



African Population and  
Health Research Center



# ACCESS TO QUALITY EDUCATION FOR CHILDREN LIVING IN URBAN, POOR INFORMAL SETTLEMENTS IN UGANDA

Urban Education Research Report - Uganda

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## Abbreviations and Acronyms

<b>APHRC</b>	- African Population and Health Research Center
<b>AVC</b>	- Average Class Size
<b>COVID-19</b>	- An illness caused by a novel coronavirus called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) discovered in 2019.
<b>EFA</b>	- Education for All
<b>FSE</b>	- Free Secondary Education
<b>HDT</b>	- Human Development Theme
<b>LCPS</b>	- Low-Cost Private Schools
<b>PTR</b>	- Pupil Teacher Ratio
<b>RTE</b>	- Right to Education
<b>UBOS</b>	- Uganda Bureau of Statistics
<b>UPE</b>	- Universal Primary Education

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## Executive Summary

The Ugandan Government in 1997 introduced the Universal Primary Education (UPE) policy. The policy allowed the abolishment of tuition fees to increase access to education for the most marginalized. Other national programs and interventions exist to ensure that all children access quality education without any form of discrimination. Additionally, the Government of Uganda is also a signatory to international and local treaties that protect the right to education for all. Despite the UPE policy and other programs supporting access to quality education, children from marginalized communities still face exclusion from education opportunities. Gender, regional disparities, socio-economic status and disabilities are some of the key forms of exclusion that children face.

To understand access to quality education in urban informal settlements in Uganda, the African Population and Health Research Center in 2018 brought together state and non-state actors of education working in the urban informal settlements through the urban education project. Through this project, the state and non-state actors of education formed a Uganda Urban Education Group (UEG). Stakeholders in this group engaged in different activities, such as forming and strengthening the UEG group for a collective voice in advocating for access to quality education for children living in urban informal settlements. Through this engagement and review of existing literature, the stakeholders identified a gap. The gap in the evidence was in relation to how children in urban informal areas in Uganda access education and where the children access education. It was after several consultations with the UEG members that the team sought to carry out a research study in

selected urban informal settlements in Uganda. The study titled *'The Urban Education Agenda in Uganda: A Call for Targeted Attention on Education for the Urban Poor'* sought to answer the following objectives.

1. What are the schooling patterns among children living in urban poor households in Uganda – including those with Special needs?
2. What explains the observed schooling patterns in small and large urban centers?
3. How do poor urban communities perceive and understand education as a right in the context of urbanization in Uganda?
4. What available education opportunities exist for children with special needs and living in poor households in Uganda?
5. What survival and educational mechanisms/initiatives did people in urban poor settlements adopt during the COVID-19 pandemic?

Data collection was carried out in two phases. The main data collection took place in October 2020, while the school survey and the rapid household survey both took place in March 2021. The study was conducted in 42 villages selected in seven parishes in Kampala and Mukono. Five of these parishes were from Kampala, and two from Mukono Municipality. In selecting the study site, the research team ensured that each of the study sites was classified as an urban informal settlement by the Uganda Bureau of Statistics (UBOS). Additionally, the Urban Education steering committee from the Ministry of Education and Sports (MoES) and Kampala Capital City Authority (KCCA) were also consulted in deciding on the areas of study.

A total of five quantitative instruments were used. These included household amenities and schedule, individual schooling history, parental and perception, rapid household and institutional tools, and 1,102 households with 2,581 children aged 3-19 years were interviewed. Descriptive and inferential statistics were used to conduct the analysis. Tables and graphs have been used to present the findings.

Qualitative tools were also used for this study. The following methods were used: Key Informant Interviews (KIIs) with national policy actors, In-depth Interviews (IDIs) with local administration and Focus Group Discussions (FGD) with parents. In analyzing the qualitative data, codes were developed and the deductive method was mainly used.

## Key Findings

### Household Characteristics

1. 65.3 % of households in Uganda's urban informal settlements have more than five members who live in the poorest wealth quintile.
2. More than half (53.9%) of the female-headed households were in the poorest wealth quintile compared to their male counterparts.
3. Across the three wealth index levels (poorest, middle, wealthiest), more than half of the household heads had attained a lower secondary or above in regard to education.
4. There were more girls (54%) in the selected households compared to boys (46%) that had school going children aged 3-19 years.
5. Across the three wealth index levels more children were attending the primary level (67%), followed by the secondary level (19%) and lastly, the pre-primary level 14%.

### School Attendance

1. Before the closure of schools due to COVID-19, 99.6% of the children aged 4 to 17 years had ever been to school.
2. Before the closure of schools due to COVID-19, 2.1 % of children were out of school, but after full school re-opening, this increased to 9 %.
3. By gender, before school closure, more boys (2.4%) were out of school compared to girls (2.1%), but after full re-opening, more female learners (9.2%) were not enrolled compared to (8.6%) boys.
4. At all the primary and secondary levels, there were more learners enrolled in private schools compared to government schools during school closures due to COVID-19 and after full school re-opening. At the primary level before COVID-19, enrollment stood at

68.1%, but after full re-opening, this went down to 63.8 %. At the secondary level, it was 71.7% before the school's closure, and surprisingly, this remained the same after full school re-opening.

5. After full school re-opening, the findings show an increase in the learners from the poorest wealth index level at the primary level moving to government schools from 33.9% to 43.9%.
6. About 42.3% of parents transferred their children after full school reopening due to the affordability of school fees.
7. More children from the urban informal settlements for the period 2015-2022 have predominantly utilized private schools compared to government schools.
8. Overall, 8.2% of children had repeated a grade, with more boys (9.3%) repeating than girls (7.3%).
9. About 28.4 % of learners did not progress to the next grade after full school re-opening.

### Pupil-Teacher Ratio

1. The PTR at the primary school level was high (1:55) in government schools compared to 1:19 in private schools.

### Perceptions on Quality of Education

1. Slightly more than half (51.9%) of parents from the urban informal settlements felt that the quality of education had improved since the introduction of the Universal Free Primary Education policy.

### Stakeholders' Understanding of the Right to Education

1. Notably, the concept of the Right to Education was well understood by all the



stakeholders, including the parents. The parents highlighted several ways in which they uphold the right to education, which included providing uniforms and food for their children while going to school. Additionally, they encouraged each other to enroll their children in schools while acknowledging the role the community plays.

2. The mechanisms used to report violations of the Right to Education were better understood by the policy actors and local administration as compared to the parents. Parents indicated using more community-level-based methods, such as the village local council meetings compared to the structures set up by the Ministry of Education and Sports and others.

### Opportunities for Continued Learning During COVID-19

1. Overall, the poorest households (15%) accessed the least and paid (54%) more for these opportunities compared to those households that were in the middle and wealthiest wealth index levels.
2. The main challenges in accessing learning opportunities included a lack of resources to purchase learning materials, competing responsibilities at home that limited the time available for study and a lack of study spaces at home.

## Conclusion

The urban informal areas in our towns and cities continue growing rapidly. This trend comes with an increase in the population and, consequently, a growing demand for public services such as education. In Uganda's urban informal settlements, more children are utilizing private schools than government public schools to access education. This pattern is associated with distance to school and hence the reason for parents choosing private schools over government schools, which are already crowded. Despite the UPE policy, there was an indication that children from urban poor informal settlements largely do not benefit from the UPE policy, enhancing education inequalities and continuously denying opportunities to the most marginalized children.

It was also evident that children from urban poor informal settlements were more likely to not access learning opportunities during school disruptions such as that of COVID-19. Therefore, calling on the government to develop measures and programs to cushion learners from such settings when such instances occur. Moreover, girls are more likely to be affected by disruptions such as COVID-19 in different ways. This includes being prone to teenage pregnancies and taking up responsibilities to take care of younger siblings compared to boys.

The community plays a critical role in upholding the right to education and the community members including parents trust the structures that are at the community level in addressing some of the challenges they face in ensuring children from the urban informal communities access quality education.

## Recommendations

1. The government should strengthen the Public-Private Partnership (PPP) mechanism that already exists, despite the PPP being a model to ensure that the government increases access to quality education for all. Some schools have been left out and hence the need to explore ways in which private schools within the urban informal settlements could benefit from it. Additionally, there are other PPP models that the government can explore, such as working with the private sector.
2. The government should build more public schools in informal urban settlement areas to accommodate all learners. With Uganda increasing the number of cities, more people will continue moving into these cities, and there is an opportunity for the government to plan and build more schools in the urban informal settlements.
3. There is a need for sensitization among all education stakeholders on government policies that encourage re-enrolment of pregnant teenagers to school.
4. The government and stakeholders in education should create awareness to reduce gender inequities for girls and boys.
5. Develop and strengthen community structures in and within the communities.

## Introduction

The global population will predominantly be urban if the current population trajectory and/or increase in urban centers is anything to go by (Ritchie & Roser, 2018). For instance, in 2018, more people were living in urban areas than in rural areas, the former accounting for 55% of the global population (UNESCO, 2019). The incremental trend is expected to continue, with projections estimating that by 2050, 68% of the global population will be living in urban areas (Lerch, 2017). The level of urbanization is, however, not homogenous, as there are inherent differences in urbanization levels among various regions and countries. For instance, North America was the most urbanized region of the world, with about 82% of its population living in urban areas as of 2018. On the other hand, Asia's urbanization level is currently nearing 50% while that of Africa is at 43%, implying that Africa is largely rural (United, 2018a)

However, the growth in Asia and sub-Saharan Africa (SSA) will represent over 90% of the global population increase (Forum, 2016). Rural-urban migration, natural population growth, and the reclassification of settlements to urban areas are among the top drivers of this growth (Lerch, 2017).

Further, urban economic development fueled by small and medium-sized enterprises has been partly associated with propelling urbanization (Güneralp, Lwasa, Masundire, Parnell, & Seto, 2017). People move to cities because of the belief that they offer better education and employment prospects, especially in the service and manufacturing sectors (United Nations, 2019). In fact, urbanization has been a positive driver of social and economic

development, with an estimated 80% of the global gross domestic product (GDP) produced in urban centers (OECD, Africa, & Bank, 2022). Urbanization, on the other hand, influences social issues and challenges that the population living in urban areas contend with (Shankar-Brown, 2015). In sub-Saharan Africa, countries continue experiencing rapid urbanization characterized by the growth of the urban population (Teye, 2018). This trend is an opportunity for countries in SSA to rethink development.

States are the primary custodians and implementers of every aspect pertaining to the Right to Education (RTE), though other key stakeholders, such as parents and development partners, also play a critical role in upholding this right (UNESCO, 2023). RTE in Uganda is enshrined in the country's Constitution, with the country also being a signatory to key regional and international treaties that safeguard the RTE.

Nationally, the country boasts of a number of legal instruments that protect and sustain the practice of RTE, including but not limited to the Ugandan Constitution; Uganda National Program of Action for Children (UNPAC); Children Statute (1996); The University and Other Tertiary Institutions Act (2001); Education Sector Strategic Plan (ESSP), which supports pursuance of the goal of universal primary education (UPE) through a series of education sector strategies and plans such as; The Education Service Act 2002; Basic Education Policy for Educationally Disadvantaged Children, 2006; Planning and Implementation Guidelines for District and Urban Councils, 2007; the Education (pre-primary, primary and post-

primary) Act (2008); the Gender in Education Sector Policy, 2009; Strategic Plan for Secondary Education in Uganda 2008-2019 (2008); among others.

Moreover, during the 2014 census, Uganda had a population of 34.6 Million people. By 2022, this population was projected to reach 44.2 Million reflecting a growth of about 3.3 % up from 2014. Further, in the same year, the urban population represented 37% (17 million) of the country's population. It is also worth noting that children and youth constitute most of Uganda's population. 60% of Uganda's urban population lives in urban informal settlements, which are characterized by high population densities, poor sanitation, poor housing, and limited social amenities – translating to about 21 million residents in Uganda's slums (Dimanin, 2012; Odebero, 2010). Kampala, the capital city, harbors most of the urban population and those living in urban poor settlements.

Moreover, almost 40% are classified as urban poor (Richmond, Myers, & Namuli, 2018). The anticipated re-classification of towns into cities is expected to further grow the urban population and calls for adequate planning to provide public services such as education, health and Water Sanitation and Hygiene services among others. In the last two decades, and following the Universal Primary Education policies, Uganda has seen a tremendous increase in school enrollment, only disrupted in 2020 by COVID-19. The UPE policy particularly led to several gains and challenges. The most gains that the country recorded include primary school enrollments that were above 100%, increased access to education by marginalized children (the hard to reach). For example, 21000 schools have special needs education programs; there are 138 institutions

unique to persons with disabilities in Uganda (Odebero, 2010) and a decline in the number of out-of-school children.

Despite these gains, the education sector continued to face challenges, especially for the most marginalized communities. Some of the challenges included overcrowding in the classrooms, a decline in the quality of education (learning poverty) leading to absenteeism and high opportunity cost, and an increase in the growth of Low-Cost Private Schools (LCPS). In the urban context of Uganda, education is also characterized by an influx of refugee populations in major urban areas (Grossman, Kippels, & Zhang, 2013; UNHCR, 2009). Therefore, through a collaborative effort that included the African Population and Health Research Center (APHRC), International Day of the African Child/ Youth (IDAY), the Ministry of Education and Sports (MoES), Kampala Capital City Authority (KCCA) and the Uganda Urban Education Group members, the need for quality and reliable data was examined through this study. The study sought to investigate the schooling patterns of children living in poor households to understand the quality of education received.

## Problem Statement

The population of cities has been growing globally. People relocate to cities because they think they provide greater opportunities for education and work, particularly in the manufacturing and service industries (United Nations, 2019). Given that urban areas provide an estimated 80% of the world's GDP, urbanization has actually aided in social and economic growth (OECD, Africa, & Bank, 2022). However, urbanization also affects the social problems and difficulties that urban residents face (Shankar-Brown, 2015). Sub-Saharan African nations are still undergoing fast urbanization, as seen by the region's urban population growth (Teye, 2018). Uganda had a population of 34.6 million in the 2014 census. This population was predicted to increase by roughly 3.3% from 2014 to 44.2 million by 2022.

Furthermore, 17 million people, or 37% of the total population of the nation, lived in urban areas in that same year. The growing urban population may have negative consequences like a high rate of dropouts and out-of-school incidents, as well as overcrowding in classrooms, particularly in informal settlements. There is a shortage of research and literature in Uganda regarding children residing in urban poor informal settlements in relation to access to high-quality education. Therefore, this study sought to establish the patterns of education, the perception of the urban poor communities on the right to education and opportunities available to children living in informal settlements, particularly those with special needs before and during the COVID-19 pandemic.

## Purpose of the Study

The study aimed to examine the schooling patterns of school-going children (3 years to 19 years) living in the urban poor areas of Uganda before and during the COVID-19 pandemic.

The study targeted children living in urban poor households in selected informal settlements in Kampala and Mukono. It sought answers to the following four research questions:

1. What are the schooling patterns among children living in urban poor households in Uganda – including those with special needs?
2. How do urban poor communities perceive and understand education as a right in the context of urbanization in Uganda?
3. Which education opportunities exist for children with special needs and living in poor households in Uganda?
4. What learning opportunities existed for children in urban poor settlements during school closures due to COVID-19 pandemic?

**Figure 1: A map of the study site**



## Methodology

### Study Design and Sampling

This was a cross-sectional survey utilizing a mixed-methods approach. Mixed methods help in collecting both quantitative and qualitative data, which complement each other in explaining a certain phenomenon. The study targeted households with school-going children (aged 3 to 19) in selected villages (See Annex 1).

We conducted the study in three sequential stages:

1. Listing of eligible households
2. Sampling for main data collection and household survey after full school re-opening and school survey. During the listing, 3,059 households with 8,039 individuals aged between 3 and 19 years were identified. In the main data collection, 1,102 households with 2,581 individuals aged 3 to 19 years were selected.

**Sampling for the main study:** Using the listing as a sampling frame, a sub-sample of 1102 households with 2581 individuals aged 3 to 19 years was drawn for the main study. The sampling of households and individuals took into consideration the study site and age of the individual. The household sample size was estimated using the following key considerations: a primary school level net enrollment rate of 85.05% (Uganda Bureau of Statistics, 2017) which provided an indicator of schooling access, a 5% level of significance corresponding to a value of 1.96 from normal distribution curve (or in other words representing the 95% confidence intervals), a margin of error of 5% to ensure that our sample generates precise estimates, a power  $(1-\beta)$  to reduce the probability of committing type II error, a design

effect of 2.5 and a non-response rate of 20%. Further, we assumed that each household, on average, had two individuals of school-going age (i.e. between 3 and 19 years). Based on the above considerations, the household sample was computed using the formula recommended by Wang & Chow (2007); the household sample was, therefore, 1,200 (rounding up 1,199.5) and 2,400 individuals aged 3 to 19 years. The sample was stratified proportionate to the two study sites based on their population and, thereafter, randomly sampled the identified households to participate in the study.

Additionally, we purposely selected eighty-one (81) participants for focus group discussions (FGDs). Four FGDs were conducted with male parents, and another four with female parents, each comprising 9 to 11 respondents. Five (3 females and 2 males) of the FGD participants were parents of children with special learning needs to address issues of inclusivity. The study also had twelve (12) in-depth interviews (IDI) with respondents drawn from persons occupying elective and administrative offices within the study sites. Four key informant interviews (KIIs) were also part of the study respondents and were all drawn from the national decision-making levels at the Ministry of Education and Sports (MoES). In IDIs and KIIs, the office targeted was the key inclusion criteria, and their occupants were selected.

**Rapid survey after school re-opening:** This was a phone-based survey of a sub-sample of the main study conducted in 2022 to collect data on the schooling status that could not be collected in 2021 due to the prolonged school closures. Moreover, it was prudent to understand



school resumption patterns after re-opening, movements from one type of school to the other as well as teenage pregnancies. The rapid survey targeted 634 households with 928 individuals aged 6-19 years from the main survey.

**School survey:** We identified all the schools (pre-schools, primary and secondary) located within the study sites as well as those in their neighborhood that had enrolled at least 10 individuals. In total, the individuals of school-going age (from the targeted households in the main study) were enrolled in over 600 institutions. Only 98 schools were selected for an in-depth school survey. The inclusion criteria (for the 98 schools) included all schools that had been mentioned by households at least 5 times and were located within the study sites and those in the neighborhood of the study site that had enrolled at least 10 learners from the targeted households.

### Survey Instruments

The development of the quantitative and qualitative study instruments was through a consultative process with study partners and

key actors, including the MoES, Kampala Capital City Authority (KCCA), Uganda National School Inspectors Authority and the Uganda Urban Education Group (UEG). The UEG consists of community-based organizations working with urban poor populations and with a focus on education under the coordination of International Day of the African Youth/Child. The team borrowed and adapted tools that had been previously used in APHRC studies and the DHS. The following survey instruments were used for data collection: a) a household schedule and amenities questionnaire; b) an Individual schooling history questionnaire; c) a parental/guardian involvement questionnaire that incorporated questions on perception d) a Focus group discussion with parents and e) an in-depth interview and key informant interview questionnaires with opinion and policymakers.

The tools' descriptions, including targeted participants and study indicators in each tool, are summarized in Table 1 below.

**Table 1: Summary and description of study tools**

Tool	Target Participant	Description and Indicators
A household schedule and amenities (HHSA) tool	Household Head	This tool collected data/information about household membership, their characteristics, and social-economic characteristics, including food security, household shocks, household poverty, well-being, and household schedule. The household head or someone living in that household and with enough information on the household responded to this tool. The information in this tool was used to generate the wealth index and quintiles.

Tool	Target Participant	Description and Indicators
Individual Schooling History (ISH) tool	Individuals aged 3 to 19 years	This tool collected detailed schooling information about individuals aged between 3 and 19 years. This included enrollment, type of school enrolled, and participation in preschool, among others, in 2020 before school closures. Caregivers responded for children aged below 12 years, while there was an option for those between 12-19 years to be respondents. The tool also collected information on opportunities for learning during the school closures.
Parental/guardian involvement (PGI) and perception tool	Caregivers	The tool sought information on parental involvement in their children's schooling, including homework support, parental perception of student schooling experience, feeding and costs of schooling. The perception tool gathered information on parents' perception of the quality of education in the era of universal education policies, their understanding of education as a right and their support to schools to improve access and quality. This was responded to by the parents of the child or children living in the household.
Institutional tool		The tool (questionnaire) sought to understand the schools' background information, enrollment, teacher qualifications, facilities available in the schools, schooling charge and the school governance.
Focus Group Discussions (FGD)	Caregivers	The guide explored parents' understanding of the right to education, the role they play in ensuring that all learners are accorded or enjoy this right, and the challenges faced. The guide equally explored aspects captured in the quantitative tools to help in the triangulation of findings as well as potential solutions to identified challenges.

Measures taken to improve data quality included:

- Recruitment of enumerators, training and pretesting of tools to enhance reliability and validity of data collected,
- Ethical approval, study authorizations and permissions to ensure compliance with research ethics and legal requirements in conducting research,
- Spot checks during data collection to enhance accuracy and completeness,
- Use of tablets loaded with Survey CTO that had the necessary conditional checks and skips to ensure applicable responses and timely submission of collected data to APHRC secure servers.

## Validity and Reliability of Instruments

We assessed the internal consistency of the instruments using the Cronbach Alpha to check for internal consistency – see coefficients in Annex xx. Adapting previously used tools enhanced and/or ensured content validity. Additionally, the use of local stakeholders who understand the context enhanced the face validity of the instruments. For the wealth index, we applied the principal component analysis (PCA) to the items measuring household possessions. PCA is a statistical technique that reduces the dimensionality of data and summarizes a set of variables (Jolliffe & Cadima, 2016). This summarized set of variables can be used to define a wealth score (Fry et al., 2014). The wealth score was then grouped into three equal categories (known as wealth tertiles) from the poorest (1) to the least poor/wealthiest (3).

## Data Management and Analysis

To ensure consistency, data were extracted from the Survey CTO, labeled, and cleaned. Stata Version 17.0. was used for data analysis. Both descriptive and inferential analysis were applied during analysis beginning with exploratory analysis to regression modeling. Exploratory data analysis was performed using graphical plots and tabulations to observe the patterns of the data and assess the frequencies and measures of central tendency. The results have been presented using both tables and graphs. The household wealth index (scores) was calculated using the household possessions and amenities variables. The amenities included sanitation facilities (for example, drinking water sources, toilet types), house construction materials (e.g., wall, roof, floor), fuel used, and lighting, while possessions ranged from ownership of a car, TV, fridge, radio, to bicycles, among others. Qualitative data analysis largely adopted

deductive coding and, to some extent, inductive coding. Deductive coding was preferred since the interview guides explored information on constructed thematic areas; this implies that the coding was data-led. However, there are instances where other anticipated themes emerged. The resulting themes were consistent with the information gathered from the study respondents' responses. The emerging responses were then assigned to appropriate codes. The data responses were re-read to help identify identical themes, which were then assigned to an initial set of codes. The re-reading exercise was done line-by-line for all the datasets (FGDs, KIs, and IDIs) to help obtain even more broad-ranging codes. The emergent codes were grouped to help inform how they fit within the previously developed coding frame.

Additionally, thematic analysis was also performed to assist in identifying the most common, unique, and consistent responses that aligned with the study's research questions. This assisted in facilitating the understanding of the different respondents' perceptions, including highlighting the themes' dis/similarities or differences in relation to the study's research questions and objectives (Braun & Clarke, 2006). The derived data was then used to write the qualitative findings section of this report.

**Table 2: Analytical approaches for each research question**

Research question	Analytical approach
<b>RQ 1:</b> What are the schooling patterns among children living in urban poor households in Uganda – including those with special needs?	<p>Both descriptive and inferential analyses were utilized to respond to this research question.</p> <p>Descriptive statistics comprised a summary of the data in terms of frequencies and measures of central tendency such as the average class size, computation of proportions (percentages of frequencies) such as the percentage of learners enrolled in low-cost private schools, computation of the rates and ratios such as pupil-teacher ratio, and indices such as Gender Parity Index.</p> <p>Inferential statistics incorporated the use of logistic regression analysis that enabled us to assess the relationship between child enrollment in low-cost private schools (versus enrollment in government schools) against household and the learner's characteristics. A logistic regression model was fitted since we had a binary outcome variable of the type of school chosen, which was assigned (1) if a child was enrolled in a low-cost private school and (0) if enrolled in a government (aided) school.</p> <p>This regression model was used to establish the relationship existing between the outcome variable (type of school chosen) and the characteristics of the learner, household head and household characteristics.</p> <p>The learner's individual characteristics included age, sex and parental survivorship, whereas household head characteristics included sex, age, education level and marital status. On the other hand, household socio-economic characteristics included items such as the wealth index, household size, location (e.g., site), and household monthly income.</p>
<b>RQ 2:</b> How do urban poor communities perceive and understand education as a right in the context of urbanization in Uganda?	The approach used to respond to this research question two was by use of descriptive analysis to assess the parental knowledge on the right to education as well as the community and reporting mechanisms.

Research question	Analytical approach
RQ 3: Which education opportunities exist for children with special needs and living in poor households in Uganda?	Quantitative: Descriptive analysis was used to respond to this question from the household level data as well as school-level data. Qualitative: a mix of deductive and inductive coding was applied in thematic analysis.
RQ4: What learning opportunities existed for children in urban poor settlements during school closures due to the COVID-19 pandemic?	Descriptive analysis was utilized to respond to this question using the household-level parental and school survey tools.

### Limitations of the Study

Due to the long school closure periods, recall bias was expected from the household heads and caregivers, specifically on questions that sought to understand the schooling experiences for the period 2015-2022.

## Household Characteristics

From Table 3, we see that the larger the household size, the poorer the households, while the smaller the household size, the wealthier the households are. Moreover, the male headed households were wealthier than the female headed households. The poorer the households, the more likely it was for them to have a child with special needs.

**Table 3: Household head and child characteristics**

Characteristic		Wealth index		
		Poorest	Middle	Wealthiest
		N=371	N=364	N=367
Household size	2-4 members	34.8%	39.8%	24.8%
	5-6	43.7%	38.5%	37.1%
	>6	21.6%	21.7%	38.1%
Household head gender	Male	46.1%	56.6%	51.2%
	Female	53.9%	43.4%	48.8%
	19-30yrs	22.6%	24.2%	9.5%
Household head age categories	31-35yrs	21.3%	20.3%	16.3%
	36-40yrs	21.6%	16.2%	16.1%
	41-50yrs	22.1%	25.5%	31.1%
	>50yrs	12.4%	13.7%	27.0%

Characteristic		Wealth index		
Highest education level attained	Never been/duksi /preschool	4.9%	5.5%	4.9%
	Primary level	41.5%	39.0%	37.6%
	Lower secondary and above	53.6%	55.5%	57.5%
Marital status of the HH head	Married - monogamous	38.8%	45.9%	45.2%
	Married -polygamous	4.3%	3.8%	7.9%
	Widowed	11.3%	10.4%	17.2%
	Separated	26.7%	22.5%	16.3%
	Divorced	3.2%	1.4%	1.4%
	Never Married	4.0%	1.4%	2.7%
	Living together	11.6%	14.6%	9.3%

Table 4: Child Characteristics for ages 4 - 17 years

Characteristic		Wealth index		
		Poorest	Middle	Wealthiest
		N=777	N=816	N=993
Household size	Baby class age	49 (6.3%)	48 (5.9%)	57 (5.7%)
	Pre-primary school age	104 (13.4%)	107 (13.1%)	138 (13.9%)
	Primary school age	504 (64.9%)	538 (65.9%)	585 (58.9%)
	Lower secondary age	120 (15.4%)	123 (15.1%)	213 (21.5%)
Child's sex	Boy	346 (44.5%)	368 (45.1%)	474 (47.7%)
	Girl	431 (55.5%)	448 (54.9%)	519 (52.3%)
Does NAME have any special needs?	No	757 (97.4%)	798 (97.8%)	976 (98.3%)
	Yes	20 (2.6%)	18 (2.2%)	(1.7%)

### Schooling Among Children Living in Urban Poor Households in Uganda

This section describes schooling before school closures (March 2020) due to COVID-19 and after school re-opening (January 2022). It delves into understanding Access, Efficiency, and quality

as measures of internal efficiency of education before and after the COVID-19 pandemic.

### School Attendance

The Uganda education system is divided into basic education (pre-primary - 3 years,



primary 6 years and secondary 6 years divided into lower and upper secondary) and post-secondary education, which lasts three to five years (Tabetando, 2019). Pre-school attendance is a trend that is currently receiving attention from governments across sub-Saharan Africa, including Uganda. It is also considered the foundation stage of education. The study sought to understand learners' participation in preschool for those who had ever attended school in Uganda's urban informal settlements. The results indicate that about 97 % of all the children had attended preschool. When disaggregated by gender the percentage of girls who did not enroll in pre-school was slightly higher than for boys. (See Annex 2).

Additionally, to understand children's school attendance, parents were asked whether their school-going children had been to school before the closure due to COVID-19. The results indicate that 99.6% of the children, aged 4 to 17 years, had ever been to school. We will discuss enrolment, the Gender Parity Index, access to government schools before closure due to COVID-19 and after full school re-opening.

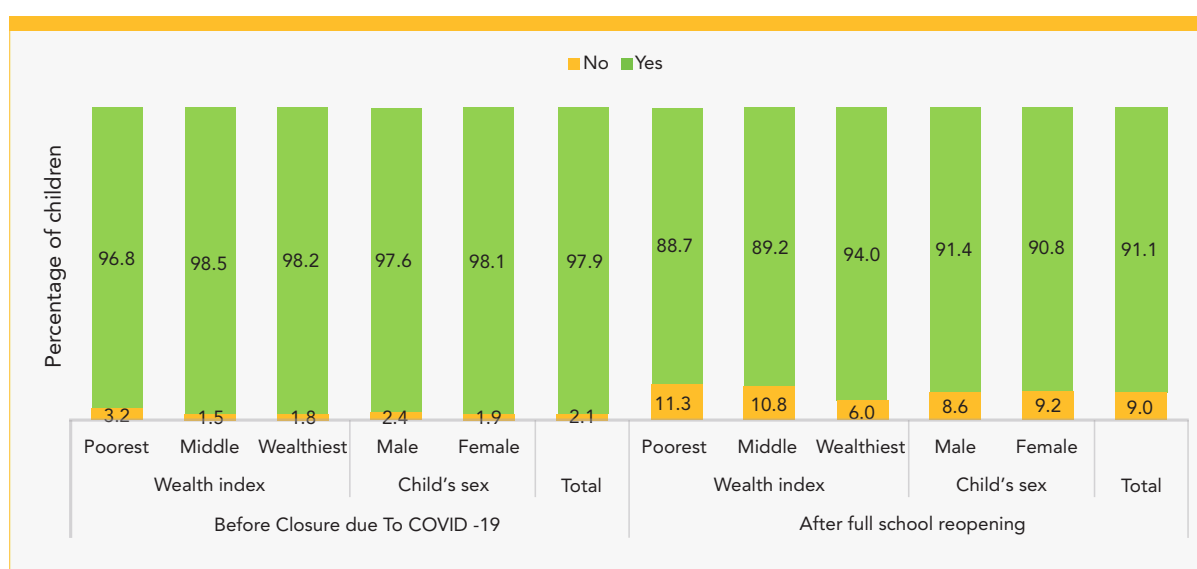
Additionally, the patterns of schooling for the years 2015-2022 will be discussed.

### School enrolment

Research findings indicate that out-of-school children aged 4-17 years were 2.1% before COVID-19 and 9.0% after full school reopening. This varied by gender where, before COVID-19, more male learners (2.4%) were out of school compared to (2.1%) while after school re-opening, more female learners (9.2%) were out of school compared to male learners (8.6%) This implies that female children were more affected after COVID-19, which could be attributed to high cases of teenage pregnancies (Datzberger & Parkes, 2021; Willie, 2021).

With regard to the household wealth index and school enrolment before and after full re-opening, there was a decline in enrolment of children from both poor and wealthy backgrounds from 96.8% to 88.7% and from 98.2% to 94%, respectively, meaning that those from poor backgrounds were more affected as shown in Figure 2 below.

**Figure 2: School enrolment before COVID-19 and after full reopening by household wealth index and learner's sex**



## Gender Parity Index by School Type and Grade

Providing access to all school-going children is envisaged in the universal primary education (UPE) policy (Deininger, 2003). Using the enrolment data collected from the sample schools, the Gender Parity Index (GPI) was computed for the pre-primary and primary levels. The results show that in the pre-primary level, there was a disparity in all the grades favoring boys (0.95). However, in primary schools, it favors girls (1.01), as presented in Table 5.

NB: Since there was only one government secondary school in the sample, the GPI for secondary school was not computed.

**Table 5: Gender Parity Index by Grade**

		GPI		
		Government	Private	Overall
Pre-primary	Baby class	0.92	0.96	0.95
	Middle class	0.84	0.95	0.89
	Top class	0.89	0.92	0.91
	SNE	1.00	0.93	0.93
Primary	P1	1.03	0.99	1.01
	P2	1.13	1.06	1.10
	P3	0.96	1.06	0.99
	P4	1.02	1.18	1.08
	P5	1.04	1.11	1.06
	P6	0.98	1.10	1.01
	P7	1.30	1.11	1.23
	SNE	0.97	0.84	0.92

## Access to Government Schools Before COVID-19

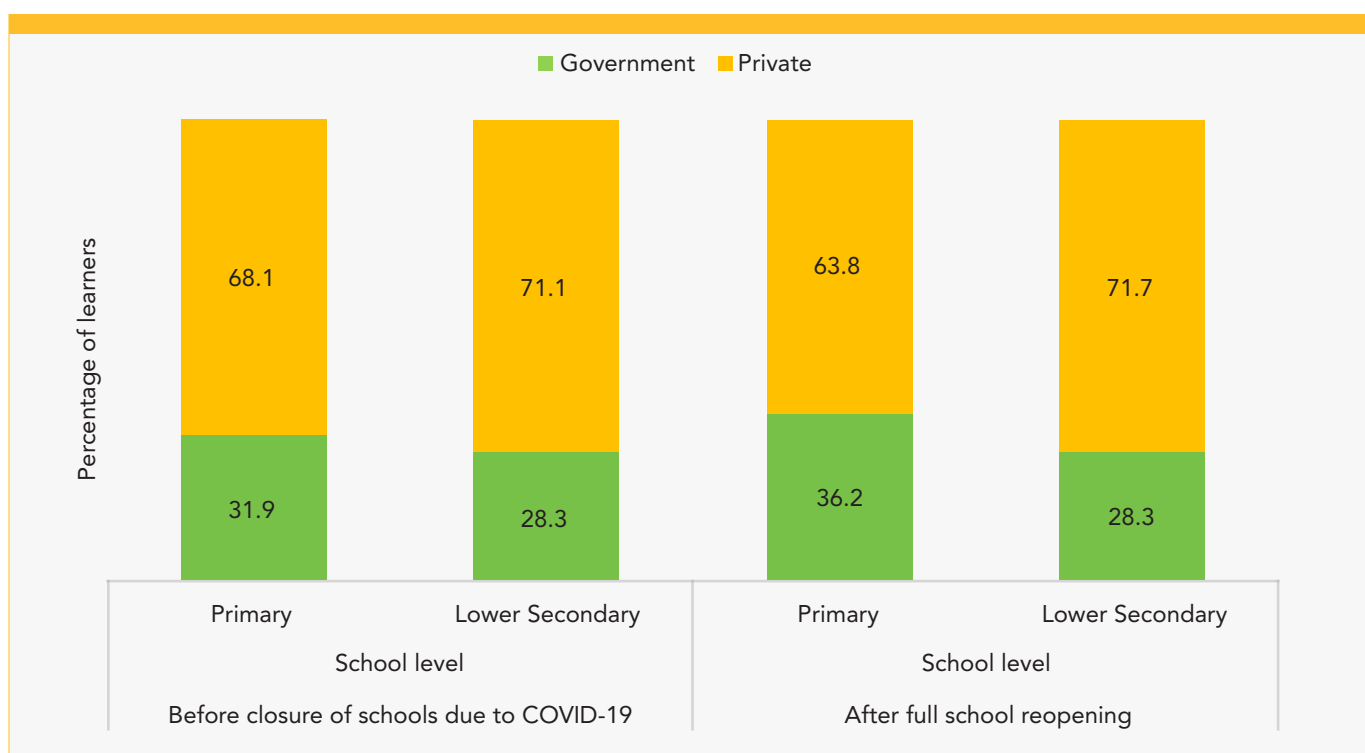
On average, 1.3% of the parents indicated that their children were denied admission to government schools before the COVID-19 pandemic period. The top reasons why children were denied admission included lack of school fees, especially at secondary school and lack of spaces. Lack of space in public schools could be associated with the permanent closure of private schools due to loss of financial flow (Azzi-Huck & Shmis, 2020; Juvenile Ehwi & Ehwi, 2022; Psacharopoulos, Collis, Patrinos, & Vegas, 2020). In addition, parents who lost income could have chosen public schools due to the lack of affordability of school fees charged by private schools, thus affecting their school choices (Aborode, Anifowoshe, Ayodele, Iretiayo, & David, 2020). Additionally, fewer public schools against a high population, as indicated by key informants, would be a reason why there was a lack of space.

'...Government/public schools are few, we have only 2 schools that provide free education compared to the high population of learners. Each School has more than 800 learners, yet they were intended for a few learners at the time when they were constructed.' [#R-IDI3]

### Enrolment Patterns Before COVID-19 and After Full School Re-opening

The study examined the enrolment patterns by school type and school levels for children enrolled in school before closure due to COVID-19 and after full school reopening. The results indicate that at all levels, there were more learners enrolled in private schools compared to government schools, as shown in Figure 3. After school re-opening, there was a decrease in the percentage of learners enrolled in private schools, while the percentage of learners in government primary schools increased from 31.9% to 36.2%.

**Figure 3: Enrolment before school closure and after full reopening in government and private schools**



Regarding enrolment by type of school and wealth quintiles, the study noted an increase of learners from poor backgrounds joining government primary schools from 33.9% to 43.9% after full-school reopening. Additionally, there was a decrease in learners from poor backgrounds who were initially in private schools from 66.1% to 56.1%, as shown in Table 5 below. Generally, there was a decline in enrolments in private schools, especially among the poor and

middle-level classes at all levels of education. However, for public schools, there was an increase in enrolment suggesting that there was mobility of learners from private to public schools under free primary education programs. In order to establish whether the pattern of enrolment by school category was a result of transfer or wastage (dropout), the study tracked learners' mobility, and the results indicate that

at the primary school level, the highest transfer was from private to private among the middle class at 19.1% and 10.1% from private to government among the poor households. At the secondary level, the highest was from private to private at 23.5% among middle-class households.

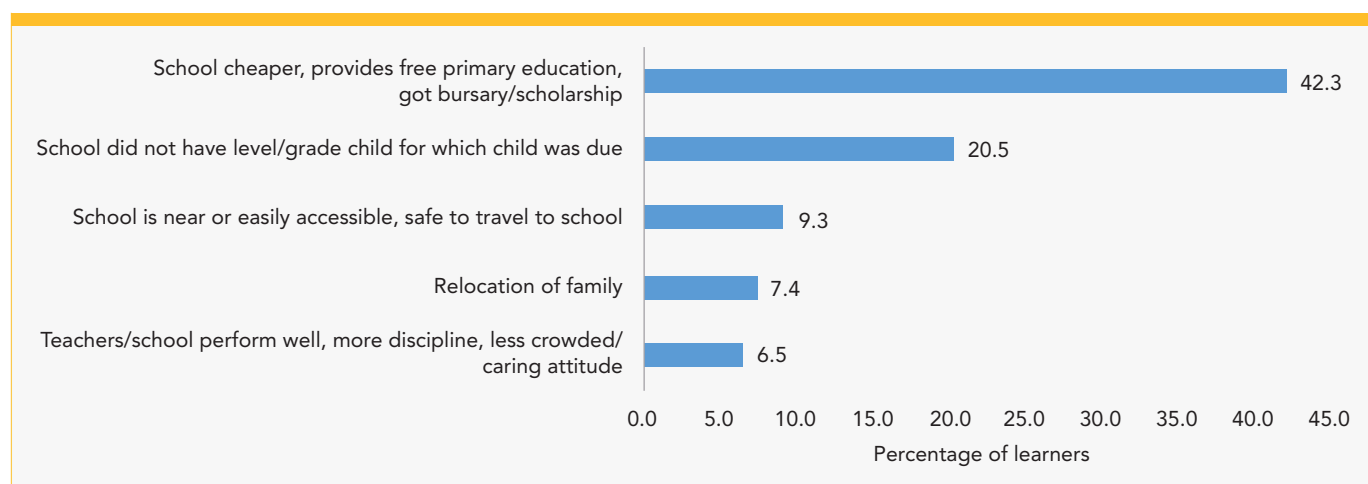
### Reasons for transfer.

**Table 6: Levels of enrolment by type of school cross-tabulated by household wealth**

		Wealth index			Sex		Wealth index			Sex	
		Poorest	Middle	Wealthiest	Boy	Girl	Poorest	Middle	Wealthiest	Boy	Girl
Primary	Government	33.9	32.2	30.1	31.8	32.0	43.9	40.1	27.4	34.6	37.8
	Private	66.1	67.8	69.9	68.2	68.0	56.1	59.9	72.6	65.4	62.3
Secondary	Government	19.4	32.0	30.9	29.3	27.8	22.6	35.3	27.4	25.0	30.2
	Private	80.6	68.0	69.2	70.8	72.2	77.4	64.7	72.6	75.0	69.8

**Table 7: Mobility of learners after full school reopening by school levels and wealth index**

	Primary level				Secondary level			
	Wealth index			Total	Wealth index			Total
	Poorest	Middle	Wealthiest	Boy	Poorest	Middle	Wealthiest	Boy
Private to government	33.9	32.2	30.1	31.8	43.9	40.1	27.4	34.6
Government to private	66.1	67.8	69.9	68.2	56.1	59.9	72.6	65.4
Private to private	19.4	32.0	30.9	29.3	22.6	35.3	27.4	25.0
Government to government	80.6	68.0	69.2	70.8	77.4	64.7	72.6	75.0

**Figure 4: Reasons why learners were transferred upon full school reopening.**

Further, the results indicate that the main reason for transfers was the affordability of the school (42.3%), Lack of the next level grade for enrolment (20.5%) and accessibility of school (9%), among others, as presented in Figure 4.

### Enrolment trends for the period 2015-2022

The study sought to establish the trends of enrollment before and after full school reopening from 2015 to 2022. The results show that enrollment in primary school has predominantly been in private schools among the urban informal settlements. In 2020, before the closure of schools, 68.1% of children enrolled in private schools, which declined slightly to 65.3% in 2022 after full school reopening. This could be attributed to harsh economic conditions brought about by the COVID-19 disruptions, dwindling family income, and hence increasing enrolments in government-aided schools. By level of wealth index, it's observed that private schools are dominated by children from wealthy households and for public schools, the poorest dominate. This could be attributed to perceived quality at private schools, which have better learning environments, better infrastructure and high teacher-student ratio (Romuald, 2023)

### Determinants of Choice of School Before COVID-19 and After Full School Re-opening.

Teacher performance was the top-most reason why over a third of the parents interviewed enrolled their children in private schools, closely followed by the distance and ease of access to the school. Other factors that influenced the choice of school included affordability and discipline, among others.

To assess the learner and household factors that have a significant relationship toward the choice of school that a learner was enrolled in before the closure of school due to COVID-19 and after the full-school reopening, we fitted a logistic regression model (see Annex 3). The model incorporated learners aged 6 to 18 years in primary school, totaling 1,585 children from 878 households for the main study. A sub-sample of 496 children from 376 households from the rapid survey was also considered in the model. The main outcome variable was the choice, i.e., if a learner was enrolled in a private or government-aided school. The enrollment in a private school was coded (0) whereas enrollment in a government-aided school was coded as 1. The independent variables included in the model included learner characteristics (age and sex), household head characteristics (age, sex, education level, marital status), and other socio-economic characteristics such as household size,

wealth index, monthly income, and location. The overall regression model on the choice of school before COVID-19 was significant ( $p\text{-value}<0.001$ ), whereas the model of choice after initial school reopening was not significant ( $p\text{-value}=0.169$ ). The model's goodness of fit test using the Hosmer-Lemeshow Test indicates that they both have a good fit with  $p\text{-values}$  of 0.278 and 0.220, respectively. Examining the covariates that indicate significant influence on the choice of school, we find that the age of the learner, sex and marital status of the household head, wealth tertiles, and location variables were found to be significant either in the model for choice of school before COVID-19 related closure or after full school reopening or in both models.

We found that holding other factors constant, the odds of being enrolled in a private school than in a public one decreased as a child's age increased by years. This was the case before the closure of school due to COVID-19 and also after full school reopening. The odds decreased by 13% (for the period before COVID-19), depicting a  $p\text{-value}<0.001$ , and by 8% after full-school reopening. This could be attributed to the nature of schools in and around the urban informal settlements, where the majority of schools are owned by private individuals right from the pre-primary level and moving on to the secondary level, this still holds as enrollments in this study portray (cross-referencing). It is worth noting that some primary schools do not have all the grades, and hence, learners are transferred to available public/government schools or to other private schools that have the subsequent grades they are transiting to. A similar finding of a decrease in the odds of enrolment in LCPS for each additional child's year has been observed in an upcoming publication from a Kenyan study by Habimana et al (2022) among the urban informal settlements of Nairobi.

Before the closure of schools due to COVID-19 and holding other factors constant, the odds of a married household head enrolling their children in a private school were 61% higher than those of unmarried household heads or those that have separated due to various reasons, e.g., divorce, demise, etc. ( $p\text{-value}=0.045$ ). We found a similar percentage increase in the odds upon full school reopening, though the statistic was not significant ( $p\text{-value}=0.156$ ).

Household sex has some influence on the choice of school following the initial school reopening, holding other factors constant. After school reopening, there were 91% higher odds for enrolment of a child in private school among families headed by a female than male-headed households ( $p\text{-value}=0.043$ ). Before COVID-19, the odds for enrolment of children into private schools among female-headed houses were higher even though this was not statistically significant ( $p\text{-value}=0.178$ ). This could be attributed to the fact that female-headed households may prefer to enroll their children in schools near their residences even when they are privately owned.

The wealth index was measured by considering household possessions among other household characteristics as described in the household characteristics section. In this model, we utilized the wealth tertiles to assess the existing relationship with the choice of school. Results indicate that holding other factors constant, the odds of enrolling a child in private school (LCPS) was 2 times higher among the wealthiest tertile (least poor) than the poorest after full school reopening ( $p\text{-value}=0.014$ ). Before the closure of school due to COVID-19, we found that the odds of the wealthiest enrolling their children in LCPS were 44% higher than those of the poorest after adjusting for the other factors, but this was only significant at 10% level ( $p\text{-value}=0.066$ ).



Location of the household vis-à-vis the location of the school was another significant factor influencing the type of school a learner would be enrolled in. This was conducted only before full reopening. Results indicate that holding other factors constant, there were lower chances of enrolling a child in an LCPS if the school was located outside their village, i.e. 42% lower odds of enrolling the child in LCPS located in a neighboring village than within the same village ( $p\text{-value}=0.003$ ), 55% lower odds of enrolling a child in an LCPS that is outside their neighborhood but their district ( $p\text{-value}<0.001$ ), and finally much lower odds (77%) of enrolling a child in an LCPS that is outside their district ( $p\text{-value}<0.001$ ).

We attribute this variable as a proxy for distance, whereby the chances of a household enrolling a child in an LCPS that is nearer their homestead is higher than for an LCPS that is far from their homesteads. Other studies, like in Kenya, have observed similar findings (Ngware, Abuya, Admassur, Mutisya, Musyoka, & Oketch (2013). They indicated that the nearer the distance, the lower the perceived risks that the children might experience as they go to school and hence more preferred by their caregivers. Still, on location, we find that holding other factors constant, there are lower chances of enrolling learners in LCPS if a homestead is located in Mukono than in Kampala. Before COVID-19, we find that it was significantly so with 49% lower odds for Mukono than in Kampala ( $p\text{-value}<0.001$ ), and after full school reopening (though not statistically significant), the odds were 25% lower ( $p\text{-value}=0.311$ ). This may imply that the distribution of government versus private schools in the two districts is different. The statistical abstract of 2017 indicates that the proportion of private schools in Kampala was 88.4% (602 out of 681), whereas in Mukono, it was 29.8% (82 out of 275), which helps to explain the dynamics that enhance higher private school enrolment in Kampala district than in Mukono district (Ministry of Education and Sports, 2017).

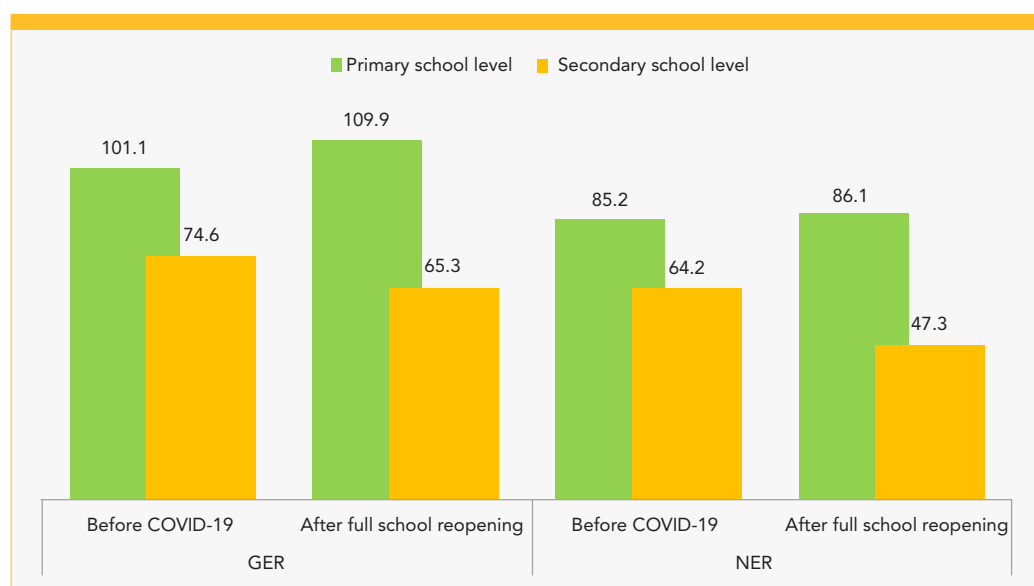
## School Repetition and Progression Rates

The study sought to find out the promotion and repetition trends among learners. The results show the overall percentage of learners aged 4 to 17 years who had ever repeated a grade was 8.2%. This varied by gender, where more boys (9.3%) repeated than girls (7.3%). This is despite the Automatic Promotion Policy enacted in 2005 in Uganda which aims at reducing repetition and school dropouts (Okurut, 2018).

Regarding progression rate, the study shows that about 71.6% of learners progressed to the next grade. Despite a government directive to have all the learners transition to the next class to cover the one and a half years they were not in school due to COVID-19. This implies that 28.4% of the learners remained in the same grade. The results point to wastage where 28.4% of the learners in informal settlements are not able to progress from one level to another.

## Gross Enrolment Rate (GER) and Net enrolment Rate (NER)

The GER for primary school before school closure due to COVID-19 was 112.5%, whereas after full school reopening, it increased to 117.7%. This could be attributed to some aged learners joining schools after opening. However, there was a decline in GER at the secondary school level from 74.6% to 63.2% before and after COVID-19, respectively. Regarding NER, There was a decline from 94.8% to 85.6% and 64.2% to 38.1%, respectively, for primary and secondary school levels in the two periods under consideration, as shown in Figure 5 below. The significant decline in NER could be attributed to a lack of fees and high teenage pregnancy cases during the COVID-19 Period.

**Figure 5: Gross enrolment ratio for primary and secondary school levels before and after COVID-19**

### Access to schooling by learners with special needs and facilities in the community

On whether learners living with special needs versus those without have equal opportunities to enroll in school, 73.4% of the respondents indicated that both learners with and/or without special needs had an equal chance of accessing and joining existing learning institutions. The study also established that, on average, 16% of parents across all social statuses were not able to tell whether all learners had equal opportunities to enroll.

Learners living with various special needs require enabling resources like wheelchairs, ramps at schools, braille, and assistive hearing devices, among others (Ochieng & Waithanji Ngware, 2023). Evidence from primary data in Uganda's urban poor areas reveals that the provision of enabling and/or supportive facilities for learners with special needs existed at varied levels but was largely inadequate. In the qualitative interviews, the study explored the perceptions of the community members on facilities for people living with special needs in the community.

Below are some excerpts from the qualitative interviews:

'...the facilities are very few. In my area, there is none, except in Katwe Community..... The facilities [in Katwe] are meant to support children with disabilities. There is also another organization which facilitates a healthcare provider to do home visits to families of those children or gather at the school so that they support them with physiotherapy so that they can be able to sit or hold something tightly or take them for surgery in case the child situation warrants, the child is treated for free. **[#R-IDI-9]**

'No services or facilities for special needs' children...seek elsewhere at Katwe primary school...it is also difficult for them to cross Entebbe Road or push them off the wheelchair, and they fall, as a result, he refuses to go back to school'. **[#R1-FGD-8]**

'The Ugandan [government]... has distributed some materials such as hearing aids... an assessment was done countrywide, a good number [of learners living with special needs] were identified and supported...they are provided sophisticated items, attached to hospitals in the region to support with assessment and treatment. [#R-KII-5]

### Initiatives for promoting the overall well-being of learners during COVID-19

The overall well-being of a community is a multi-stakeholders' [involving the Government, I/ NGOs, CSOs, private partners, individuals etc.] initiative, calling for a concerted effort and response as a joint approach in addressing and/or providing the much-needed intervention(s) for community wellbeing (Amarashingham, Xie, Karam, Nguyen, & Kapoor, 2018; Siegel, Erickson, Milstein, & Pritchard, 2018). In light of whether learners in the study site got support from other stakeholders, the results from qualitative data show that.

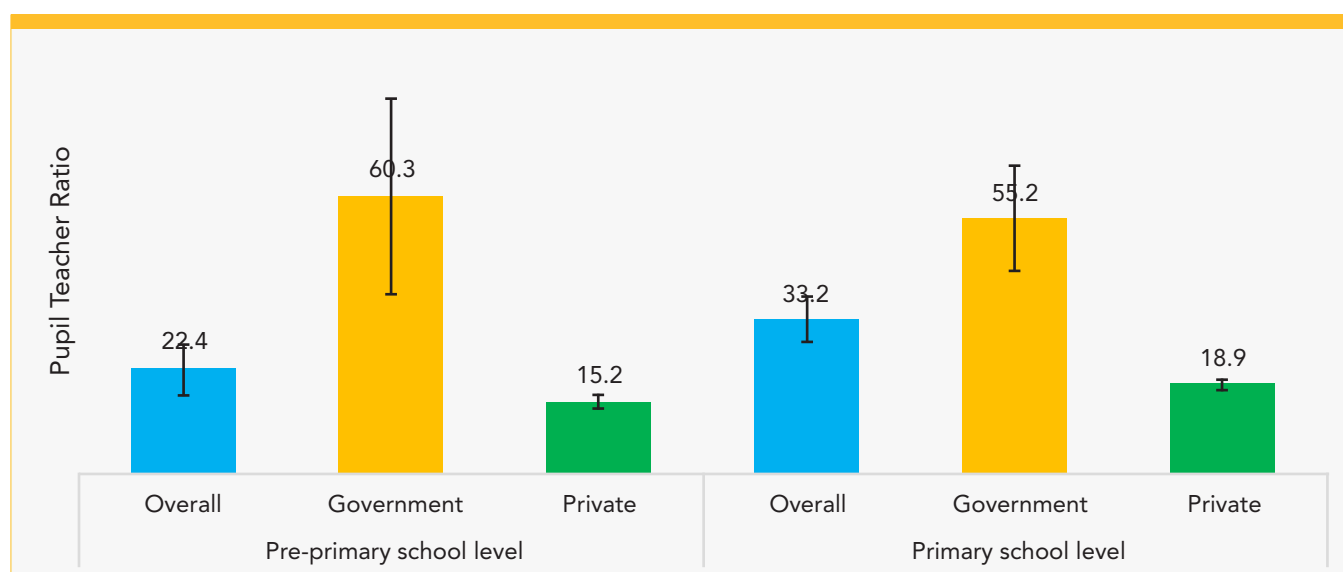
'They [government and other NGOs] have done a lot like Publishing textbooks...for community home learning, they [NGOs & CSOs] could go in the villages and collect few learners, and they teach them...buying reading materials and... modified them and included counseling through radio and television...they do all this to protect the children so CSOs have done a lot of work... they have done strategies to make learning continuous'. [#R-KII-4]

'We [community leaders] mediate for the wellbeing of learners...we call for meetings especially if community members identify particular criminal gangs/children in the area or emerging. We invite both parent and child and openly discuss the matter, we disclose the identity of culprits and also discuss consequences to violators and force them to change or leave...' [#R-IDI-3]

'Parents get involved in children's education for their educational wellbeing through meetings, school days, Sports days, dance and drama Annual Gala that attract other schools...to see what their children and other children are able to do'. [#R- KII-2]

### Pupil-Teacher Ratio (PTR)

As captured by the data, there was a significant gap in PTR between the government and private schools at both levels, with a higher PTR in government schools. The PTR difference would imply that due to the lower PTR found in the private schools, the quality of learning was higher in the private schools than in the government schools. However, this is interpreted with caution because other measures define the quality of learning. This suggests a need for the government to lower the PTR in government schools, for instance, through the employment of more teachers, in order to improve the pupil-teacher learning environment.

**Figure 6: Pupil Teacher Ratio (PTR) by school levels**

### Average class size:

The findings show that the average class size in government schools in all grades was significantly larger than in private schools. Notably, the average class size was reduced in P7 in government schools but was slightly higher than the previous grade in private schools. This being the last primary level grade, the drop could be an indication of movement of learners from government schools to private schools or a case of drop-outs when transitioning to P7. However, there is a need to investigate this phenomenon further to understand the trend.

### Pupil-Textbook Ratio

A pupil-textbook ratio of 1:1 is the ideal. However, most countries in sub-Saharan Africa are struggling to achieve this ratio (Fredriksen & Brar, 2015). In this context, the study sought to establish the pupil-textbook ratio for mathematics and English as key subjects in enhancing numeracy and literacy. The results

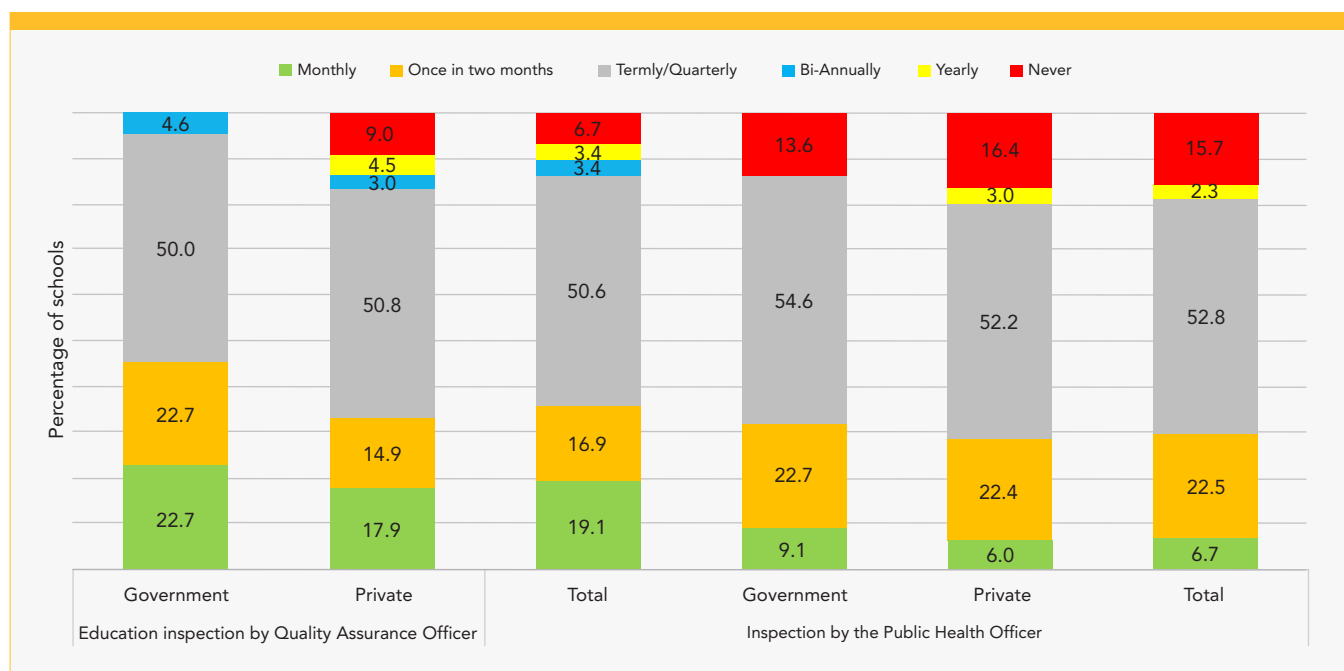
**Table 8: Average class size in Pre-Primary and Primary Schools**

Level	Grade	Overall	Private	Government
Pre-primary	Baby class	43.9	32.3	77.3
	Middle class	26.6	25.2	34.8
	Top class	38.4	27.3	68.2
Primary	P1	58.3	35.6	88.6
	P2	53.5	33.3	84.0
	P3	57.2	34.7	88.8
	P4	55.1	34.9	82.5
	P5	58.6	32.7	93.7
	P6	54.0	30.5	83.4
	P7	53.9	33.7	79.5

indicate that, on average, the pupil-textbook ratio for mathematics in private schools was 2:0 and the government 1:8. For English, the pupil-textbook ratio for both government and private schools was relatively the same. However, the ratios are below the recommended standard pupil-textbook ratio. The implication is that children in private schools, which, as shown by the data, are those from poorer backgrounds, are likely to be deprived of access to books, inhibiting the quality of education they receive. It also shows that there are inequalities in the distribution of books between the government and private schools in urban informal settlements in Uganda.

The results indicate that more government schools (22.7%) are assessed by Quality Assurance officers on a monthly basis compared to private schools (17.9%). Some 9% of private schools have never been assessed for quality. This raises some questions on the level of the quality of education received by learners who attend private schools. Regarding inspection by public health officers, government schools are assessed more often than private schools. This is illustrated further in Figure 7 below. This study sought to establish the level of teacher training as an indicator of quality: 2.5% of schools had untrained teachers for the pre-primary level and 2.8% for the primary level, most of whom were in private schools.

**Figure 7: Percentage of government and private schools inspected by quality assurance and public health officers**



## Learning environment

The learning environment is a critical component of quality education. The study further sought to understand the facilities in the school.

This section provides evidence on the Water Sanitation and Hygiene (WASH) facilities utilized by learners who attend schools within the urban informal settlements.

### Toilet Facilities

The school survey indicated that 99 % of all schools had toilet facilities located within the school. More government schools had separate toilet stances for boys and girls compared to the private schools. This was similar to the toilet stances for male and female teachers.

### Pupil-Toilet Ratio

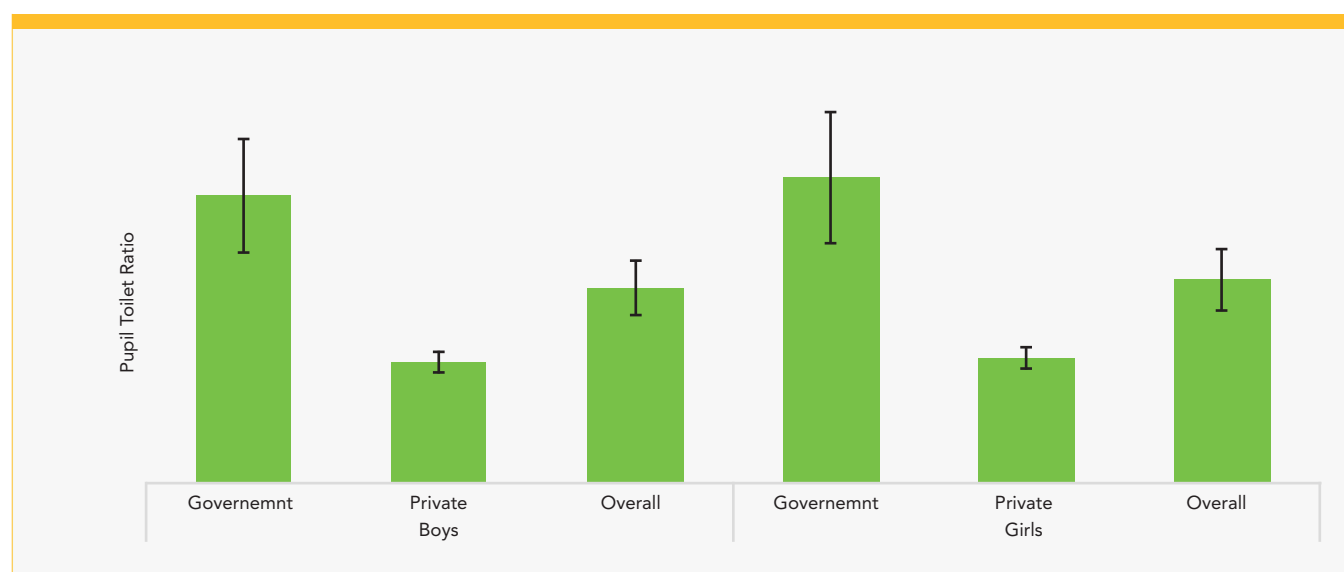
The pupil-toilet ratio is derived as a ratio of boys and girls enrolled at a school level against the number of toilet/toilet stances. The results of the study show that in the government schools, the ratio of boys' toilets was 60:1, with that of girls being 66:1, compared to the ratio of 26:1

for boys and 27:1 for girls in private schools, as shown in Figure 8 below. While the pupil-toilet ratio in private schools is quite close to the recommendation by WHO (1:30 for boys and 1:25 for girls), the situation in the government schools calls for urgent action to ensure a safe and comfortable learning environment for learners.

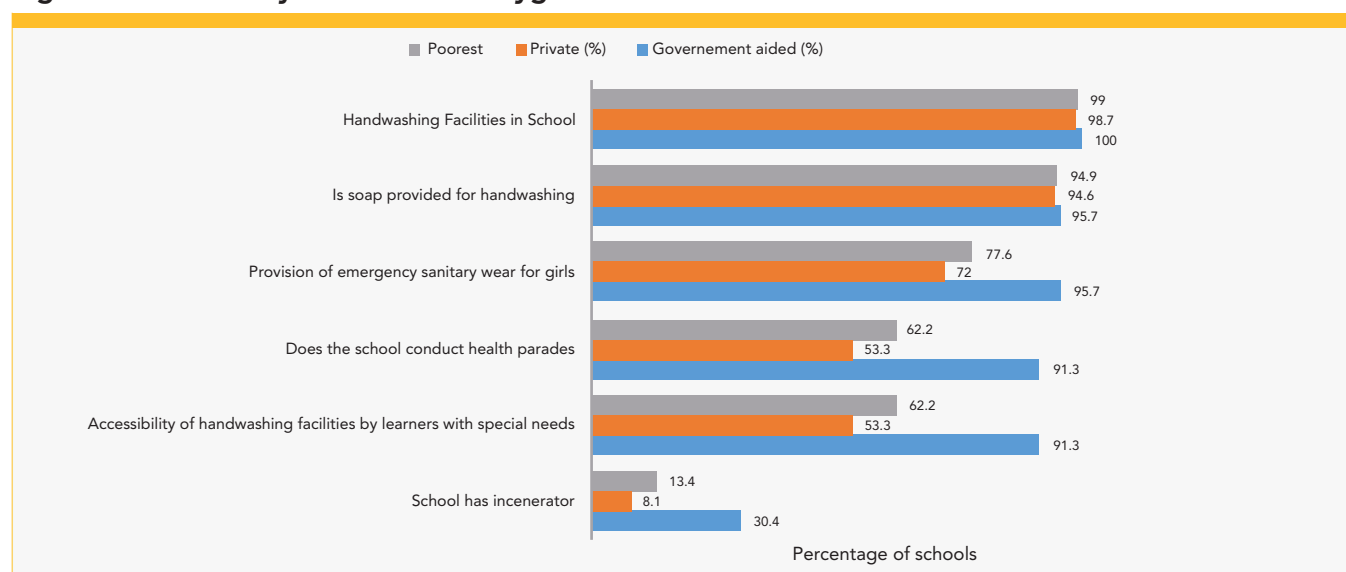
### Handwashing, Sanitaryware, Incinerators and Health Parades

99 % of all the schools had handwashing facilities. However, in government schools, accessibility to handwashing facilities for learners with special needs was about 62%, while in private schools, it was 53%. This shows that there is a need to be cognizant of learners with special needs when designing facilities to ensure that children with special needs access the facilities with ease. In regards to the provision of sanitary towels, 95 % of the government schools provided emergency sanitary towels to the girls compared to 72% in private schools, as shown in Figure 9.

**Figure 8: Primary school Pupil-toilet ratio by sex and school type**





**Figure 9: Availability of Health and hygiene facilities within schools**

### Perceptions on quality of education

Slightly more than half of the parents from urban informal settlements felt that the quality of education had improved since the introduction of Free Primary Education (FPE). Moreover, more parents felt that teacher's performance and the building of structures within the schools had improved. Generally, the trends show that more parents from poor backgrounds felt that the quality of education had improved since the introduction of free primary as compared to those from wealthy backgrounds. This was attributed to low absenteeism, access to textbooks and support from teachers. This was also observed by Adero and Otieno (2023), who established a strong relationship between free primary education and quality education among children from poor households.

**Table 9: Perceptions on quality of education**

		Wealth index			Total
		Poorest	Middle	Wealthiest	
Thoughts about quality of education since introduction of universal basic education in Uganda	Have Improved	56.0	52.7	48.3	51.9
	Have not Improved	39.0	43.5	44.0	42.3
	Have Worsened	5.0	3.8	7.8	5.7
Thoughts about teacher performance since free primary education was introduced in Uganda?	Have Improved	51.3	47.3	45.7	47.9
	Have not Improved	42.6	48.0	47.1	46.0
	Have Worsened	6.0	4.7	7.3	6.1
Thoughts about buildings/structures since free primary education was introduced in Uganda?	Have Improved	56.6	50.7	50.2	52.3
	Have Not Improved	37.4	43.8	42.7	41.5
	Have Worsened	6.0	5.5	7.1	6.3

## Stakeholders' Understanding of the Right to Education

For states to fulfill their responsibility of providing education to all children, education stakeholders must understand and espouse the concept of the right to education (RTE). This section assessed stakeholders' understanding of RTE by collecting data on four key indicators: stakeholders' knowledge of the government's protection of RTE, parental responsibilities in upholding RTE, the role of community leaders and the community in the protection of RTE, and the available mechanisms for reporting RTE violations. Using inductive reasoning, parents/guardians, community leaders, and policymakers were probed to gain a deeper insight into their understanding of RTE.

## Stakeholders' Knowledge of Government's Protection of the Right to Education

A yes/no question was posed to the stakeholders to gauge their understanding of RTE. An overwhelming majority (90.8%) responded affirmatively, signifying a commendable degree of understanding. This positive outcome could be attributed to the projects on RTE initiated by educational partners or the supportive policies and legal frameworks within the country that uphold and sustain RTE (Crawford & O'Callaghan, 2019; Mugerwa-Sekawabe, 2022). Stakeholders were further asked to explain the meaning of RTE. They provided clear explanations, with only a few misconceptions.

According to the stakeholders, RTE encompasses access to schools, non-discrimination, availability of learning materials, a conducive learning environment, parental involvement in school activities, and community support. However, some stakeholders mistakenly believe that it is

the primary responsibility of parents to provide RTE.

It is possible that this stemmed from the fact that many parents in the study had enrolled their children in private schools and were not benefiting from the UPE policy. The stakeholders also explained RTE in the context of children's rights. Some supporting quotes include:

'It [RTE] means a lot of things like giving the child what he/she needs while at school, like books, pens, food at school, and other requirements. I also understand it as putting the good environment that motivates the child to go to school, like not being harsh to him/her. Another thing is that the community should be supportive to the school-going children...' **[#R1-Female FGD-3]**

'...I understand it as giving children the right to education, not only to be at school but also getting involved in all activities at the school because some [children] go there and they are denied [opportunity] to participate in some activities' **[#R-KII-3]**

'...to allow the child to understand what is taught in class, giving all children time to participate in co-curricular activities while at school. Even those with disabilities, like the deaf and the blind, should enjoy these rights too...Teachers should not discriminate [against] them' **[#R-KII-3]**

'...you can find a parent who can't talk to the child politely, they use vulgar language like, 'you dog do this, you stupid girl do this work'. This is all a violation of children's rights...You find another parent who doesn't want her/his children to do any work, but the parent directs all the

work to be done by a particular child who is not their own. For example, the child washes the utensils and washes clothes while others eat...' [#R-IDI-7]

### Parents' responsibilities in upholding the Right to Education

One of the parental responsibilities in upholding RTE is ensuring that their children attend compulsory education. Three variables were used to measure parents' perceptions of upholding RTE: practices used, parental decisions on schooling, and parental monitoring.

### Practices parents use to uphold the Right to Education

Parents were requested to select a preferred practice they frequently employed to ensure their children's access to school. Table 11 depicts that the most prevalent practice was parents encouraging each other to enroll their children in school (61.8%). Remarkably, parents in the lowest economic class (64.5%) were more inclined to encourage enrollment than those in the wealthiest class (57.7%). Less than a fifth (18.4%) reported cases of school nonattendance. Surprisingly, it was the parents in the wealthiest category (10.3%) that minded more increases in school charges than those in the lower wealth economic class (4.4% = poorest; 6.9% = middle class).

**Table 10: How Parents Uphold the RTE**

	Wealth index			Total
	Poorest	Middle	Wealthiest	
I encourage fellow parents to allow children attend school	64.5	64.7	57.7	61.8
I report cases of children not attending school	19.0	16.9	19.2	18.4
Go to school to question arising charges at school	4.4	6.9	10.3	7.5
Reporting through known reporting channel	4.9	4.2	5.2	4.8
I do not allow (NAME) to hawk	3.8	5.6	3.4	4.2
Nothing being done	0.6	0.0	1.7	0.9
Don't know	0.3	0.3	0.5	0.4

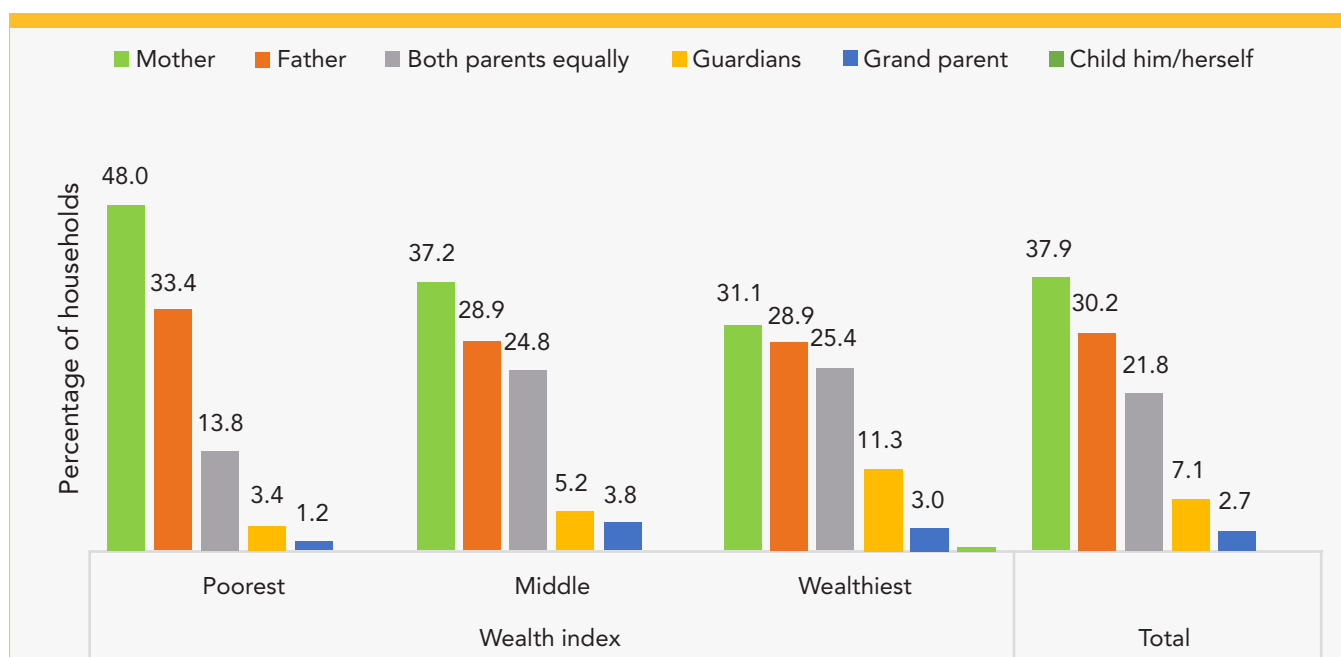
## Decisions about schooling

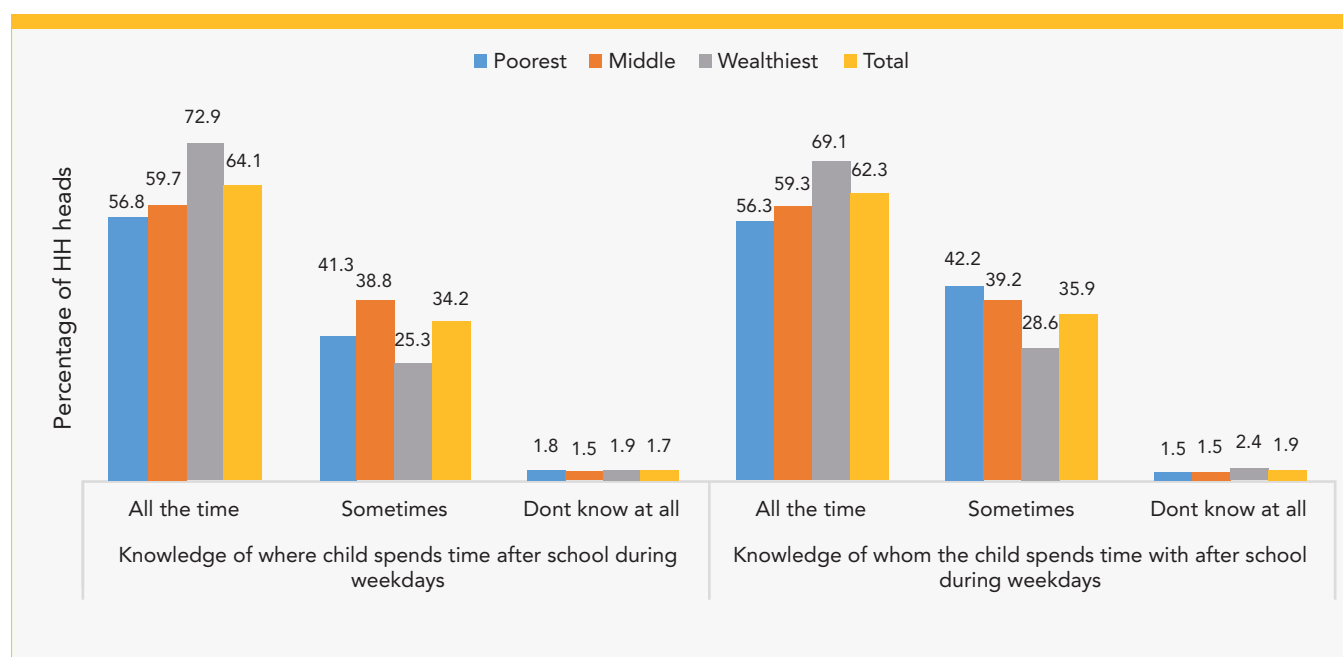
Collaboration between parents is crucial when making decisions regarding their children's education. The results in Figure 11 indicate that a significant proportion of mothers (37.9%) had a greater decision-making power in determining whether their children attended school or not. This pattern was consistent across all socioeconomic backgrounds, with mothers taking the lead in deciding on their children's schooling. The finding is consistent with the parental self-efficacy theory that depicts mothers as more efficacious than fathers during the school-age period (de Jong, Schreurs, & Zee, 2022).

## Parental Monitoring

Parental monitoring refers to parents' practices and knowledge concerning their children's activities, whereabouts, and peers they associate with (Bleakley, Ellithorpe, & Romer, 2016). Available literature shows that parental monitoring is associated with less school absence, lower truancy, low substance abuse, and increased school outcomes. A significant number of parents (> 40%) in middle and poorest socioeconomic classes were not aware of their children's whereabouts all the time and who their company was after school hours on weekdays. Lack of strict monitoring is likely to lead to children associating with bad company, and this may negatively affect school outcomes, including access.

**Figure 11: Decision Maker Regarding Schooling**



**Figure 12: Parental monitoring**

### Role of community leaders and the community in protecting the Right to Education

Community leaders and the community are important in safeguarding the right to education in any jurisdiction. Community leaders and the wider community are both implementers and beneficiaries of RTE. In the context of this study the community included the government and non-governmental entities' efforts in protecting RTE.

Results from the survey show that community leaders and the wider community play diverse roles. The roles mentioned were policy development, capacity building of teachers, employing teachers, promoting accountability in schools through monitoring the quality and quantity of education, raising awareness about RTE, and ensuring adherence to RTE principles by parents and schools. The roles identified are in line with the obligations of the government; to respect, to protect, and to fulfill. The obligations relate to the essential features of the right to education, availability, accessibility, acceptability, and adaptability (UNESCO, 2019). From the

discussion, it was evident that various players in the community were effectively protecting RTE. The following excerpts exemplify the roles.

'...me the parent...give the teacher the responsibility to take care of my child and me as a parent, I am supposed to know where my money goes, so I check my child's books and do homework together with my child...I also spare some time and visit the school where my child studies...and the class teacher explains to me my child's learning progress and behavior...'  
**[#R7-FGD-4].**

'...we put in place guidelines, we train teachers, we support the teachers through capacity building, we supervise, we regularly inspect teaching and learning in schools, we even pay teachers in government schools, and we ensure that we have a framework to ensure that right to education is upheld and that children go to school and complete their studies.'  
**[#R-KII-4]**

## Mechanisms available for reporting violations of the Right to Education

The study examined both formal and informal reporting mechanisms. The study's findings showed that there exist mechanisms for reporting violations of RTE in Uganda at national and local levels. Utilization of the reporting mechanisms depended on a respondent's scope of responsibility or sphere of influence. Respondents from national spheres were familiar with formal reporting mechanisms (hotline, toll-free call center), while those from local or sub-national units were more familiar with informal reporting (village local council meetings). The formal reporting mechanisms are structured, well managed and thus effective in capturing information on violations of RTE. However, the informal mechanisms were seen to be ineffective. The local council leaders were corrupt, biased and practiced nepotism in reporting RTE violations. The following quotes support these views.

"We have got a hotline in the gender unit of the Ministry of Education but also through existing structures of leadership... Depending on the gravity of the violation, some issues are reported to police which end up probably in the courts of law. Some issues are reported by children themselves to the teachers or parents. The parents report to head teachers, head teachers to the sub-county chief, all through to the District Education Officer (DEO)." **[#R-KII-2]**

"We have put up a toll-free call center where someone can call the helpline...it is managed by the guidance and counseling department and also linked to Uganda police. They receive and record all calls on a daily basis. Then we receive a report asking us to intervene and follow up." **[#R-KII-3]**

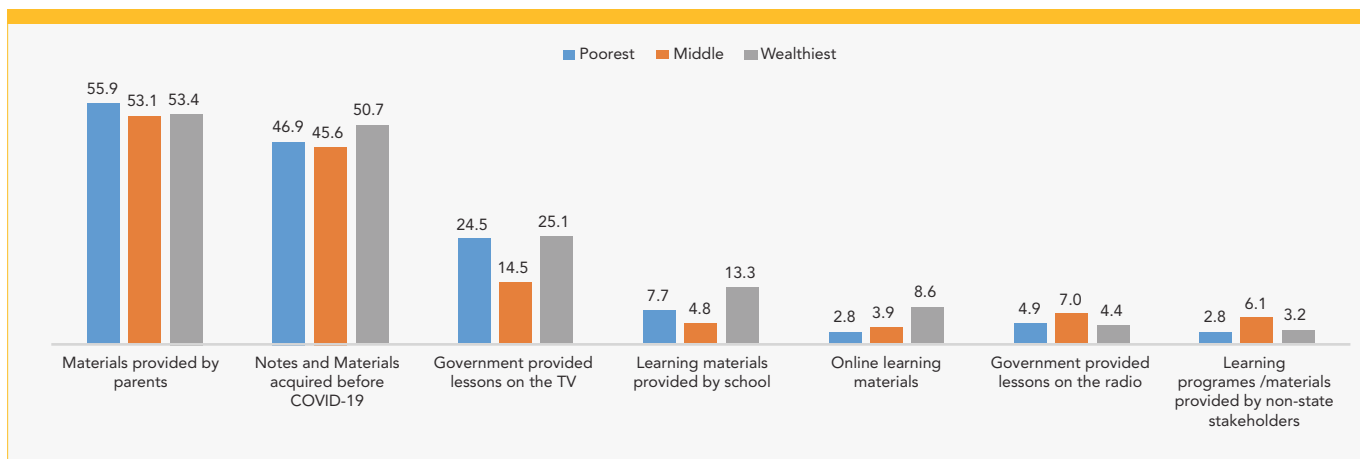
'We have village Local Council meetings where all people in the village attend and tell us [local leaders] what has been going on in their community and in case of any criminality they even help advise on how best it can be handled...On our local council committee, we have an office specifically meant for children's affairs, which is the office of the Vice Chairperson, so any issue pertaining to children's rights can be reported there **[#R-IDI-7]**

'...the reporting mechanisms at the local community levels are not effective and can sometimes be biased...maybe if a new approach is adopted. Otherwise, currently, local leaders at both Local Council I (LCI) and Local Council II (LCII) cannot surrender their friends for arrest by police for failure to educate their children because of a conflict of interest...there is a need to elect a specific team to handle children's affairs, and who will monitor and task parents to take responsibility for their children's education and other needs. **[#R1-FGD-4]**

## Opportunities for continued learning during COVID-19

This section addresses the home learning opportunities that were available during the school closure due to COVID-19, including access and frequency of access to mainstream and print media as well as the internet. We define learning opportunities as the available mechanisms by which learners could access learning materials during school closures due to COVID-19 in their context. These opportunities are further shown in Figure 13.

Notably, these opportunities - government-provided lessons on television, notes and materials acquired before COVID-19, learning materials provided by the schools, online

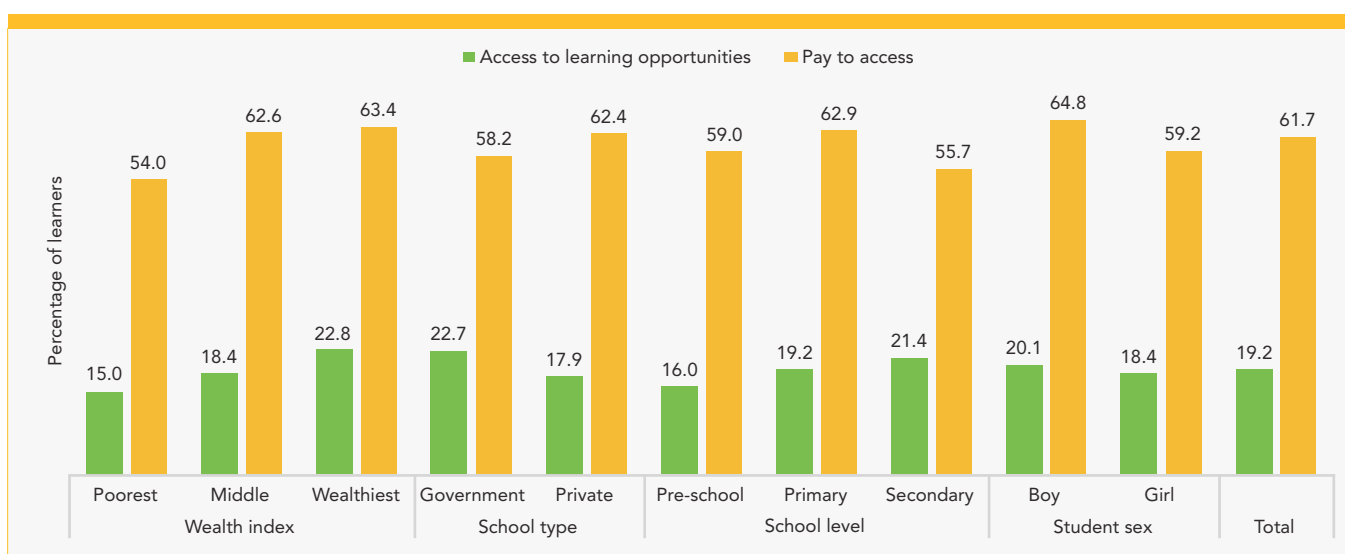
**Figure 13: Home learning opportunities accessed during school closures.**

learning materials and learning materials provided by non-state actors - were accessed by the learners who came from the wealthiest backgrounds. This shows that learners who came from the poorest backgrounds had limited learning opportunities while schools were closed during COVID-19.

Overall, the poorest households (15%) accessed the least and paid (54%) the most for these opportunities compared to those households that were in the middle and wealthiest quintile. Moreover, those learners who attend private

(62%) schools were more likely to pay for the learning opportunities compared to those in government (58%), as shown in Figure 14. The main services paid for included printing of learning materials and tutor fees, with smaller proportions of households paying for internet, some TV/Radio lessons and airtime.

The study found that most households purchased their own learning materials for their children as access to TV and radio lessons by the government was low.

**Figure 14: Home learning opportunities during school closures**



### Frequency and challenges of access to home learning opportunities:

The frequency of access to home learning opportunities varied. A majority of the learners reported they had access daily or at least twice a week. The main challenges relating to access to learning opportunities included a lack of resources to purchase learning materials, competing responsibilities at home that limited the time available for study and a lack of study spaces at home. Other factors included restricted movement, which limited learners' movements to access learning materials, and lack of food in the households, among others. The challenges varied slightly across all variables, including learner gender, levels of enrollment and type of school.

### Sources of homework:

The main sources of homework reported were teachers and schools, printed materials from the government and schools in general. Radio and TV did not appear to expose learners to sufficient homework. The majority of learners received their homework through a direct visit or a phone call from a teacher. This implies that even during school closures due to emergencies, the school and teachers remain the core of learning. The government must, therefore, equip teachers with the necessary coping skills and resources to cope during such times.

**Table 11: Challenges faced when accessing home learning during school closures in Uganda urban informal settlements, 2021.**

Challenge	Child Sex (%)		Level enrolled (%)			Type (%)	
	Boy	Girl	Pre-school	Primary	Secondary	Government	Private
Competing responsibilities at home	38.5	37.8	40.4	36.1	45.7	32.8	40.2
Lack of resources to buy more learning materials	78.5	78.7	73.4	78.4	82.7	80.5	77.8
Lack of enough space at home to learn well	30.6	28.3	30.9	28.5	32.3	24.6	31.3
Lack of capacity at home to support	13.3	17.3	14.9	16	12.6	10.8	16.9
Lack of resources to provide adequate food	19.7	21.3	18.1	19.6	26	12.3	23.5
Inability to move and secure/get learning materials	20.9	18	21.3	19.2	18.9	14.4	21.2

### Homework support by household members

A majority of the learners indicated that they were receiving homework support during the school closure. However, the support by household members was differentiated by selected characteristics. Overall, male learners were more likely to receive support than their female counterparts. Also, learners in private schools got more support compared to those in government schools. In addition, pre-school learners, probably due to their age, received more support than children in higher grades. The study, however, reported that about 20% of the learners did not receive any support with their

homework at home. Instances where parents were less involved in their children's education were particularly due to difficult working schedules as well as absentee parents/guardians. One of the respondents noted the following:

'Most parents are involved, though they are faced with many challenges...parents who are educated support their children; however, some are busy and don't have time to do so... during the lockdown, some parents have made an initiative to educate their children while some parents don't care, a child is left to play the whole day.' [#R-IDI-5]

**Table 12: Sources of homework during school closures**

	Wealth index			Total
	Poorest	Middle	Wealthiest	
From his/her school	24.8	34.8	45.4	37.4
From teachers/private tutors	41.3	33.3	31.2	34.2
From printed materials from govt/teachers/vendors	20.2	25.4	23.9	23.4
From friends	8.3	12.3	8.3	9.5
From the internet	0.0	5.1	9.6	6
TV lessons	7.3	0.7	4.1	3.9
Relatives	6.4	1.4	2.8	3.2
Home/self-learning	3.7	0.7	1.8	1.9
From CSOs/NGOs/FBOs	0.9	0.7	0.5	0.6

## Conclusions

The study established that school attendance was high among boys and girls across all levels of education and across the wealth index of the household, with over 99% of learners attending except at the pre-primary level. It is also observed that the out-of-school children increased from 2.1% before COVID-19 to 9.0% after full school reopening, implying that COVID-19 influenced school attendance. This varied by gender, where female learners were more affected than male learners. This was attributed to pregnancy among teenage girls who got pregnant during school closures and did not go back to school after full reopening (Nakiyingi, Namatende-Sakwa, Banturaki, Kiragga, Balikooowa, and Nanvuma et al., (2022).

Regarding gender parity, the disparity at the pre-primary level favored boys, while at the primary level, it favored girls' schools. Regarding access to schooling for learners with special needs and those without, the study found that 73.4% of all learners had an equal opportunity to access education. However, more learners (10.3%) with special needs from wealthy backgrounds had an opportunity to access education compared to only 4% of the learners from poor backgrounds. This finding is corroborated by excerpts from the qualitative interviews where respondents cited that special needs facilities were inadequate and inaccessible to most of the learners. Further, a higher proportion of girls (23.1%) do not attend school compared to boys at 10.0%. It was also evident that poorer households are more likely to have children with special needs compared to those from wealthier backgrounds.

A small proportion (1.3%) of learners from the study sought enrolment in government schools

and were denied admission. School fees and lack of space in government schools were listed as the topmost reasons why learners were denied admission. As a result, higher enrolment was observed in private schools in these informal settlements. The study results indicate that 6 out of 10 learners in urban informal settlements in Uganda attend private schools. It was also evident that learners from poorer backgrounds utilized private schools more than those from wealthier backgrounds. An indication that learners from poor backgrounds do not benefit from the government-provided capitation grants that emanated from the Free Primary Education Policy launched in 1997, one of the earliest in East Africa.

On enrollment by school type, the study established that there was a decline from 68.1% to 63.8% before and after COVID-19 in private primary schools. While in government schools, enrolment increased from 31.9 to 36.2%. However, for secondary schools the enrolment remained the same at 71.7% for the period when schools were closed and after full reopening. This was attributed to transfers where parents in private schools opted to transfer their children to government schools, which are cheaper than private schools. This was occasioned by the loss of jobs due to COVID-19, and some parents could no longer afford private schools.

Regarding the promotion and repetition rates after the Covid-19 pandemic, the study found that there were cases of grade repetition at 8.2%, with boys recording higher incidences (9.3%) of repeating a grade as compared to girls (7.3%). This is despite the Automatic Promotion Policy in Uganda as well as the government

directive to have all the learners transit to the next grade. The study found that the reasons cited for repetition included lack of fees and schools requesting learners to repeat the grade. With regard to GER and NER before and after the COVID-19 pandemic, the study observed that there was a general increase in GER from 112.5% to 117.7% for the primary school level, while NER declined from 94.8% to 85.6% and from 64.2% to 38% for primary and secondary schools respectively. The decline in NER after the COVID-19 pandemic could be attributed to the high cases of early pregnancies witnessed during the pandemic.

Regarding education inputs in urban informal settlements in Uganda, the results indicate that private schools have better inputs in all indicators, such as pupil-teacher ratio, class size, and Pupil-Toilet ratio, except pupil-textbook ratio, where government schools recorded lower ratios.

Based on the findings, a majority of learners in the informal settlements in Uganda did not have access to learning opportunities during the school closure due to COVID-19, as most families could not afford to pay for them. The study also found that government schools offered more learning opportunities than private schools. Male learners were also more likely to receive support with their homework as compared to girls. Many poor parents were unable to offer support to their children due to their work demands in order to provide for their families.

From the findings on knowledge of RTE, although some stakeholders explained RTE from the perspective of children's rights, they demonstrated a good understanding of

the concept. Most parents misconceived the protection of the right to education as largely their responsibility and not the government's. Overall, policymakers had better knowledge than the parents, probably because of the nature of their work.

Parents were carrying out their responsibilities of upholding RTE. However, there is a need to scale up efforts. Parental efficacy was higher among mothers who were the lead decision-makers on education matters. Both mothers and fathers with children in urban informal settlements need to collaborate in equal measures when making education decisions about their children. The prevalent practice used by parents to increase access was parents encouraging each other to enroll their children in school. Use of the other practices that are equally important to bring access to 100% was limited. A significant number of parents were not monitoring their children's whereabouts and the companies they engaged with after school. This may lead to truancy and engagement in negative peer groups and erode gains made in access.

According to the findings, community leaders and the wider community were effectively protecting RTE, as evidenced by the many roles they cited during the interview. The roles were aligned to the 4As of the RTE (availability, accessibility, acceptability, adaptability).

The informal mechanisms of reporting RTE violations were considered ineffective because they had trust issues that had led to frustrations and apathy.

## Recommendations

More learners enrolled in private schools: In order to promote equity and boost access to education for children from low-income families, more effort should be put in place to provide public education in informal settlements through expanding government schools. This will help parents cope with shocks like COVID-19 and other emergencies. The government should provide adequate public schools in the informal urban settlement areas to accommodate all learners to ensure continued learning during any emergency closure.

The government and other stakeholders should put in place mechanisms to cushion poor families during school closure in order for their children to continue learning, for example, by providing free and effective learning services.

There is a high repetition among learners, leading to wastage in the education system; there is a need for strict enforcement of the government policy on automatic promotion of all learners despite their levels of achievement.

The cases of early pregnancies associated with school-going girls were high at 62% during and after COVID-19, leading to high dropouts and inequality of education for girls vs. boys; to reduce the prevalence of teen pregnancies, there is a need for sensitization among all education stakeholders on government policies that encourage the re-enrolment of pregnant teenagers in school. There is also a need to develop sensitization programs on comprehensive sexuality education.

The study established that in integrated schools' teachers have no mechanism of identifying

learners with special needs for specialized handling in class; to enhance inclusivity among learners, there is a need to thoroughly map out learners with special needs in integrated schools and provide them with learner-friendly facilities.

To sustain the high knowledge levels and further broaden stakeholders' understanding of RTE, the government and/or education partners should mount education programs that focus on increasing understanding of RTE using a rights-based approach. A rights-based approach will bring all educational players on board, including children. This will help to clear the blurred line between RTE and child rights, and all will equally understand rights, roles and responsibilities.

Fathers, as the heads of families, should be encouraged to play a more active role in their children's schooling decisions. The formal communication mechanisms should be devolved to the village levels and made available to everyone on request. Equally, the local leaders in charge of the committees need to be trained on how to handle information and on fair treatment of victims. The study established that most learners in urban poor settlements in Uganda did not access learning opportunities during the COVID-19 school closure; the government should invest more, e.g., in digital facilities, to enable all learners to continue learning during emergency school closures.

The government and stakeholders in education should create awareness for gender equality and equity among families in informal sectors in order to facilitate access to learning opportunities for girls, just like boys.

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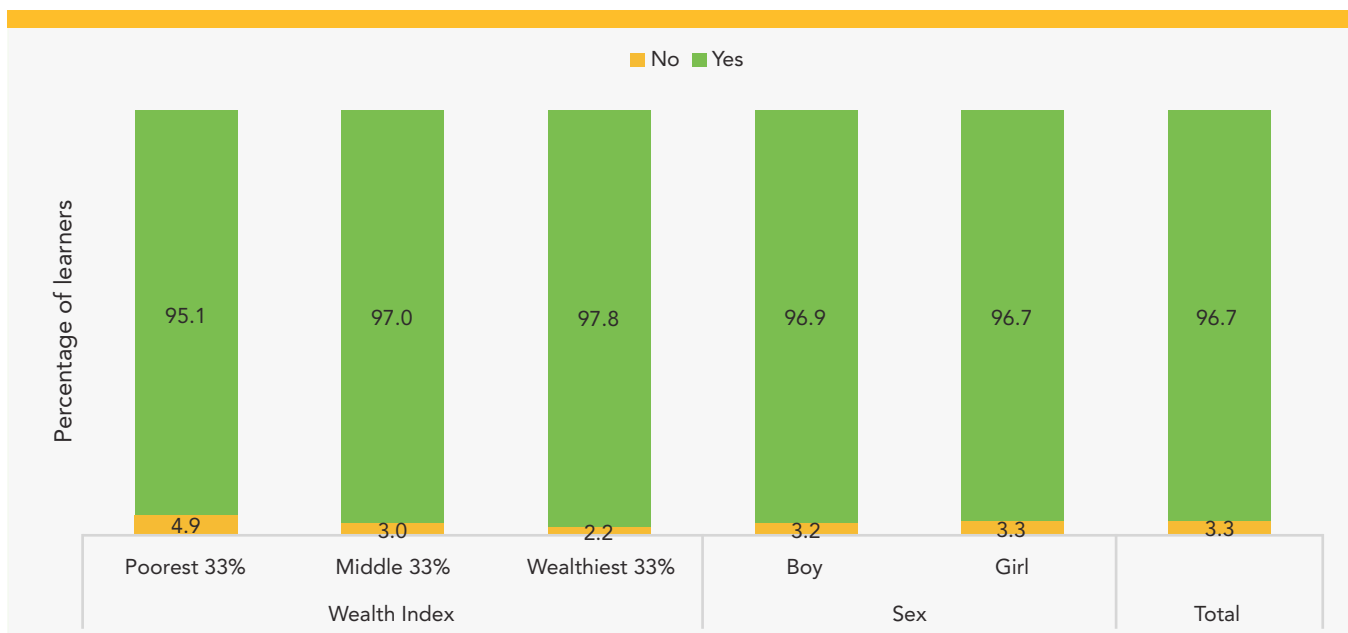
## Annexes:

### Annex 1: Selected characteristics of the study site

	Kampala					Mukono Municipality		
Division	Makindye	Nakawa	Central	Rubaga	Kawempe	Central	Goma	Total
# of parishes	21	23	20	13	19	4	5	105
Selected parish	Kibuye I	Banda	Kamokya II	Nakulabye 1	Kawempe I	Ggulu	Nantabulirirwa	
Population in selected parish- UBOS 2014	26284	20576	18640	19819	44745	20511	22241	172816
# of HHs in selected parishes	8353	6260	5869	6351	11187	4844	4993	42864
# of villages in selected parish	6	6	7	6	6	7	6	43
# of HHs in selected villages with 3-19 yrs.	178	240	115	128	166	107	168	1102
#of HHs with children aged 4-17 years	156	224	112	118	152	103	143	1008
# of school going age children (4 to 17)	395	621	274	312	432	282	401	2717
Mean number of children aged 4-17 years age to population	2.5	2.8	2.4	2.6	2.8	2.7	2.8	2.7

## Annexes:

### Annex 2: Pre-school attendance and age at Primary 1



### Annex 3: Logistic regression on the choice of primary school among household factors during the period of closure after school reopening

Main household survey	Rapid household survey			
Number of observations	=1,585		496	
LR chi2(20)	=110.6		22.4	
Prob > chi2	=0.000**		0.169	
Pseudo R2	=0.087		0.046	
	se. adjusted for 878 clusters in hhid		se. adjusted for 376 clusters in hhid	
Covariates	OR (Robust se.)	P>z	OR (Robust se.)	P>z
Child's age	0.87(0)	0.000**	0.92(0)	0.032*
Child sex(ref. boy)				
Girl	0.93(0.1)	0.569	1.00(0.2)	0.993
Household size categories (ref. 2 to 5)				
6to7	0.92(0.2)	0.650	1.33(0.3)	0.274

## Annexes:

>7	0.97(0.2)	0.883	1.01(0.3)	0.966
Household head age category(ref. <=35 yrs)				
36-45yrs	1.14(0.2)	0.487	0.73(0.2)	0.269
>46yrs	0.90(0.2)	0.597	0.85(0.3)	0.618
Household sex (ref. Male)				
Female	1.36(0.3)	0.178	1.91(0.6)	0.043*
Marital status (ref. Separated/Divorced/ Widowed/Never married)				
Married/living together	1.61(0.4)	0.045*	1.60(0.5)	0.156
Household head education categories (ref. some pri. & no education)				
Primary complete	1.34(0.3)	0.205	1.07(0.4)	0.846
0-level partly or completed	0.98(0.2)	0.915	1.19(0.3)	0.547
Above 0-level	1.23(0.3)	0.425	1.56(0.6)	0.215
Wealth tertile (ref. Poorest 33%)				
Middle 33%	1.15(0.2)	0.466	1.15(0.3)	0.606
Least poor 33%	1.44(0.3)	0.066	2.03(0.6)	0.014*
Household monthly income (ref. No income)				
<30,000UGX	0.93(0.2)	0.752	0.57(0.2)	0.088
30,000-60,000UGX	0.99(0.2)	0.949	0.84(0.3)	0.574
>60,000UGX	1.18(0.2)	0.400	0.95(0.3)	0.840
School location (ref. located within same village)				
Located in a neighboring village	0.58(0.1)	0.003**		
Located in Mukono/Kampala Area	0.45(0.1)	0.000**		
Located outside Mukono/Kampala	0.23(0.1)	0.000**		
District (ref. Kampala)				
Mukono	0.51(0.1)	0.001**	0.75(0.2)	0.311
_constant	8.05(3.4)	0.000**	2.46(1.7)	0.188

## Annexes:

Inference: \* 5% significance level; \*\*1% significance level

se. Standard errors

OR Odds Ratios



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