

Is our Secondary School System Inequitable by Design?

Facts and figures for evidence-based building back better!

Usawa 1st Secondary School Survey Report | 2022

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The survey was supported by:

1. Wellspring Philanthropic Fund
2. Echidna Giving
3. Imaginable Futures

To cite this report:

To cite this report: Usawa (2022): ***Are our secondary schools inequitable by design? Usawa 1st Secondary School Survey Report.*** Nairobi: Usawa Agenda.
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Foreword



Turning the spotlight on the inequities that disenfranchise millions of secondary school leavers

They say that education is an equal opportunity to people to show how unequal they are. This maxim aligns well with the global educational aspiration as encapsulated in SDG 4, to which Kenya is signatory: ***"Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all[1]"***. It, however, presumes that the school system is equitable and that what one emerges with from it is a true reflection of their ability and effort. The question that this report seeks to answer is: Is that true of the Kenyan secondary school system?

This secondary school survey report, therefore, could not have come at a more opportune moment in the country's education sector. It comes as we count down the last decade of two important national and global education aspirations. The world is counting down the last decade of the global agenda 2030 whose educational aspiration as articulated in the SDG 4. Simultaneously, Kenya is also counting down the last decade of the grant national Vision 2030, in which education is considered one of the main enablers of national development. The overall educational goal of Vision 2030 is: ***"offer Kenyans a globally competitive, quality and relevant education and training"***.

This report comes at the time Kenyans are counting down the 12th year since the country promulgated the current constitution, which makes basic education (including secondary education) a constitutional right. This year is also expected to culminate to the second political transition under

1 Emphasis added

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the current constitution, whose implementation continues to be consequential for the education sector. It also comes out as the country is preparing to transition the pioneer group of the competency-based curriculum (CBC) out of primary education and into junior secondary at the end of 2022. The implementation of the new curriculum has elicited, as it should, heated debate. Yet much of the debate has been devoid of some critical facts that need to inform the otherwise healthy discussion around the switch from the 8-4-4 system of education to the current one.

The report is also coming out as the first independent assessment of the impact of COVID-19 on the country's secondary school sub-sector. This is in the aftermath of the country's unprecedented 9 months closure of schools. Admittedly, many of the challenges unearthed in this report predate the COVID-19 pandemic. This report thus highlights a number of things that could help advance important discourses going forward: It offers insights into the impact of COVID-19 on secondary school enrolment for different groups of children, especially girls. It boldly dives into the uncharted waters of how the country's secondary school system promotes and inhibits the national aspiration of giving **every child** an equitable chance to realize their full potential through education. The findings in this report are groundbreaking and point to many gaps that require urgent attention if we are to live up to the global mantra of building back better. Importantly, this report is primed to bridge the evidence gaps in the ongoing national discourse on the implementation of CBC.

It is my expectation that everyone who reads this report, whether through the lenses of the national goals of education, or the global vision of an equitable quality education for ALL, will find it worth of dispassionate engagement with. The data upon which this report is based will also be shared once we have gotten the right advice on how to proceed without breaching the data protection law that recently came into effect in Kenya. Once we share the data, we will encourage academics, graduate students and other researchers to mine it for non-profit courses, to generate further engagement and enhance its utility. Finally, it is our expectation that the evidence we share in this report, will inform the ongoing political campaigns and contribute to shaping the educational priorities of the next regime.



Emmanuel Manyasa, PhD
Executive Director, Usawa Agenda

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Acknowledgements



The completion of this report brings to fruition the dedicated efforts of a wide range of staff, volunteers, consultants and partners. We wish to acknowledge everybodyone who offered his or her time, expertise and resources to support the successful implementation of the 2021 secondary school survey in Kenya. Our sincere apologies in advance to those we may not be able to mention by name. The following, however, stand out in their unique contributions to the 2021 survey:

- The Usawa Agenda founders: Dr. Martin Ogola and Dr. Everline Wanzala, thank you for believing that this work is doable and trusting us to do it.
- Usawa Agenda funders: Wellspring Philanthropic Fund, Echidna Giving and Imaginable Futures, thank you for trusting us enough to put resources into the implementation of our ideas.
- The Usawa Agenda board members: Mr. Henry Kilonzo (Chairman), Prof. Gituro Wainaina, Mr. Naman Owuor, Ms. Florence Syevuo, Dr. Wilson Wasike, Mrs. Esther Wairimu and Ms. Joy Claudia Anami, thank you for keeping our feet on the ground while carrying out this important duty.
- The Usawa Agenda Staff: Dr. Emmanuel Manyasa, Boaz Ochi, Cycus Baraza, Brenda Onyango, David Lutta, Esther Nyokabi, Faith Atieno and David Baraza thank you for commitment beyond the call of duty without which this work report would not be out at this time.
- The Usawa Agenda Consultants: Walter Kwena and Kevin Mwanza;
- The 47 Uwezo County Partners who sacrificed their time to work with data collectors to ensure that we reached all the selected schools;
- The trainers who committed their time and expertise to enhance the data collectors' capacities to conduct the survey in the most credible way possible; and
- The 339 secondary school principals who welcomed us into their schools to conduct the surveys we can't thank you enough for your sacrifices to support this work.

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- We sincerely thank the leadership of the Ministry of Education both at the national and county levels for the continued and unwavering support to Usawa Agenda activities, without which we would not be able to do this work. We are indebted to the Department of Family Health, Division of Adolescents and School Health at the Ministry of Health, represented by Dr. Beatrice Ochieng for support in developing the school health components of the survey tools. We thank NACOSTI for support in timely authorizing of the survey.
- We thank the 47 County Commissioners at whose offices we made our first stops in each of the counties, in some cases requiring security support to proceed with the survey, and they all came through for us.
- We thank Mr. Kahi Indimuli, the Chairman of the Kenya Secondary Schools Heads Association and the Teachers' Service Commission for their role in producing and sharing this evidence.
- Deep appreciation to Dr. James Mbugua, who crunched the numbers to help us to make sense of them. We thank William for burning the midnight oil to design this report on an extremely tight timeline.
- To all those whose names we couldn't list here, accept our heartfelt gratitude and know that literally, we could not have done it without you. We continue to be inspired by all who unwaveringly work every day to secure the future of our children and that of the country through education.

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1. Introduction



This is Usawa's first secondary school survey report for Kenya. It is informed by the fact that secondary education is critical in the career paths that young Kenyans can take. Indeed, not performing well in secondary school has greater ramifications for young Kenyans than any other level of their education. Today there are many young Kenyans who have studied hard to acquire university degrees, but cannot be deployed at the same grade as their fellow university graduates because of their form four grade – that is how consequential achievement at the secondary school level is!

This report notes the fact that the grade a learner obtains in his/her Kenya Certificate of Secondary Education (KCSE) examinations is not entirely dependent on their ability and/or effort. Many factors impact this grade, most of them outside of the learner's control. Yet the learner almost singly bears the full responsibility for the grade they obtain. Most of these factors are school-level, while some are beyond the school. Based on anecdotal evidence, and sometimes in glaring exhibition of herd behavior, parents and learners scramble for limited spaces in the perceived best performing schools, while many secondary schools remain with sub-optimal number of learners. This report heralds the effort to investigate and expose the multiple factors that drive the academic performance of our public secondary schools (which educate most of the learners). It attempts to tackle the salient issue that we have surfaced over the years – inequity in our school system. Building on the many years of work at the primary school level, this report asks the question: ***"Is our secondary school system inequitable by design?"***

This report provides insights into the drivers of learning and academic performance in public secondary schools in Kenya, with a clear focus on the underlying structure that perpetuates systemic inequities. The report highlights the categorization of schools into national, extra-county, county and sub-county schools and the inequitable distribution of public resources among the different cadres of schools. Given that this categorization is neither provided for in the Basic Education Act of 2013 nor the Sessional paper number 1 of 2019, this report finds it difficult to rationalize the continued use of this order to skew the allocation of public resources (including teachers) in the secondary school sub-sector.

Kenya has pursued legal, policy and institutional reforms in education since the promulgation of the current Constitution in 2010 that have brought consequential structural changes including but not limited to:

1) Education being recognised as a constitutional right through the provisions of Article 53(1),
2) The provision of education becoming a shared function between the National and County governments (IV Schedule of the Constitution),

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3) The Teachers' Service Commission (TSC) being established as an independent Constitutional Commission with the mandate of among others to:

   - Ensure that teachers comply with the teaching standards prescribed by the Commission;
   - Manage the payroll of teachers in its employment;
   - Facilitate career progression and professional development for teachers in the teaching service including the appointment of head teachers and principals; and
   - Monitor the conduct and performance of teachers in the teaching service.

The country continues to pursue policy, legal and institutional reforms to comply with the Constitutional requirements of providing free and compulsory basic education, which is defined in the Basic Education Act 2013 as the 12 uninterrupted years of continued learning.

The implementation of the Free Primary Education Policy in 2003 and the Free Day Secondary Education policy in 2008 illustrate the efforts towards removing the financial barriers to universalising basic education. The Ministry of Education and the country in general have pursued policies that seek to deepen access, and improve quality, relevance and transition at critical levels of basic education.

From 2019, the Ministry of Education began the national roll out of the competency-based curriculum as a hallmark of the education reforms. The curriculum lauded widely by many stakeholders was seen as the panacea to addressing quality concerns. Our evidence (the first on the scene) from 2009 had revealed the sharp contrast between the education inputs and the learning outcomes; that indeed children were in school but were not learning.

In this year, when the pioneer group of CBC learners is expected to exit primary school and join secondary school, this report raises a red flag to warn of the high risk of serving new wine in old wineskins. It points out the inequities that have made many schools fail to live up to the expectations of learners, parents and the public, while a few schools, educating a minority fraction of the learners are lavished with public resources beyond their need. This is what it has always been. This is what must change.

The global clarion call to build back better will ring hollow for Kenyans if this doesn't change. The desire to contribute to the change has motivated this study, informing the deep dive into the issues that have simmered for long. Progress requires deep engagement with the facts that we share in this report to challenge all stakeholders to transcend the allure of cosmetic reforms that reproduce inequities.

The brief on the survey

To get this done this study undertook stratified random sampling of schools to obtain a sample of 376 secondary schools. Stratification was done at three levels: county, gender and category of schools. The target was to select 8 secondary schools from each county stratified into 2 schools for each category (sub-county, county, extra-county and national). Within these strata, there was further stratification into boys, girls and mixed secondary schools.

Survey tools were developed, pretested and piloted ahead of the survey. The primary respondents were principals of the selected schools. The data analysis has involved weighting the observations to make the findings reflect the true weight of the schools. For instance, sub-county schools constitute roughly 70% of the secondary schools and this was factored in the weighting of the sample during analysis.

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2. Key Facts on The Status of Secondary Education in Kenya!



FACT ONE:

The **category of secondary school the learner attends** contributes more to his/her KCSE grade than his/her entry (KCPE) marks.

FACT TWO:

Only **3 in 10** surveyed boarding schools reported having adequate space in their dormitories.

FACT THREE:

Girl schools are generally **less equipped with biology, physics and chemistry laboratories** compared to boy schools.

FACT FOUR:

Attending a school with **a high proportion of TSC-employed teachers** has a significant positive contribution to a learner's KCSE grade.

FACT FIVE:

Only 3 in 10 secondary school teachers are trained on using ICT in teaching and learning.

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3. Key Findings



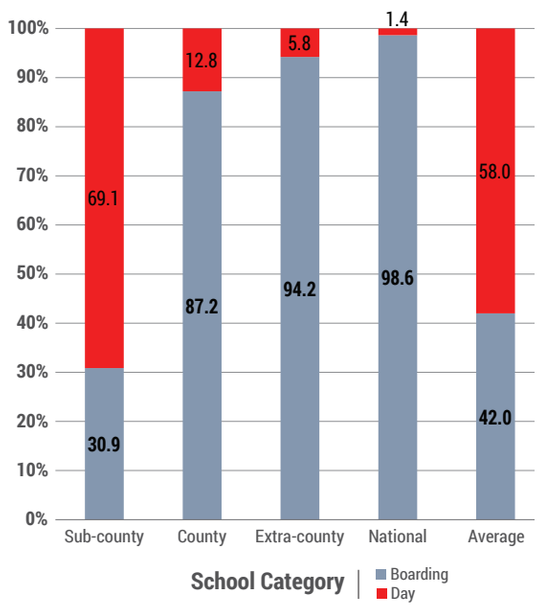
School Characteristics

Table 1: Distribution of the surveyed schools by category

School category	Frequency	Percentage
Sub-county	94	27.7
County	86	25.4
Extra-county	86	25.4
National	73	21.5
Total	**339**	**100**

- 339 schools were surveyed against the target of 376 representing 90.2% response rate.
- Sub-county schools had 100% response rate, while national schools had the least response rate at 77.7%.

Fig. 1: Distribution of schools by residency type and category



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- 6 in 10 secondary schools in Kenya are day schools.
- 7 in 10 sub-county schools are day while only 1 in 100 national schools is day.
- 13 in 100 county schools and 6 in 100 extra-county schools are day.

Table 2: Average number of learners by school category

Category	Average
Sub-county	391
County	510
Extra-county	800
National	1,226
Total	**433**

- The average national school is almost four times the size of an average sub-county school, more than double the size of an average county school and 1.5 times the size of an average extra-county school by population.

Table 3: Average number of examined subjects by school category and gender type

Category	School Type (Gender)			Average	Range
	Boys	Girls	Mixed		
Sub-county	10.8	11.0	10.9	10.9	[7, 15]
County	11.5	11.4	10.4	11.3	[7, 15]
Extra-county	12.5	12.5	-	12.5	[8, 20]
National	13.9	14.3	14.0	14.1	[8, 21]
Average	**11.5**	**11.3**	**10.9**	**11.1**	**[7, 21]**

- The number of subjects examined ranges from 7 to 21.
- The number of subjects differs among the different categories of schools.
- They range from 8 to 21 among national schools, 8 to 20 among extra-county schools and 7 to 15 among both county and sub-county schools.
- On average, sub-county schools have 10 examined subjects, county schools have 11, extra-county schools have 13 and national schools 14.
- Candidates are required to sit examinations in 7 subjects: the higher, beyond 7 the number of examined subjects, the higher the options for learners to select what interests them most and the more the opportunities for career paths the learners have.

COVID-19 Impact and Response

Table 4: COVID-19 Impact on enrolment by class and school category (2020 to 2021)

School Category	Class				Average		
	Form 1	Form 2	Form 3	Form 4	Boys	Girls	Total
Sub-county	-2.9%	-2.1%	-1.3%	-4.7%	-2.4%	-3.0%	-2.6%
County	-1.8%	-2.4%	-2.3%	-6.7%	-2.2%	-4.0%	-3.1%
Extra-county	-2.7%	-0.3%	-1.4%	-5.4%	-2.1%	-2.9%	-2.3%
National	-4.1%	-0.6%	-0.6%	0.4%	-2.0%	-0.7%	-1.4%
Average	**-3.1%**	**-1.1%**	**-1.3%**	**-3.3%**	**-2.1%**	**-2.3%**	**-2.1%**

- The COVID-19 pandemic caused a 2.1% decline in enrolment in the secondary schools across board.
- The dropout rate varied among the different classes and school categories:
  - *Among national schools, the highest dropout rate (4.1%) was in form one and the least (an increase in enrolment of 0.4%) in form four.*
  - *Among extra-county schools, the highest dropout rate (5.4%) was in form four and the least (0.3%) in form two.*
  - *Among county schools, the highest dropout rate (6.7%) was in form four and the least (1.8%) in form one.*
  - *Among sub-county schools, the highest dropout rate (4.7%) was in form four and the least (1.3%) in form three.*
  - *County schools reported the highest dropout rate (3.1) overall and for girls (4%), while national schools reported the lowest dropout rate (1.4%) overall and for girls (0.7%).*

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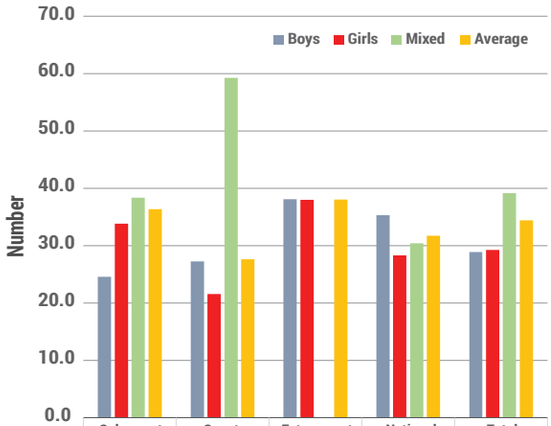
- The dropout also varied on the basis of gender:
  - *Girls generally recorded higher dropout rates across the different categories of schools than boys except for national schools where a lower rate (0.7%) was reported for girls compared to the boys' rate (2%).*

Fig. 2: Learners per functional hand-washing point by school category and gender type

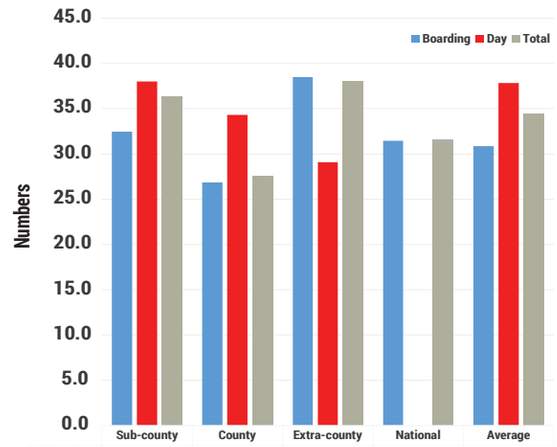


	Sub-county	County	Extra-county	National	Total
Boys	24.6	27.2	38.1	35.3	28.9
Girls	33.8	21.5	38.0	28.3	29.2
Mixed	38.3	59.3	0.0	30.4	39.2
Average	36.3	27.6	38.0	31.7	34.4

School Category

- Overall, 34 learners shared one handwashing point.
- In mixed schools, 39 learners shared one handwashing point while in boy and girl schools 29 learners shared one handwashing point.

Fig. 3: Learners per functional hand-washing point by school category and residency type

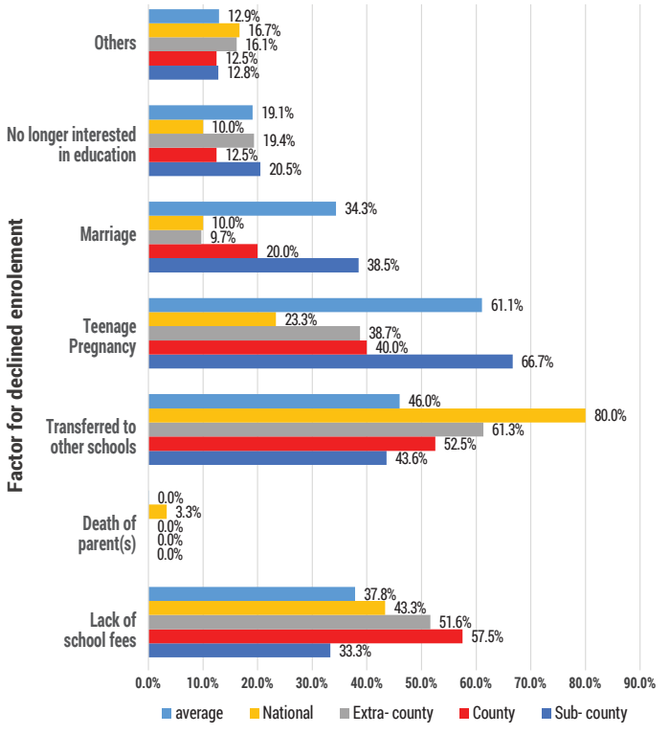


	Sub-county	County	Extra-county	National	Average
boarding	32.5	26.8	38.5	31.5	30.9
day	38.0	34.3	29.1	0.0	37.8
Total	36.3	27.6	38.0	31.5	34.4

School Category

- On average, there were 34 learners per every functional handwashing point in the schools across the board.
- Day schools had the higher learner to handwashing point ratio of 38 while boarding schools had 31 learners per handwashing point.

Fig. 4: Factors that contributed most to the decline in enrolment between March 2020 & January 2021 by school category



- Overall, lack of fees was mentioned as the cause for the decline in enrolment by 37.8% of the schools, transfer to other schools by 46% of the schools, teenage pregnancy by 61.1% of the schools, marriage by 34.3%, no longer interested in education by 19.1% and other unspecified reasons by 12.9%.
- The causes differed by the category of school:
  - *For national schools, the highest contributor at 80% was transfer to other schools.*
  - *For extra-county schools, the highest contributor at 62.3 % was transfer to other schools.*
  - *For county schools, the highest contributor at 57.5% was lack of fees.*
  - *For sub-county schools, the highest contributor at 61.1% was teenage pregnancy.*

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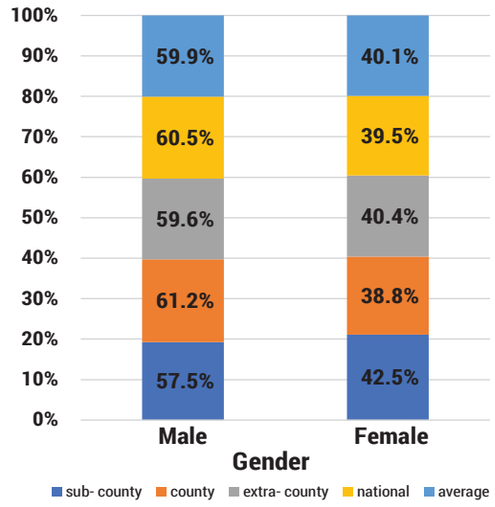
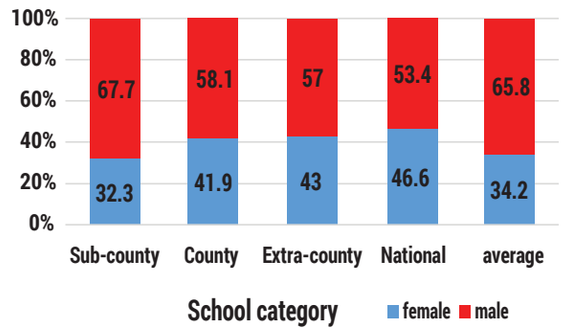
Teachers and School Managers

Fig. 5: Distribution of teachers by gender and school category



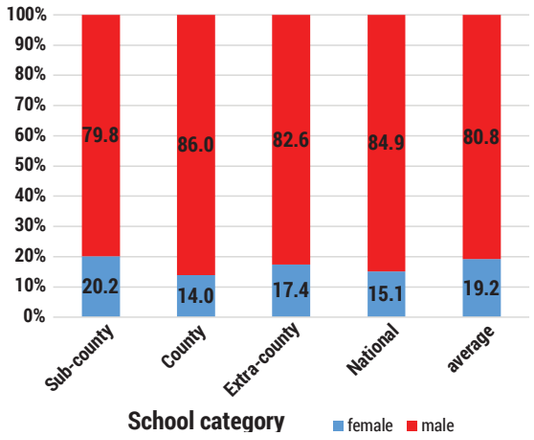
- 6 in 10 secondary school teachers in Kenya are men.
- Sub-county schools have the highest ratio of female to male teachers.

Fig. 6: Distribution of school principals by gender and school category



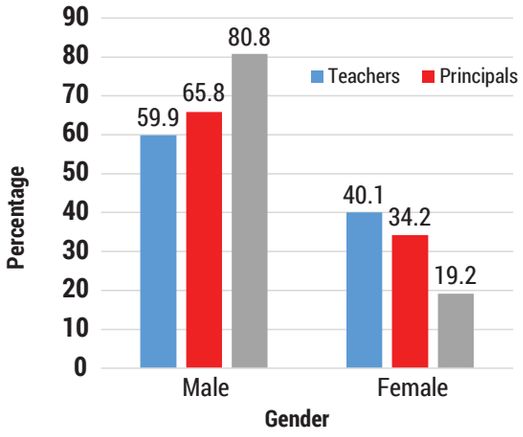
- 66 in 100 secondary school principals in Kenya are men while 34 in 100 are women.
- 68 in 100 principals of sub-county schools are men, while 53 in 100 principals for national schools are men.

Fig. 7: Distribution of school BOM Chairs by gender and school category



- 8 in 10 chairpersons of the secondary school boards of management are men with only 2 in 10 being women.

Fig. 8: Distribution of teachers and school managers by gender



- Women are under-represented in secondary school leadership.
- While women are 4 in 10 teachers, only 3 in 10 principals and 2 in 10 BOM Chairs are women.

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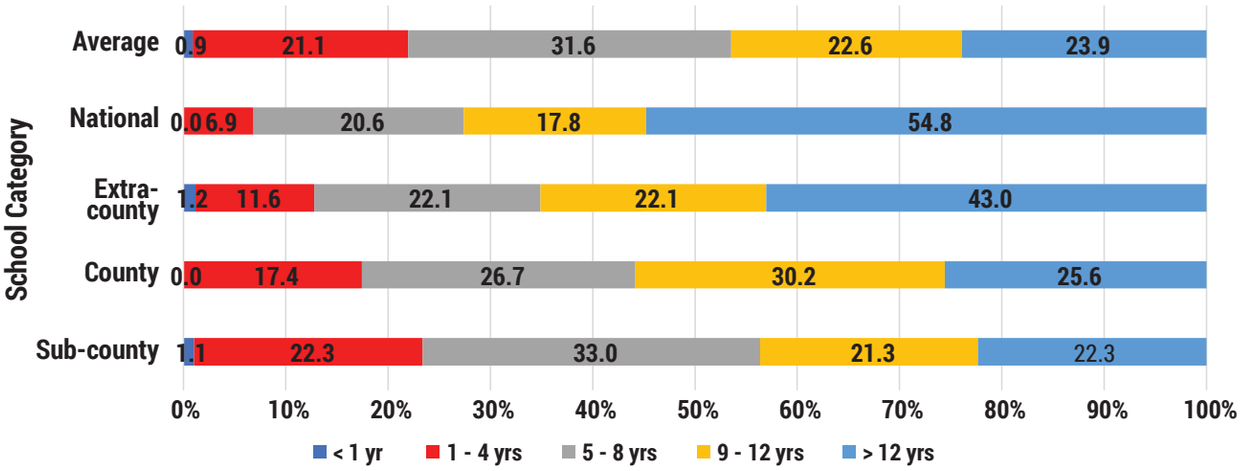
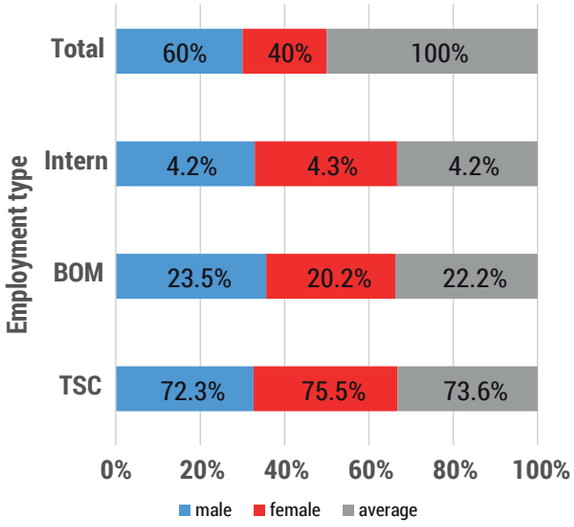
Fig. 9: Distribution of school principals by years of experience and school category



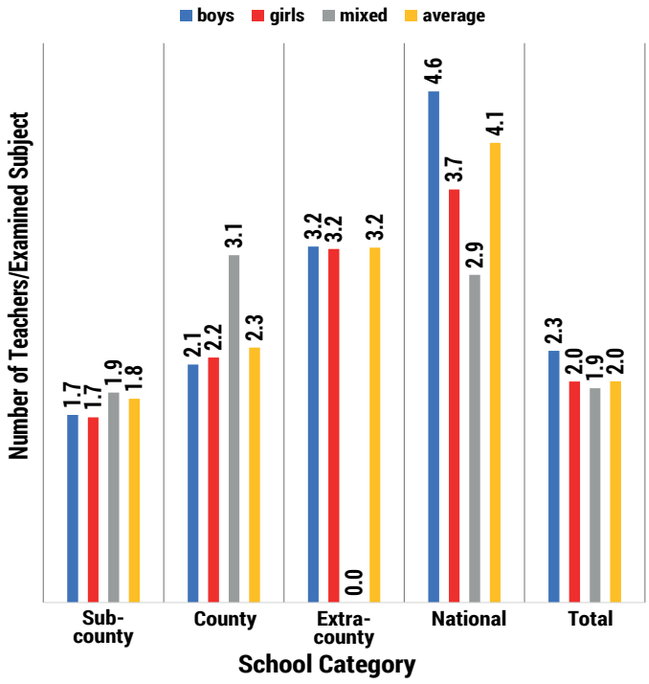
- On average, 1 in 100 secondary school principals had less than 1-year experience, 21 in 100 had 1-4 years' experience, 32 in 100 had 5-8 years' experience, 23 in 100 had 9-12 years' experience, while 24 in 100 had more than 12 years' experience in the position.
- The number of years of experience for the principals increase progressively from sub-county to national schools.
- 55% of the national school principals had more than 12 years' experience and none with less than 1-year experience.

Fig. 10: Distribution of teachers by employment type and gender



- Three types of teachers are found in public secondary schools in Kenya by nature of their employment: TSC permanently employed (73.6%); TSC Interns (4.2%); and BOM temporary employed (22.2%).

Fig. 11: Number of teachers per examined subject by school category



- National schools have more than twice the number of teachers per examined subject in sub-county schools.
- National schools also have double the national average of the number of teachers per examined subject.
- National schools are therefore more resilient to teacher transitions out of the school than the other categories of schools.
- Sub-county schools are the most vulnerable to teacher transitions out of the school among all the categories of schools.

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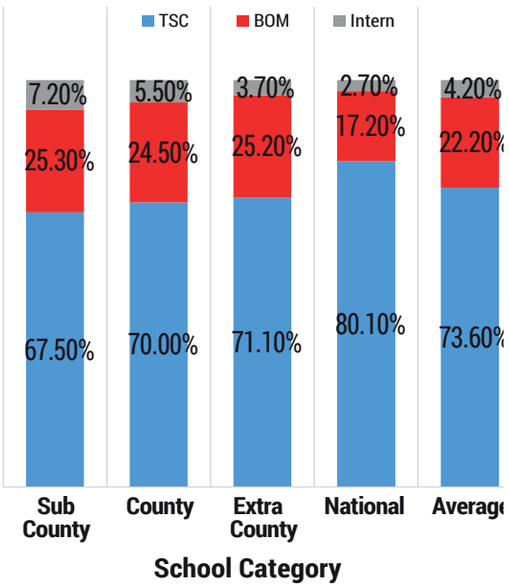
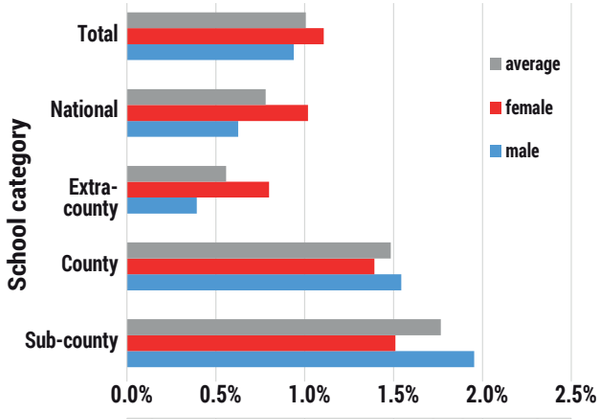
Fig. 12: Distribution of teachers by employment type and school category



- National schools are the most privileged in distribution of teachers: they have the highest percentage of TSC members of staff (80.1%) and least percentages of BOM (17.2%) and intern (2.7%) members of staff.
- Sub-county schools are the most disadvantaged in distribution of teachers: they have the least percentage of TSC members of staff (67.5%) and highest percentages of BOM (25.3%) and intern (7.2%) members of staff.

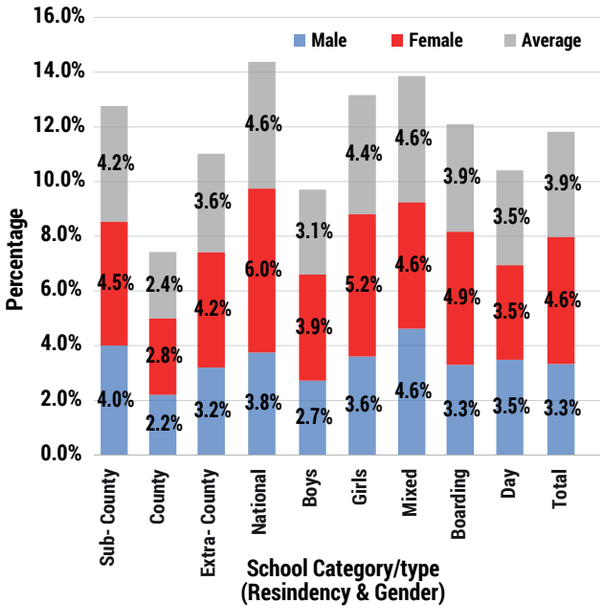
Fig. 13: Teachers trained in SNE by school category and gender



	Sub-county	County	Extra-county	National	Total
average	1.8%	1.5%	0.6%	0.8%	1.0%
female	1.5%	1.4%	0.8%	1.0%	1.1%
male	2.0%	1.5%	0.4%	0.6%	0.9%

- Overall only 1% of the teachers in public secondary schools are trained in special needs education (SNE) with slightly more women (1.1%) than men (0.9%) trained.
- Sub-county schools have the highest percentage of their teachers (1.8%) trained in SNE and also a higher percentage of men (2%) than women (1.5%) trained.
- Extra-county schools have the lowest percentage of their teachers (0.6%) trained in SNE and also a lower percentage of men (0.4%) than women (0.8%) trained.

Fig. 14: Teachers absent by gender and school category/ residency type/gender type



- Overall 3.9% of the teachers were absent from school on the day of the survey with more female teachers (4.6%) than male (3.3%) being absent.
- National schools recorded the highest absenteeism rate than other schools at 4.6% compared to the average rate of 3.9% and also recorded the highest female teachers' absenteeism rate at 6% compared to the female teachers' average rate of 4.6%.
- Absenteeism rates vary by gender and school category:
  - Female teachers were more absent than male teachers in all categories, types (based on gender and residency) except for day schools were the absenteeism rate for both male and female teachers was 3.5%.

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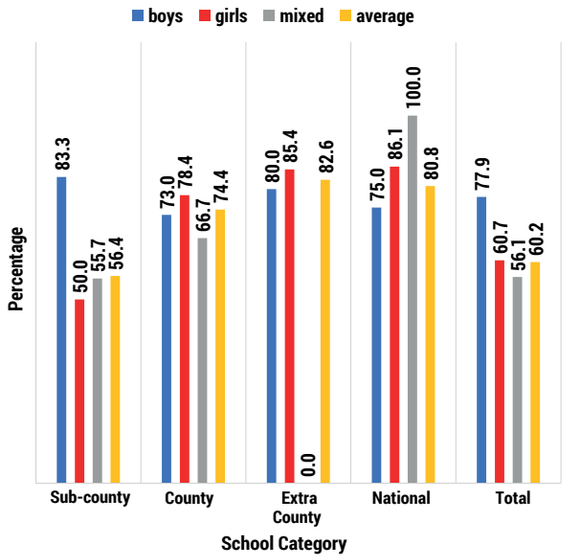
School Facilities and Services To Learners

Table 5: Distribution of Learning infrastructure by category of schools

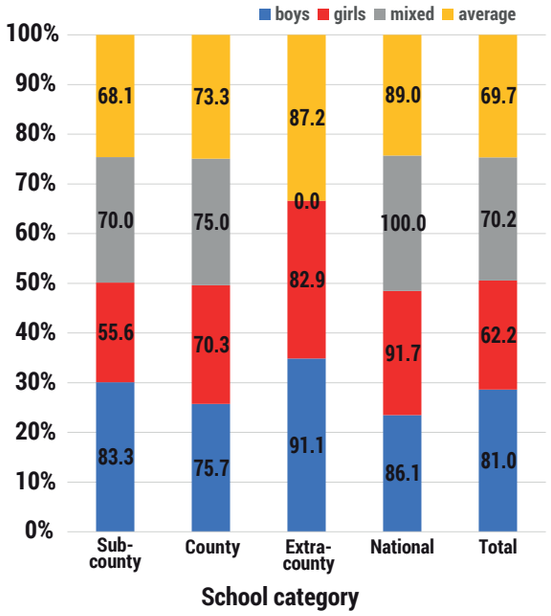
Infrastructure	Sub-county	County	Extra-county	National	Average
Schools with fully functional fire-fighting equipment	71.3%	83.7%	91.9%	95.9%	74.1%
Average number of usable classrooms	9.1	11.5	16.7	25.5	9.9
Average class sizes	47	48.5	49.5	51.9	47.6

Fig. 15: Schools that provided psycho-social support to their learners by category and gender type



- On average, 60.2% of the schools provided psycho-social support to learners in the aftermath of the covid-19 closure of schools.
- 77.9% of boy schools, 60.7% of girl schools and 56.1% of mixed schools provided psycho-social support to their learners.
- Except for sub-county schools where only 50% of girl schools provided psycho-social support to their learners compared to 83.3% of boy schools, in all other categories more girl schools provided psycho-social support to their learners than boy schools.

Fig. 16: Schools that have a trained counsellor by category and gender type



- Overall, 69.7% of public secondary schools have trained counsellors.
- More boy schools (81%) than girl schools (62.2%) and mixed schools (70.2%) have trained counsellors.
- Among national schools, more girl schools (91.7%) than boy schools (86.1%) have trained counsellors.

Table 6: Number of learners per trained counsellor by school category and gender type

School Category	boys	girls	mixed	average
Sub-county	189.7	334.5	321.9	311.6
County	280.9	329.8	516.9	332.0
Extra-county	284.0	361.6	-	315.7
National	381.7	257.9	380.0	313.9
Total	**258.1**	**329.5**	**329.3**	**315.2**

- There are more girls per trained counsellor across all school categories except for national schools.
- On average, there are 315 learners per trained counsellor in the public secondary schools.

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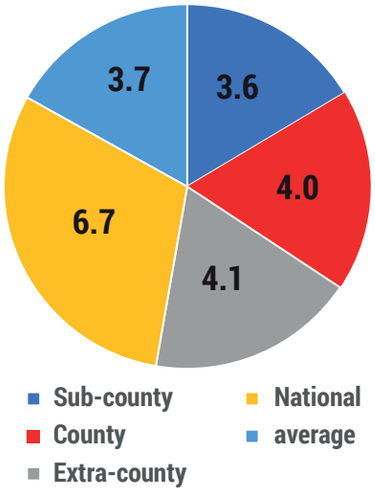
Table 7: Main source of drinking water by school category

Water source	School category				
	Sub-county	County	Extra county	National	Average
Borehole	21.3	40.7	41.9	32.9	24.9
Buy into tank	13.8	7.0	8.1	5.5	12.6
None	1.1	0	0	0	0.9
Pipe	41.5	38.4	41.9	50.7	41.2
Rainwater	10.6	5.8	3.5	4.1	9.6
River	7.5	4.7	2.3	4.1	6.8
Well	4.3	3.5	2.3	2.7	4.1
Total	**100**	**100**	**100**	**100**	**100**

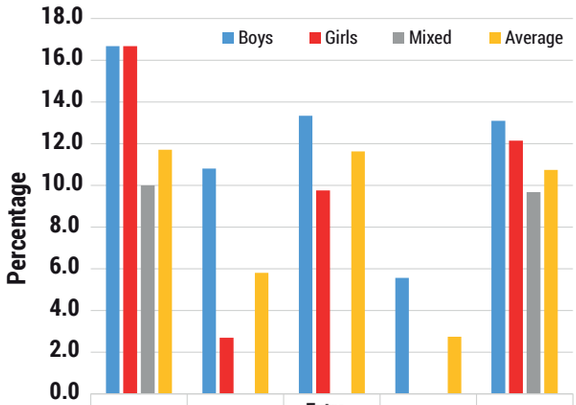
- On average 41.2% and 24.9% of the public secondary schools have access to piped water and boreholes as their main sources of drinking water respectively. .
- National schools have the highest access rate to piped water at 50.7% while the county schools have the least access to piped water at 38.4%.

Fig. 17: Average number of new toilets constructed during covid-19 by school category



- National schools built more toilets (7) during the covid-19 pandemic than county and extra-county schools, which built 4 new toilets each on average.
- Sub-county schools built just under 4 toilets on average.

Fig. 18: Schools with an incident of learners attending lessons in the open by category and gender type

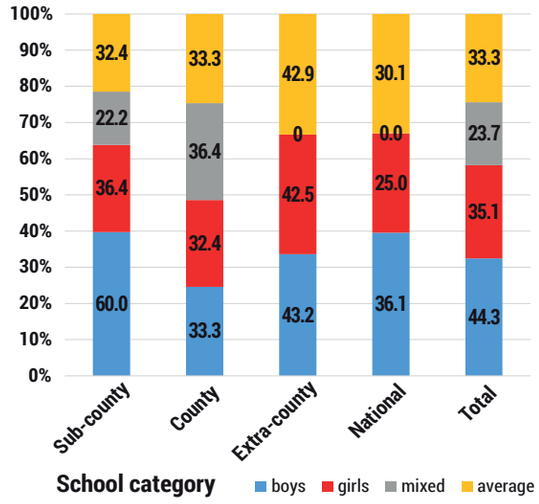


	Sub-county	County	Extra-county	National	Total
Boys	16.7	10.8	13.3	5.6	13.1
Girls	16.7	2.7	9.8	0.0	12.2
Mixed	10.0	0.0	0.0	0.0	9.7
Average	11.7	5.8	11.6	2.7	10.7

School category

- 10.7% of the schools had at least one case of children learning in the open for lack of a classroom.
- National schools reported the least such cases at 2.7% while sub-county schools reported the highest incidence at 11.7%.
- Boy schools also reported higher incidence of learners attending lessons in the open at 13.1% compared to mixed schools at 9.7%.

Fig. 19: Schools reporting adequate spaces in the dormitories by category and gender type



- Only 33.3% of the surveyed schools reported having adequate space in their dormitories.
- The greatest deficit is in mixed schools where only 23.7% of the schools reported having adequate space in their dormitories.

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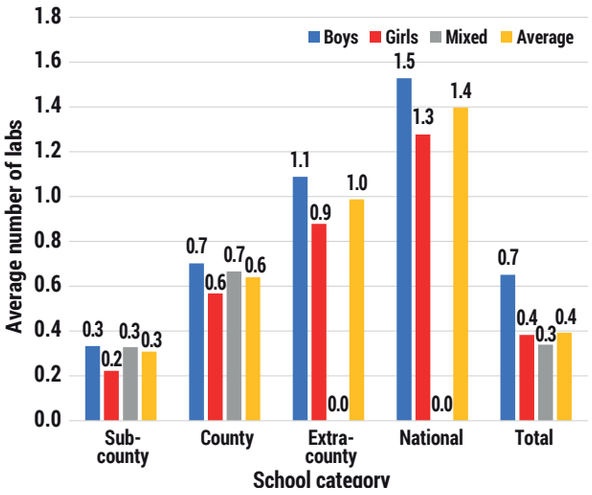
- Nationally, boy schools reported the greatest availability of spaces in their dormitories at 44.3%.
- National schools are most constrained with only 30.1% of them reporting having adequate space in their dormitories.
- Across all categories of schools, boy schools are less constrained compared to girl schools.
- Among the sub-county schools, 60% of boy schools reported having adequate space in their dormitories compared to the mixed schools with only 22.2% of them reporting having adequate space in their dormitories.

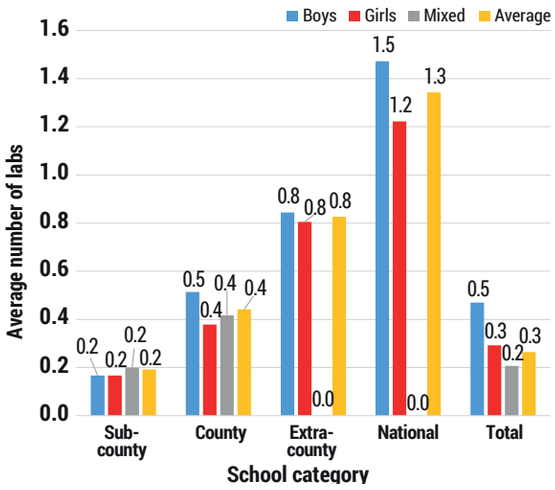
Fig. 20: Number of Chemistry laboratories in the school by category and gender type



- There are more chemistry labs in boy schools than in girl and mixed public secondary schools nationally and across all categories of schools.
- The average number of chemistry labs in national schools is more than triple the national average and more than four times the average number of chemistry labs in sub-county schools.

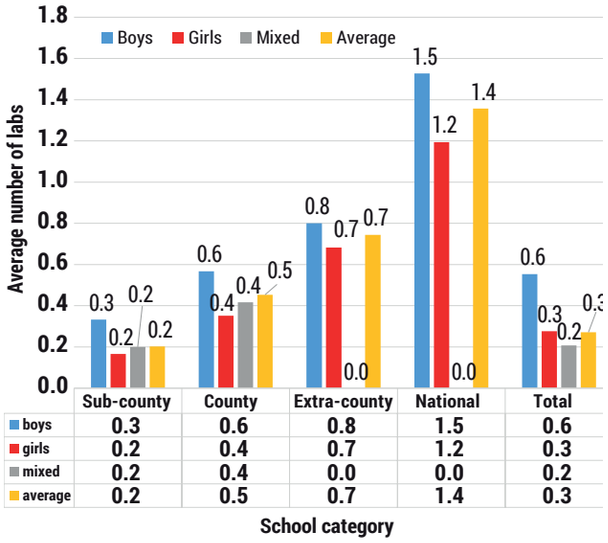


Fig. 21: Average number of Biology laboratories in the school by category and gender type



- The average number of biology labs in boy schools is more than that in girl and mixed public secondary schools nationally.
- The average number of biology labs in boy schools is greater across all categories of schools, except the sub-county ones where the average number of labs is uniform across the three types of schools (based on gender)..
- The average number of biology labs in national schools is more than four times the national average and more than six times the average number of biology labs in sub-county schools.

Fig. 22: Average number of Physics laboratories in the school by category and gender type



	Sub-county	County	Extra-county	National	Total
boys	0.3	0.6	0.8	1.5	0.6
girls	0.2	0.4	0.7	1.2	0.3
mixed	0.2	0.4	0.0	0.0	0.2
average	0.2	0.5	0.7	1.4	0.3

- The average number of physics labs in boy schools is more than that in girl and mixed public secondary schools nationally and across all categories of schools.

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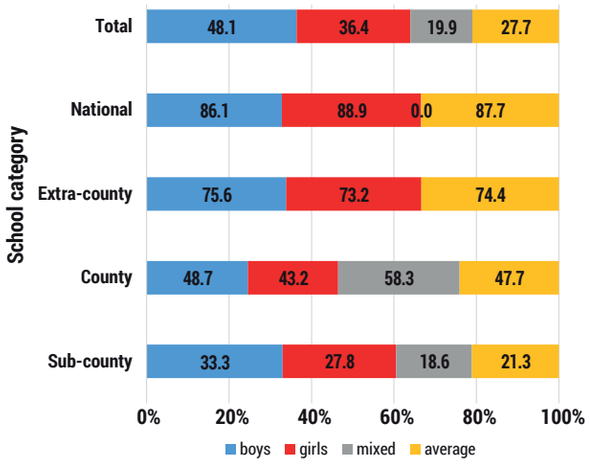
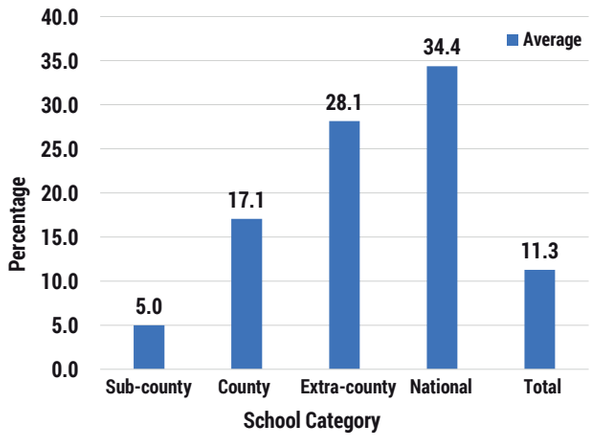
- The average number of physics labs in national schools is more than four times the national average and more than six times the average number of physics labs in sub-county schools.

Fig. 23: Percentage of schools with a library by category and gender type



- Overall, 3 in 10 surveyed schools have a library.
- 2 in 10 sub-county schools, 5 in 10 county schools, 7 in 10 extra-county schools and 9 in 10 national schools have a library.
- A higher percentage of boy schools have libraries than girl and mixed schools nationally, as well as among the sub-county and extra-county schools.
- A higher percentage of national girl schools have libraries than their boy and mixed school counterparts.
- A higher percentage of county mixed schools have libraries than their boy and girl school counterparts.

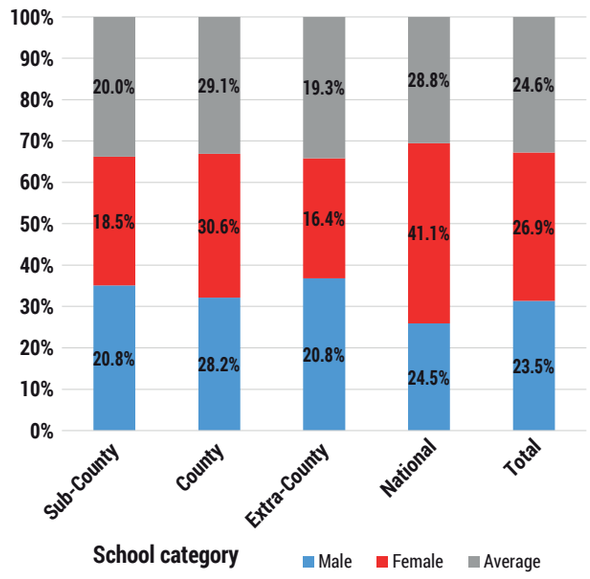
Fig. 24: Percentage of schools with a library connected to online resources by category



- 11 in 100 schools nationally have libraries connected to online resources.
- 5 in 100 sub-county schools have libraries connected to online resources.
- 17 in 100 county schools have libraries connected to online resources.
- 28 in 100 extra-county schools have libraries connected to online resources.
- 34 in 100 national schools have libraries connected to online resources.
- Percentage of national schools with a library connected to online resources is more than six times that of sub-county schools and double that of county schools with similar libraries.

ICT Facilities and Services

Fig. 25: Teachers trained on Digital literacy program (DLP) by MOE by school category and gender



- Nationally, only 24.6% of the teachers in surveyed secondary schools are trained on DLP with slightly more female (26.9%) than male (23.5%) teachers trained.
- County schools have the highest percentage of teachers trained on DLP (29.1%), while extra-county schools have the lowest percentage of teachers trained on DLP (19.3%).
- The percentage of male teachers trained on DLP is almost constant across different school categories.

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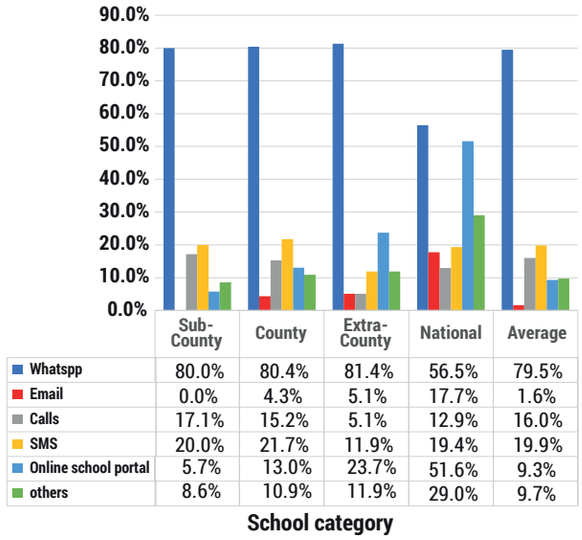
- The percentage of female teachers trained on DLP varies across different school categories, ranging from 16.4% among the extra-county schools to 41.1% among the national schools.

Table 8: ICTs access in schools by category

ICT Resource access	Sub county	County	Extra county	National	Average
Average number of learners sharing a computer	128	64	45	43	52
Proportion of schools with a computer laboratory	25.5%	57%	91.9%	97.3%	33.2%
Percentage of teachers trained on using ICT in teaching and learning	24.1%	30.7%	34.4%	31.1%	30.9%
Percentage of schools offering computer lessons to learners	20.2%	53.5%	87.2%	95.9%	28.2%
Percentage of schools offering computer lessons to learners	5.3%	18.6%	38.4%	31.5%	8.7%
Percentage of schools utilizing KICD audio-visual learning materials	52.1%	54.7%	58.1%	64.4%	52.9%
Percentage of schools utilizing the radio lessons on the national broadcaster - KBC	5.3%	5.8%	12.8%	8.2%	5.7%
Percentage of schools that possess functional official email address	80.9%	90.7%	98.8%	100%	83.1%
Percentage of schools that possess functional official telephone line	45.7%	61.6%	75.6%	93.2%	49.6%

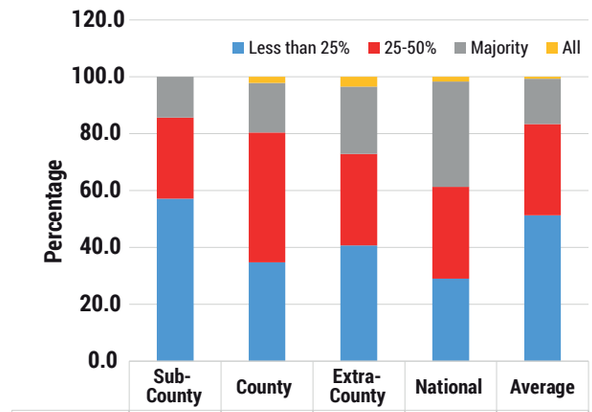
Fig. 26: Popular platforms used to support learning continuity during school closures



	Sub-County	County	Extra-County	National	Average
Whatspp	80.0%	80.4%	81.4%	56.5%	79.5%
Email	0.0%	4.3%	5.1%	17.7%	1.6%
Calls	17.1%	15.2%	5.1%	12.9%	16.0%
SMS	20.0%	21.7%	11.9%	19.4%	19.9%
Online school portal	5.7%	13.0%	23.7%	51.6%	9.3%
others	8.6%	10.9%	11.9%	29.0%	9.7%

- WhatsApp was by far the most preferred platform for remotely reaching learners during the extended school closures.
- Among the sub-county and county schools, the second most preferred platform was SMS, which was also second most preferred nationally.
- Among national and extra-county schools the second most preferred platform was online school portal.

Fig. 27: Learners reached remotely on regular basis by school category



	Sub-County	County	Extra-County	National	Average
All	0.0	2.2	3.4	1.6	0.6
Majority	14.3	17.4	23.7	37.1	16.0
25-50%	28.6	45.7	32.2	32.3	32.1
Less than 25%	57.1	34.8	40.7	29.0	51.3

- 51.3% of the schools reached less than 25% of their learners remotely.
- 32.1% of the schools reached between 25% and 50% of their learners remotely.

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- 16% of the schools reached majority of their learners remotely.
- 0.6% of the schools reached all their learners remotely.

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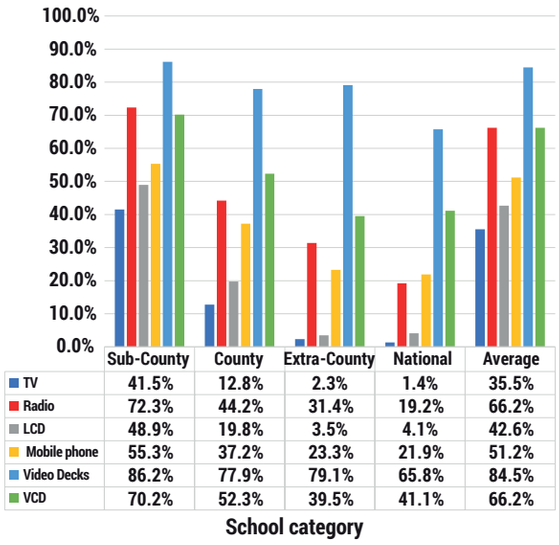
Fig. 28: List of digital devices/equipment owned by schools by school category

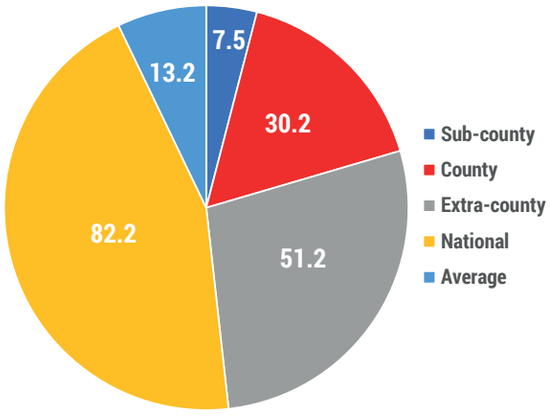


	Sub-County	County	Extra-County	National	Average
TV	41.5%	12.8%	2.3%	1.4%	35.5%
Radio	72.3%	44.2%	31.4%	19.2%	66.2%
LCD	48.9%	19.8%	3.5%	4.1%	42.6%
Mobile phone	55.3%	37.2%	23.3%	21.9%	51.2%
Video Decks	86.2%	77.9%	79.1%	65.8%	84.5%
VCD	70.2%	52.3%	39.5%	41.1%	66.2%

- The digital device owned by the greatest number of schools is the video deck at 84.5%.
- The digital device owned by the least number of schools is the TV at 35.5%.

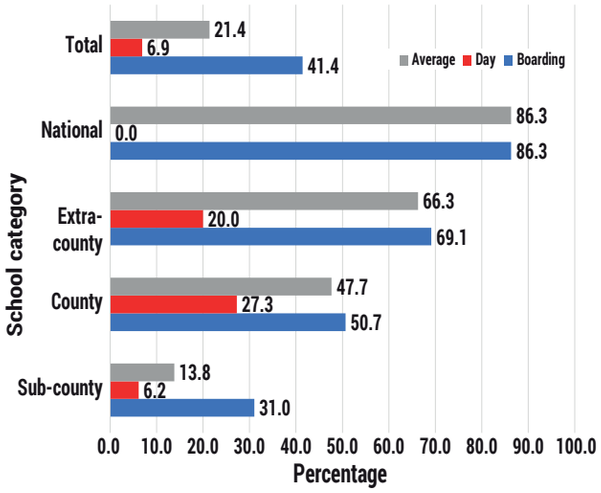
School Health Matters

Fig. 29: Percentage of schools with a trained nurse by category



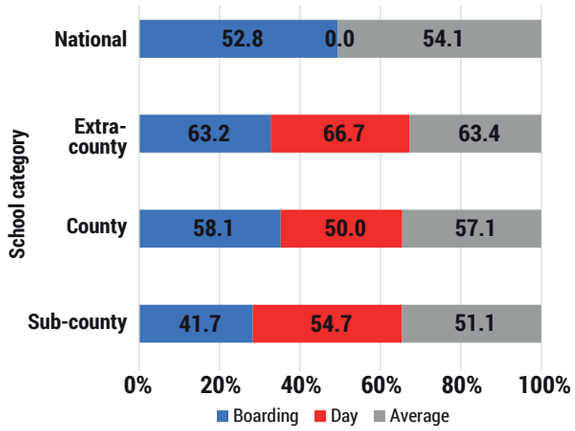
- 8 in 10 national schools have trained nurses.
- 5 in 10 extra-county schools have trained nurses.
- 3 in 10 county schools have trained nurses.
- Only 8 in 100 sub-county schools have trained nurses.
- 13 in 100 surveyed schools have trained nurses.

Fig. 30: Schools with a school clinic by category and residency type



- 21.4% of surveyed schools have clinics.
- Higher percentage of boarding schools (41.4%) than day schools (6.9%) have clinics.
- 86.3% of national schools compared to 13.8% of sub-county schools have clinics.
- Across the different categories of schools, the percentage of boarding schools which have clinics is more than double that of the day schools with clinics.

Fig. 31: Schools that provide free sanitary towels by category and residency type



- 63.4% of extra-county schools provide sanitary towels compared to 51.1% of the sub-county schools.
- 66.7% of extra-county day schools provide sanitary towels compared to 41.7% of the sub-county boarding schools.

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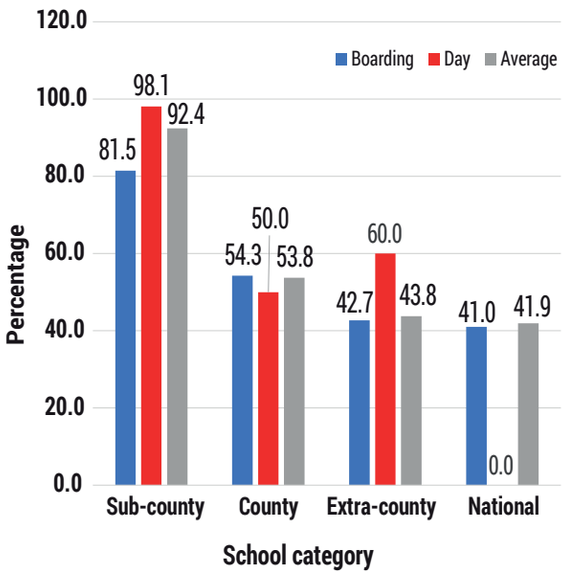
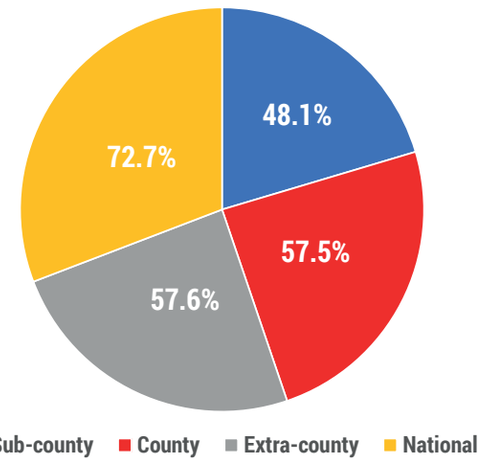
Fig. 32: Schools that reported at least a case of teenage pregnancy during extended school closures by category and residency type



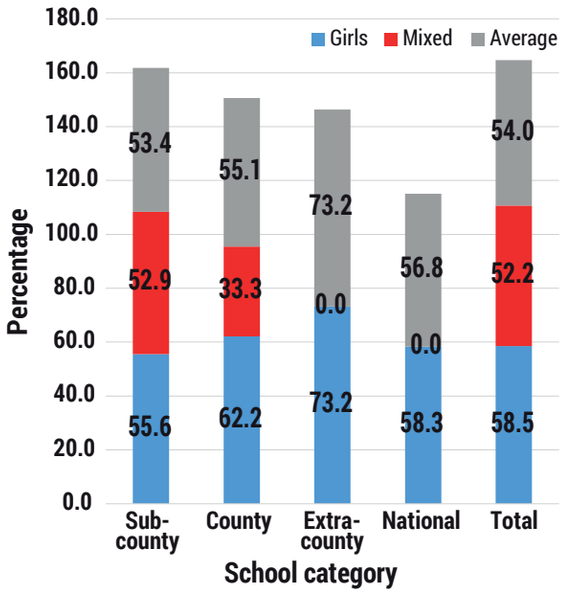
- 9 in 10 surveyed sub-county schools reported at least a case of teenage pregnancy during extended school closures.
- 10 in 10 surveyed sub-county day schools reported at least a case of teenage pregnancy during extended school closures compared to 8 in 10 sub-county boarding schools.
- 4 in 10 surveyed extra-county schools reported at least a case of teenage pregnancy during extended school closures.
- 6 in 10 surveyed extra-county day schools reported at least a case of teenage pregnancy during extended school closures compared to 4 in 10 extra-county boarding schools.
- 4 in 10 surveyed national schools reported at least a case of teenage pregnancy during extended school closures.
- 98% of day sub-county schools recorded cases of teenage pregnancy compared to 85% of boarding sub-county schools and 41% of national schools – the category and type of school a girl attends has a great impact on her likelihood to become a teenage mother.

Fig. 33: Teenage mothers' school return rate by school category



- 72.7% of teenage mothers in national schools returned after delivery compared to 48.1% in sub-county schools.

Fig. 34: Schools that reported instituting measures to support returning teenage mothers by category and gender type



- 54% of the surveyed girl and mixed schools have instituted measures to support returning teenage mothers.
- 58.5% of girl schools have instituted measures to support returning teenage mothers compared to 52.2% of mixed schools.
- 73.2% of extra-county schools have instituted measures to support returning teenage mothers compared to 53.4% of the sub-county schools.

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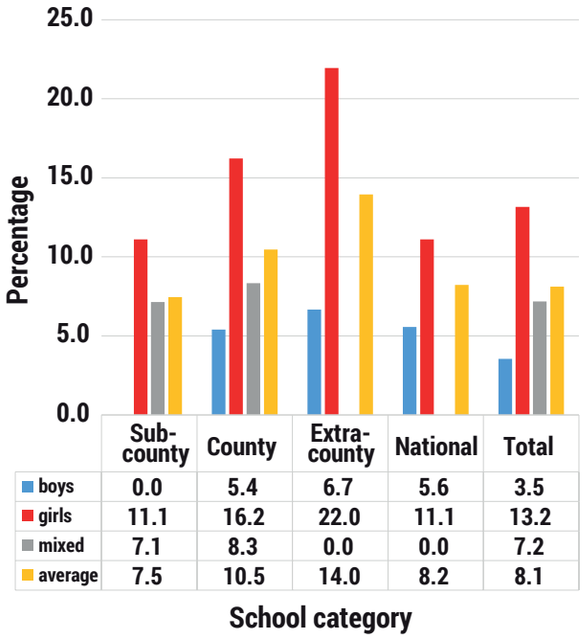
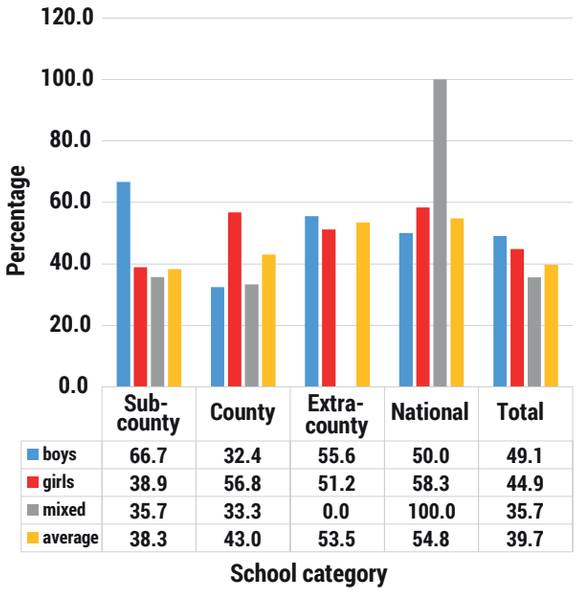
Fig. 35: Schools that reported at least a case of sexual & gender-based violence (SGBV) during extended school closures by category and gender type



	Sub-county	County	Extra-county	National	Total
boys	0.0	5.4	6.7	5.6	3.5
girls	11.1	16.2	22.0	11.1	13.2
mixed	7.1	8.3	0.0	0.0	7.2
average	7.5	10.5	14.0	8.2	8.1

- 8.1% of the schools reported at least a case of SGBV during extended school closures.
- Higher percentage of girl schools reported at least a case of SGBV during extended school closures (13.2%) compared to boy schools (3.5%) and mixed schools (7.2%).
- Sub-county schools recorded the lowest percentage of those reporting incidents of SGBV at 7.5%.
- Extra-county schools recorded the highest percentage of those reporting incidents of SGBV at 14%.
- 22% of extra-county girl schools reported at least a case of SGBV during extended school closures.
- None of the sub-county boy schools reported a case of SGBV during extended school closures.

Fig. 36: Schools that reported instituting measures to protect victims/survivors of SGBV by category and residency type



	Sub-county	County	Extra-county	National	Total
boys	66.7	32.4	55.6	50.0	49.1
girls	38.9	56.8	51.2	58.3	44.9
mixed	35.7	33.3	0.0	100.0	35.7
average	38.3	43.0	53.5	54.8	39.7

- Overall, 39.7% of surveyed schools reported instituting measures to protect victims/ survivors of SGBV.
- 49.1% of boy schools reported instituting measures to protect victims/survivors of SGBV.
- 35.7% of mixed schools reported instituting measures to protect victims/survivors of SGBV.
- 54.8% of national schools compared to 38.3% of sub-county schools reported instituting measures to protect victims/survivors of SGBV.

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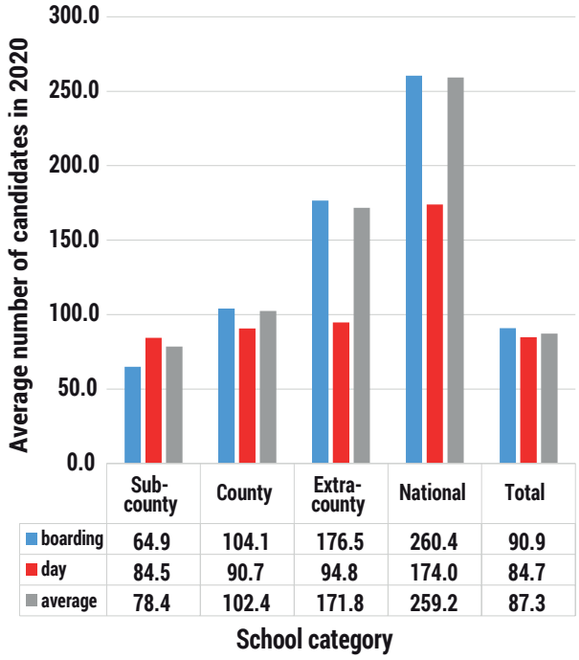
Learning Outcomes and Their Drivers

Fig. 37: Average number of KCSE candidates the schools had in 2020 by category and residency type



- Sub-county schools had an average of 78 candidates.
- County schools had an average of 102 candidates.
- Extra-county schools had an average of 172 candidates.
- National schools had an average of 259 candidates.
- The national average number of candidates was 87 per school.

Table 9: Regression results of learners' KCSE performance on school factors and entry scores

Factor	Coefficient	P-Value	[95% Conf.	Interval]
KCSE Grade				
KCPE Marks (entry marks)	0.16	0.000	0.15	0.16
Learners/ teacher	-1.04	0.000	-1.24	-0.85
Number of years served in the current school (Ref: <1 year)				
1-4 years	-0.73	0.333	-2.22	0.75
5-8 years	-4.76	0.000	-6.37	-3.16
9-12 years	0.36	0.726	-1.65	2.36
Years of experience as a Principal (Ref: <1 year)				
1-4 years	6.99	0.000	4.79	9.20
5-8 years	14.2	0.000	11.89	16.50
9-12 years	11.57	0.000	9.33	13.81
>12 years	12.70	0.000	10.37	15.04
School Category (Ref: Sub-county)				
County School	-0.70	0.243	-1.87	0.47
Extra County School	2.51	0.000	1.11	3.90
National School	5.43	0.000	3.51	7.34
School Residence (Ref: Day School)				
Boarding School	7.67	0.000	6.74	8.60
School gender (Ref: Mixed)				
Boys School	-0.41	0.548	-1.77	0.94
Girls School	1.19	0.038	0.07	2.31
School has Library (Ref: No)				
Yes	1.67	0.000	0.93	2.42
Percentage of absent teachers	-0.16	0.000	-0.20	-0.13
Proportion of TSC teachers	7.48	0.000	5.06	9.91

A weighted OLS regression model was fitted on the data with the KCSE points scored by candidates in the 2020 national examinations from the selected schools as the dependent variable and a host of regressors as indicated in table 9.

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The results show that:

- One mark increase in the candidate's entry score is associated with only 0.16 points addition to the candidate's KCSE mean grade.
- One unit increase in the learners to teacher ratio is associated with 1.04 points decline in the candidate's KCSE mean grade.
- Attending a county school is associated with scoring similar points in KCSE examinations with a fellow candidate who attended a sub-county school.
- Attending an extra-county school is associated with scoring 2.51 points more in KCSE examinations than a fellow candidate who attended a sub-county school.
- Attending a national school is associated with scoring 5.43 points more in KCSE examinations than a fellow candidate who attended a sub-county school.
- Attending a boarding school is associated with scoring 7.67 points more in KCSE examinations than a fellow candidate who attended a day school.
- For girls, attending a girl school is associated with scoring 1.19 points more in KCSE examinations than a fellow girl who attended a mixed school.
- Attending a school with a library is associated with scoring 1.67 more points in KCSE examinations than a fellow candidate who attended a school without a library.
- A one unit increase in the percentage of teacher absenteeism is associated with 0.16 points decline in the candidates' KCSE mean grades.
- A one unit increase in the proportion of TSC teachers is associated with 7.48 points increase in the candidates' KCSE mean grades.
- Attending a school where the current principal has served in the same capacity and school for between 5 & 8 years is associated with scoring 4.76 less points in KCSE examinations than a counterpart in a school where the principal has served for less than one year in the same capacity.
- Attending a school where the current principal has between 5- & 8-years' experience is associated with scoring 14.2 more points in KCSE examinations than a counterpart in a school where the principal has less than one-year experience.

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4. Conclusions



Several conclusions can be drawn from the analysis in this report:

- The categorization of schools has direct impact on resource allocation among the various cadres of public secondary schools in Kenya;
- The highest ranked schools - national schools enjoy great privilege compared to the lowest ranked ones – sub-county schools both in staffing and funding;
- The category of school one attends has direct implication on their performance in the KCSE examinations, with sub-county schools offering the least opportunity to excel while the national schools offer the best opportunity to excel;
- For girls, attending a sub-county day school exposes them to a much higher risk of teenage pregnancy than other categories of schools while attending a national school presents the least such risk;
- Parents of children attending sub-county schools shoulder a much heavier burden of hiring teachers to fill the shortfall left by inadequate deployment by the Teachers Service Commission while those of children attending national schools shoulder the lightest such burden;
- Women are under-represented in management of schools both as principals and boards management chairs; and
- **The above factors put together and combined with the paramount importance of the KCSE grade in career options and social standing, make the secondary school system as currently set up, the citadel of inequity in the country!**

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Appendices

Appendix 1: Selecting the schools

The sample frame for the 2021 secondary schools survey was made up of all public secondary schools in Kenya.

Sample	Targeted reaching 376 secondary school distributed in four categories: sub -county, county, extra-county & national
Reached and assessed	339 secondary school comprising of94 sub-county schools; 86 county schools; 86 extra county schools; and 73 national schools
Sampling schools	Schools were sampled using multistage, stratified random sampling.
Interviews were conducted face to face	Interviews followed an interview schedule.
Observation was conducted	Observation followed an observation guide
Process recheck	Process re-check conducted in 7 counties

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Notes

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