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# Evidence-Based Education: What We Know (and still need to know)

While the first day of the evidence-based education conference focused on where investments have the most impact in improving school participation and performance, the second day focused on topics that need more thorough research, such as learning through technology, secondary and girls' education, and early childhood education.

## *Learning Through Technology*

The use of technology in education is receiving increasing attention as developing countries strive to improve the quality of their educational systems. Yet despite the growing enthusiasm over technology, the evidence is mixed at best. Much more remains to be learned if we are to effectively harness technology in improving access and the quality of education systems around the world.

While computers are costly and require high-level maintenance, they remain a favorite in the classroom because they allow students to learn at their own pace and receive instant feedback on their performance. However, the way in which computers are incorporated into schools matters a great deal for their effectiveness. Evaluations suggest that computers can have a positive but limited impact on student performance when used before or after school hours and a negative impact when used during school hours, possibly because they take time away from the normal curriculum.

One promising area of research is the use of technology to impact student efforts. Shwetlena Sabarwal, an economist at the World Bank, is currently evaluating an intervention that is providing students e-readers that are pre-loaded with a variety of books. Preliminary results show that the students' average reading time has greatly increased.

## *Secondary Education*

Many of the rigorous evaluations of education programs to date have focused on improving attendance and achievement in primary schools, but relatively less is known about improving education at the secondary level. The existing evidence shows that some of the key issues affecting secondary enrollments are accessibility and cost of attendance.

One accessibility issue is the distance children must travel to school. Through the evidence of

the benefits on primary school enrollment of programs that reduce school distance, we find some insight on the potential of such programs for secondary school enrollment. In Afghanistan, the building of “village-based schools” that decreased the distance children had to travel to school led to a 42 percentage point increase in primary enrollment.

Issues of cost in the form of cash and credit constraints are also two other important barriers to secondary school enrollment. A study by Baird, McIntosh and Özler on the Conditional Cash Transfer (CCT)/Unconditional Cash Transfer (UCT) programs in Malawi showed that both programs led to an increase in secondary school enrollment. However, while the amount of the cash transfers made no difference, high transfers led to higher enrollment in the UCT program.

Voucher programs are another effective means of tackling household cash and credit constraints and promoting secondary enrollments. Studies show that students who benefit from vouchers are more likely to finish 8<sup>th</sup> grade and attend secondary school.

Many pressing questions regarding secondary school enrollments and achievement remain unanswered. These questions relate to the usage of mother-tongue instruction, curriculum content, soft skills (to what extent are soft skills important), testing (what to test and when), and tracking (how much to track and what to base tracking on).

### *Girls' Education*

Beyond secondary education, the panel also discussed the unique educational barriers facing girls, which often leads to lower enrollment rates in the higher grades. Early marriages and an unequal distribution of household chores are some of the factors that may explain the gender differences in enrollment.

However, when schooling is shown to give girls opportunities for employment, parents are more likely to invest in their daughters' education. Girls whose parents receive this information are also less likely to marry at an early age and more likely to have fewer children. A study by Oster and Millet showed that informing parents about call centers employing educated women in India increased girls' enrollment rates in primary school by 5.7 percent because these centers signaled to parents and girls that there were available opportunities for educated women in the workforce.

Reduction in the cost of schooling for girls also shows to have an important impact on reducing gender differences in education. Studies show that merit scholarships increase girls' test scores and attendance rates. Other studies show that role models for women help improve the perception of women's worth and empower women to seek better jobs.

### *Early Childhood Development (ECD)*

A growing body of neurological research shows that a child's early developmental stages are critical and malleable. However, much remains to be learned about the best ways to design cost-effective ECD programs.

A number of interesting ECD studies are currently underway. For instance, one study in Columbia is evaluating the effects of providing children with cognitive stimulation and nutritional supplements on children's development. Young women visit five to six children with their mothers daily and implement one of three interventions for children: 1) stimulation activities, 2) nutritional supplements, and 3) stimulation activities and nutritional supplements. The study found that nutritional supplements have only a limited impact, while stimulation in early life has the greatest impact on children's cognitive development.

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