Access and Learning during Covid-19

School closures brought on by the Covid-19 pandemic have had a stark impact on girls and their learning. The Covid-19 pandemic has highlighted the importance of programmes like the UK's Girls' Education Challenge (GEC) which has supported marginalised girls worldwide and their learning since 2012.

Our study found that most girls in our sampled areas in Kenya and Nepal suffered large learning losses in Maths and reading, with many girls reporting not to have studied at all while schools remained closed. Girls also struggled to study without adequate teacher support, with some dropping out of school altogether during the pandemic. The innovative machine learning techniques we used show great promise in being able to help education planners and programmes identify those girls who are at risk of dropping out early on and putting in place preventative measures.

Key Findings

- Girls in our sampled areas suffered large learning losses in maths and reading following school closures.

- Girls spent less time studying and suffered from a lack of direct teaching support, loss of motivation and limited access to educational resources to help them learn.

- While the girls we spoke to in Kenya and Nepal welcomed the support t they received from projects (EDT in Kenya and Mercy Corps in Nepal) connectivity issues, limited access to devices, and the cost of internet and electricity all made it difficult for them to engage in remote forms of learning while schools were closed.

- Girls who repeated a year of schooling, come from less-educated families, are part of larger households, have been involved in farming more than their peers or who are married, were found to be more at risk of dropping out of school compared with their peers. Household poverty was the largest factor reported by girls for dropping out.

- Remedial learning such as reading camps, back-to-school campaigns, and community mobilisation activities supported girls to return to school (or transition) and catch up with their learning.

Key Recommendations

- GEC projects and education programmes should strengthen planning for future school closures to engage girls better in their learning: if using radio lessons, these need to be supplemented with more interactive forms of learning.

- GEC projects and education programmes should carefully identify the needs, barriers, and constraints to remote learning faced by different groups of learners, including those living in rural and hard-to-reach areas to ensure remote learning benefits all learners.

- GEC projects and education programmes should provide stronger support for teachers during school closures. This should include training in digital learning, and how to identify and address low motivation and poor wellbeing remotely.

- GEC projects and education programmes should systematically and regularly collect and track data on girls' characteristics and circumstances to identify those most at risk of dropping out and /or falling behind in their learning.

- GEC projects and education programmes should reassess girls' learning levels as soon as possible after schools have reopened to provide targeted remedial support to those most in need.

Background

This brief presents research conducted with two GEC projects – one in Kenya (Education Development Trust, EDT) and one in Nepal (Mercy Corps) - to understand the impact of Covid-19 related school closures on girls' education.

The study set out to answer four questions:

1) How have GEC projects sought to provide continued access to learning opportunities during school closures?
2) How have girls' learning changed during the Covid-19 period, while schools were closed?
3) Which girls are most at risk of not returning to school, and have GEC projects been successful in identifying them? How useful is a machine learning approach in identifying them?
4) How are GEC projects supporting girls to re-enter formal schooling (or alternative pathways), and with what effects on girls' access to learning opportunities?

The research was carried out between November 2020 – December 2021, with schools in Kenya and Nepal visited in February – March 2021. Schools were closed in Kenya between March 2020 – January 2021, while in Nepal they closed in March 2020 and opened only partially from November 2020.

We tested girls in reading and mathematics and compared their results to data gathered by projects in the same schools in July 2019. We also trained prediction models to look for patterns in historical data to learn how to classify girls as accurately as possible as being at risk of drop-out (i.e., machine learning), which we tested in Kenya and Nepal.

This was done to try to understand how these models might be useful in future to support girls at risk and prevent them from dropping out or falling behind in their education.

Findings

How did projects try to mitigate the impact of school closures?

GEC projects pivoted after the initial Covid-19 outbreak to continue to support girls. In Kenya, EDT strengthened their use of digital platforms (such as WhatsApp and social media), used radio and television broadcasts, and distributed solar radios, dignity kits and cash transfers to girls and households to allow them to continue learning. In Nepal, Mercy Corps were more focused on the girls due to sit Grade 10 examinations through distance learning, while also broadcasting public service announcements and distributing informative posters and pamphlets about school reopening, wellbeing, and safeguarding and gender-based violence issues.

The biggest challenges were connectivity issues, limited access to devices, and the cost of internet and electricity, all of which made it difficult for girls in both countries to learn.

What effects did school closures have on learning levels?

Girls in Kenya and Nepal had noticeably lower average learning levels in maths and reading in the administered tests than before the pandemic. Learning losses have not however been uniform across schools, with some schools suffering greater losses than others (and some also experiencing learning gains).

Girls reported spending limited time studying at home and struggling with a lack of direct teaching support and limited access to educational resources. Girls' motivation to learn also deteriorated the longer that schools were closed.

Yet, these reductions were not inevitable - average learning levels increased in twenty percent of schools in Kenya and eleven percent of schools in Nepal. In these cases, girls reported being able to dedicate more time to study and having better access to learning resources at home.

Which girls did we identify as being at risk of drop-out? How useful is a machine learning approach in identifying them?

Our predictive model shows promise in being able to predict girls at risk of dropping out. Our model used in this study was found to be 70-80% accurate (in Kenya and Nepal respectively) – a good start, given that the data used were from before the start of the pandemic, and that girls' circumstances had changed noticeably during school closures. Factors such as marriage were strong predictors of drop-out – and many of our 'false positives' were girls that had married since data had last been gathered on them, highlighting the need to integrate these methods into regular data capture systems rather than one-off surveys.

Girls that have already repeated a year of schooling, come from less-educated families, are part of larger households, have been involved in farming more than their peers or who are married, are more at risk of dropping out of school as compared with their peers, based on our model's predictions. Household poverty was the largest cited factor for why girls dropped out of school.

How have projects supported girls to return to school and catch up with their learning?

EDT delivered a combination of back-to-school campaigns, community mobilisation activities and cash transfers to re-engage girls in school, while Mercy Corps supported girls to re-enter schools through enrolment drives, school reopening plans, and public service announcements.

Projects also supported girls to catch up with their learning. In Kenya, girls who attended out-of-hours reading camps performed better in literacy and numeracy tests than those who did not attend reading camps.

In Nepal, Mercy Corps' support to out-of-school girls was beneficial to girls' transition, with 93% of girls having successfully completed vocational training designed to help them secure financial independence.

Conclusions

While projects adapted to Covid-19, they still struggled to reach girls during school closures.

Whilst both projects adapted to support girls during school closures, they encountered challenges reaching girls. These challenges included being able to reach marginalised girls with limited radio access and being able to prevent girls from marrying and dropping out of school altogether or migrating.

Learning levels in our sampled areas in Kenya and Nepal have been severely impacted by school closures.

Average learning levels in our sampled schools have fallen noticeably, leaving this cohort behind expectations and behind previous cohorts. Helping them recover should be a key priority. School closures in these contexts sadly meant limited learning - girls spent limited time studying and received less direct teaching or lacked access to educational resources.

Projects did not anticipate the impact that prolonged school closures would have on girls' motivation to learn.

Covid-19 response plans for both projects largely focused on the early response to the pandemic. Yet, motivation diminished the longer that schools were closed, suggesting that further planning might have been needed at the outset to help engage girls during prolonged closures.

Limited teacher interaction may have contributed to learning decline and exacerbated inequalities between learners.

Girls (and boys) need help to learn from their teachers and mentors. Their inability to engage effectively with teachers while schools were closed meant that girls were dependent on parents, siblings, or neighbours to support learning, and poorer girls were more likely to struggle with support from family members who may be illiterate or too time-poor to help.

Covid-19 has underlined just how important schools are in protecting the very conditions needed to learn, stay well, and interact with peers.

Even where projects provided opportunities for girls to learn at home, the absence of a conducive learning environment while schools were shut made this a challenging task. Not being able to receive support from teachers or interact with other peers has made learning even more difficult and underlined the importance of schools in protecting the very conditions needed to study and learn effectively.

Poverty was raised by girls as the main factor driving girls to drop out from school following the closures.

Our model found that girls are at risk of dropping out if: they have already repeated a year of schooling, have come from less-educated families, are part of larger households or families, have been involved in farming more than their peers or who are married. Poverty and migration were reported by girls to be the largest driving factors behind drop-out. This raises the importance of monitoring regular changes in household poverty within the monitoring systems.

Predictive modelling such as that used in our study has the potential to help improve early warning systems in education programming.

The machine learning model used in our study, based on historical data, successfully predicted whether a girl would drop out of school in seven to eight of every 10 cases. However, it needs to be integrated into regular data systems to unleash its full potential.

Remedial teachers, intensive classes in key topics and out-of-hours learning camps show great promise in supporting girls to catch-up with their learning or transition after the re-opening of schools.

Head teachers expressed confidence in girls' abilities to get back on track and catch up with their learning. Reading camps delivered by EDT were found to help girls catch up with the learning they had lost during the closures. Vocational training delivered by Mercy Corps supported out-of-school girls gain financial independence.

For more information

This research was carried out by the Independent Evaluation Team of the Girls' Education Challenge Fund Programme. The Independent Evaluation Team is a consortium of partners: led by Tetra Tech International Development (lead partner), the Research and Equitable Access and Learning (REAL) Centre at the University of Cambridge, and Fab Inc.

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