Press Release: Targeted Math Lessons Delivered by Mobile Phone Raise Education Scores

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Manila, Philippines - A new education initiative that uses phone calls and text messages to deliver math instruction has been proven to raise education outcomes, according to the Philippines country office of Innovations for Poverty Action, the Department of Education of the Philippines, and Youth Impact. The three institutions jointly implemented a mobile education intervention whose 5-country evaluation results translate to around 3.4 years of quality schooling gained during an eight-week intervention.

To mitigate learning losses due to COVID-19, IPA Philippines, in partnership with the Department of Education (DepEd) and the NGO Youth Impact, tested a simple, cost-effective intervention focused on foundational literacy, called mEducation* (mobile phone + education). The study enlisted 3,492 Grade 3 and Grade 4 students from 110 schools across Regions IV-B, VI, and IX.

The results are staggering: The program led to a significant 40 percent increase in children’s math skills in the Philippines. It also increased the proportion of students who could solve math problems across all basic operations. For every 100 participating students, there were 6 more students who were able to solve the math problems compared to those who did not receive the program. Similarly, for every 100 participants, 18 more students could correctly complete the subtraction problems than in the group that did not receive the intervention, 18 more for multiplication, and 13 more for division. Due to the high ownership of cell phones, the primary expenses associated with the mEducation program were the production and delivery of its content to families, with an average cost per student of USD $12 for 8 weeks of intervention across the 5 countries.

“These are profoundly important results,” said Aftab Opel, IPA Philippines country office director. “The mEducation program cost little but produced significant learning gains. And just as important, mEducation’s effectiveness has been proven through rigorous testing.”

mEducation uses simple text messages and phone calls to deliver instructions. Participating
students received a 20-minute weekly phone call tutorial targeted to their level, plus a weekly text message containing simple math exercises or nudges to encourage parental engagement.

First implemented in Botswana, the Philippine implementation is part of a global effort to replicate the intervention in five countries: India, Kenya, Nepal, Philippines, and Uganda.

What differentiates mEducation from other mobile education interventions is that it only requires basic mobile phones; there are no applications to be downloaded. Its approach combines elements of tutoring and Teaching at the Right Level (TARL), methods proven to improve learning outcomes. To illustrate, if a learner is struggling with subtraction, the topic for the week will be subtraction and the learner will not be promoted to the higher operation (multiplication) until he/she has mastered the current operation. Mastery of an operation means correctly solving the problem and explaining the solution.

The intervention was rigorously tested twice in the Philippines. Students were randomly assigned to one of three groups: a control group that did not receive the program, a group that received both phone calls and SMS, and an SMS-only group. This made it possible to determine whether both components (SMS and phone calls) are necessary to achieve a positive impact. The second evaluation varied whether the program was implemented by IPA or DepEd to assess whether the effectiveness of the program is affected by who delivers it, and to evaluate its feasibility for implementation by the government.

The program’s consistently positive impact on learning gains, regardless of whether instruction was delivered by teacher aides or actual DepEd teachers, shows the intervention can be adopted successfully by government teachers. It disproves the notion that programs often work when delivered by NGOs but fail to replicate when scaled by governments.

“The mEducation program offers many opportunities to be integrated into the existing learning approaches concurrent with the desire of DepEd to produce research-based interventions,” said Cerilo Illaga Jr., senior education program specialist of the Schools Division of Calapan City. “Given how students in the Philippines suffered from lost schooling during COVID-19, mEducation offers an alternative way to improve numeracy skills. It can be adopted as one of the strategies to complement other distance learning modalities to provide additional learning support to students. Similarly, it can be part of DepEd’s remedial education program to target instruction of learners, especially those who are falling behind in classes. It can also be implemented not only during school closures for COVID-19 but also for other forms of disruptions, such as typhoons, earthquakes, and other disasters.”

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*The program is also referred to as ConnectEd*