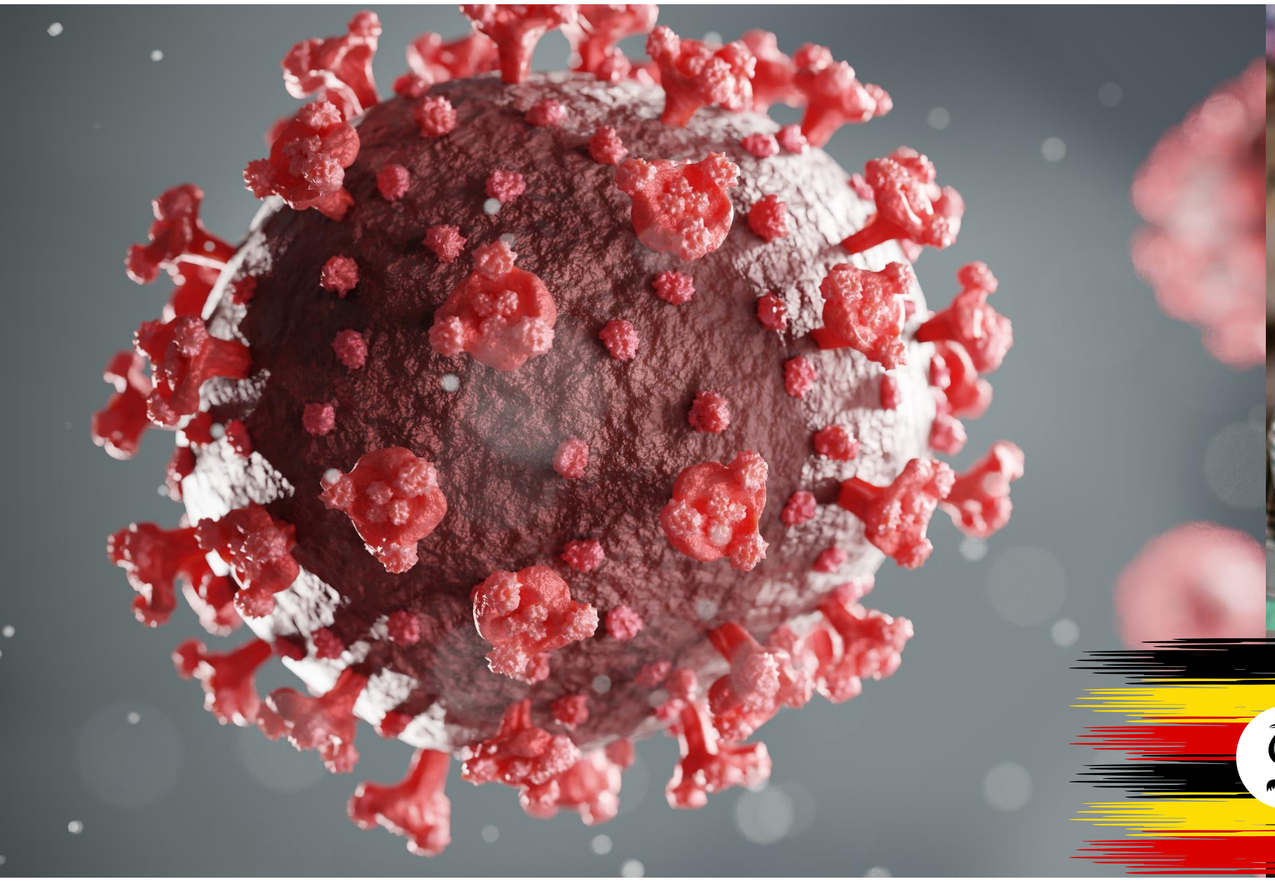


The Impact of the COVID-19 Pandemic on Students' Learning Outcomes in Uganda

Phionah

Background and Motivation

- COVID-19 led to extensive school closures worldwide, with Uganda experiencing some of the longest closures (nearly two years).
- More than **10.4 million** students were affected in Uganda.
- Disruptions highlighted existing educational inequalities, especially for students from rural and underserved areas.
- Motivated by the need to address:
  - Educational setbacks.
  - Long-term impacts on human capital development.

Research Objective

- To analyze the impact of COVID-19 on:
  - School enrollment dynamics.
  - Class progression.
- To identify key drivers of educational disruption.
- To provide evidence-based recommendations for strengthening the resilience of Uganda's education sector.

Theoretical Framework

- **Guiding Theory**: Human Capital Theory
  - Emphasizes education as a key driver of individual and societal productivity.
  - Highlights long-term consequences of disrupted education on economic growth.
- **Focus**:
  - How instructional continuity and socioeconomic factors influence educational outcomes during crises

Methodology

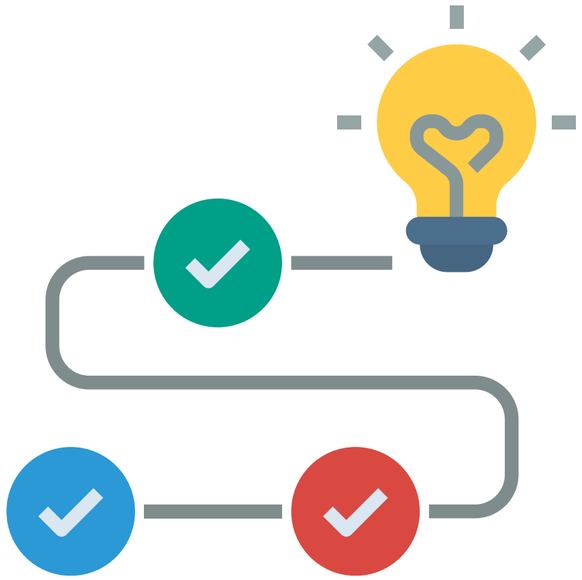
Data Source: High Frequency Phone Survey (HFPS) by the World Bank.
Data from Rounds 1 and 8 (June 2020 and June/July 2022).

Key Variables:

- **Dependent Variables**: Changes in school enrollment and class progression.
- **Independent Variables**: Instructional status, household characteristics, age, gender, and regional factors.

Estimation Method: Multinomial Logistic Regression.

Methodology



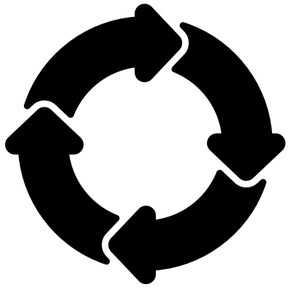
- The logit regression model for both "Change in School Attendance Post-Lockdown" and "Class Progress" can be formally expressed as follows:

- where yi is the categorical outcome for child i, P(yi=j) is the probability of child i being in category j,
- Xki are the independent variables,
- and βkj are the coefficients to be estimated for each outcome relative to the reference category.

Results Overview: School Enrollment

Findings:

Continued Attendance: **73%** of students remained enrolled.



Returned to School: 11% resumed after a break.

Stopped Attending: 5% dropped out permanently.

Never Returned: 10% left the education system permanently.

Multinomial Logistic Regression Results

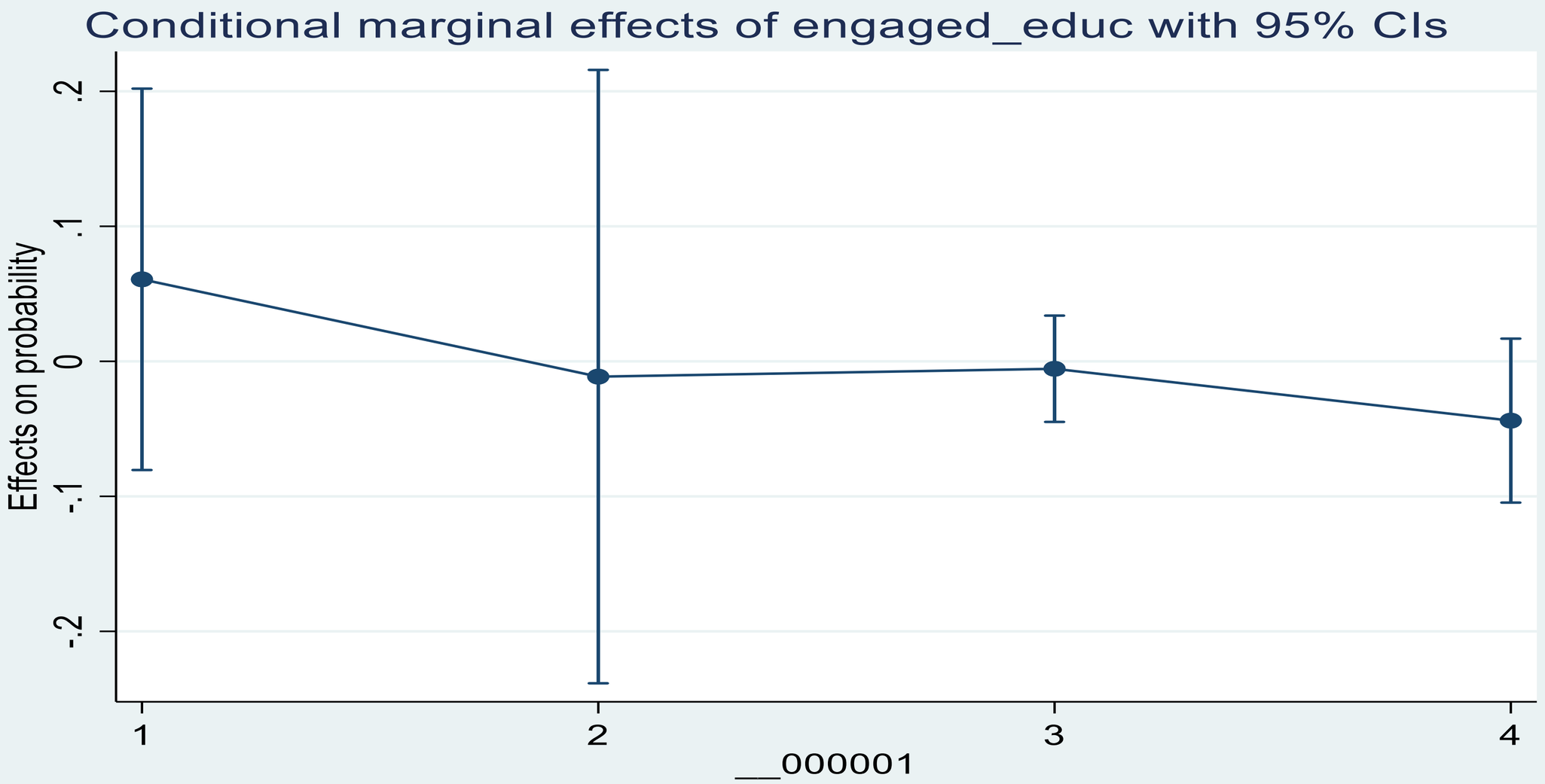
VARIABLES	(2)	(3)	(4)
	Stopped_Attending	Returned_to_School	Never_Returned
	Base outcome: Continued_Attending		
Instructional Status	-0.374**	-0.129	-0.596***
	(0.027)	(0.298)	(0.000)
age_child	-0.025	-0.226***	-0.270***
	(0.803)	(0.001)	(0.000)
age_childsq	0.004	0.006*	0.011***
	(0.333)	(0.055)	(0.001)
Gender_child_Female	-0.001	-0.196	-0.082
	(0.993)	(0.103)	(0.528)
Basic_education	0.440*	-0.029	0.142
	(0.058)	(0.851)	(0.415)
Secondary_education	-1.986*	-0.397	-0.042
	(0.054)	(0.189)	(0.895)
Higher_education	-0.666	-0.290	-0.433
	(0.154)	(0.247)	(0.159)

Multinomial Logistic Regression Results cont'd

Employment_beforecovid	-0.095	-0.109	-0.186
	(0.694)	(0.529)	(0.325)
Urban	0.196	0.097	-0.301
	(0.378)	(0.544)	(0.133)
Eastern (base Central)	0.795***	0.435**	1.176***
	(0.001)	(0.016)	(0.000)
Kampala	-13.547	0.144	0.849
	(0.984)	(0.780)	(0.196)
Northern	0.217	0.711***	1.571***
	(0.435)	(0.000)	(0.000)
Western	0.571**	0.161	0.546**
	(0.022)	(0.394)	(0.029)
Constant	-3.413***	-0.493	-1.210***
	(0.000)	(0.172)	(0.004)
Observations	2,924	2,924	2,924

*P-value in parentheses; *** p<0.01, ** p<0.05, * p<0.*

Impact of Educational Engagement on Enrollment Dynamics



Results Overview: Class Progression

- **Findings**:
  - **No Classes Lost**: 68% maintained their academic trajectory.
  - **Lost One Class**: 23% faced minor setbacks.
  - **Lost Two Classes**: 9% experienced significant disruptions.

Multinomial Logistic Regression Results

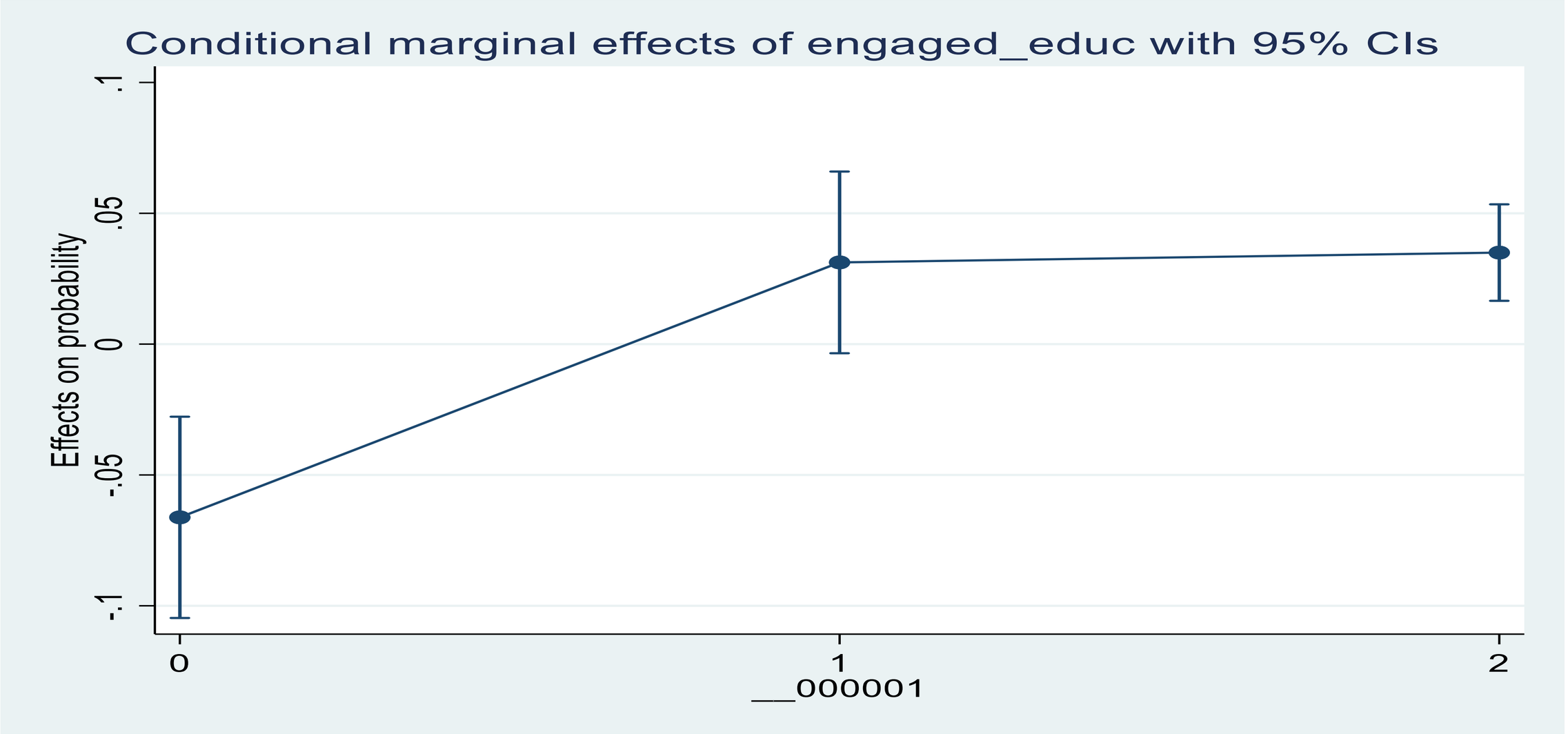
VARIABLES	(2) Lost one class	(3) Lost two classes
	Base outcome: Zero classes lost	
Instructional status	0.250**	0.689***
	(0.030)	(0.000)
age_child	-0.085	0.084
	(0.180)	(0.352)
age_childsq	0.005*	-0.002
	(0.093)	(0.621)
Gender child Female	0.070	0.221
	(0.518)	(0.144)
Basic_education	0.335**	0.198
	(0.021)	(0.317)
Secondary_education	0.043	0.007
	(0.866)	(0.983)
Higher_education	0.270	-0.182
	(0.211)	(0.551)

Multinomial Logistic Regression Results cont'd

Employment_beforecovid	0.194	0.029
	(0.198)	(0.889)
Urban	0.116	0.021
	(0.385)	(0.920)
Eastern (base Central)	-2.332***	-0.030
	(0.000)	(0.899)
Kampala	0.111	2.122***
	(0.776)	(0.000)
Northern	-0.696***	1.354***
	(0.000)	(0.000)
Western	-2.501***	-2.527***
	(0.000)	(0.000)
Constant	-0.217	-3.535***
	(0.533)	(0.000)
Observations	2,472	2,472

*P-value in parentheses; *** p<0.01, ** p<0.05, * p<0.*

Role of Active Educational Engagement in Class Advancement



Key Insights

- **Instructional Engagement**:
  - Students engaged in educational activities during lockdown were less likely to drop out or lose classes.
- **Age and Education Level**:
  - Older students faced higher dropout risks.
  - Household head’s educational attainment influenced children's resilience.
- **Regional Disparities**:
  - Eastern and Western regions showed varied recovery patterns, while challenges persisted in Kampala and Northern regions.

Policy Implications

- **Urgent Needs**:
  - Promote instructional continuity during crises.
  - Address regional and socioeconomic inequalities.

- **Recommendations**:
  - Expand access to digital and remote learning tools.
  - Implement targeted support for vulnerable households.
  - Strengthen educational resilience through community and government collaboration.

Conclusions

- COVID-19 profoundly disrupted Uganda's education system.
- Highlighted the importance of instructional engagement and socioeconomic factors.
- Regional disparities require tailored policy responses.
- Strengthening resilience in the education sector is critical for long-term recovery and development.


THANK
YOU