $t(2305) = 35.37$, $p < 0.001$. These results suggest that grade 7 and 8 girls' literacy performance was significantly different from those of numeracy.

2. Comparison of girls' performance in literacy and numeracy between Urban Slum and ASALs

The second task of this study was to find out if there were differences in performance of girls enrolled in marginalised ASAL areas and those in Urban Slum areas. An independent t-test was conducted to compare girls' performance in numeracy and literacy for the two regions.

The group statistics for Grade 5 and 6 results were as shown in Table 7.

Table 7: Group Statistics for Grade 5 and 6 Performance

Test	ASAL-Urban	N	Mean	Std. Deviation	Std. Error Mean
Numeracy	ASAL	1406	65.21	18.433	.492
	Urban	1379	66.99	16.441	.443
Literacy	ASAL	1406	46.14	21.550	.575
	Urban	1378	57.11	18.922	.510

The girls' numeracy performance was slightly better for the Urban slum areas (mean = 66.99, SD = 16.44) compared to the ASALs (mean = 65.21, SD = 18.43). However, the two means were close indicating that the numeracy skill levels of the girls in the two regions were close.

The literacy performance showed marked differences in favour of Urban Slums. Girls in Urban slums performed better (mean = 57.11, SD =18.92) than those in ASALs (mean =46.14, SD =21.55). The huge difference in the means of the two regions indicate that the literacy skill levels of the ASAL girls was lower compared to those of Urban Slums.

The independent t-test findings are as shown in Table8.

Table 8: Independent Samples Test for Grade 5 and 6

		t-test for Equality of Means		
		T	df	Sig. (2-tailed)
Numeracy	Equal variances assumed	-2.698	2783	.007
	Equal variances not assumed	-2.701	2758.340	.007
Literacy	Equal variances assumed	-14.264	2782	.000
	Equal variances not assumed	-14.282	2749.108	.000

An independent t-test found significant difference in the performance of girls in numeracy in Urban slums and ASAL, $t(2783) = -2.698, p < 0.05$.

The independent t-test for literacy also showed a significant difference in the performance of girls in Urban slums and ASAL, $t(2782) = -14.264, p < 0.05$.

The group statistics for Grade 7 and 8 were as shown in Table 9.

Table 9: Grade 7 and 8 Group Statistics

Test	ASAL_URBAN	N	Mean	Std. Deviation	Std. Error Mean
Numeracy	ASAL	1238	16.3772	13.10426	.37244
	Urban	1163	20.7008	15.48866	.45418
Literacy	ASAL	1203	22.1467	15.09502	.43521
	Urban	1103	40.0884	19.04325	.57339

Girls numeracy performance in Grade 7 and 8 was better for the Urban slum areas (mean = 20.70, SD = 15.49) compared to the ASALs (mean = 16.38, SD = 13.10).

The trend was the same with literacy performance, Urban slums (mean =40.09, SD =19.04) than ASALs (mean =22.15, SD =15.10). However, there were marked differences in performance between ASAL and Urban slums (Urban Slums with a mean of 40.09 and ASALs' 22.15).

The independent t-test findings for grade 7 and 8 were as shown in Table 10.

Table 10: Independent Samples Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
Numeracy	Equal variances assumed	-7.399	2399	.000
	Equal variances not assumed	-7.361	2281.215	.000
Literacy	Equal variances assumed	-25.172	2304	.000
	Equal variances not assumed	-24.924	2098.832	.000

An independent t-test found significant difference in the performance of girls in numeracy in Urban slums and ASAL, $t(2399) = -7.399, p < 0.05$

Equally, the independent t-test for literacy showed a significant difference in the performance of girls in Urban slums and ASAL, $t(2304) = -25.172, p < 0.05$.

3. Performance of Girls per Grade

a. Literacy

The last task of this study was to analyse girls' performance in Literacy as per sampled Grades. The findings were as presented in Table 11.

Table 11: Literacy Performance for Grade 5 and 6

Region	N	Invent ed words	Fami liar word s	Oral pass age	Compreh ension	EGRA Aggregat e Score	
ASAL	5	632	55.6	53.1	63.4	27.9	43.6
	6	626	61.0	59.7	69.8	27.9	48.0
	Total	1258	58.3	56.4	66.6	27.9	45.8
Urban	5	645	69.2	73.8	76.5	26.3	54.0
	6	651	74.0	78.4	84.2	29.1	60.2
	Total	1296	71.6	76.1	80.4	27.7	57.1
Total	5	1277	62.5	63.5	70.0	27.1	48.8
	6	1277	67.6	69.2	77.1	28.5	54.2
	Total	2554	65.1	66.4	73.6	27.8	51.5

When analysed as per region, the findings suggest girls in Urban Slums were better in literacy (with a mean of 57.1) compared to girls enrolled in ASALs (mean of 45.8). In both regions, girls in grade 6 demonstrated better literacy skills than those in grade 5 (Urban Slums grade 6 had mean of 60.2 and grade 5 had 54.0 while in ASAL grade 6 had mean of 48.0 and grade 5 had 43.6).

In terms of subtasks, girls demonstrated poor mastery of literacy skills that demanded higher order thinking. The mean of 27.8 for comprehension illustrates the unfinished business if pupils have to accumulate the intended literacy skills in the marginalised areas.

The findings for grade 7 and 8 were as shown in Table 12

Table 12: Literacy Performance for Grade 7 and 8

ASAL_URBAN	N	Subtask 1	Subtask 2	Subtask 3	Aggregate mean	
ASAL	Class 7	608	44.0	5.5	0.2	17.8
	Class 8	630	68.1	19.0	3.1	26.3
	Total	1238	56.3	12.3	1.7	22.1
Urban	Class 7	569	59.4	10.1	0.4	36.0
	Class 8	594	77.9	25.0	4.1	44.2
	Total	1163	68.8	17.7	2.3	40.1
Total	Class 7	1177	51.4	7.7	0.3	26.6
	Class 8	1224	72.9	21.9	3.6	34.7
	Total	2401	62.4	14.9	2.0	30.7

The performance of girls deteriorated as literacy tasks tended to subtasks that required higher thinking. The overall performance of girls for grade 7 and 8 was very low with a mean of 30.7. This suggests pupils enrolled in marginalised ASAL and Urban slums have acquired minimal competencies expected at those levels. However, girls enrolled in Urban Slums demonstrated better literacy skills with a mean of 40.1 compared to those in ASALs (22.1).

b. Numeracy

The study analysed girls’ performance in numeracy and the findings as per region and Grade for grade 5 and 6 was as shown in Table 13.

Table 13: Girls Performance in Numeracy for Grade 5 and 6

Region	N	Subtask 1	Subtask 2	Subtask 3	Subtask 4	Subtask 5	Subtask 6	Aggregate mean	
ASAL	5	632	53.5	74.6	56.7	70.4	58.3	39.3	52.2
	6	626	60.3	78.8	61.6	75.8	62.7	47.8	60.8
	Total	1258	56.9	76.7	59.2	73.1	60.5	43.5	56.5
Urban	5	645	57.2	72.4	54.4	79.4	66.7	45.5	54.2
	6	651	62.8	78.9	62.1	82.6	73.1	54.5	63.5
	Total	1296	60.0	75.7	58.2	81.0	69.9	50.0	58.9
Total	5	1277	55.4	73.5	55.5	75.0	62.5	42.4	53.2
	6	1277	61.6	78.8	61.9	79.2	68.1	51.2	62.2
	Total	2554	58.5	76.2	58.7	77.1	65.3	46.8	57.7

Key: Subtask 1=Missing Numbers; Subtask 2=Addition 1; Subtask 3=Subtraction; Subtask 4= Addition 2; Subtask 5=Subtraction 2; Subtask 6=Word Problem

Girls in Grade 5 and 6 demonstrated better mastery of numeracy skills with a mean of 57.7. However, word problems had the lowest mean (46.8).

Numeracy performance was better in Urban Slums with a mean of 58.9 as compared to ASALs 56.5. The observed differences were not as huge as was the case in literacy.

The Grade 7 and 8 numeracy findings for the three subtasks were as indicated in Table 14.

Table 14: Girls Performance in Numeracy for Grade 7 and 8

Region	N	Subtask 1	Subtask 2	Subtask 3	Aggregate mean	
ASAL	7	608	24.5	4.2	0.3	10.9
	8	630	37.9	14.6	4.2	20.3
	Total	1238	31.3	9.5	2.3	15.7
Urban	7	569	33.0	7.7	0.5	15.3
	8	594	43.3	19.2	5.5	24.2
	Total	1163	38.2	13.6	3.1	19.8
Total	7	1177	28.6	5.9	0.4	13.0
	8	1224	40.5	16.8	4.8	22.2
	Total	2401	34.6	11.5	2.7	17.7

The three subtasks in numeracy were poorly performed with an overall mean of 17.7. Only subtask 1 had a mean of over 15. Numeracy performance was better in Urban Slums with a mean of 19.8 as compared to ASALs’15.7.

IV. DISCUSSION OF THE FINDINGS

The discussion on access to free primary education in Kenya has become more intense, with calls for opening up more learning opportunities to pupils particularly in marginalised and underprivileged groups and communities. However, many education stakeholders are more concerned with the kind of quality of education that such groups of pupils are exposed to. The findings on learning outcomes of this group of students in marginalised regions of Urban Slums and ASALs in Kenya show that there are differences in the performance of girls. The urban Slums performed better than those in ASALs in the sets of tests for middle grades (5 and 6) and upper grades (7 and 8).

The independent t-statistic for performance of middle grades girls in numeracy in Urban slums and ASAL was significant, $t(2783) = -2.698, p < 0.05$ and equally the literacy results was significant for girls in Urban slums and ASAL, $t(2782) = -14.264, p < 0.05$. The same trend was replicated in upper grades. The performance of girls in numeracy in Urban slums and ASAL, $t(2399) = -7.399, p < 0.05$ and for literacy, $t(2304) = -25.172, p < 0.05$.

Other studies on location and learning outcomes have reported differences in performance. In Punjab and Singh Provinces of Pakistan, urban pupils were found to perform significantly better than those in rural [22]. In Peoples Republic of China, [23] reported that education performance of urban pupils was better than those of rural areas. In

Namibia, the SACMEQ findings of 2011 revealed the same trend. In Kenya, pupils enrolled in urban cities were found to perform better than those in rural areas with those in marginalised districts reported to have lower skills [24]. The current study findings showing that overall girls enrolled in marginalized areas had accumulated lower skills and those in urban slum posted better scores both in literacy and numeracy than those in marginalised ASALs reinforces these earlier findings.

V. CONCLUSION

This paper examined the differences in the learning outcomes of pupils enrolled in urban slum and those in rural ASAL regions in Kenya. Results show that there exists a substantial difference between performance of girls in urban slums and rural ASALs in favour of those enrolled in urban slums. Further, the performance of girls in subtasks that require high level thinking was very low. These results should be a concern to education stakeholders as the country emboldens their efforts to provide quality education to special groups. Therefore, to solve the existing significant inequalities in the education outcomes of pupils enrolled in these marginalised areas, there is the need for the educational stakeholders to ensure quality education forms part of discourse on provision of education opportunities to special categories of households. Lastly, the study established the differences in the performance of girls enrolled in Urban slum areas and ASAL areas. However, the study did not investigate the factors that contributed to these differences. The question still remains whether the differences are as a result of the location of these schools or other related factors like socioeconomic status, family structure and level of education of the parents. There is therefore a need to carry out a study to be able to determine the variable with the most influence to inform on appropriate interventions.

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APPENDICES

APPENDIX 1: Scoring for Literacy and Numeracy Test for Grade 5&6

EGRA			
No	Subtasks	Number of Items	Scoring
1	Invented Words	The test had 50 words that were to be read in one minute.	One mark was awarded for any correctly read word maximum 50 marks.
2	Familiar Words	The test had 50 familiar words to be read in one minute.	One mark was awarded for any correctly read word maximum 50 marks.
3	Oral Passage	The test story had 178 words to be read in a minute.	The correct words read in the oral passage per minute were noted.
4	Comprehension	The test questions were six (6) spread to cover the content in the story. However, girls only attempted questions covering the part of the story the girl had read	The comprehension questions were weighted equally.
Numeracy Tests			
1	Missing Number	The test had 10 series items and girls were to fill missing numbers	The 10 items carried equal weighting
2	Addition 1	The test had 20 items and girls were expected to give answers for the item in a minute	The 20 items carried equal weighting
3	Subtraction 1	The test had 20 items and girls were expected to give answers for the item in a minute	The 20 items carried equal weighting
4	Addition 2	There were 5 items, not timed	The 5 items carried equal weighting.
5	Subtraction 2	There were 5 items, not timed	The 5 items carried equal weighting
6	Word Problems	There were 6 items, read to the girls carefully and they were to provide answers to the word problems	The 6 items carried equal weighting

Source: WERK’s GEC-T Baseline Unpublished Report, 2018

The numeracy and literacy tests for grade 5&6 had various skills/competences captured as ‘subtasks’ as indicated in Appendix 1.

The literacy tests for grade 7&8 had three related areas named Passage I, Passage II and subtask 3 that required the girls to write a composition. Passage I and II had a single passage story of about 300-400 words. Girls would take about 15 minutes to complete reading. As was the case with grade 5&6 tests, the content of the story was guided by the national curriculum with participation of the experts from the Ministry of Education (MoE) and Kenya Institute of Curriculum Development (KICD). The scoring was as captured in Appendix 2.

APPENDIX2: Scoring for Literacy and Numeracy for Grade 7 and 8

Literacy Test		
No	Subtasks	Number of Items
1	Passage	The test had seven items assessed out of 10 marks
2	Passage	The test had seven items assessed out of 10 marks
3	Composition	The composition was marked out of 20 marks
Numeracy Test		
1	Task 1	The test had seven items assessed out of 16 marks
2	Task 2	The test had seven items assessed out of 13 marks
3	Task 3	The test had seven items assessed out of 15 marks

Source: WERK’s GEC-T Baseline Unpublished Report, 2018