

IMPACT OF COVID-19 ON LEARNING

Evidence from Six Sub-Saharan
African Countries

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BACKGROUND

The COVID-19 pandemic has wreaked havoc upon global learning, with many countries facing severe school disruptions and closures. An emerging literature based on household survey data points to the pandemic as having exacerbated inequalities in education and learning in countries from Italy to Denmark, the United Kingdom, and the United States.

For example, Bacher-Hicks et al. (2021)¹ find that high income areas in the United States with greater internet access and better equipped schools had substantially larger increases in search intensity for online learning resources than poorer areas. Jæger and Blaabæk (2020)² observe that in Denmark, families with higher levels of socioeconomic status took out more digital children's books, both before and during the COVID-19 lockdown, than poorer families. During COVID-19, the baseline gradient increased: families with high socioeconomic status consistently took out more digital children's books than their low socioeconomic status counterparts in each of the three phases of the COVID-19 lockdown.

This brief offers new analysis on the impacts of the COVID-19 pandemic on learning outcomes for six sub-Saharan African countries. We analyze detailed household-level data from several rounds of panel phone surveys collected by the World Bank in Burkina Faso, Ethiopia, Malawi, Mali, Nigeria, and Uganda.

These surveys were first implemented between late April and early June 2020, after school closures due to the pandemic. In each survey round, the surveyed households were asked a set of core questions on topics such as knowledge of COVID and mitigation measures, access to educational activities during school closures, dynamics of employment, household income and livelihood, income loss and coping strategies, and received assistance.

To further enrich the analysis, we match these phone surveys with useful variables in the pre-COVID-19 Living Standard Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) panel household surveys, such as household consumption quintiles and the education levels of household heads.³

¹ Bacher-Hicks, A., Goodman, J. and Mulhern, C. (2021). Inequality in household adaptation to schooling shocks: COVID-induced online learning engagement in real time. *Journal of Public Economics*, 193: 104345.

² Jæger, M. M. and E. H. Blaabæk (2020). Inequality in learning opportunities during COVID-19: Evidence from library takeout. *Research in Social Stratification and Mobility*, 100524.

³ For more information on the LSMS-ISA surveys, see <http://www.worldbank.org/lsmis>.

In particular, we investigate the following research questions:

- What are the impacts of COVID-19 on school enrollment and attendance?
- Does the pandemic result in learning inequalities in terms of access to different learning activities and contact with teachers?
- Do these impacts vary for different types of households, such as rich versus poor households, and less educated parents versus more educated parents?
- To what extent do community characteristics such as area of residence mitigate or exacerbate these impacts?

EDUCATIONAL OUTCOMES BEFORE AND AFTER COVID-19

We show in Figure 1 the participation rate of the share of households with children engaged in any learning activity after schools were closed due to COVID-19 (blue bars) for the six countries. To compare with a similar educational outcome before COVID-19, we

also show the absolute differences between this rate and the enrollment rate – the share of households with children attending school – before schools were closed due to COVID-19 (red dots).

In other words, these differences represent the reduction in learning activities that can be directly attributed to school closures caused by the pandemic.

Figure 1 ranks the frequency of the learning activities in a decreasing order and shows that Uganda and Nigeria have the highest rates at approximately 60 percent each, followed by Mali (36 percent), Burkina Faso (32 percent), Ethiopia (28 percent), and Malawi (20 percent). This shows that **the negative impacts of the pandemic have been substantial, with the differences before and after the onset of the pandemic ranging from more than 30 percentage points (Uganda) to almost 80 percentage points (Malawi).**

Figure 1. Any learning activities after COVID-19 vs. Difference with school enrollment before COVID-19, by country

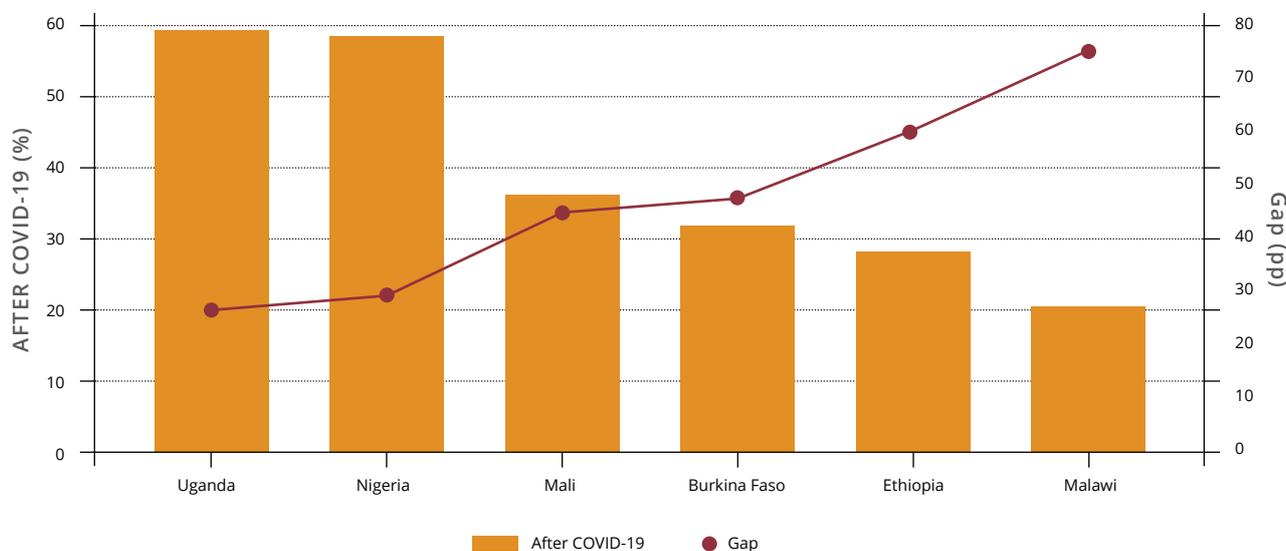
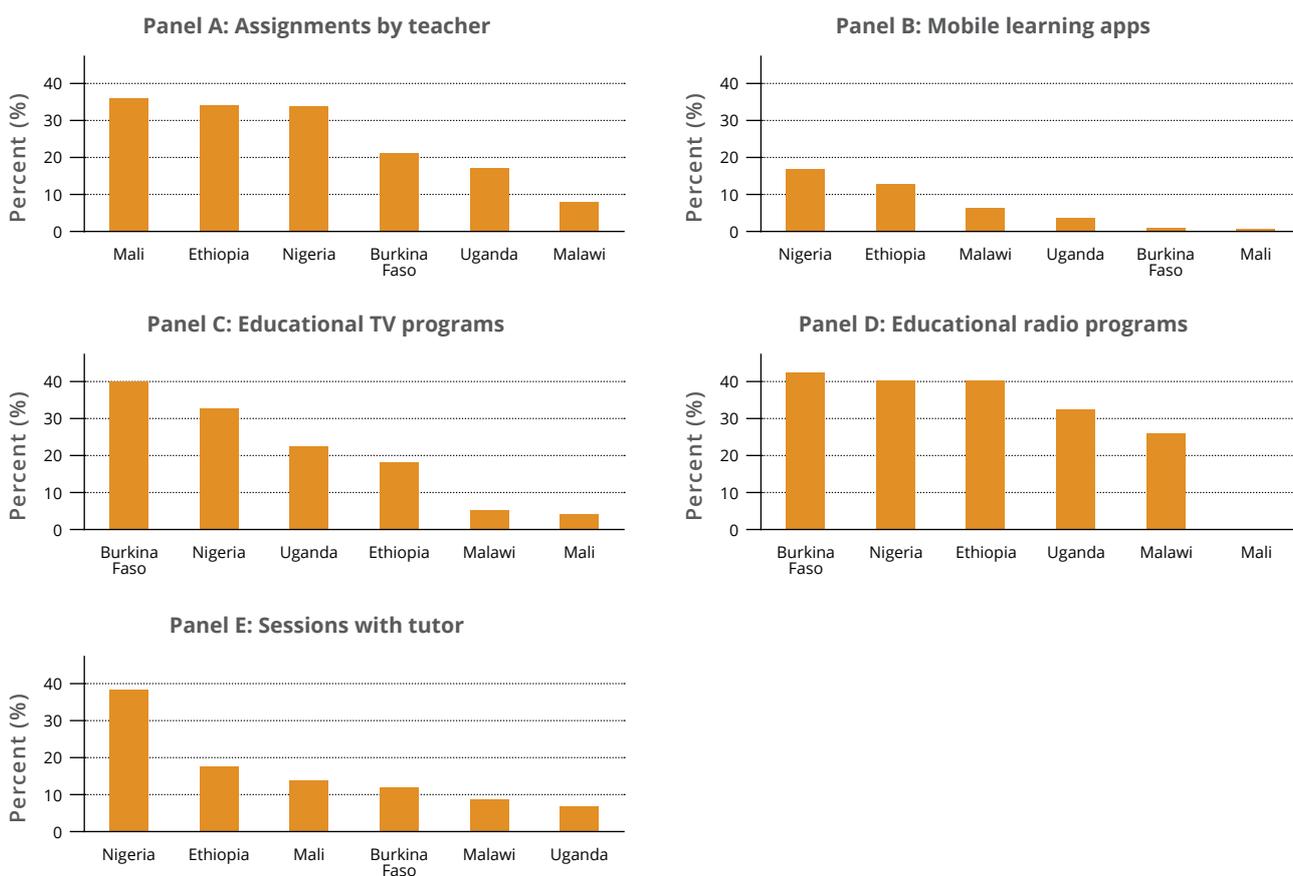


Figure 2 looks more closely at the specific learning activities and suggests that **the most popular types of educational activities are teacher assignments and educational radio and television programs**. However, countries exhibit significant heterogeneity in terms of these specific learning activities.

In particular, when compared to the other countries, Nigeria leads in using mobile learning apps and tutoring sessions, while Burkina Faso leads in using educational television or radio programs.

On the other hand, Mali makes the most use of teacher assignments but hardly relies on mobile learning apps and educational TV or radio programs. If we consider all these specific activities as equally important, we can obtain the average ranking for the five activities as a whole for each country.⁴ **Using this average ranking, Nigeria comes first (1.8), followed by Ethiopia (2.6), Burkina Faso (3), Mali and Uganda (both have 4.4), and finally Malawi (4.8).**

Figure 2. Share of households with children participating in specific learning activities during post-COVID-19 school closures



⁴ For example, Figure 1 indicates that for the educational activity “Assignments by teacher” (panel A), Mali has a rank of 1, Ethiopia has a rank of 2, Nigeria has a rank of 3, and so on. The rankings for the other activities are similarly obtained, and the overall ranking for each country is obtained by averaging the rankings for the five activities.

We plot the number of contacts with teachers since schools were closed for an average household in Figure 3, where types of contacts with teachers include: no contacts, SMS, online applications, email, mail, telephone, WhatsApp, Facebook, and other methods. **All countries are similar in terms of showing a low number of contacts with teachers after the onset of the pandemic.**

Figure 3 shows that Nigeria leads with around 1.2 contacts with teachers, while the corresponding figure for the remaining countries hovers around one.

To what extent are these differences driven by gaps in area of residence, education, or wealth that existed before the pandemic? Put differently, did the pandemic create new types of learning inequalities or did it simply deepen existing inequalities?

We examine these questions by considering the pre-COVID19 urban-rural, education, and wealth divides. In Figure 4 above, we plot the participation rate in any learning activity after the pandemic (blue bars) and the absolute differences between this rate and the school enrollment rate before the pandemic (red dots). Put differently, Figure 4 is Figure 1 disaggregated by urban-rural residence areas.

Figure 3. Average number of contacts with teacher after COVID-19

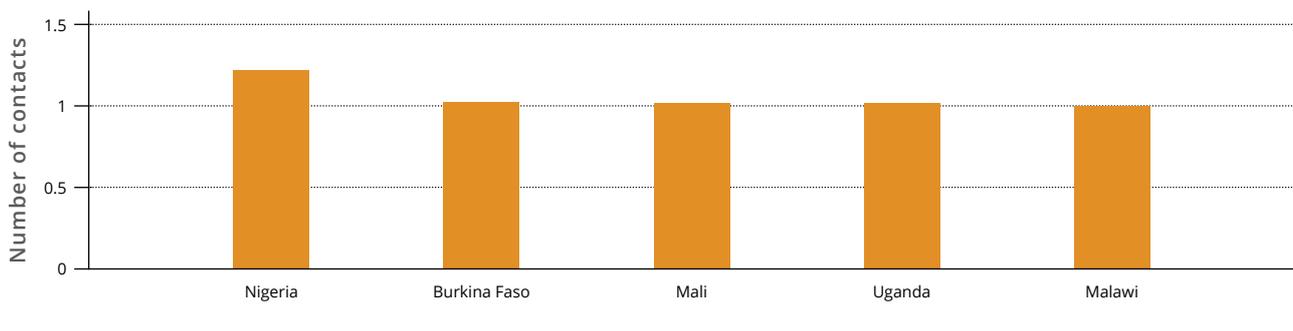
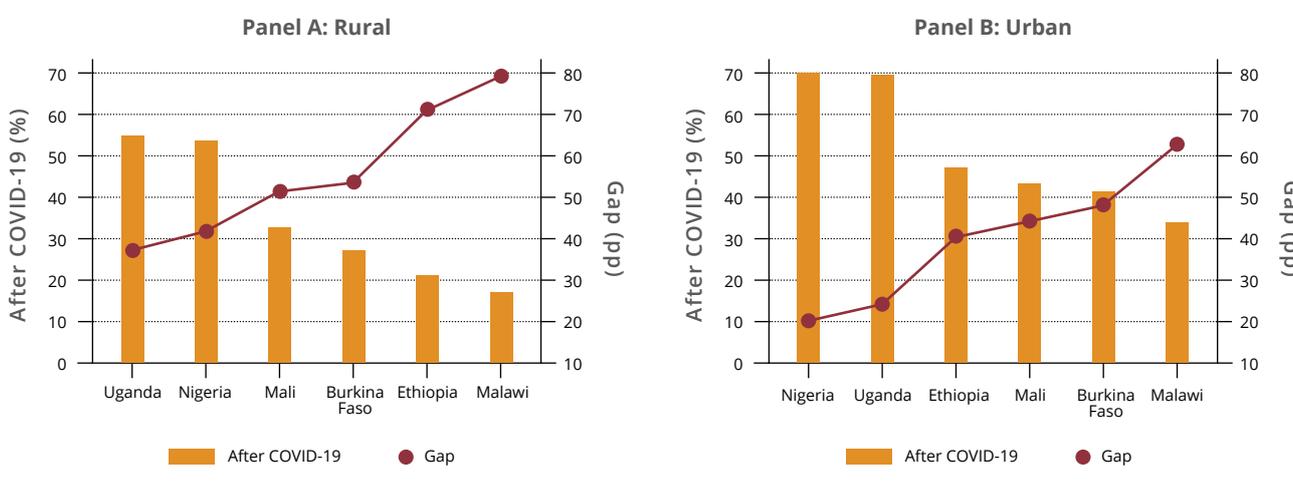


Figure 4. Any learning activities after COVID-19 vs. difference with school enrollment before COVID-19, by residence areas



While Figure 4 shows a similar country ranking as Figure 1, two key differences stand out. First, **urban households have consistently higher participation rates post-COVID-19 in all six countries.** The gap between urban and rural households ranges from 11 percentage points (Mali) to 27 percentage points (Ethiopia).

Second, for the same country, urban households can perform better or worse than rural households when compared with similar households in different countries. For example, urban Nigerian households

have the highest participation rate out of all urban households, but rural Ugandan households have the highest participation rate out of all rural households. While Malawi has the lowest rates across all countries for both urban and rural households, **the remaining five countries change rankings depending on whether urban or rural households are considered.**

We further plot the share of learning activities by pre-COVID-19 household consumption quintiles and household head education level in Figures 5 and 6.

Figure 5. Any learning activities after the pandemic, by pre-COVID-19 consumption quintile

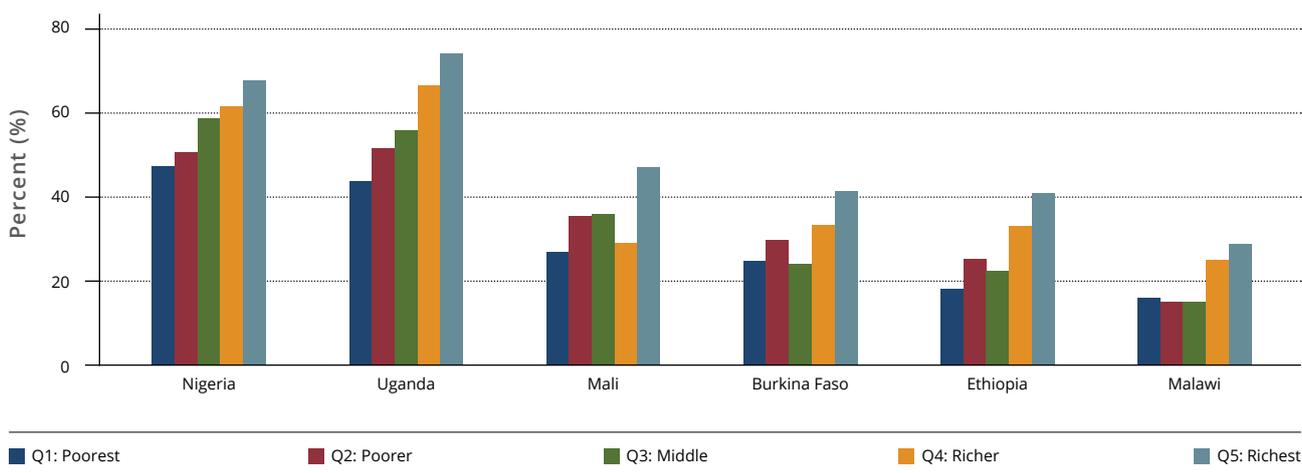
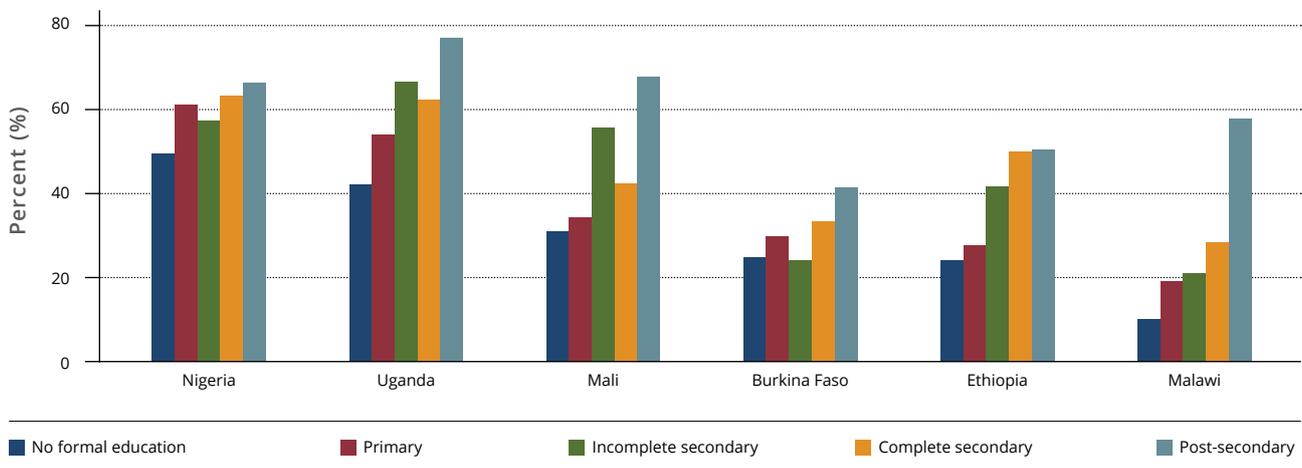


Figure 6. Any learning activities after the pandemic, by pre-COVID-19 household head education level



The overall patterns for the six countries indicate that richer households or households with more educated heads have more learning activities for their children. The gaps between the richest and the poorest consumption quintiles range from 13 percentage points (Malawi) to 31 percentage points (Uganda).

The gaps between households where heads have post-secondary education relative to those with no formal education range from 17 percentage points (Nigeria) to 48 percentage points (Malawi). Notably, the participation rate in learning activities for the most educated households in Malawi is nearly 60 percent, almost six times higher than the corresponding figure for the least educated households. In fact, while the most educated households in Malawi have higher participation rates than those of Burkina Faso and Ethiopia, Malawi has a lower

overall participation rate compared to the latter two countries. These differences raise particular concerns about the high level of inequality in learning activities for Malawi.

NEXT STEPS FOR POLICY

As an early study analyzing the impacts of COVID-19 on learning activities in a multi-country, sub-Saharan African setting, our results suggest that policy interventions are needed to both counteract the negative effects of the COVID-19 pandemic on education for all students as well as to help them compensate for lost instruction time. Support should be focused on households that are poor, have less education, or reside in rural areas. These vulnerable groups have been hardest hit and are most in need of protection against deepening levels of learning inequalities caused by the COVID-19 pandemic.



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