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## Linking Research and Action

STRENGTHENING FOOD ASSISTANCE AND FOOD POLICY RESEARCH

# Do Crowded Classrooms Crowd Out Learning? Evidence From the Food for Education Programme in Bangladesh

The concern that learning performance may be adversely affected by increased class size appears to be unfounded. But unchecked, the negative peer effect could hinder student achievement.

In Bangladesh, pervasive poverty has kept generations of families from sending their children to school, and without education, their children's future will be a distressing echo of their own. Many children from poor families in Bangladesh do not attend school either because their families cannot afford books and other school materials, or because the children contribute to their family's livelihood and cannot be spared. In some areas, there is also a lack of schools. Among those who enter primary school, only about 40 percent of them complete it. The great success of the Food for Education (FFE) programme of the Government of Bangladesh has led to larger classes, but do these crowded classrooms crowd out learning?

### How does FFE work?

The Government of Bangladesh launched the FFE programme in 1993. FFE provided a free monthly ration of foodgrains to poor families in rural areas if their children enrolled in primary school, and maintained an 85 percent attendance rate. The fami-

ly could consume the grain, or sell it and use the cash to meet other expenses. Before the programme was terminated in June 2002, FFE covered about 27 percent of all primary schools and enrolled about one-third of all primary school students. FFE beneficiary students accounted for about 13 percent of all students in primary schools in Bangladesh. The cost of the programme (including the value of foodgrains) was approximately US\$37 per beneficiary student per year. A two-step targeting mechanism was used, selecting poor areas, then poor households within those areas.

Data from school and household surveys conducted in Bangladesh by IFPRI in September-October 2000 were used to evaluate the FFE programme. The surveys included primary schools with and without the FFE programme, and a cross section of households including programme beneficiaries and non-beneficiaries. The sample included 600 households in 60 villages in 30 unions in 10 *thanas*, and 110 schools in the same 30 unions from which the household sample was drawn. In addition, a standard academic achievement test, designed to assess the quality of education received by students, was given to students in both FFE and non-FFE schools.

### Insights from IFPRI Research

#### What was the impact of FFE?

IFPRI analysis showed that FFE led to increased enrolment and class attendance rates, particularly among girls. However, classrooms of FFE

schools became more crowded: on average, classrooms in FFE schools had 22 percent more students (67 students) than classrooms in non-FFE schools (55 students). Within FFE schools, the average test score is lower for FFE beneficiaries than non-beneficiary students, which brings down the aggregate score in FFE schools. In non-FFE schools, average test scores of all students are comparable to non-beneficiaries in FFE schools. Boys consistently outperformed girls in the achievement test in all subjects in all types of schools, regardless of FFE beneficiary status.

Does classroom crowding (resource dilution) or the lower ability of FFE children (peer effect) affect test scores of non-FFE students in FFE schools? IFPRI's multivariate analysis does not support the resource dilution hypothesis. Class size has no effect on student achievement.

Results of the peer effect analysis, however, show that the learning performance of non-FFE students in FFE schools is negatively affected when an average of 44 percent of the students in class are FFE beneficiaries. This is probably due to the teachers having to go more slowly to accommodate poorly performing FFE students. These students come from poorer families. Evidence from household surveys show that children from poor families are less likely to have educated parents who could help them in their studies at home, to afford study materials, and to find enough time to do the homework, as many of them must contribute to their family's livelihood. Moreover, from

birth, these children are often deprived of the basic nutritional building blocks that they need in order to learn.

Nevertheless, there are benefits to non-FFE beneficiaries from being in an FFE school because FFE schools must meet certain minimum educational quality standards to maintain FFE eligibility. For example, in FFE schools, at least 10 percent of Grade 5 students must qualify for the national annual scholarship examination. No such performance standards are required for the non-FFE primary schools. These benefits to non-FFE beneficiaries outweigh the negative peer effects up to the point when FFE beneficiaries reached 69 percent of the students in the classroom. After 69 percent, the benefits derived from minimum performance standards vanish.

The overall effect at the community level is measured by the Minimum Learning Achievement, the percentage of children in a community who attain a minimum achievement score, weighted by the enrolment rate in that community. The minimum learning achievement in FFE communities is higher than in non-FFE communities (despite the latter tending to be richer) due to the increased enrolment from FFE. Particularly, major benefits accrued to the children from poor families who would not have attended school without the FFE programme.

### Implications for Food Assistance Programming

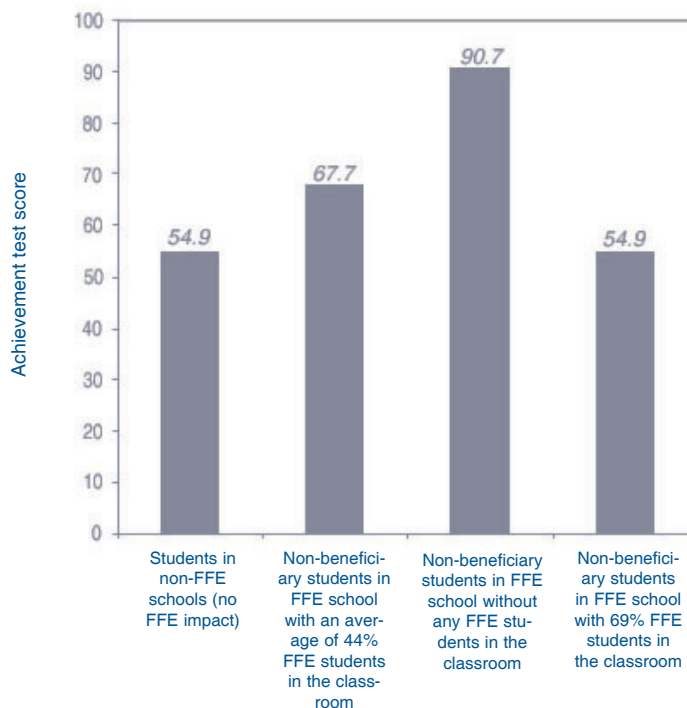
As a food-based social safety net, the FFE programme in Bangladesh served a wider purpose than simply providing the poor with immediate sustenance through take-home food rations, important as that is. It has empowered children from poor fami-

lies with education, thereby paving their pathway out of poverty.

The FFE enrolment increase was greater for girls than boys, yet boys consistently outperformed girls on the achievement tests. Having drawn them into school, improving the quality of girls' education will ultimately strengthen the beneficial effects of women's education on various family-level outcomes, such as

minimum educational quality standards. Setting clear standards for performance is important, even at the primary level. Minimum performance standards should be incorporated in the design of the recently implemented Primary Education Stipend programme (a cash-for-education programme that has replaced the government's FFE programme), as well as in the ongoing pilot testing of the

**Predicted impacts of FFE on student achievement under different scenarios**



children's schooling, child health and nutrition, and women's fertility.

The concern that learning performance of non-FFE students in FFE schools may be adversely affected by increased class size generated by FFE appears to be unfounded. But, unchecked, the negative peer effect could hinder student achievement. In the FFE programme, this was offset by the required mini-

school-feeding programme launched by the Government of Bangladesh with support from WFP.

Akhter U. Ahmed and Mary Arends-Kuenning (2003), "Do Crowded Classrooms Crowd Out Learning? Evidence From the Food for Education Programme in Bangladesh, forthcoming, International Food Policy Research Institute, Washington, D.C. Contact author at a.ahmed@cgiar.org.

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