

Continue or reboot?

Overarching options for education responses to COVID-19 in low- and middle-income countries

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The COVID-19 pandemic has far-reaching consequences for public health, including socio-economic issues. The pandemic also has consequences for education. However, in this blog post, I argue that these educational consequences will be felt more by (high-income populations in) high-income countries than low-income populations in low- and middle-income countries, such as the rural poor, who already had low learning levels prior to the outbreak.

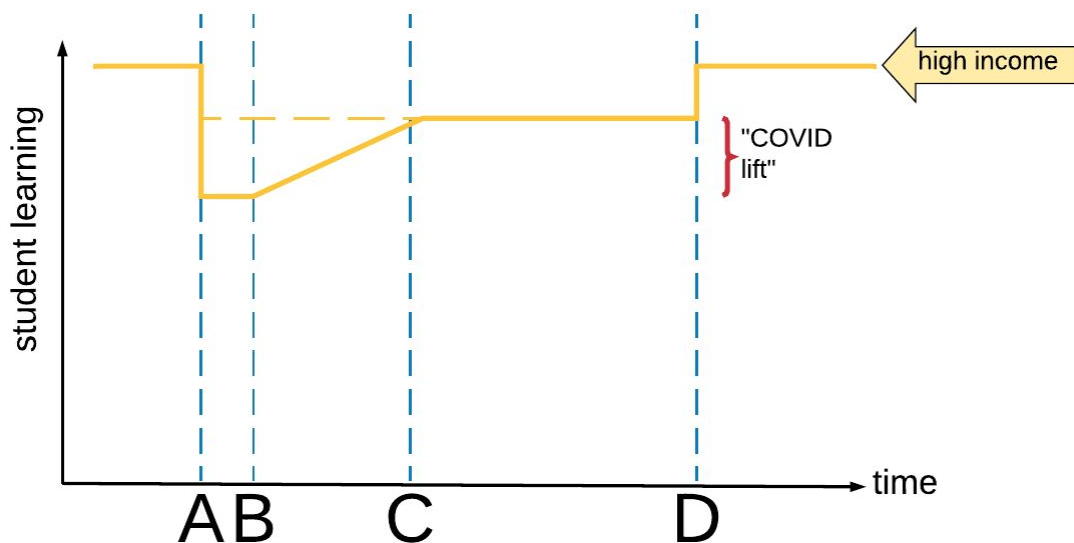
For the rural poor in low- and middle-income countries, I argue that

1. It is impossible to design an intervention that addresses the immediate learning needs of the rural poor in 3-6 months ('continuity of education').
2. Instead, it may be possible to design an intervention that will positively impact the learning of the most marginalised students when they return to school (possibly even in January 2021).
3. The long-term benefits of system change outweigh the short-term drawbacks.

1. The COVID-19 education curve

The diagram in Figure 1 shows an idealised curve of how student learning is likely to change due to the pandemic in a resource-rich context. At point A, the system is hit by the pandemic and the student learning is disrupted. Learning doesn't drop to zero, but just to a lower level (e.g., due to parental engagement). At point B, measures such as online learning kick in, which results in improvements in learning up to a new level (at C). Between B and C, children and teachers get used to the new regime and student learning gradually improves until it reaches C. That level is maintained (or slightly increases) until the end of the pandemic (at D).

Figure 1. Student learning over time for high-income countries.



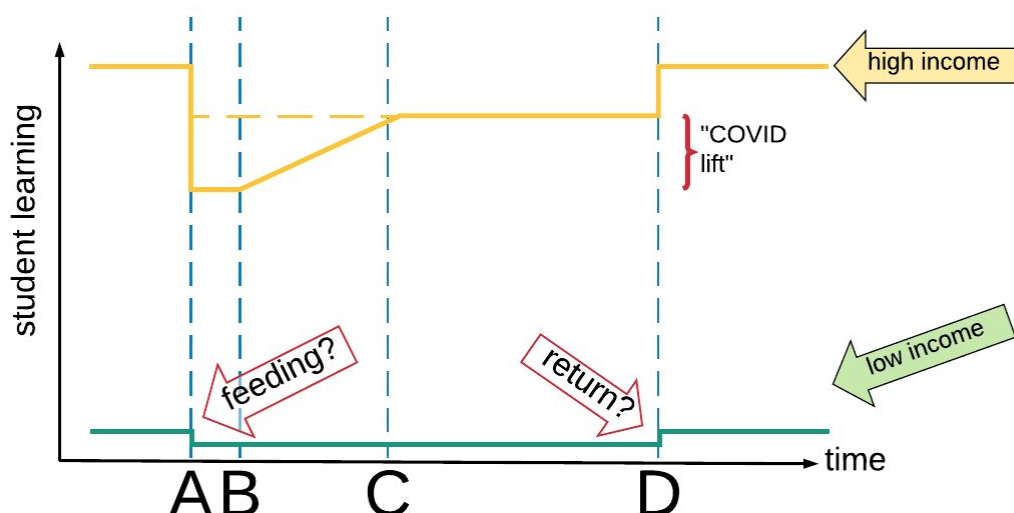
This curve is of course idealised. As lockdown may not happen across all areas (or all demographics) at the same time, the different points are reached at different times. Also, the extent of the disruption between A and C (dashed line) depends on the degree of preparedness of the education system.

The diagram also shows the “COVID lift”, i.e. the improvement in education that is possible during the pandemic. This COVID lift also has a cost associated with it.

2. Low-resourced contexts

We now look at a low-resourced context, particularly deep rural contexts in low- and middle-income countries. Such contexts are subject to the ‘global learning crisis’, meaning that while many children are in school, they are not actually learning. The green curve in Figure 2 illustrates this. Students start with lower learning levels. Being out of school means that the level may drop, but it cannot drop far. For example, often by Grade 6, children have not achieved Grade 2 learning outcomes.

Figure 2. Student learning over time for high-income countries and low-income countries.



There are undoubtedly significant health consequences due to the pandemic, including children not being able to participate in school feeding programmes. Moreover, children out of school may be de-socialised from the school routines, which will cause issues with returning to school. However, in terms of education as such, the poorest children in deep rural contexts may not actually suffer an additional educational disadvantage.

3. Impact of educational interventions

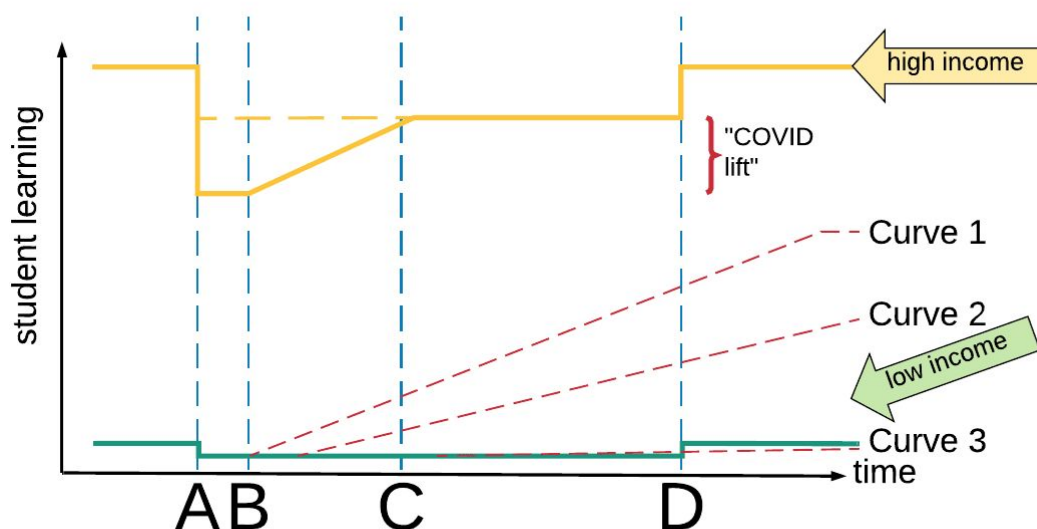
Let's now consider the impact of educational interventions in low-income contexts. Firstly, for some children (e.g., in capitals in low- and middle-income countries), the recovery curve may well follow the 'high income' curve. However, for rural populations, who started from a lower point, the recovery curves look different.

Let's consider three scenarios illustrated in Figure 3. Undoubtedly 'Curve 1' is what would be ideal: A fast response at point B, with a steep increase. Such a steep increase would need to be supported by some kind of distance learning. However, even in high-income countries, adequate learning gains through distance learning are hard to make when, for example, teachers are not trained in digital pedagogies.

In low-income countries, the progress indicated for Curve 1 was the kind of progress hoped for in the SDGs by 2030. However, this was widely considered to be unrealistic, with insufficient finance available. It is simply unreasonable to expect that kind of progress in say 6-18 months; it would require the introduction of online learning in regions that are not electrified and may not even have mobile phone coverage. Even Curve 2, with a delayed and less steep response, seems unachievable.

The development is far more likely to look like Curve 3. Whatever mitigation effort is made (e.g., see our previous blog post on [radio instruction](#)) will be limited; moreover, even at the 'end of the pandemic', some schools may not resume.

Figure 3. Student learning over time for high-/low-income countries together with recovery.



I also note, that in some high-income countries, right now (16 April), even before online learning has started in earnest, some education systems are considering re-opening the final-year students (e.g., Germany). Undoubtedly, it will take some time still, but it's possible that some grades may re-open sooner than later, especially where large-scale COVID-19 testing is possible. For low- and middle-income countries, it's of course completely unclear what the options are, but it would seem — at this point in time — at least possible that schools (e.g., in sub-Saharan Africa) may well reopen in January 2021.

What does this mean for education in low-resourced contexts? While children could lose one year of education as a result of COVID-19, many of the rural poor were not learning effectively before. Although the loss of an academic year matters, it matters more for richer students and well-functioning education systems.

3.1. Why attempting to move to online learning will further disadvantage the poor

Why not try to do something about COVID-19 now? Of course, we have to do what's feasible. So, why not start buying tablets for students? As noted above, while everybody scrambles to develop online and individualised solutions, these interventions will have little impact on the poorest children in the poorest countries. Any attempt to transition the most marginalised students to digital learning on a COVID-relevant timescale (6-12 months) will not lead to scalable outcomes (e.g. for the rural poor) even if a few already advantaged students can benefit.

At the moment, we are seeing massive proposals for aid aimed at pivoting to online learning. Firstly, this will not benefit the rural poor; secondly, it effectively drains funding away from the rural poor: **There will be funding fatigue following the pandemic.**

3.2. What are the short-term options?

So — what are the feasible options? As an interim solution, we should focus on delivering radio education, educational television (although the poorest students do not have access to TVs in the home), interactive voice instruction, all supported by SMS messaging and — where available — by WhatsApp messages. Depending on the infrastructure available, also newspaper supplements or special newspaper issues. Online content provision has to draw on existing provision; where online content is available, it needs to be without bandwidth charges, ideally in perpetuity. Only a minority of the rural poor have smartphones and, where they do, they own slow devices and may not have money for data bundles.

4. Prepare now for an education system reboot in January

Instead of investing funds in patchwork solutions that are unlikely to fix broken education systems, we should use this opportunity to plan for rebooting education systems when the pandemic is over (perhaps in January 2021). In the next 6-9 months, we should make a concerted effort to develop a comprehensive set of resources that are based on and fully aligned with actual curriculum frameworks in a number of countries (across low- and middle-income countries, including sub-Saharan Africa).

This set of resources needs to have the following features:

1. It would include multiple country curriculums that are driven by demands and contexts of the specific countries;
2. It would align with — and completely cover — the curriculum in core subjects (at least mathematics and language, ideally including some health inputs);
3. It would resource the education system, rather than only pupils; i.e., it has to contain teacher guides, lesson plans, teacher professional development materials, textbooks, workbooks and classroom materials (or at least ways of how to procure or making them);
4. The resources gathered and produced need to collectively span several countries, so that an economy of scale is reached; however, this does not mean that the curriculum needs to be exactly the same across those countries: The resources will be organised such that they can be adjusted and tailored to each country, from a common set of materials.

We also note that this set of 'comprehensive curriculum resources' forms only one part of a multipronged approach to an education system reboot: The materials scaffold the changes, but on their own are not sufficient. Such materials need to be part of a national teacher professional development effort as soon as school reopen.

This comprehensive curriculum, comprising multiple country-specific curriculums, can serve as a blueprint for further curriculum development as the other countries join the project. The comprehensive curriculum can then be tailored and adapted to suit specific country needs

and contexts. The curriculum will be built from gathering existing country resources, buying content from providers, and creating new content where there are gaps that have not been filled. Once education systems re-open, we begin intensive trialling, revision and implementation. While this project is ambitious, it offers an opportunity to deliver sustainable impact for marginalised learners. What if there's a longer crisis, e.g. 18 months? Well, the materials are still useful. They might then be supplemented by simple mp3 players and even printed resources ('interactive audio instruction'), which are an order of magnitude cheaper than even basic phones. Such decisions can be made later in the year, when the first set of curriculum-aligned materials are well under way.

In summary, there are significant differences in the education response between resource-rich contexts and under-resourced contexts. In the case of the former, the shift to online and remote learning may provide an adequate solution to continued education. The main concern in these resource-rich contexts is those marginalised minority groups within these regions that do not have the resources to utilise and benefit from online learning. In under-resourced contexts where the majority do not have access to data, devices and internet infrastructure, spending emergency funding on trying to implement online learning solutions may be a waste of resources. I have argued in this article that focus and funding should be shifted to rebooting the education system such that upon reopening schools in 2021, there are improved curriculum and TPD resources to better support teaching and learning.