

## Challenges Faced by Primary Schools in the COVID-19 Post Pandemic Era: A Case of St. Martin Primary School, Mulago, Kampala, Uganda

Kasirye Elizabeth Omagino<sup>1\*</sup>, Mubiru Denis<sup>2</sup>, Kwesiga Justus<sup>3</sup>

<sup>1</sup>Department of Public Health, Texila University, Kampala, Uganda

<sup>2</sup>Department of Public Health, Malaria Consortium, Juba, South Sudan

<sup>3</sup>Statistician Joyster Consults Limited, kampala, Uganda

### Abstract

The COVID-19 pandemic has posed unprecedented challenges to the education sector worldwide, particularly affecting students' access to learning. This study investigated the level of students' access to education during and after the pandemic at St. Martin Primary School, Mulago, Kampala, Uganda. Socio-economic and school-related factors influencing access to education are examined, along with the implications of these challenges on clinical practice. A cross-sectional survey was conducted among students at St. Martin Primary School, Mulago, Kampala, Uganda, utilizing both quantitative and qualitative methods using structured questionnaires and key informant interview guides respectively. Purposive, snowball and systematic random sampling techniques were utilized. Data was collected from 108 students in Primary seven on students' access to education, socio-economic challenges, and school-related factors. Chi-square tests were employed to analyze associations between variables. The study revealed that 88.0% of students reported having access to education during the pandemic, primarily through online classes (93.7%). Socio-economic challenges, including parental education level, household income sources, and loss of family income due to the pandemic, significantly impacted access to education. School-related challenges, such as dissatisfaction with communication from school, lack of clear instructions for online classes, and encountering technical issues, also hindered access. Significant associations between socio-economic factors, school-related challenges, and access to education were identified. There is need for Policy interventions to focus on bridging the digital divide, providing support for vulnerable households.

**Keywords:** Access to Education, COVID-19 Pandemic, Socio-Economic Challenges, School-Related Factors.

### Introduction

Globally, the outbreak of corona virus disease (COVID 19) caused devastation of the entire world [1] and this disease rapidly spread in the whole world creating a serious worldwide public health threat [1]. Although the virus had been under control in China [2], it continued spreading worldwide [3]. As of September 2021, the global burden of COVID 19, there were over 200 million confirmed cases with over 4 million deaths. In Uganda, over 120

thousand cases with 3170 deaths were recorded. (WHO COVID 19 dashboard). In order to avoid the spread, many sectors were closed, such as in this study, the education sector remained closed.

The COVID-19 pandemic led to widespread disruptions in education globally, with an estimated 1.6 billion learners affected at the peak of school closures [4]. Factors influencing access to education during the pandemic include lack of internet connectivity, limited access to digital devices, socioeconomic

disparities, and disruptions in school infrastructure and resources [4].

European countries implemented various measures to mitigate the impact of school closures, including remote learning initiatives and support for vulnerable students [5]. However, disparities in digital infrastructure and socioeconomic resources remained significant barriers to equitable access to education (European Commission, 2021). In the United States, the pandemic exacerbated existing educational inequities, with marginalized communities disproportionately affected by school closures and remote learning challenges [6]. Factors such as inadequate access to technology, unstable internet connections, and lack of parental support contributed to disparities in educational access and outcomes [6].

In Asia, the pandemic highlighted disparities in access to education, particularly in rural and remote areas with limited digital infrastructure [6]. Factors such as poverty, lack of internet connectivity, and digital literacy skills posed significant challenges to remote learning initiatives in countries across the region [7].

Sub-Saharan Africa faced unique challenges in ensuring continued access to education during the pandemic, including limited internet penetration, inadequate infrastructure, and resource constraints [8]. School closures disproportionately affected vulnerable populations, exacerbating existing inequalities in educational access and learning outcomes [8].

In East Africa, the pandemic disrupted education systems, with school closures leading to learning losses and increased dropout rates [9]. Factors such as poverty, lack of access to technology, and remote learning infrastructure challenges hindered efforts to ensure continuity of education for all children [9]. Countries in East Africa, including Kenya, Tanzania, Uganda, faced similar challenges in navigating the educational impacts of the pandemic. School closures, limited access to digital

devices and internet connectivity, and socioeconomic disparities contributed to disruptions in education and widened learning gaps among students [10].

At present, very few studies [11, 12] have been done to assess the challenges faced by school going children in the COVID 19 era and mainly they have been conducted elsewhere across the globe among postgraduate students [13, 14], secondary schools and not primary schools where children possess low knowledge compared to secondary students. The COVID-19 pandemic had significantly disruption on the educational landscape worldwide, presenting unprecedented challenges for primary schools in Uganda, particularly in urban centers like Kampala. Despite efforts to adapt to remote learning modalities, primary schools such as St. Martin Primary School in Mulago, Kampala, continue to face multifaceted challenges in the post-pandemic era. These challenges encompass various factors such as limited access to technology, socioeconomic disparities, health and safety concerns, and the psychosocial well-being of students. However, a comprehensive understanding of the specific challenges faced by St. Martin Primary School and the implications for its students' education and well-being remains elusive.

According to a report by the Ministry of Education and Sports [15], primary schools across the country grappled with the abrupt transition to remote learning during the pandemic, exacerbating existing disparities in educational access and quality. Furthermore, research by Lordan, Prior [16] emphasized the importance of addressing health and safety concerns in schools post-pandemic, including implementing effective infection prevention measures and ensuring the well-being of students and staff. Despite these insights, there remains a gap in understanding the specific challenges faced by primary schools like St. Martin Primary School in Mulago, Kampala, and the urgent need to identify targeted solutions to support their post-pandemic

recovery and ensure the continuity of quality education for all students.

Therefore, this study was conducted to find out the challenges faced by primary schools during and after the COVID 19 pandemic: A case of St. Martin Mulago, Kampala, Uganda.

## Materials and Methods

### Research design

This was a mixed methods study which employed both quantitative and qualitative methods of data collection. For the quantitative aspects of the study a cross-sectional study design was conducted. This design was utilized because it was relatively faster and less expensive than other study designs. The qualitative aspect entailed use of Key informant interviews with Teachers at St. Martin Primary School that were more knowledgeable about the situations about their students and the challenges the school faced as well as the students.

### Study Area

The study was conducted at St. Martin Primary School, Mulago, Kampala, Uganda. St. Martin Mulago Primary School is a school in Kawempe Division, Kampala Capital City, Central Uganda. St. Martin Mulago Primary School is situated nearby to the police station Old Mulago Kapapali Police Post. The school is a Government Sponsored School. The school also neighbors Mulago Catholic Church, Mulago Vocational training center and Mulago School of the deaf children. The school was selected because it is a government aided school and it also had implemented the online learning system during COVID 19.

### Study Population

The study population involved all the primary seven (P.7) students at St. Martin Primary school Mulago. The study also involved Teachers at St. Martin Primary school, Mulago. These were involved in the study because of the experiences seen or shared to

them by the students of St. Martin. The study involved P.7 students because these were at least in primary four (P.3) during the time COVID 19 started in March 2020 and now were P.7 by the time of the study (2024). These students who were in P.3 in the year 2020 were now found in p.7 in 2024. As of the study time 201 students were in P.7 and among these 150 continued with the school from p.3. Therefore, 150 were considered as the study population for the study. These were trained by 6 teachers, and these were considered purposely for the qualitative study.

### Inclusion

The study included all primary seven students at St. Martin primary school who studied with the school from primary three until now when they are in P.7.

### Exclusion Criteria

1. The study excluded all those students who were not studying with St. Martin primary school.
2. Students who had red eyes were also excluded from the study. This study was conducted in the period where red eye infection was high.
3. People who were too sick to participate were also excluded from this study.
4. Those who did not consent to the study

### Sample Size

The study utilized the Krejcie and Morgan [17] sample size determination formula to compute the sample size for quantitative study;

$$s = \frac{X^2 NP(1 - P)}{d^2(N - 1) + X^2 P(1 - P)}$$

Where s=sample size.

$X^2$ =the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N=the population size.

P= the population proportion (assumed to be 0.50 since this would provide the maximum size).

d=the degree of accuracy expressed as a proportion (0.05).

$$S = \frac{3.841 * 150 * 0.5(0.5)}{0.05 * 0.05(149) + 3.841 * 0.5(0.5)}$$

S = 108.

A sample of 108 students in primary seven was involved in the study.

### Data Collection Techniques and Tools

Interviewer administered semi-structured questionnaire were used to collect the data from the students at St. Martin primary school, Mulago.

For qualitative data collection, a key informant interview guide was used to collect data from the six (6) class teachers in primary seven. This had open questions related to the study objectives. It was also arranged in sections according to the objectives of study.

### Data Analysis Plan and Statistical Tests

The data collected from students was entered into an excel spreadsheet and later exported to SPSS for further analysis. The first objective was assessed using frequency and percentages. This helped to determine the level of student

access to education during COVID 19 pandemic. Univariate analysis was also applied on objective 2 and 3. However, the socio-economic characteristics and school-related factors were also subjected to chi-square test to determine the associated factors with students' access to education during COVID 19 pandemic.

After data collection, recorded data from interviews was transcribed, after checking for completeness and consistency as well as for various omissions, incomplete or otherwise unusual responses. Data analysis was done manually focusing on the major themes from the transcript's thematic analysis. Qualitative data was presented in the form of statements and narratives to support the findings from quantitative study.

### Results

Table 1 shows the demographic characteristics of the students, 63.3% of the students who participated in the study were female and 36.7% males. Results showed that 75% of the students were between 13 to 15 years old, and 25% above 15 years old.

**Table 1.** Socio-Demographic Characteristics of Students

Variables	Frequency	Percent
<b>Gender</b>		
Male	40	37.0
Female	68	63.0
<b>Age</b>		
13-15	81	75.0
More than 15 years	27	25.0

The results in **Error! Not a valid bookmark self-reference.** illustrate the level of students' access to education during the COVID-19 pandemic at St. Martin Mulago, presented in percentages. Among the surveyed students,

88.0% reported having access to education during the pandemic, while 12.0% indicated they did not have access. Concerning the nature of class conduction, the majority of students (93.7%) experienced online classes, while only

a small proportion (6.3%) had classes conducted manually. In terms of frequency, the majority of students (89.5%) attended online classes daily, with a smaller percentage attending weekly (4.2%) or monthly (6.3%). Additionally, the distribution of hours spent

attending online classes varied, with 49.5% of students spending less than one hour per day, 22.1% spending 1-2 hours, 18.9% spending 3-4 hours, and 9.5% spending more than 4 hours per day.

**Table 2.** Level of Students' Access to Education During COVID-19 Pandemic at St. Martin Mulago

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Accessibility to Education during COVID 19 pandemic</b>		
Had access	95	88.0
Did not have access	13	12.0
<b>Nature of Conduction of Classes</b>		
Online	89	93.7
Manually	6	6.3
<b>How often Online Classes were Conducted</b>		
Daily	85	89.5
Weekly	4	4.2
Monthly	6	6.3
<b>Hours per day Spent Attending Online Classes</b>		
Less than 1 hr	47	49.5
1-2 hrs	21	22.1
3-4 hrs	18	18.9
More than 4 hours	9	9.5

The results in

Table provide insights into the socio-economic factors affecting students' access to education during and after the pandemic, presented in percentages. Concerning the highest level of education for parents or guardians, a diverse distribution was observed, with 24.1% having no formal education, 28.7%

completing primary education, 20.4% reaching secondary education, 14.8% attending college or vocational training, and 12.0% obtaining a university degree. In terms of the main source of household income, the majority of households (69.4%) relied on employment, while smaller proportions depended on

agriculture/farming (13.0%), casual jobs (14.8%), or business/entrepreneurship (2.8%). Regarding accessibility to electricity in the homestead, the vast majority of households (93.4%) reported having access to electricity, while a small percentage (6.6%) did not. Additionally, a substantial number of households experienced a loss of family income or employment due to the COVID-19 pandemic (90.6%), with a significant proportion reporting infections among parents (84.9%). Despite challenges, many students managed to balance

household responsibilities with online learning (85.8%), although a considerable number skipped online classes due to family obligations (88.0%). Furthermore, a majority of students (88.0%) shared electronic devices with family members for online learning, indicating potential constraints on access. However, only a minority of students reported receiving financial support to aid in accessing education (31%), highlighting a potential gap in support systems.

**Table 3.** Socio-Economic Challenges that Affected Students' Access to Education During and After the Pandemic

<b>Variables</b>	<b>Frequenc y</b>	<b>Percent</b>
<b>Highest level of education for parents/guardians</b>		
No formal education	26	24.1
Primary	31	28.7
Secondary	22	20.4
College/Vocational	16	14.8
University	13	12.0
<b>Main source of household income</b>		
Employment	75	69.4
Agriculture/farming	14	13.0
Business/Entrepreneu rship	3	2.8
Casual jobs	16	14.8
<b>Accessibility to electricity in homestead</b>		
Yes	99	93.4
No	7	6.6

<b>Loss of family income/employment due to covid pandemic</b>		
Yes	96	90.6
No	10	9.4
<b>Infection of COVID 19 against parents</b>		
Yes	90	84.9
No	16	15.1
<b>Loss of parent during COVID 19</b>		
Yes	15	14.0
No	92	86.0
<b>Affordability of expenses related to online learning e.g. internet costs</b>		
Yes	50	46.3
No	58	53.7
<b>Balancing of household responsibilities with online learning</b>		
Yes	91	85.8
No	15	14.2
<b>Skipping online classes due to family obligations</b>		
Yes	95	88.0
No	13	12.0
<b>Sharing of electronic devices with family members</b>		
Yes	95	88.0
No	13	12.0
<b>Accessibility to financial support</b>		

Yes	31	28.7
No	77	71.3

Qualitative finding: the results from key informant with a teacher in p.7 showed that students missed classes a lot during the online learning and some even could not provide the assessments in time either due to household activities.

*“COVID 19, was not an easy period, we saw people even going a day without a single meal and so education was not all taken that seriously since also teaching an angry child*

Table shows the relationship between socio-economic variables and access to education. Each variable examined reflects a socio-economic dimension that may influence access to education, presenting significant findings. The education level of parents demonstrated a notable association ( $\chi^2 = 9.519$ ,  $p = .049$ ), indicating that parental education plays a role in determining students' access to education during crises. Higher levels of parental education may correlate with better access to

*means your teaching a biased person already. These students who come to these public schools means that they cannot afford private ones, so when we go to this lock down, expect also to face other challenges, parents used not to work, students also need time to engage on television and lough to promote better mental health, so many challenges were experienced.” (KII 5 Male, 39 Years, 2024).*

resources and support for their children's learning. Additionally, the source of income of parents exhibited a highly significant association ( $\chi^2 = 23.975$ ,  $p = .000$ ). Accessibility to electricity showed a strong association ( $\chi^2 = 24.382$ ,  $p = .000$ ). Furthermore, the loss of parents revealed a significant association ( $\chi^2 = 5.055$ ,  $p = .025$ ). Balancing household responsibilities with class demonstrated a significant association ( $\chi^2 = 7.208$ ,  $p = .007$ ).

**Table 4.** Results from Chi-Square Test for Categorical Data on Socio Economic Challenges and Access to Education During the Pandemic

<b>Chi-Square Tests</b>			
<b>Variables</b>	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance (2-sided)</b>
Education level of parents	9.519 <sup>a</sup>	4	.049
Source of income of parents	23.975	3	.000
Accessibility to electricity	24.382	1	.000
Loss of parents	5.055	1	.025
Balancing household responsibilities with class	7.208	1	.007



The results in Table 5 highlight various school-related factors impacting students' access to education during and after the pandemic, expressed as percentages. Regarding satisfaction with communication from school regarding online classes, the responses varied,

with 32.1% of students reporting being very satisfied, 16.0% satisfied, 2.8% neutral, and 49.1% dissatisfied. Additionally, the provision of clear instructions and guidelines for accessing online classes was reported by 45.4% of students, while 54.6% indicated otherwise.

**Table 5.** School-Related Challenges that Affected Students' Access to Education During and After the Pandemic

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Satisfaction with communication from school regarding online Classes</b>		
Very satisfied	34	32.1
Satisfied	17	16.0
Neutral	3	2.8
Dissatisfied	52	49.1
<b>Provision of clear instructions and guidelines for access to online classes</b>		
Yes	49	45.4
No	59	54.6
<b>Provision of additional academic support or sessions</b>		
Yes	40	37.7
No	66	62.3
<b>Provision of counseling services/mental health support</b>		
Yes	25	23.1
No	83	76.9
<b>Accommodations made to support persons with disabilities</b>		
Yes	49	45.4
No/Not sure	59	54.6
<b>Satisfaction with quality of online teaching</b>		
Very satisfied	40	37.0
Satisfied	6	5.6
Neutral	3	2.8
Dissatisfied	59	54.6
Very satisfied	40	37.0
<b>Encountering technical issues</b>		
Yes	91	84.3
No	17	15.7
<b>Provision of necessary online learning materials (textbook etc.)</b>		
Yes	32	29.6
No	76	70.4
<b>Overall rating of the online learning experience</b>		
Better	36	33.3

Fair	34	31.5
Worse	38	35.2

Similarly, while 37.7% of students received additional academic support or sessions, 62.3% did not. Mental health support services were provided to 23.1% of students, while 76.9% did not receive such services. Accommodation for persons with disabilities was made for 45.4% of students, whereas 54.6% reported otherwise. Satisfaction with the quality of online teaching varied, with 37.0% very satisfied, 5.6% satisfied, 2.8% neutral, and 54.6% dissatisfied. Technical issues were encountered by 84.3% of students, while 15.7% did not face such issues. Moreover, 29.6% of students received necessary online learning materials, while 70.4% did not. Overall, students' ratings of the online learning experience were diverse, with

Table also revealed some significant factors associated with accessibility to education during COVID 19 pandemic; communication from school regarding classes and assignments exhibited a highly significant association ( $\chi^2 = 27.814$ ,  $p = .000$ ), the provision of academic support to students to cope with online learning demonstrated a significant association ( $\chi^2 =$

33.3% reporting it as better, 31.5% as fair, and 35.2% as worse.

Results from qualitative study support the findings of the study.

*“During COVID 19, we had online sessions, but they were hectic, not having access to better internet, even us alone the skills were quite lacking, but we managed. It was not all that the best but at least we used to send some reading materials to the emails provided to us by the parents/guardians of the students. Even though schools may have computers, but internet accessibility remains a challenge which makes us not to engage more on internet-based services hence a knowledge gap.” (KII 2, Teacher Female 36 Yrs., 2024).*

The Chi-square test results in 4.286,  $p = .038$ ), the provision of counseling services and mental health support revealed a significant association ( $\chi^2 = 4.451$ ,  $p = .035$ ), support and accommodation for disabled individuals showed a significant association ( $\chi^2 = 5.361$ ,  $p = .021$ ), and the quality of online teaching services demonstrated a highly significant association ( $\chi^2 = 24.744$ ,  $p = .000$ ).

**Table 6.** Results from Chi-Square Test for Categorical Data on Socio Economic Challenges and Access to Education During the Pandemic

Chi-Square Tests			
Variables	Value	df	Sign. (2-si)
Communication from school regarding	27.814	3	.000
Provision of academic support	4.286	1	.038
Provision of counseling/mental support	4.451	1	.035
Support/accommodation to cater for disabled people	5.361	1	.021

The quality of online teaching services	24.744	3	.000
---	--------	---	------

Among the main challenges identified from the teachers in primary seven are presented in

Table. The teachers reported that students didn't know sometimes how to utilize the phones, laptops and purchase data bundles to access online learning platforms. Some used to even miss the class sessions. Financial issues were also noted among the students as they

reported a lack of money to buy data bundles for the devices. Note that the parents were already in lockdown and not working which made it difficult to finance the needs of the students.

**Table 7.** Key Themes from Qualitative Analysis

<b>Challenges faced by students</b>
Technology issues
Financial issues to meet resources
Household duties vs learning time
Lack of online devices/gadgets
Loss of parents

The study also revealed that students got involved in a lot of home duties and balancing time with home duties was difficult. They also lacked smart devices to access online classes. They sometimes shared phone calls with their parents. The teachers also reported that some of their students lost parents, and this created a big gap between the students and the school. According to one of the teachers.

*“At least to me about 5 students called me on phone to notify me how they had lost their parents, this was done by their other guardians and by that time we could not even move to go for burial. This must have created a lot of impact to the students. 1 of the students after COVID 19 didn't present back to school and when I followed up, she said she was at a guardians place and they changed her school to another district for easy monitoring” (KII 1 Teacher, Female 41 years, 2024).*

## Discussion

### Level of Students' Access to Education During Covid-19 Pandemic at St. Martin Mulago

According to a report by UNESCO (2020)[4], the COVID-19 pandemic has disrupted education systems globally, with an estimated 1.6 billion learners affected by school closures at the peak of the crisis. In this study 88% of the students reported to have accessed education during the COVID 19 pandemic. The reported percentage of students with access to education (88.0%) aligns with broader trends observed in similar studies conducted worldwide (UNESCO, 2020). Various research articles and reports available online corroborate these findings, highlighting the widespread shift towards online learning modalities in response to the pandemic-induced disruptions to traditional education systems (UNESCO, 2020). As noted by Adarkwah, (2021) [8], the closure of schools prompted educational

institutions to adopt remote learning strategies, with online classes becoming the primary mode of instruction for many students globally.

The prevalence of online classes (93.7%) observed in the study is consistent with global trends, reflecting efforts by educational institutions to maintain continuity in learning amidst physical distancing measures and school closures [8]. According to a study by Johnson et al. (2020), the transition to online education has been driven by the need to ensure the safety of students and educators while minimizing disruptions to the learning process.

Furthermore, the frequency of online classes, with the majority of students (89.5%) attending daily sessions, mirrors the urgency and commitment of educators and students to adapt to the new virtual learning environment. These findings resonate with reports and articles discussing the rapid implementation of online education platforms and strategies to ensure uninterrupted learning during the pandemic [4].

### **Socio-Economic Challenges That Affected Students' Access to Education During and After the Pandemic**

This study also identified the challenges which are multifaceted and have profound implications for students' ability to engage effectively in learning. The findings revealed a diverse distribution of the highest level of education among parents or guardians, ranging from no formal education to university degrees with many parents having a low level of education. This diversity underscores the varying levels of educational attainment within households, which can influence the level of support and resources available to students [4].

The study also revealed that the main source of household income is a critical determinant of students' access to education, with employment being the predominant source for the majority of households. This finding resonates with research indicating that socio-economic status significantly impacts educational opportunities

and outcomes. Access to electricity in the homestead also emerged as a crucial factor, with the vast majority of households reporting access. However, the small percentage of households without electricity highlights disparities in infrastructure access, which can exacerbate inequalities in education. In Uganda, most of the households rely on electricity for all electronic appliances [18] and with high load shedding. This left students with limited access to online learning services.

The study also revealed the widespread impact of the COVID-19 pandemic on family income and employment, with a significant proportion of households experiencing losses. These economic hardships can hinder families' ability to support their children's education and may lead to increased financial strain [19]. Additionally, the loss of parents during the pandemic emerged as a significant challenge, underscoring the devastating impact of the virus on families and communities. Most families across the globe lost their loved ones and this left them in sad state and with mental issues, similarly, students who lost their parents experienced psychosocial challenges [20].

Despite these challenges, many students demonstrated resilience in balancing household responsibilities with online learning. However, a significant number reported skipping online classes due to family obligations, indicating the competing demands faced by students during this period. The sharing of electronic devices for online learning also highlighted the need for equitable access to technology, particularly among households with limited resources [4]. All these findings show that students could not concentrate on education given the environment of home activities and the inadequate equipment which was shared by family members to access study sites. Students also lacked internet gadgets to access online materials [21].

The results from the chi-square tests further elucidate the associations between socio-economic factors and students' access to

education. The education level of parents, source of income, accessibility to electricity, loss of parents, and balancing household responsibilities with class all emerged as significant predictors of access to education during the pandemic.

### **School-Related Factors That Affected Students' Access to Education During and After the Pandemic**

The results from the study highlighted various school-related challenges that have significantly impacted students' access to education during and after the COVID-19 pandemic. Satisfaction with communication from schools regarding online classes varied among students, with a substantial proportion expressing dissatisfaction. This finding aligns with prior research indicating that effective communication between schools and students is crucial for ensuring successful online learning experiences [22]. Additionally, the provision of clear instructions and guidelines for accessing online classes was reported by less than half of the students, indicating potential gaps in communication and support from educational institutions [4].

The study revealed that some students received additional academic support or sessions, the majority did not, suggesting disparities in access to resources and support services during the pandemic. This finding underscores the importance of providing equitable academic support to all students, particularly during times of crisis [4]. Similarly, the limited provision of counseling services and mental health support services highlights the need for comprehensive support systems to address the socio-emotional needs of students during remote learning [23]. Therefore, the study revealed that the school provided little support and limited counseling to students. This could have affected the mental health of the students during the COVID 19 pandemic.

Accommodations for persons with disabilities were reported by less than half of

the students, indicating potential challenges in ensuring inclusivity and accessibility in online learning environments [24]. This shows that Persons with disabilities during COVID 19 suffered the challenges of accessing education. Furthermore, satisfaction with the quality of online teaching varied among students, with a significant proportion expressed dissatisfaction.

The chi-square test results further elucidated significant factors associated with accessibility to education during the pandemic. Communication from schools regarding classes and assignments, provision of academic support, provision of counseling services, and support for disabled individuals, and the quality of online teaching services all demonstrated significant associations. These findings show the importance of addressing these school-related challenges to enhance students' access to education during crises [4].

### **Implication for Clinical Practice**

The disruptions caused by the pandemic on primary education had significant implications for the mental health and well-being of students. Clinical practitioners, particularly those working in pediatric and adolescent healthcare settings, may anticipate an increased need for mental health support services among children and adolescents. This could include addressing issues such as anxiety, depression, and social isolation resulting from disruptions in education and changes in daily routines. Clinical psychologists, counselors, and mental health professionals may need to collaborate closely with schools and communities to provide targeted support and interventions. Given the heightened awareness of public health measures during the pandemic, clinical practitioners may collaborate with schools to reinforce health education initiatives, including hand hygiene, respiratory etiquette, and vaccination awareness.

### **Implication for Future Research**

There is a need for longitudinal studies to assess the long-term effects of the pandemic on primary education, including academic achievement, socio-emotional development, and educational equity. By tracking students' progress over time, researchers can gain insights into the sustained impact of disruptions and inform targeted interventions to support their recovery and resilience. Future research could explore the differential impact of the pandemic on vulnerable populations within the primary school system, such as children from low-income households, minority communities, and those with disabilities. Investigating the intersecting factors of socioeconomic status, access to resources, and educational outcomes can illuminate disparities and inform policies and programs aimed at promoting educational equity and inclusion.

### **Limitation**

Bad weather like rains and thunderstorms were expected to interrupt the program, while some respondents were expected to either require a lot of explanation before they consent to the study or even drop out amid the study, wasting a lot of time or post COVID 19 lock down effects, where people were languishing in abject poverty and may have not recovered from the era, hence not willing to respond. The study's findings are interpreted within the specific context of St. Martin Primary School, Mulago, and Kampala, Uganda and cannot be generalizable to other settings or populations without consideration of contextual differences. It was also found out that as of Primary seven in 2020, there were 245 students but then those who continued up to P.7(study population) were only 150 which meant that 95 either had dropped out from school or changed schools. Therefore, this limited the study population for the study.

### **Recommendation**

There is a critical need for policy interventions and investments to bridge the

digital divide and improve access to technology and internet connectivity for students and teachers in Ugandan primary schools especially the public schools. This could involve initiatives such as distributing digital devices to students from low-income households and expanding infrastructure in underserved areas. Additionally, efforts should be made to enhance digital literacy and capacity-building among educators to effectively utilize technology for teaching and learning purposes.

The Ministry of Education and sports, including government agencies, schools, and community organizations, should prioritize the development and implementation of comprehensive crisis response plans to mitigate the impact of future emergencies on primary education. This includes establishing protocols for remote learning, contingency plans for school closures, and strategies for supporting the socio-emotional well-being of students and staff during times of crisis. There is a need for increased collaboration and coordination among stakeholders to ensure a coherent and effective response to emergencies, including clear communication channels and mechanisms for sharing resources and best practices such as free education TV channels even after COVID 19.

The study underscores the importance of strengthening social support systems and safety nets to address the socio-economic challenges faced by students and families, particularly in the aftermath of the pandemic. This could involve expanding access to social assistance programs, such as cash transfers, food aid, and mental health services, to vulnerable populations affected by loss of income, unemployment, or other hardships.

Additionally, schools should adopt a holistic approach to student support, including socio-emotional learning initiatives, counseling services, and targeted interventions for students facing academic or socio-economic barriers. Counselors need to be introduced in school and

Public service commission and the education service commission should table this.

## Conclusion

The current study revealed that majority of the students at St, Martin Primary school had access to education although a slight percentage did not have access to education. Education was mainly conducted online, on a daily basis and for at least 1 hour daily. However, access to education during COVID 19 pandemic was multifaceted with a lot of challenges which where; Socio-economic challenges; loss of income or employment for parents, COVID 19 infection rates among family members, expenses related to online access, household chores, limited gadgets in the household to access online platforms, limited financial support to access reading materials since most parents were employed and now had lost jobs.

The school related challenges that affected access to education among students were limited communication from school, unclear instructions/guidelines from school, limited provision of additional academic support sessions, limited counseling/mental health support, limited support for the disabled, poor quality online teaching methods, the technical issues involved in online learning, limited provision of online material such as textbooks.

The study also revealed that the majority of the students reported that online learning experience during the COVID 19 pandemic was worse/not satisfactory. This could be because of the new approaches in learning utilizing Google meet which students had not yet ventured in, even in class.

## References

- [1]. Wang, C., et al., 2020, A novel Coronavirus Outbreak of Global Health Concern. *The Lancet*, 395(10223): p. 470-473.
- [2]. Gong, F., et al., 2020, China's Local Governments are Combating COVID-19 with Unprecedented Responses—From A Wenzhou

## Funding Sources

This study was entirely self-funded by the principal investigator, with no external financial support from donors or organizations. The decision to undertake this research independently underscores the commitment to addressing gaps in knowledge regarding COVID-19 vaccination determinants among slum dwellers in Katanga, Kampala, Uganda. Despite the absence of external funding, this study is crucial in shedding light on the factors influencing vaccine uptake in marginalized communities and informing targeted interventions to improve vaccination coverage. The self-funded nature of this research emphasizes the intrinsic value and dedication to advancing public health understanding and addressing pressing issues even in resource-constrained settings.

## Conflict of Interest

The authors declare no conflicts of interest regarding the publication of this research.

## Acknowledgements

I would like to express my deepest appreciation to all those who provided me with the possibility to complete this report. A special gratitude goes to the political leadership of Katanga and the residents, co-Author Dr. Mubiru Denis and the research assistants namely Magona Samuel, Aguti Bridget, Kwesiga Justus for the guidance and support which helped me accomplish my research on time and writing this report.

Governance Perspective. *Frontiers of Medicine*, p. 1-5.

- [3]. Coe, P. F., L. L. Graper, and C. M. Zangerle, 2020, Leading Through the Unknown: A Network Perspective of the COVID-19 Pandemic. *Critical Care Nursing Quarterly*, 43(4): p. 451-467.

- [4]. UNESCO Education: From COVID-19 School Closures To Recovery. 2020.

- [5]. European Union Policy measures to Monitor And Mitigate The Negative Impacts of COVID-19 and COVID-19 Related Policy Measures On Education. 2021.
- [6]. Fahle, E.M., et al., 2020, Racial Segregation and School Poverty in the United States, 1999–2016. *Race and Social Problems*, 12: p. 42-56.
- [7]. Balakrishnan, P., 2020, Education in the Age of COVID-19: Educational Responses from Four Southeast Asian Countries. in ISEA.
- [8]. Adarkwah, M., 2021, An Outbreak of Online Learning in the COVID-19 Outbreak in Sub-Saharan Africa: Prospects and Challenges. *Global Journal of Computer Science and Technology*, 21: p. 1-10.
- [9]. UNICEF The Impacts of COVID-19 on Education Spending in Africa and Possible Recovery Pathways. 2022.
- [10]. Gustafsson, M., 2021, Pandemic-Related Disruptions to Schooling and Impacts on Learning Proficiency Indicators: A Focus on the Early Grades. UNESCO Institute for Statistics, 14.
- [11]. Zar, H. J., et al., 2020, Challenges of COVID-19 in Children in Low- And Middle-Income Countries. *Paediatr Respir Rev*, 35: p. 70-74.
- [12]. Okaka, W., The Impact of COVID-19 on Education System in Uganda. 2020.
- [13]. Etomes, S. E., Challenges Faced by Students During the COVID-19 Lockdown: Rethinking the Governance of Higher Education in Cameroon. *Journal of Education and Learning*, 2022. 11(6): p. 27-40.
- [14]. Salakhova, V. B., et al., 2022, The Problems of the COVID-19 Pandemic in Higher Education. in *Frontiers in Education*. Frontiers.
- [15]. Ministry of Education and Sports, Education and Sports Sector Digital Agenda Stakeholder Engagement Report. 2021.
- [16]. Lordan, R., et al., 2021, Considerations for the Safe Operation of Schools During the Coronavirus Pandemic. *Frontiers in Public Health*, 9: p. 751451.
- [17]. Krejcie, R. and D. Morgan, 1970, Determining Sample Size For Research Activities. *Educational and Psychological Measurement*, 30(3): p. 607-610.
- [18]. Wabukala, B. M., et al., 2022, Unbundling Barriers to Electricity Security in Uganda: A Review. *Energy Strategy Reviews*, 44: p. 100984.
- [19]. Parolin, Z., 2020, Unemployment and Child Health During COVID-19 in the USA. *The Lancet Public Health*, 5(10): p. e521-e522.
- [20]. Santos, S., et al., 2021, Case Report: Parental Loss and Childhood Grief during COVID-19 pandemic. *Frontiers in Psychiatry*, 12: p. 626940.
- [21]. Ogundari, K., Student Access to Technology at Home and Learning Hours During COVID-19 in the U.S. 2023: p. 1-18.
- [22]. Yoon, Y., et al., Stepwise School Opening and an Impact on The Epidemiology of COVID-19 in the Children. *Journal of Korean Medical Science*, 2020. 35(46).
- [23]. Browne, N. T., et al., 2021, When Pandemics Collide: The Impact of COVID-19 on Childhood Obesity. *Journal of Pediatric Nursing*, 56: p. 90.
- [24]. McKenzie, K., Murray, G. C., and Martin, R., 2021, 'It's been Adapted Rather Than Impacted': A Qualitative Evaluation of the Impact of Covid-19 Restrictions on the Positive Behavioural Support of People with an Intellectual Disability and/or Autism. *Journal of Applied Research in Intellectual Disabilities*, 34(4): p. 1089-1097.