Early grade literacy interventions in Latin America and the Caribbean are only effective under certain conditions

Children across the world are not acquiring basic reading and math skills despite increases in primary school enrollment and attendance. Teacher training and nutrition programs in Latin America and the Caribbean (LAC) are not effective in improving early grade literacy (EGL) overall, but they may be, under certain conditions. Technology in schools can be detrimental to learning outcomes if these programs only focus on technology.

What is this review about?
Approximately 250 million children across the world are not acquiring basic reading and math skills, even though about 50% of them have spent at least four years in school. Educational policies on EGL in the LAC region have long suffered from a disjuncture between school practice and research.

This review examines the effectiveness and fidelity of implementation of various programs implemented in the LAC region that aim to improve EGL outcomes, including teacher training, school feeding, computer-aided instruction, nutrition, and technology-in-education.

What studies are included?
This review includes four types of EGL studies from the LAC region:
1. quantitative interventions (23 studies)
2. qualitative interventions (6 studies)
3. quantitative non-interventions (61 studies)
4. qualitative non-interventions (14 studies).

What are the main findings of this review?
Overall, programs did not have statistically significant effects on EGL outcomes. But there are instances in which programs may have positive or negative effects.

For example, teacher training did not show positive effects on EGL outcomes, but a study from Chile showed that teacher training can possibly positively affect EGL outcomes in high-income economies when it is well implemented and complemented by sustained coaching.
Similarly, nutrition programs did not improve EGL outcomes. However, a study from Guatemala showed positive effects on EGL, possibly because Guatemala has high rates of stunting and wasting.

Although there is no statistically significant effect of technology-in-education programs on EGL outcomes in the LAC region, a study from Peru showed that the distribution of laptops to children can have adverse effects, particularly when not complemented by additional programs.

Other studies showed that phonemic awareness, phonics, fluency, and comprehension are associated with reading ability. Furthermore, poverty and child labor are negatively correlated with EGL outcomes. This finding supports the result that nutrition programs may be effective in settings with high rates of stunting and wasting.

Finally, the quality of pre-school and promoting social learning are positively associated with EGL outcomes.

What do the findings of this review mean?
Teacher training, nutrition, and technology-in-education programs on average do not show positive effects on EGL outcomes in the LAC region. However, there are several factors that could potentially enable positive impacts. These include combining teacher training with coaching, targeting school feeding and other nutrition programs to low-income countries with high rates of stunting and wasting, and combining technology-in-education programs with a strong focus on pedagogical practices.

The review also identifies some opportunities for improving design and implementation of EGL programs. Studies support the need to teach phonological awareness skills early on, but caution is required considering the small evidence-base in the LAC region. The evidence also supports investing in pre-school quality through well-implemented teacher training.

Finally, ministries of education in low-income countries with high rates of stunting and wasting could consider investing in programs to improve the nutrition outcomes of students.

Caution is needed in interpreting these findings since the evidence base on what works to improve EGL outcomes in the LAC region is weak, with indications of publication bias.