Improving the Quality
of Education in Bangladesh

Prepared for
Dr. John Richards
Bangladesh Government Advisory Group on Primary Education

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Foreword

Students in the Master of International Public Affairs (MIPA) program in the Robert M. La Follette School of Public Affairs at the University of Wisconsin–Madison produced this report for Dr. John Richards at Simon Fraser University in Vancouver and the government of Bangladesh. The students are enrolled in the Public Affairs Workshop, International Issues, the capstone course in their graduate program. The workshop provides MIPA students the opportunity to improve their analytical skills by applying them to an issue with a substantial international component and to contribute useful knowledge and recommendations to their client.

The La Follette School offers a two-year graduate program leading to a Master of Public Affairs or a Master of International Public Affairs degree. In both programs, students develop analytic tools with which to assess policy responses to issues, evaluate implications of policies for efficiency and equity, and interpret and present data relevant to policy considerations.

The workshop provides practical experience applying the tools of analysis acquired during three semesters of prior coursework to actual problems clients face in the public, non-governmental, and private sectors. Students work in teams to produce carefully crafted policy reports that meet high professional standards. The reports are research-based, analytical, evaluative, and (where relevant) prescriptive responses to real-world clients. This culminating experience is the ideal equivalent of the thesis for the La Follette School degrees in public affairs. While the acquisition of a set of analytical skills is important, it is no substitute for learning by doing.

I am grateful to Wilbur R. Voigt whose generous gift to the La Follette School supports the workshop projects. With his donation, we are able to finance the production of the final reports, plus other expenses associated with the projects.

The opinions and judgments presented in the report do not represent the views, official or unofficial, of the La Follette School or of the client for which the report was prepared.

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Acknowledgments

Executive Summary

While the primary school system in Bangladesh has made great strides in increasing access to education over the past decade, educational quality remains low. Indeed, Bangladesh has one of the lowest literacy rates in the world and the lowest literacy rate in Asia. Nearly 66 percent of children do not achieve basic literacy and numeracy. Inadequate resources, insufficient and unqualified teachers, lack of community involvement, and corruption all contribute to the poor state of education in Bangladesh.

This report addresses these issues by evaluating three policy alternatives:
> (1) providing stipends as incentives to families and teachers linked to performance on literacy tests;
> (2) hiring tutors to work in the schools with the least literate students.
> (3) encouraging decentralization by requiring school management committees to enter into contracts with district and national officials as a condition for receiving block grants; and

For each of these policies, we design a pilot program to be implemented in government schools in fifty of the least literate upazilas of Bangladesh.

We compare these policies against five evaluative criteria: effectiveness, timeliness, sustainability, equity, and technical feasibility. We also estimate costs for each pilot program. We highlight each policy's strengths and weaknesses.

The testing-stipend policy likely would improve student literacy by providing incentives for family involvement and investment in education. It also would draw on established procedures for administration and distribution, specifically Bangladesh's Primary Education Stipend Project. However, this policy likely would face significant resistance from teachers and be prone to corruption.

Institutionalizing the accepted practice of tutoring has the greatest likelihood of improving student literacy. Hiring tutors to work specifically with the least literate students in each class targets scarce resources, decreases the student–teacher ratio, and directly affects literacy rates. Similar teacher aide positions have worked well in Bangladesh's non-governmental education sector. While this policy may face some resistance from teachers, it has the best chance of improving the quality of primary education in Bangladesh. We recommend the government implement this policy to address the low levels of literacy in Bangladesh.

The decentralization policy makes the roles and responsibilities of each level of education management explicit and provides local authorities with some financial means to improve schools. However, a direct link between stronger local school management and improved literacy rates is difficult to demonstrate. More importantly, the central government has shown little political will to decentralize authority or allocate fiscal responsibility to local actors.

Introduction

International organizations, policymakers, and scholars acknowledge the importance of universal education. Both public and private gains to investment in education are high: economic growth, individual earning potential, and health indicators are all positively correlated with education. Multiple forums, including the Universal Declaration of Human Rights, have recognized primary education as a human right. The United Nations Educational, Scientific and Cultural Organization's (UNESCO) Education for All movement set a goal of universal primary and secondary education by 2015,[1] a target simultaneously established in the Millennium Development Goals.

The government of Bangladesh supports universal education with a constitutional mandate for free and compulsory education for all boys and girls.[2] Hundreds of non-governmental organizations (NGOs) likewise work to attain high quality universal education. However, on its current trajectory, Bangladesh will likely fail to meet the Education for All goals and the education-focused Millennium Development Goals.

This report analyzes three policies designed to improve the primary education system in Bangladesh. The policy areas, suggested to us by Dr. John Richards of the Bangladesh Government Advisory Group on Primary Education, are: implementing school testing linked to financial incentives, introducing tutors into government primary schools, and decentralizing fiscal administration for government primary schools to the district or (sub-district) upazila level.

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[1] UNESCO. (n.d.). *Education For All (EFA) International Coordination.* Retrieved March 29, 2008, from http://portal.unesco.org/education/en/ev.php-URL_ID=47071&URL_DO=DO_TOPIC&URL_SECTION=201.html

[2] Chief Advisor's Office, Government of Bangladesh. (n.d.). *The Constitution of the People's Republic of Bangladesh*. Retrieved February 10, 2008, from http://www.pmo.gov.bd/constitution/part2.htm

Current Status of Education in Bangladesh

Two-thirds of students in Bangladesh attend schools administered or assisted by the government.[3] In 2005, the Ministry of Primary and Mass Education reported that there were 37,672 government primary schools, 19,862 registered non-government schools, and 8,329 primary schools attached to high madrasas.[4] The system serves more than 16 million children, evenly attended by boys and girls.[5]

However, more than 20 percent of children in Bangladesh never enroll in primary school.[6] Children from rural or poverty-stricken environments are significantly less likely to be enrolled. Of all students initially enrolled, 25–33 percent do not complete primary school.[7] Girls and children in rural areas are significantly less likely to complete primary school. The average student is older than 14 upon graduation from primary school,[8] taking an average of 8.7 years to complete the five-year cycle.

The Ministry of Primary and Mass Education requires children to master 27 cognitive competencies through primary education, but only 1.6 percent of students do. Boys achieve 16.7 of these competencies on average; girls average 15.3. The Campaign for Popular Education estimates that 66 percent of children in Bangladesh do not even achieve basic literacy and numeracy.[9] Bangladesh's 41 percent adult literacy rate ranks at the bottom of eleven low-income Asian countries.[10] The Education Development Index reflects this poor performance, ranking Bangladesh 105 out of 121 countries in terms of educational outcomes.[11]

Several factors contribute to the poor state of education in Bangladesh: inadequate resources, insufficient and unqualified teachers, lack of stakeholder involvement, and corruption.

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[3] Bangladesh's tiered school system is categorized into four forms of primary education: 1) public schools, 2) private schools, 3) madrasas, which incorporate general education and religious teachings, and 4) non-formal schools, which target impoverished and marginalized families.

[4] Ministry of Primary and Mass Education. (2005). *School Information: Different Types of Primary Level Institutions.* Retrieved February 20, 2008, from http://www.mopme.gov.bd/School_info.htm

[5] Ministry of Primary and Mass Education. (2005). *Students Enrollment: Number of Students Enrolled in Primary Schools and Percentage of Boys and Girls.* Retrieved February 20, 2008, from http://www.mopme.gov.bd/students_info.htm

[6] Campaign for Popular Education. (2003–2004). *Education Watch 2003/4: Quality with Equity, The Primary Education Agenda.* Retrieved February 20, 2008, from http://www.campebd.org/content/EW_20034.htm

[7] Statistics vary slightly between Education Watch and the government's Bureau of Education Information and Statistics. The former is more likely to include non-formal schools in data collection.

[8] Ministry of Primary and Mass Education. (2003). *Education For All: National Plan of Action II 2003–2015.* Retrieved March 4, 2008, from http://www.sdnpbd.org/sdi/issues/education/Document/education_for_all_2003-2015.pdf

[9] Campaign for Popular Education. (2003–2004).

[10] United Nations. (2007–2008). *United Nations Human Development Report.* Retrieved April 28, 2008, from http://hdr.undp.org/en/media/hdr_20072008_tables.zip

[11] UNESCO. (2006). *Education For All Global Monitoring Report.* Retrieved March 29, 2008, from http://portal.unesco.org/education/en/files/43352/11321334255tableA1.2.pdf/tableA1.2.pdf

Inadequate Resources

Inadequate resources hurt education in Bangladesh. The government spends 2.4 percent of GDP on education, considerably less than the 6 percent target set by the Education for All framework and the lowest percentage in the region.[12] Too few schools exist to allow for universal enrollment; those that do exist are rapidly deteriorating. Small government grants for school maintenance and repair are distributed in a non-transparent manner, rarely based on analysis and prioritization of needs.

In general, enrollment has risen, but resources allocated to education remain unchanged, leading to the deterioration of overall quality of provisions for primary education. More than half of schools have inadequate infrastructure, textbooks, and learning materials.[13]

Insufficient and Unqualified Teachers

Inadequate resources also hurt the quantity and quality of teachers in primary schools, where the teacher to student ratio is 1:61.[14] Many teachers do not receive proper training, do not understand competency-based curriculum, and may not even understand the material they teach. Existing training has failed to increase teachers' capabilities. Chronic recruitment of unqualified teachers, primarily due to cronyism, also forms a major impediment to school-level efforts to improve quality in primary education. Additionally, many head teachers in Bangladeshi schools do not assume their leadership roles, due to insufficient resources, training, and time.

Lack of Stakeholder Involvement

Educational policy is centralized in Dhaka, where the Ministry of Primary and Mass Education and the Ministry of Education formulate all education policy and supervise all schools. At the upazila level, officials coordinate school functions but do not oversee primary school education. The lowest functioning government entity, the union or parishad, does not participate in primary education.

The highly centralized education system impedes stakeholder involvement at the district, upazila, or school level. Although parent-teacher associations and School Management Committees (SMCs) exist, their effectiveness is questionable. Originally intended to increase accountability and involvement in the education system, complaints of cronyism and internal politics plague the committees. Members often gain their seats through political connections rather than genuine concern for schools. This lack of stakeholder involvement lessens the

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[12] U.S. Agency for International Development. (n.d.). *Current Conditions: Education.* Retrieved March 29, 2008, from http://www.usaid.gov/bd/programs/education.html
[13] Campaign for Popular Education. (2003–2004).
[14] Ibid.

quality of primary education, as strong community and parental involvement in education increases the likelihood of primary school completion.

Corruption

Bangladesh faces a serious problem of corruption, ranking 162nd out of 179 countries on Transparency International's 2007 Corruption Perceptions Index.[15] Government corruption harms school performance, with estimates of impact ranging from marginal to critical. Beyond financial implications, corruption in school management and administration may prevent parents from sending children to school.

[15] Transparency International. (2007). *Corruption Perceptions Index.* Retrieved March 29, 2008, from http://www.transparency.org/policy_research/surveys_indices/cpi/2007

Some Preliminary Choices

We evaluate the policies analyzed in light of a few primary objectives chosen through careful deliberation. Specifically, we propose that the Bangladeshi government focus on improving the quality of education offered in public primary schools, as measured through increasing student literacy rates, and that education policies target the least literate households across Bangladesh.

We further propose that education-based policies be implemented initially as pilot projects in 50 upazilas, chosen for their low literacy levels (see Appendix A for list of selected upazilas). These upazilas are in 25 districts, representing many geographic regions of Bangladesh, and contain 3,276 government primary schools (8.7 percent of public schools in Bangladesh).

Why Focus on Educational Quality?

During the past decade, the government and NGOs have improved access to education. The gender gap in primary school enrollment has been reduced, enrollment rates have increased across the country, and drop-out rates have decreased. Fifty percent of enrolled students dropped out of primary school in 1995. Currently, the number is down to 25–33 percent.[16]

These relative successes are linked in part to government policies, including the distribution of free textbooks to school children and food to their families, education-based stipends for poor children, and stipends and waivers for rural girls to attend secondary schools. NGOs have achieved successes, most notably through the widespread establishment of non-formal primary educational programs.

Considering these achievements in school access, it is now time to concentrate on school quality. Bangladesh faces serious issues related to school quality, including one of the lowest literacy rates in the world. Getting children into the classroom is insufficient if they do not emerge with the knowledge or skills necessary to improve the quality of life for themselves and their households.

Why Focus on Literacy Rates?

Literacy is widely recognized as a necessary skill set for individuals and a minimum standard for school quality. Literacy, which includes reading, writing, and basic math skills, correlates positively with household earnings, household health, and empowerment of women. By improving literacy rates (generally) and focusing on the least educated households (specifically), we hope to increase standards of living and create opportunities for the most disadvantaged populations.

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[16] UNICEF. (n.d.). *Bangladesh Primary School Years.* Retrieved March 29, 2008, from http://www.unicef.org/bangladesh/children_355.htm

Concentrating on literacy rates also allows the government to collect reliable and comparable data to test the effectiveness of each policy. The Census Bureau already collects literacy rates at the regional, district, and upazila level. This means that baseline data are available and the methods for collecting these data are established.

Why Focus on Government Primary Schools?

Our focus on increasing literacy rates means we concentrate exclusively on primary education. We also focus exclusively on government schools, as this is the arena in which our client has the most jurisdiction to effect change. While our research calls upon examples from other forms of primary education, all policies were designed to be implemented by the government within the framework of government schools.

Why Focus on the Least Educated Households?

Poverty and illiteracy form a vicious cycle in Bangladesh. Children from low-income families are 30 percent less likely to enroll in school and five times as likely to drop out. Those who do stay in school master fewer cognitive competencies and achieve lower rates of literacy.[17] Illiterate workers earn less than their literate counterparts, thereby maintaining the cycle of poverty. An increased demand for child labor among poor families, higher levels of illiteracy among poor parents, and an inability to afford private tutors all contribute to persistently low literacy rates among low-income students.

By targeting the least educated households, we hope to create progressive policies that benefit those who most need assistance. Studies have shown returns to education are highest in illiterate households. The marginal benefit of adding one educated individual to an illiterate household far exceeds the marginal benefit of adding a fifth or sixth educated individual to an already literate household.[18] Therefore, targeting illiterate households is a more equitable and efficient use of public resources.

Why Implement Pilot Projects?

When compared to nationwide implementation of a policy, pilot projects provide a less expensive and timelier alternative. As political power is anticipated to shift in 2009 after elections scheduled for late 2008, it is important that programs take root quickly and effectively. Pilot projects allow for definitive action to be taken in the immediate future, thereby increasing the likelihood that projects will survive government transitions.

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[17] Campaign for Popular Education. (2003–2004).
[18] Basu, K., Naragon, A., & Ravalion, M. (2001). Is Literacy Shared Within Households? Theory and Evidence for Bangladesh. *Labour Economics*, 8(6), 649–665.

Pilot projects also allow policymakers and educators to test program effectiveness before heavily investing. We have designed the policies in such a manner that they can be transferred to additional upazilas if they prove successful.

Why Select These Upazilas?

The upazilas we selected contain the lowest literacy rates in Bangladesh, ranging from 15.1 percent to 43.2 percent. They represent many of the poorest, most rural, and least educated areas of Bangladesh. In choosing these upazilas, we aimed to keep the range small enough to be manageable but diverse enough to allow for generalizing the findings of the pilot projects.

Evaluative Criteria

To assess individual policy alternatives or program initiatives, we specify a set of evaluative criteria. These criteria represent the standard by which we judge the outcomes of each policy option; each criterion addresses a different aspect of the policy itself. We evaluate three policies and recommend the policy that performs best against five criteria: effectiveness, timeliness, sustainability, equity, and technical feasibility. For each criterion, we assign a rank of weak, medium, or strong based on expected policy outcomes.

We chose not to consider financial feasibility as a criterion to decide on the best course of action for the government. Any policy that we recommend would require additional funding for the education budget. Therefore, rather than analyzing each policy under the current budget constraints in Bangladesh, we simply provide cost estimations of our policies. We include all cost estimates in Appendix B.

Effectiveness

The most important evaluative criterion is how effectively the policy actually improves performance of Bangladeshi students. A policy may score well on all four of the other criteria but it would not be a viable option if it does not directly address the policy problem of poor academic performance. To determine how well any policy performs on this criterion, we assess improvement in general population literacy rates.

Timeliness

Due to political and electoral factors, the Bangladeshi government must implement the policy or pilot project in a relatively short time frame, almost certainly within one year. Once the contest for the upcoming election begins in earnest, the effectiveness of any policy reform will be greatly compromised. To ensure that political pressures do not cripple the policy, it must be fully implemented and operational quickly.

Sustainability

This criterion concerns the political and institutional framework and conditions under which the policies must operate and survive. One of the two main political parties of Bangladesh will presumably regain power in the upcoming elections; to be a truly viable policy, the alternatives must survive in whichever political environment arises after the election. This would be a difficult criterion to fully satisfy, as the policy outcomes would be judged on their compatibility with two different political platforms.

The rampant corruption in Bangladesh also comes into play in this criterion. Year after year, Bangladesh has scored near the bottom of nearly every major

global ranking of government corruption. Any policy reform must function in a society with widespread and entrenched corruption; policies very sensitive to high levels of corruption are likely to fail.

Equity

Closely related to the issue of accessibility for all, the equity criterion evaluates how the benefits or costs of the policy are spread across groups in society. Does it benefit students from middle-income to high-income backgrounds, while students from low-income families lag disproportionately far behind? Do rural upazilas reap larger benefits than their urban counterparts? We consider how a policy may have different impacts across different groups and areas.

Technical Feasibility

Any project must consider the technical capacity of the Bangladeshi educational sector. Administrative and instructional capacities are severely limited in many cases. We assess feasibility of policy implementation under these circumstances.

Policy 1: Education Stipends Linked to Literacy Test Performance

In this section we introduce the current status of testing in Bangladeshi primary schools and the theory behind literacy testing effectiveness. We outline and evaluate a policy that provides cash stipends to families and teacher salary bonuses linked to literacy test results and regular class attendance.

Status Quo: Testing in Bangladeshi Schools

The government of Bangladesh recognizes 53 terminal competencies, known as the Essential Learning Continua, that it expects students to master by the completion of primary school. These competencies are grouped into three categories: 1) cognitive, covering knowledge and thinking; 2) psychomotor, covering physical activities and life skills; and 3) affective, covering faith, attitude, and interests. Of these, 27 cognitive competencies are testable with paper and pencil.[19]

No national examination exists for students in first and second grades.[20] In 1992, the Continuous Pupil Assessment approach was implemented to assess the Essential Learning Continua curriculum. Teachers are expected to assess student progress on a continuous basis and take proactive measures to ensure that weaker students perform with their peers. The Continuous Pupil Assessment was designed to encourage access and retention of students in early grades, but students move to the next level of school without a written or oral test.

Students in grades three through five are tested through inadequate quarterly or annual examinations and homework completion. Additionally, there is no public examination for every student at the end of the primary school cycle. Only the top 20 percent of students take a scholarship exam, with average pass rates of 30 percent.[21] This equates to approximately 5 percent of primary students achieving successful competency rates at the completion of the primary school cycle.

With the cooperation of international partners, the government of Bangladesh introduced school testing as a facet of its Second Primary Education Development Program (PEDP-II). This initiative, started in May 2004, aims to improve educational quality through building organizational capacity, constructing additional schools and classrooms, providing teacher training, and supporting equity of access.[22] PEDP-II established a National Assessment Cell in charge of administering a national assessment exam. To date, only achievement goals related to competency testing have been reported.

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[19] Campaign for Popular Education. (2000). *Education Watch 2000: A Question Of Quality—State of Primary Education in Bangladesh.* Retrieved March 25, 2008, from http://www.campebd.org/content/EW_2000.htm

[20] Ministry of Primary and Mass Education. (2003).

[21] Ministry of Primary and Mass Education. (2006). *2006 Budget Document.* Retrieved March 25, 2008, from http://www.mof.gov.bd/previous_budget/budget_2006/MTBF/1_MoPME_E.pdf

[22] Bangladesh Department of Primary Education. (2007). *PEDP-II Progress.* Retrieved March 25, 2008, from http://www.dpe.gov.bd/pdf/ProgressReportDecember2007.pdf

In the non-formal education sector, NGOs institute testing regimes. The Research and Evaluation Division of BRAC[23] developed the Assessment of Basic Competencies tool in 1992 to assess basic literacy, numeracy, and life skills. The assessment measured basic knowledge and differed from the official government primary school competencies. The test was administered in 1992 and repeated in 1999 with the same results: students in BRAC primary schools performed better than students in government primary schools. BRAC primary school students performed slightly better in writing and arithmetic and significantly better in life skills, compared to their government school counterparts.

Leveraging Change with Testing

In working to improve literacy among primary school students, the Ministry of Primary and Mass Education can increase its focus on evaluation and testing. By administering a well-designed standardized literacy test at the primary level, the government would obtain a more detailed view of the status of its schools and of where improvement can be made, geographically and by subject. By providing improved information to educators and policymakers, this testing policy can improve decisionmaking at the national, division, district, and upazila levels. In addition, test taking can serve as beneficial practice to students who will move on to secondary school, where regular tests will form a major part of their education.

However, while the testing policy itself may bring residual benefits to policymakers, simply testing literacy would not necessarily improve students' literacy levels or alter the environment in which the students learn. A standardized test performs well as a diagnostic tool; it does not qualify as a viable policy alternative. Any policy involving student testing must find a way to "leverage change"[24] by using the information gained from the test results to address some other aspect of the educational system. Any policy based on student tests must be a testing-plus policy.

One way that a testing policy can leverage change is to attach performance to a system of financial incentives. If teachers and students see real financial gain to their school and personal well-being linked to improvements on tests, they will be more motivated to enact practices that achieve the basic levels of literacy. With this incentive structure in mind, the government of Bangladesh can consider implementing a pilot program that distributes funds to student families and teachers based on student performance on a national test.

Pilot Program Design

The Ministry of Primary and Mass Education could institute a pilot program that provides cash stipends to families and teacher salary bonuses linked to literacy test results and regular class attendance.

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[23] BRAC is an international non-governmental organization formerly known as Bangladesh Rural Advancement Committee.

[24] Kendall, N. (2008, February 18). In-person interview with Assistant Professor in Educational Policy Studies at the University of Wisconsin-Madison by Ometere Omoluabi and Samuel Austin.

Literacy Test

Under this policy, government primary schools would administer a standardized literacy test to all students in grade levels one through five. Given in late 2008 or early 2009, the test would assess reading and writing competency in Bangla, as well as basic numeracy. The Ministry of Primary and Mass Education or designated local officials would inform each school of its performance scores and would use random monitoring to ensure that teachers administer the tests correctly.

PEDP-II designed a national assessment instrument that tests primary school student levels of literacy and numeracy and other nationally defined learning competencies. PEDP-II's National Assessment Cell set a goal to achieve a 50 percent achievement level in literacy and numeracy by 2010.[25] We propose using the national assessment instrument as the literacy rate measure for the pilot program, as extensive government, NGO, and other stakeholder interests are involved in the project. However, PEDP-II literacy testing has not been reported to date. If the national assessment instrument fails in its implementation phase, we propose drawing on BRAC's prior performance evaluations and Bangladesh education sector analysis to create a nationalized literacy test.[26]

Student Participation

We propose that every enrolled primary school student who achieves a 50 percent or above literacy test score and 85 percent monthly class attendance be eligible for a monthly cash stipend. Households of qualifying students would receive 60 taka (1 U.S. dollar) per month for students in first and second grades and 80 (1.33 U.S. dollars) taka per month for students in grades three through five. Cash would be distributed quarterly through local banks, preferably to mothers. Stipends would be suspended if students failed to meet testing or attendance requirements or if they were forced to repeat a grade. Households would become ineligible for the stipend if the student dropped out of school.

Our proposal and performance benchmarks are modeled after the Food For Education program, the Primary Education Stipend Project, and PEDP-II.[27] School officials and SMCs would register children in the program. Similar to Primary Education Stipend Project, the upazila primary education officer and assistant upazila primary education officer would record and monitor the program. District primary education officers would supervise upazila officials and report districtwide activity to the Ministry of Primary and Mass Education.

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[25] The National Assessment Cell set a goal of 50 percent achievement levels for students in grade four and above and 65 percent achievement levels for all students in other nationally defined learning competencies by 2010.

[26] Nath, S.R. (2003). *Basic Competencies of the Graduates of BRAC Non-Formal Primary Schools Declining*. Retrieved March 25, 2008, from http://www.bracresearch.org/reports/basic_competencies_of_graduates_of_brac_nfpe_pdf

[27] Our proposal benchmarks complement current goals of PEDP-II that target: 50 percent competency on student literacy tests, 20 percent or less student absenteeism, 10 percent or less teacher absenteeism (excluding leave benefits), and 90 percent on-time teacher rates.

The infrastructure is in place in a majority of targeted upazilas to distribute cash stipends through local banks.[28] In rural locations, where the banking system is non-existent, we propose using Primary Education Stipend Project distribution centers, which are usually located in public spaces or schools. Further, stipends should be distributed to mothers, whenever possible, as project data show that mothers are more likely to spend the money to improve their children's welfare.[29]

Our proposal varies slightly from the Primary Education Stipend Project in the number of students eligible for the program and amount of cash stipends. First, we propose that every student in the pilot program be eligible. While Food For Education and the Primary Education Stipend Project targeted the poorest 40 percent of students, corruption and mismanagement did not assure the enrollment of every eligible child. Further, in Bangladesh's poorest upazilas, offering the program to only 40 percent of students might exclude large numbers of students that the program intends to target.[30] Second, our proposal provides 60 or 80 taka (1 to 1.33 U.S. dollars) per month per student depending on grade level, with no maximum cap on disbursements to families with more than one child.[31] Increasing the stipends for older students targets the reality that students are more prone to drop out of primary school and to work as they grow older. Analysis of Food For Education found that enrollment-based disbursements limited children's participation in the labor force.[32] Our proposal would seek to increase children's graduation rates and their academic success through a similar incentive structure.

Teacher Participation

We propose a teacher salary bonus system that complements cash incentives for student performance and attendance. First, teachers who maintain 15 percent or less absentee rates (excluding leave benefits) would be awarded a 2.5 percent salary bonus at the completion of the school year. Second, teachers who administer literacy tests to 90 percent of their enrolled students would receive an additional 2.5 percent salary bonus.

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[28] In the Primary Education Stipend Project, six national banks disperse funds on a quarterly basis at pre-determined dates at a local bank branch or temporary distribution post within five kilometers of the school. Funds are distributed to parents or legal guardians who present the appropriate bank-issued identity card.

[29] Earlier programs dispersed to fathers and male household heads. Preference is now given to issuing identity cards to mothers of students.

[30] The World Bank reports that more than 50 percent of Bangladesh's people live below the extreme poverty line of less than $1 per day. In the country's poorest upazilas, this percentage is estimated to be much higher.

[31] The Primary Education Stipend Project provides the first student a cash stipend of 100 taka per month and the second student an additional 25 taka per month. The maximum family stipend is 125 taka per month.

[32] Further analysis shows the Primary Education Stipend Project may have the same effects. Allowing for a 15 percent absenteeism rate provides the opportunity for a minimal level of student employment.

The World Bank estimates teacher absenteeism in Bangladesh at 16 percent.[33] However, many scholars and NGOs estimate this number as much higher.[34] PEDP-II places a high priority on increasing quality of education through construction of schools and classrooms and provision of teacher aides and resources —but if teachers are chronically absent, students are unlikely to learn.

Proposing a salary bonus for teachers who achieve a 90 percent student test rate attempts to make teachers stakeholders in literacy tests. Our proposal strives for an increase in ownership of literacy testing through cash incentives not directly related to test scores. Teachers' performance under this program would not be related to literacy scores, and the program offers no direct incentive to cheat on tests or select which students take the tests.

Evaluation of Policy across Criteria

The following sections analyze this policy proposal against the five evaluative criteria. We find that this policy scores medium on effectiveness, equity, and technical feasibility and weak on timeliness and sustainability.

Effectiveness
Linking student stipends to performance reaffirms the Bangladeshi government's commitment to breaking the cycle of stagnant general population literacy rates and challenges families to invest in their children's education. By creating incentives for student attainment, this policy promotes literacy by making education a more attractive alternative for families whose children contribute to household income, increasing their time spent in the classroom.

By providing financial incentives for student performance, this program will increase family involvement in children's education. Many studies link family involvement to increased academic performance.[35] By spurring investment of a household's time and resources in education, this policy has the potential to increase literacy rates.

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[33] Deabnath, S. (2008). "Bangladesh Kids Spend Least Time in Schools Among SAARC States," *The Daily Star*, April 5, 2008. Retrieved April 5, 2008, from http://www.thedailystar.net/story.php?nid=30830

[34] Chaudhury, N., et al. (2006). Missing in Action: Teacher and Health Worker Absence in Developing Countries. *Journal of Economic Perspectives* 20(1), 91–116.

[35] Sanders, M. G., & Epstein, J. (2005). School-Family-Community Partnerships and Educational Change: An International Perspective. In Andy Hargreaves (ed.), *International Handbook of Educational Change: Extending Educational Change* (pp. 109–131), Dordrecht, The Netherlands: Springer Publishing; Lee, G. (2002). The Role of Korean Parents in the Literacy Development of Their Children. *International Journal of Early Childhood*, 34(1), 1–8; Willms, J.D., & Somer, M. (2001). Family, Classroom, and School Effects on Children's Educational Outcomes in Latin America. *School Effectiveness and School Improvement*, 12(4), 409–445; Werf, G.V.D., Creemers, B., & Guldemond, H. (2001). Improving Parental Involvement in Primary Education in Indonesia: Implementation, Effects and Costs. *School Effectiveness and School Improvement*, 12(4), 447–466.

This policy also adds incentives for teachers to ensure that their students take the test, but it does not link incentives to student performance on those tests. This means that teachers do not face direct incentives to tamper with the integrity of literacy tests by cheating or only testing their best students. However, teachers would still face pressure from parents who can benefit from their children's performance. Given the rampant corruption of Bangladesh, teachers might solicit "gifts" to aid students taking the tests. While effective monitoring systems would remedy this problem, monitoring is expensive and difficult to implement.

Even if this incentive system increases family and teacher involvement in education, many external factors would decrease the effectiveness of the policy. Many teachers lack formal training in effective methodology or lack skills or motivation because they have received their jobs through personal favors. These teachers would not effectively improve literacy (whatever their absence rate), and some families could not hire private tutors to supplement this poor classroom education (whatever the size of stipend). Also, this policy does not address issues of scarce materials in classrooms, large class sizes, or shortened school days taught in shifts.

Timeliness

The caretaker government has limited opportunity to enact education policies, as political party control of the government should occur within the next year. Constructing a fully functioning school testing program and a system to distribute financial incentives within a year is unrealistic. First, if the national assessment instrument needs modification, the Ministry of Primary and Mass Education would need to develop a literacy test. The students in the pilot upazilas would need to take the test, requiring coordination with local school administrators, each with a different level of administrative capacity.

Although this policy would utilize many existing procedures from the Primary Education Stipend Project to distribute the stipend, registering the entire student body of an upazila would take time. While including all students in this program would eliminate the problem of targeting a subset of the population, ensuring proper documentation and registration of all eligible families would be time-consuming. Transferring this pilot program to a national policy would only exacerbate these problems, especially among marginalized or indigenous populations.

Sustainability

This policy would face the most difficulty in the early stages, when a large amount of funding, training, and coordination is necessary. But once Ministry of Primary and Mass Education administers the initial test and registers eligible families, the basic process can be replicated in subsequent years. However, after the elections, one of the two main political parties likely will control the government and education policy. The ruling party must support the continuation of this stipend program; without the political will to continue the testing program, the policy would fail.

While similar programs such as Food For Education and the Primary Education Stipend Project have enjoyed public support, linking bonuses to teacher attendance could face resistance from national teachers' unions. The Bangladesh Teachers' Association, Bangladesh Teachers' Federation, and the National Federation of Teachers' Association are all registered with Education International, a worldwide federation of teacher unions.[36] If educators resist this reform, they can affect the sustainability of the policy as a whole.

In addition, corruption would affect this performance-based stipend program, just as it affected the attendance-based Primary Education Stipend Project. The World Bank estimated that 10–15 percent of Primary Education Stipend Project funds were lost to "leakages."[37] If corruption disrupts the flow of large percentages of the stipends, the policy is likely to be unsustainable.

Equity

This policy eventually would include nearly every student in government primary schools. The stipend would reach a large number of children, and the selection of the pilot upazilas ensures that the poorest performing districts would receive benefits first. This policy also supports the government's access for all efforts under PEDP-II.

However, in offering a stipend to all students to streamline implementation, the policy would sacrifice equity. This trade-off means that the students most likely to perform well on the literacy test (i.e., those from higher-income families) would be ones who need the stipend least. In the pilot upazilas, with populations of predominantly low-income families, this won't be a large problem. In fact, attempting to target the policy would leave many extremely poor families without access to the benefits. If policymakers expanded the pilot to other upazilas with higher incomes, the Ministry of Primary and Mass Education would have to refine the targeting system to achieve desired equity.

Technical Feasibility

The National Assessment Cell of PEDP-II appears to have the capacity to develop and conduct a national standardized test. Even if the Ministry of Primary and Mass Education deems this instrument inappropriate, the ministry can draw on a variety of international and domestic experts to develop a literacy test. Within Bangladesh, BRAC has experience creating and implementing a school test in its Assessment of Basic Competencies program that was created in 1992.[38] The testing aspect of this policy seems technically feasible.

[36] Education International Asia Pacific. (n.d.). Asia Pacific Affiliates. Retrieved April 10, 2008, from http://www.ei-ie.org/asiapacific/en/affiliate.php

[37] Tietjen, K. (2003). *The Bangladesh Primary Education Stipend Project: A Descriptive Analysis.* The World Bank. Retrieved April 6, 2008, from http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099080014368/BangladeshStipend.pdf

[38] Nath, S.R. (2003).

The main mechanism for disbursing the stipend to families through local banks has been used with relative success in the Primary Education Stipend Project. The countrywide voter registration reform, which will provide all citizens with photo identification cards, would ease the registration process. The Ministry of Primary and Mass Education can draw on these experiences and current reform for this policy, instead of building a distribution system from scratch. However, across upazilas, differential capacity for administering and managing the stipends exists; some schools may be better prepared to implement the test than others due to local administrator skill. This policy also would face the logistical and security problems of regularly moving large amounts of cash in a situation where wireless transfers are impossible.

Table 1 summarizes our evaluation of primary school testing.

Table 1: Summary Evaluation of Primary School Testing

Criteria	Score	Summary
Effectiveness	Medium	Family motivation to improve literacy rates and receive stipend may exist, but institutionalized practice of poor performance would be too great to overcome for many schools.
Timeliness	Weak	A 12-month introductory period is too short. Time would be needed to register families and implement policies.
Sustainability	Weak	Political party views during government transition and official corruption could limit ability to administer tests and distribute stipends in the short and long term.
Equity	Medium	High enrollment rates would ensure most children would be tested and eligible for stipends, but some students who receive stipends may not actually need them.
Technical Feasibility	Medium	Domestic and international experts could assist with test creation, implementation, and training of local administrators. Capacity across upazilas varies, and logistical issues would need to be worked out.

Policy 2: Tutors in Government Primary Schools

In this section we analyze a policy of introducing tutors into the government primary schools. We describe the current role of teachers and tutors in the education system, examine the relationship between poverty and illiteracy, and evaluate a policy for the government to hire tutors to work with the least literate students in each school.

Status Quo: Too Many Students, Too Few Teachers

Over the past decade, Bangladesh has made significant progress toward achieving universal primary education. Enrollment and attendance rates have both increased significantly, especially among girls. At the same time, government expenditure on education has remained largely stagnant, and the number of teachers in primary schools has not increased significantly.

In 2004, Bangladesh had 327,000 teachers, 67 percent of whom met the minimum government qualifications.[39] According to UNESCO, an additional 397,000 teachers will need to be hired by 2015 to make up for attrition, accommodate universal primary education, and achieve a 1:40 teacher–student ratio.[40]

The average primary school teacher–student ratio is 1:61, although in some upazilas the ratio is as high as 1:90.[41] Empirical studies have produced mixed findings on the relationship between class size and student performance, but many studies find evidence that smaller classes are correlated with higher student achievement.[42] Educational theory suggests that smaller classes lead to more teacher-student interaction, more targeted lesson plans, and fewer class disturbances. UNESCO, scholars, and policymakers in many developing nations recognize a teacher-student ratio of 1:40 as a maximum target.

Very few upazilas in Bangladesh come near this target ratio, and a large increase in teacher recruitment is unlikely in the near future. Teacher salaries already make

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[39] A primary school teacher is expected to hold a certificate in education upon completion of a one-year training program prior to appointment. However, it is uncertain whether a sufficient pool of candidates meets this criterion to qualify as effective primary school teachers.

[40] UNESCO Institute for Statistics. (2006). *Teacher Supply and Demand in South and West Asia*. Retrieved March 28, 2008, from http://www.uis.unesco.org/TEMPLATE/pdf/Teachers2006/ Regional_Profiles/RegProfile_SWAsia.pdf

[41] Bangladesh Bureau of Education Information and Statistics. (n.d.). Primary Education Statistics. Retrieved April 25, 2008, from http://www.banbeis.gov.bd/db_bb/primary_education_1.html

[42] Akerhielm, K. (1995). Does Class Size Matter? *Economics of Education Review*, 14(3), 229–241; Krueger, A. (2002). Understanding the Magnitude and Effect of Class Size on Student Achievement. In L. Mishel, R. Rothstein (eds.), *The Class Size Debate* (pp. 7–33). Washington D.C.: Economic Policy Institute; Finn, J.D., Pannozzo, G.M., & Achilles, C.M. (2003). The "Why's" of Class Size: Student Behavior in Small Classes. *Review of Educational Research*, 73, 321–368; Hattie, J. (2005). The Paradox of Reducing Class Size and Improving Learning Outcomes. *International Journal of Educational Research*, 43 (6), 387–425; Ahmed, A.U., & Arends-Kuenning, M. (2006). Do Crowded Classrooms Crowd Out Learning? Evidence from the Food for Education Program in Bangladesh. *World Development*, 34(4), 665–84.

up 67 percent of education expenditure: doubling the number of teachers would be prohibitively costly.[43] Furthermore, the current shortage of qualified teachers, especially in rural areas, indicates recruitment efforts might not be successful even if resources were abundant.

Role of Private Tutors in Bangladeshi Education

Teacher shortages and overcrowded classrooms contribute to the existence of a large market for private tutoring throughout Bangladesh. The rate of primary school students accessing private supplementary tutoring increased two percentage points per year over the past decade, reaching 31 percent of students in 2005.[44] According to the 2006 Education Watch Report, an estimated 43 percent of students in government primary schools had private tutors. Although incidence of private tutoring is greater among boys, urban students, and wealthier households, there is significant reliance on private tutors even among the poorest quintile of families.[45] A study by BRAC's Research and Evaluation Division finds that supplementary tutoring in Bangladesh helps students learn more than those who have no such support. Private tutors for primary school students have become a well-accepted norm.[46]

Bangladesh is not alone in its widespread dependence on tutors. The World Bank reports that tutors have become a pillar of education in many developing countries. It finds that "private tutoring boosts student academic performance. Tutoring lessons are found to increase test scores in India, mean matriculation rates in Israel, the quality of colleges in which students can enroll in Japan, both SAT and ACT test scores (except for ACT reading scores) and academic performance in the United States, and student academic performance in Vietnam."[47]

The World Bank warns that private tutoring can exacerbate societal inequality by allowing wealthier households to invest in superior quality education, while poorer households are unable to invest outside of the public schools. Research by the Campaign for Popular Education in Bangladesh confirms this is a problem in Bangladesh: 19 percent of students from impoverished households have private tutors, compared to 57 percent of students from wealthier households. Poor students who do have access to tutors generally can only afford to see them five months per year, compared to nine months per year for wealthier students.[48]

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[43] Al-Samarrai, S. (2007). Financing Basic Education in Bangladesh. Munich Personal RePEc Archive Paper No. 1505. Retrieved April 25, 2008, from http://mpra.ub.uni-muenchen.de/1505/1/MPRA_paper_1505.pdf

[44] Nath, S.R. (2008). Private Supplementary Tutoring Among Primary Students in Bangladesh. *Educational Studies*, 34, (1), 55–72.

[45] Campaign for Popular Education. (2003-2004).

[46] Nath, S.R. (2008).

[47] Dang, H., & Rogers, H.F. (2008). How to Interpret the Growing Phenomenon of Private Tutoring: Human Capital Deepening, Inequality Increasing, or Waste of Resources? World Bank: World Bank Policy Research Working Paper No. 4530. Retrieved May 20, 2008, from http://econ.worldbank.org/external/default/main?pagePK=64165259&theSitePK=469372&piPK=64165421&menuPK=64166322&entityID=000158349_20080225153509

[48] Campaign for Popular Education. (2003-2004).

With the variation in public expenditure on different education institutions in Bangladesh, the level of access to tutoring also depends on cost. The cost of tutoring varies throughout Bangladesh, ranging from 20 taka (33 cents) to 18,000 taka (300 U.S. dollars) per nine-month tutoring period, with a mean of 887 taka ($15).[49] On average, students in the highest quintile spend 2,661 taka ($44) for private tutoring (with a range of 1,201–18,000 taka or $20–$300), about 22 times higher than students in the lowest quintile (with an average of 121 taka, or $2, and range of 20–200 taka, or 33 cents to $3).[50] Table 2 summarizes this variation.

Table 2: Mean and Standard Deviation of Costs of Private Supplementary Tutoring

Quintiles	Range of Cost (in taka)	Mean	Standard Deviation	Coefficient of Variation
1st	20–200	121	56	46
2nd	201–400	327	56	17
3rd	401–700	532	82	15
4th	701–1,200	924	109	12
5th	1,201–18,000	2,661	2,103	79
All	20–18,000	887	1,298	146

Source: Nath. (2008).

Pilot Program Design

To alleviate the teacher shortage and take advantage of the widespread reliance on tutors, we propose the government hire, train, and introduce tutors into schools with the lowest literacy rates. These tutors would be trained specifically to work on improving literacy among children who are falling behind in the government schools.

Two successful randomized experiments providing remedial education for students in urban India employed young women as tutors for students lagging in basic literacy and numeracy skills. With these experiments as our model,[51] we propose the government hire tutors in rural areas, employing primarily women from local communities who have their senior secondary education certificate.[52] Approximately 7,000 tutors should be hired from the 50 upazilas targeted in our pilot programs. This would allow for approximately two tutors per school in the 50 least literate upazilas. Each tutor should receive a salary of 9,600 taka ($160)

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[49] Values are based on a nine-month tutoring period, using a 60:1 Bangladeshi taka to U.S. dollar exchange rate.

[50] Nath, S.R. (2008).

[51] Banerjee, et al. (2006). Remedying Education: Evidence from Two Randomized Experiments in India. Centre for Economic Policy Research Discussion Paper No. 5446.

[52] BRAC has successfully targeted this demographic as well. BRAC (2007). BRAC Education Programme (BEP) - How Our Schools Operate. Retrieved March 25, 2008, from http://www.braceducation.org/how_we_work_page1.php

per year (about 800 taka or $13 per month), which is above the current mean earnings for tutors working with impoverished students but still low enough to be financially feasible for the government. This proposed salary is also higher than the 500 taka ($8) per month, which teachers in NGO schools receive.[53]

These tutors would be trained in a format similar to BRAC's 12-week teacher training programs prior to the start of the academic year. Since BRAC and other NGO schools have teacher training facilities in the most impoverished areas, the pilot project would also provide an opportunity for partnership between government schools and non-formal institutions.

Tutor training would ensure a basic understanding of literacy instruction and help implement a standardized curriculum. Concurrent with recruitment, training, and placement of tutors, the government should test literacy levels for all third and fourth grade students in the pilot schools. This would allow the schools to identify the students who most need additional assistance to reach basic literacy levels.

Tutors would be hired on a part-time basis for non-single shift schools and a full-time basis in single-shift schools. During the school year, the tutors would work with the least literate third of students for two hours each day. These students would be pulled from their regular classes for tutoring in math and reading and writing in Bangla. For the remaining two hours of the school day, the students would return to classes with their regular teachers.

In the average school, tutors would work with approximately 20 students, although in some schools the number would be closer to 30. Tutoring would take place in unoccupied classrooms where available and common areas (hallways, lunch rooms, courtyards) where space is limited. In one-room schools without adequate common areas, additional resources may need to be allocated to classroom construction.[54] If no additional space is available, tutors would work with their targeted students in the regular classroom. Tutors would work with one group in the morning and another group in the afternoon, thus ensuring 80–120 of the least literate students per school have access to specialized tutoring.

In the average classroom, this program would reduce class size to 1:21 for remedial students and 1:40 for the remainder of students. Remedial students would receive the benefits of more specialized literacy instruction and increased interaction with tutors. The remainder of students also would receive the benefits of smaller class sizes and more advanced instruction, as the need for teachers to accommodate struggling students is decreased.

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[53] U.S. Agency for International Development. (2002). Bangladesh Education Sector Review. Retrieved April 25, 2008, from
http://www.beps.net/publications/BANGLADESH%201%20Overview%20of%20Basic%20Educa tion%20Sector.pdf
[54] PEDP-II is expanding education infrastructure: an estimated $510 million is targeted toward improving schools and classrooms, likely decreasing the number of one-room schools.

Evaluation of Policy across Criteria

The following sections analyze this policy proposal against the five evaluative criteria. We find that this policy scores medium on effectiveness, sustainability, equity, and technical feasibility and weak on timeliness.

Effectiveness
There are several examples of tutors being incorporated into schools and successfully increasing student literacy levels. In India, the average test scores of children working with tutors increased by 0.6 standard deviations, which is more than 50 percent of the test score gain a comparison child realized from one year of schooling. [55] To put this in perspective, the Student–Teacher Achievement Ratio program, conducted in Tennessee in the United States, reduced class sizes from 22 to 15 in select classes, resulting in an increase of 0.21 standard deviations. Since the early 1990s, the program has served as primary evidence that smaller classes significantly increase pupil performance.

Teachers' aides have proved effective in many non-formal schools in Bangladesh, contributing to a mean literacy rate of 75 percent for students in non-formal schools (compared to 52 percent for students in government schools).[56] We envision a role for tutors in government schools that mirrors teachers' aides in non-formal schools.

Furthermore, studies by BRAC's Research and Evaluation Division and the World Bank indicate that tutoring does lead to improved academic performance, even controlling for selection bias. The widespread demand for tutors in Bangladesh suggests that access to tutors is very likely linked to success in school. Although there may not be perfect information in the market for tutors, the ever-increasing demand for private tutoring suggests that households expect returns to education to exceed the costs.

However, just as the quality of teachers and schools varies across Bangladesh, the quality of tutors varies as well. Given the low salary proposed in this policy, it is likely that the quality of tutors would be low. Studies show a strong correlation between tutor fees and quality of tutors.[57] If tutors are unskilled at instructing pupils, they are unlikely to raise student literacy levels.

Timeliness
Although the introduction of tutors in classrooms would have positive long-term effects on literacy rates, the implementation of this policy is not feasible within an academic year. The components of this policy include recruitment and training of tutors, testing of students in classrooms, and introducing tutors to work specifically with the poorest performing students. Realizing these goals would be challenging within our political timeframe.

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[55] Banerjee, et al. (2006).
[56] Campaign for Popular Education. (2003–2004).
[57] Nath, S.R. (2008).

Sustainability

After hiring tutors in the pilot upazilas and developing a training procedure, sustaining and scaling up the program would require only recruitment of new tutors as needed. The structure of the program could easily be institutionalized within the Ministry of Primary and Mass Education's framework.

Resistance from teachers' unions is possible if newly hired tutors are seen as competition. Many government teachers supplement their salaries by tutoring students after school hours. This is a considerable source of income for many. In the short run, fear of competition may create backlash. However, the tutors would be working primarily with students from the most impoverished households. These students are not capable of hiring tutors and therefore would not affect market prices. In addition, the tutors would work during school hours, when teachers are unable to take on additional tutoring. Even if teachers' unions oppose the policy, it is likely to enjoy popular support, as it provides employment in impoverished areas and improves teacher-student ratio.

Equity

The policy ameliorates the social inequalities pervasive throughout the education system. By targeting the least literate upazilas, located almost exclusively in impoverished regions of Bangladesh, it ensures a distribution of educational resources that is more equitable than current funding. By training tutors to work with the least literate students, who are statistically more likely to be girls, first-generation learners, and from the poorest families, the policy addresses the more substantial factors contributing to inequality in the education system.

However, the policy does not give equal access to benefits. Students outside the bottom third of the class might not benefit at all from this policy. In poor-performing schools nearly all students likely would benefit from increased access to tutoring. By subsidizing only a small portion, this policy might be viewed as unfair by students and families who did not reap the benefits.

Technical Feasibility

Both India's and BRAC's programs have been successful in recruiting tutors who meet minimum qualifications. Our proposal's emphasis on basic literacy and numeracy means tutors could be less educated than teachers. Based on BRAC's success at recruiting and training young women from rural communities, we conclude that the government would not face significant difficulties in hiring 7,000 tutors.

Training for tutors would be technically feasible as the sessions would be shorter than the one-year training required for full-time teachers. However, the dearth of extra classrooms or common areas in many rural schools poses a substantial problem for technical feasibility.

Table 3 summarizes our evaluation of primary school testing.

Table 3: Summary Evaluation of Tutoring

Criteria	Score	Summary
Effectiveness	Medium	Tutoring is an effective method of improving literacy.
Timeliness	Weak	This policy entails significant time for recruitment and training.
Sustainability	Medium	This policy is easily replicable and would enjoy popular support, but teachers' unions might be hostile to perceived competition.
Equity	Medium	This policy would decrease the teacher–student ratio and provide tutoring in the most disadvantaged upazilas. However, some students with low levels of literacy would be excluded from the benefits of tutoring.
Technical Feasibility	Medium	Administrative capacity for this policy exists. The infrastructure is inadequate.

Policy 3: Fiscal Decentralization and School Management Committee Reform

In this section, we introduce and analyze a policy that encourages local stakeholder involvement in school management by increasing awareness of roles and responsibilities and decentralizing a percentage of school funding.

Status Quo: Limited Finance, Limited Scope

Since Bangladesh's independence from Pakistan in 1971, the government has been implementing policies to localize the management and administration of primary education. The Primary Education Act of 1981, the most fundamental national approach for primary education, established upazila education officers.[58] These officers are responsible for providing primary education leadership at the grassroots level. They are to oversee quality improvement of schools, group management, professional development, educational planning, monitoring and evaluation, communication and organization, and administrative duties.[59] Assistant upazila education officers are the frontline supervisors for primary schools in charge of giving teachers professional support and advice to do their job properly.[60] Ninety-four percent of upazilas had upazila education officers in 2003.[61]

PEDP-II aims to increase authority and resources at the school level to increase accountability, learning quality improvement, and equitable access. PEDP-II emphasizes autonomy and accountability to local communities to improve the quality of education.

In addition to the Bangladeshi government, international donors support educational decentralization. For example, under the Local Government Support Program, initiated by the World Bank in 2004, one of the project's five components incorporates fiscal transfers to eligible local governments for basic service delivery, including education for local people, and provides incentives for good governance and service delivery performance.[62]

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[58] Bangladesh Parliament. (n.d.). Act 1981. Retrieved March 30, 2008, from http://www.parliamentofbangladesh.org/Act/Act1981.pdf
[59] Campaign for Popular Education. (2003–2004).
[60] Ibid.
[61] Ahmed, M., Ali, K.S., & Khan, K.K. (2005). *Bangladesh: Education Sector Mapping.* Institute of Education and Development, BRAC University. Retrieved March 26, 2008, from http://www.lcgbangladesh.org/Education/reports/Education%20Sector%20Mapping%20March_05.pdf
[62] World Bank. (2008). *Local Governance Support Project.* Retrieved March 30, 2008, from http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P098273

School Management Committees

SMCs are recognized in local education sector efforts. The Primary Education Act of 1981 made provisions for the establishment of SMCs. According to the act, SMCs are expected to "ensure the effective management and functioning of the school and serve as the main vehicle for ensuring accountability of the school to parents and community."[63] According to a World Bank report, almost all schools (99 percent) surveyed by Education Watch 2001 had SMCs.[64]

The local member of Parliament selects all 11 SMC members. Each committee consists of the head teacher of the school, one male and one female patron of education, one donor of land to the school (if any), a teacher of a nearby high school (selected by the upazila education officers), a teacher representative from the school, and five parents.[65]

In theory, the establishment of SMCs institutionalizes participatory processes by creating semi-autonomous, quasi-legal bodies in every community to plan and oversee programs of basic education. The committees are charged with making educational plans and processes that reflect local concerns and aspirations.[66] Stakeholders are expected to meet monthly. The decentralization argument "rests on the assumption that local cadres will be sufficiently independent and motivated to take responsibility for risky undertakings."[67] However, as detailed below, Bangladeshi educational decentralization through SMCs has been ineffective.

Challenges of School Management Committees

Placing selection of SMC membership in the hands of local politicians has led to widespread dissatisfaction with SMC performance. The lack of transparency and community participation in the selection process has silenced the voice of the community in managing primary education. Moreover, local members of Parliament have been given the opportunity to exercise undue influence in the functioning of SMCs.[68] As a result, the key responsibility of school management and improvement has frequently been placed in the hands of the uneducated or well-connected.

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[63] Campaign for Popular Education. (2003–2004).

[64] Tietjen, K. (2003).

[65] Campaign for Popular Education. (2003–2004).

[66] Campaign for Popular Education. (2005). *Education Watch 2005: The State of Secondary Education Progress and Challenges.* Retrieved April 30, 2008, from http://www.campebd.org/content/EW_2005.htm

[67] UNESCO. (2005). *Implementing Education for All: Teacher and Resource Management in the Context of Decentralization, Literacy and Skills Development.* Retrieved April 25, 2008, from http://portal.unesco.org/education/en/ev.php-URL_ID=35964&URL_DO=DO_TOPIC&URL_SECTION=201.html

[68] Campaign for Popular Education. (2003–2004).

SMCs have little role to play in education because the elaborate administrative network of the education bureaucracy has firm control over all government primary schools. Consequently, SMCs have failed to attract adequate community participation to have a positive impact on primary education.[69] SMCs lack any say in the performance of teachers; in most cases, participation of SMC members is limited to attending meetings.[70]

There is low motivation among SMC members, especially in rural areas containing governmental primary schools. On average, 60 percent of members attended SMC meetings in rural governmental primary schools, whereas 75 percent of members participated in urban areas.[71] In contrast, local stakeholders were actively involved in the activities of registered non-government primary schools and BRAC schools.[72]

Female participation in SMCs is very low. Nearly 98 percent of committee presidents are male, and only 3 percent of females participate in meetings.[73]

Lack of communication with other local educational authorities is also a problem. Assistant upazila education officers apparently have no contact with SMCs or parents and do not attend meetings. Further, committee members have commented that they have never been asked to attend upazila education officers meetings. Miscommunication or confusion about the roles of parent-teacher associations and SMCs are also reported.[74]

Because of these shortcomings, 85 percent of all SMCs are reported to be inactive. Committees in rural areas and government primary schools are especially poorly managed. SMC members most frequently cite undue influence by head teachers and local politicians as the cause of SMC incompetence.

SMCs have been given a broad and sweeping role in primary school management but little real authority.

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[69] Behrman, J.R., Deolalikar, A.B. & Soon, L. (2002). *Promoting Effective Schooling through Education Decentralization in Bangladesh, Indonesia, and Philippines*. Asian Development Bank Economics and Research Department Working Paper Series No. 23. Retrieved on April 20, 2008, from http://www.adb.org/documents/erd/working_papers/wp023.pdf
[70] UNESCO. (2005).
[71] World Bank. (2004). *Project Appraisal Document on a Proposed Credit to the People's Republic of Bangladesh for a Primary Education Development Project II*. Retrieved April 25, 2008, from
http://web.worldbank.org/external/projects/main?Projectid=P074966&theSitePK=40941&pagePK=64283627&menuPK=228424&piPK=73230
[72] Ibid.
[73] Campaign for Popular Education. (2003–2004).
[74] Ibid.

The Case for Strengthening School Management Committees

Strengthening SMCs is the key to carrying forward educational decentralization in Bangladesh and thereby improving the quality of education. In the face of declining education expenditures since 1995, the resource needs of the education sector have expanded rapidly due to higher enrollment rates.[75] There is a need for enhanced management of school administrative and financial functions at the local level.

SMCs are in the best position to diagnose problems and prescribe solutions for the improvement of education in each school. Their efforts are likely to be the most targeted and therefore most effective. In theory, because SMC members are elected, they can be held accountable for educational outcomes by the community.

SMCs have been formed in all government primary schools in Bangladesh, so the framework for decentralization is complete. A large part of the potential of educational decentralization to improve educational quality lies in the mobilization of these groups. Improving capacity through training and enhancing operational budgets will strengthen SMCs.

Pilot Program Design

With these ideas in mind, we propose fiscal decentralization and SMC reform. While the broader goal of decentralization—the transfer of political, fiscal and administrative powers to subnational governments—continues in Bangladesh, the education sector requires a more targeted policy.[76] This policy focuses on the transfer of fiscal and administrative power over school management to the community level through SMC training and increased discretionary funding.

Specifically, the central government should offer SMC training, focusing on accountability, female participation, and funding. We propose taking measures to strengthen SMCs by increasing involvement and transparency at all levels of school administration. We believe this can be accomplished by requiring SMC members, upazila officers, and national officials to enter into written contracts, elaborating each level's respective rights and responsibilities.

While this policy does not call for political decentralization at the upazila level, centrally controlled upazila education officers would be responsible for SMC training, as mandated under PEDP-II. This training should include financial, supervisory, and administrative skills so that committees can mobilize local resources and residents to improve their schools. The upazila education officer would monitor SMC progress and report outcomes to the Ministry of Primary and Mass Education. For their part, SMCs would ensure 30 percent female membership and draft an SMC action plan, detailing explicit steps to improve educational quality in their respective schools. The SMC would provide copies of this

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[75] Behrman, J.R., Deolalikar, A.B. & Soon, L. (2002).
[76] World Bank. (2008). *Decentralization in Bangladesh.* Retrieved March 30, 2008, from http://go.worldbank.org/G2HLJUMFS0

document to upazila and national offices. The Ministry of Primary and Mass Education's main responsibility would be general oversight of the policy.

Upon filing the action plan and signing the contract, the Ministry of Primary and Mass Education would provide a one-time block grant to the SMC for investment in quality improvement of education. Grants will amount to 42,000 taka ($700) per SMC (roughly 10 percent of the annual operating budget of a school), resulting in fiscal decentralization of expenditure.[77]

Evaluation of Policy across Criteria

The following sections analyze this policy proposal against the five evaluative criteria. We find that this policy scores strong on equity, medium on effectiveness, and weak on timeliness, sustainability, and technical feasibility.

Effectiveness
Theoretical and empirical evidence show that active and capable school-level management can improve educational quality. Such localized management can target the goals and needs of the community while enhancing accountability for educational outcomes. Case studies from Pakistan have found that strengthening local school managers through decentralization improved educational quality.[78]

Requiring that all levels enter into contracts ensures that all stakeholders realize their rights and responsibilities and fosters communication across multiple levels of government. Fiscal decentralization would allow SMCs to accomplish locally targeted initiatives, encouraging community ownership of schools. Finally, recent efforts by Bangladesh's Anti-Corruption Commission to uproot the influence members of Parliament exercise over school management might serve to further empower SMCs.

Although decentralization may benefit some areas, this policy does not directly link to improving literacy rates. There is no way of guaranteeing that SMCs would spend discretionary funding on programs that improve student performance. Finally, this policy would not be effective if local elites continue to control SMC decisionmaking.

Timeliness
Elections at the end of 2008 could constrain implementation of any pilot program. Full implementation of the program requires drafting and filing SMC action plans, signing contracts at all government levels, distributing block grants, and training each SMC. We predict that implementing this pilot program would not occur before the expected government transition at the end of 2008.

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[77] Ahmed, A.U., & Arends-Kuenning, M. (2006).

[78] World Bank. (2005). *Proposed Sector Development Policy Credit to the Islamic Republic of Pakistan for a Second Education Sector Development Policy Credit for the Government of Punjab Province*. Retrieved April 25, 2008, from http://www-wds.worldbank.org/external/default/ WDS ContentServer/WDSP/IB/2005/03/10/000012009_20050310105745/Rendered/PDF/31519.pdf

Sustainability

Capacity building of SMCs likely would take a prolonged commitment from the central government. In the changing political climate, this policy is susceptible to failure if funding for training programs is cut. Given the longstanding efforts at decentralization, including the PEDP-II, and the widespread international acceptance of its value, this policy might be sustainable with central government support. However, regardless of national legislation, the central government has shown no inclination to decentralize authority, a position that seems unlikely to change.

A one-time block grant would not provide continuous funding for SMCs nor require a long-term commitment from the central government. Once funds are spent, SMCs would face the same set of fiscal challenges as before. The patterns of accountability would be unlikely to continue without the block grant as an incentive. Finally, the SMCs do not raise their own revenue. As raising own-source revenue encourages efficient expenditure and accountability, a block grant provided by the central government might result in inefficient allocation of resources.

Equity

The policy would improve gender equity in SMCs and schools. Girls often do not attend school, and this worsens the literacy rate. Fostering their school participation through SMCs would improve the literacy rate.

Decentralization would bring more equity by allowing SMCs the option to allocate resources or implement programs in a way that meets local needs. Considering the variation across regions, especially between urban and rural areas, school-level administration should also vary. Different SMCs will use intimate knowledge of their schools to allocate their block grants, potentially improving equity.

Technical Feasibility

This policy would face significant technical feasibility challenges. For example, school curricula are still made at the central level, and SMCs have little voice in decisionmaking. At the local level, intervention by members of Parliament who tend to side with central stakeholders impedes turning SMCs into local, education-governing institutions. On the other hand, without the cooperation of these legislators, SMCs' ability to solve local education problems is severely compromised. In addition to these challenges, the existing culture of corruption in the country would likely hamper the transfer of funds from the center to local levels. Corruption has played a significant part in the failure of past decentralization policies.

The SMC contract policy would likely face significant opposition from influential legislators hostile to decentralization projects. However, because the contract clarifies the role and duties of the SMCs for the community members and reconstitutes SMC membership to empower the community, the program would likely benefit from considerable popular support.

Table 4 summarizes our evaluation of this policy against the five criteria.

Table 4: Summary Evaluation of Fiscal Decentralization

Criteria	Score	Summary
Effectiveness	Medium	Although fiscal decentralization seems to have positive effects on literacy rates, there is no guarantee that SMCs would use the block grants for programs that promote literacy.
Timeliness	Weak	This pilot program would not be fully implemented before the expected government transition.
Sustainability	Weak	A one-time block grant would not permanently change the centralized structure of the education system.
Equity	Strong	This policy would allow local decisionmakers to tailor programs to local needs.
Technical Feasibility	Weak	We expect high levels of corruption and institutionalized resistance to decentralization.

Policy Recommendation

Based on the projected performance of the three policy alternatives, we recommend that the Bangladeshi government implement tutoring pilot programs in the selected low-literacy upazilas. Introducing tutoring into government schools increases the teacher–student ratio and the amount of attention that each student receives. The Ministry of Primary and Mass Education could implement this pilot program in a relatively short time frame; the design could be expanded nationwide should it prove successful.

This pilot program also would address educational equity, as students from lower-income families cannot afford to hire tutors outside of school. Institutionalizing an aspect of the tutor system represents a way to remedy this inequality. Finally, teachers' aides already exist in the non-formal education sector in Bangladesh and have proven effective in improving educational outcomes. The government schools could draw on this established practice when implementing this pilot program.

This policy would not come without obstacles. First, teachers' unions might resist this program if tutors are seen as a threat to teachers' income. Second, corruption would influence the hiring of tutors and any effort to monitor their activities in the schools. Third, even in a situation with low levels of corruption, hiring high-quality tutors would be difficult.

Considering the shortcomings of the other two policy alternatives, the tutor policy has the greatest chance of improving literacy rates in government primary schools. The difficulty of implementing and monitoring the standardized test incentive policy would be greater than the tutoring policy. Fiscal decentralization does not provide the direct link to literacy improvement that school-based tutoring does. Corruption also has a much greater effect on the fiscal decentralization and testing alternatives than the tutoring policy. Therefore, while the tutoring policy may not be perfect, it has the best chance of improving literacy rates in government primary schools using existing education structures and institutions.

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Appendix A: Selected Upazilas

There are 37,672 public primary schools in Bangladesh. We chose 3,276 public schools in upazilas with the lowest general population literacy rates in all of Bangladesh. Our selection consisted of choosing the 25 upazilas in Bangladesh with the lowest literacy rates in 25 districts (one upazila per district). We then included the upazila with the second lowest literacy rate in each selected district. Pilot program upazila literacy rates range from 15.1 percent to 43.2 percent. They represent many of the poorest, most rural, and least educated areas of Bangladesh. In choosing these upazilas, we aimed to keep the range small enough to be manageable but diverse enough to allow for generalizing the findings of the pilot projects. Selected schools represent 14.4 percent of total schools in the 25 districts and 8.7 percent of total public schools in Bangladesh. Table 5 summarizes the data about the 25 districts.[79]

Table 5: Upazilas Selected for Pilot Project

District	Number of schools in district	Upazila	General population literacy rate	Number of schools in pilot project
Bandarban	219	Thanchi	15.1%	14
		Roangchhari	23.8%	24
Bhola	424	Lalmohan	32.2%	72
		Manpura	35.7%	14
Bogra	961	Dhunut	31.1%	96
		Shariakandi	32.3%	83
Brahmanbaria	690	Nasirnagar	27.8%	80
		Sarail	32.9%	81
Chittagong	1,634	Bashkhali	29.5%	110
		Fatikchhari	43.2%	133
Comilla	1,334	Homna	33.2%	62
		Meghna	33.8%	42
Cox's Bazar	376	Maheshkhali	22.5%	47
		Teknaf	24.4%	34
Gaibandha	737	Pulchhari	27.7%	49
		Sundor Gonj	31.1%	140
Hobiganj	732	Lakhai	28.7%	51
		Banichang	31.5%	114

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[79] Ministry of Primary and Mass Education. (n.d.). List of Government Primary Schools. Retrieved March 24, 2008, from http://www.mopme.gov.bd/; and Bangladesh Bureau of Statistics. (2001). Area, Population and Literacy Rates by Upazila/Thana-2001. Retrieved March 14, 2008, from http://www.bbs.gov.bd/dataindex/census/ce_uzila.pdf

District	Number of schools in district	Upazila	General population literacy rate	Number of schools in pilot project
Jamalpur	588	Islampur	23.6%	83
		Madargonj	24.6%	66
Khagrachhari	320	Luxmichhari	22.9%	15
		Panchari	34.6%	40
Kishorgonj	813	Nikli	23.9%	38
		Itna	24.8%	49
Kurigram	563	Rowmari	24.7%	39
		Rajibpur	25.6%	21
Luxmipur	512	Ramgati	29.5%	91
		Raypur	42.3%	84
Manikgonj	457	Daulatpur	28.3%	65
		Singair	34.7%	69
Mymensingh	1,249	Dhubaura	27.9%	43
		Fulpur	33.1%	133
Nawabgonj	370	Shibgonj	32.5%	120
		Gomastapur	35.4%	57
Netrokona	625	Madan	27.1%	44
		Kalmakanda	30.2%	75
Nilphamari	472	Kishoreganj	32.7%	77
		Jaldhaka	33.0%	85
Rangamati	391	Bilichari	26.7%	18
		Jurachhari	27.3%	25
Rangpur	701	Gangachara	32.9%	84
		Kawnia	37.0%	54
Shariatpur	397	Jajira	31.0%	56
		Goshairhat	32.0%	45
Sherpur	358	Sreebordi	26.4%	77
		Sherpur Sadar	30.3%	119
Sunamgonj	856	Dharampasha	26.4%	98
		Bishwambarpur	28.4%	43
Sylhet	1,066	Companigonj	22.7%	32
		Goainchat	22.8%	85

Sources: Ministry of Primary and Mass Education. (n.d.). List of Government Primary Schools. Retrieved March 24, 2008, from http://www.mopme.gov.bd/; and Bangladesh Bureau of Statistics. (2001). Area, Population and Literacy Rates by Upazila/Thana-2001. Retrieved March 14, 2008, from http://www.bbs.gov.bd/dataindex/census/ce_uzila.pdf.

Appendix B: Cost Estimates

This appendix presents the cost estimates for each policy alternative.

Policy 1: Education Stipends Linked to Literacy Test Performance

Cost of Pilot Program

Primary school testing would be a new cost to the education budget, as the government must create and administer the test, award the stipends and teacher bonuses, and monitor the system.

Family Stipends

If all students achieved the benchmark level of literacy, the cost of family stipends in the pilot program would be approximately 7.5 crore taka ($1.3 million) per month and 90 crore taka ($15 million) per year.[80] If only a quarter of all students met the benchmark literacy levels, family stipends would cost 1.9 crore taka ($317,000) per month and 22.8 crore taka ($3.8 million) per year.

Teacher Bonuses

If all teachers in the pilot program received a full 5 percent bonus, the cost would be 4.3 crore taka ($720,000) per year. If 25 percent of teachers received a full bonus, the cost would be 1.1 crore taka ($180,000) per year.[81]

The pilot program cost would additionally include implementation and operational costs.

Policy 2: Tutors in Government Schools

Cost of Pilot Program

A similar program implemented in India was highly cost-efficient, estimated to be 12 to 16 times more cost effective than hiring new teachers. The salary of tutors in India was only 10 percent the salary of teachers.[82] Similarly, in Bangladesh, the cost of tutors is estimated to be 9,600 taka ($160) per tutor, compared to 48,000 taka ($800) per teacher. Therefore, the government would be able to hire 7,000 tutors at a cost of 6.72 crore taka ($1.1 million) per year, compared to 33.6 crore taka ($5.6 million) to hire the same number of teachers.

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[80] We base this estimate on the number of students in government primary schools in 2004 as reported by the Ministry of Primary and Mass Education, assuming that 10 percent of students are targeted in the pilot. The family of each student in class I or II would receive a 60 taka stipend per month for achieving the benchmark; students in classes III-V would each receive 80 taka. We use a 60:1 Bangladeshi taka to U.S. dollar exchange rate.

[81] We base this estimate on the total number of teachers in government primary schools in 2005 as reported by the Ministry of Primary and Mass Education, assuming that 10 percent of teachers are targeted in the pilot. Ahmed (2006) reports an annual government primary school teacher salary of $887 per year at a 60:1 Bangladeshi taka to U.S. dollar exchange rate.

[82] Banerjee, et al. (2006).

Additional costs

Some additional costs to the program would include pre-and post-project literacy tests, the development and implementation of tutor training and other operational costs, depending on the existing infrastructure and technical expertise in these areas.

Policy 3: Fiscal Decentralization and School Management Committee Reform

Cost of Pilot Program

This policy alternative would require the central government to provide 42,000 taka ($700) in discretionary funding to participating SMCs. With 3,276 schools in the pilot program, this would translate to 13.7 crore taka ($2.3 million) if all committees complied with the program requirements. The SMC constitution and contract drafting itself would not require significant funding from the center, although additional staff time would be required to oversee the process at the committee level and to monitor the program at the ministry level.