

評価調査結果要約表（英文）

I. Outline of the Project		
Country: People's Republic of Bangladesh		Project title: Project for Strengthening Primary Teacher Training on Science and Mathematics
Issue/Sector: Basic education		Cooperation scheme: Technical Assistance Project
Division in charge: JICA Bangladesh Office		Total cost: Approximately 550 million yen
Period of cooperation	From October 1, 2004 to	Partner country's implementing organization: Directorate of Primary Education (DPE), Ministry of Primary and Mass Education (MOPME)
	September 30, 2008 (4 years)	
1. Background and Outline of the Project		
<p>The People's Republic of Bangladesh has been working actively toward achieving universal implementation of primary education since the signing of "Education for All (EFA)" declaration in 1990. From 1998 to 2003, the Primary Education Development Programme I (PEDPI), which is a sub-sector wide program, was put into effect to implement the construction of primary schools and resource centers, the training of teachers and administrative officers, the development of educational materials and the establishment of information management systems. As a result, it succeeded in raising the net enrollment ratio of primary education to 87.2%³. However, the completion rate of primary schooling, which is compulsory, remains at 59.2%⁴, and the problems of withdrawal and consequent reduction in the quality of education are recognized as important challenges.</p> <p>The Government of Bangladesh (GOB) started the Second Primary Education Development Program (PEDP II, 2004-2010) from 2004 as the second phase of the PEDPI under the cooperation of eleven donor organizations. PEDP II aims to improve the quality of education, and includes four major components, namely 1) organizational reform, 2) improvement of educational quality in the school and in the classroom, 3) improvement of infrastructure and 4) improvement of access. Among them, regarding Component 2) "improvement of educational quality in the school and in the classroom," the GOB requested technical assistance to the Government of Japan on the improvement of educational quality at the classroom level.</p> <p>Receiving the request mentioned above, this project was started from October 2004 as a four-year project, aiming to improve the quality of training for science and mathematics teachers at primary schools and that of education given in the classroom. With the National Academy for Primary Education (NAPE) serving as the major counterpart (C/P) organization, the project promotes cooperation and collaboration between teachers and others involved in education, and implements activities conducive to</p>		

³ Baseline survey PEDPII(2005)

⁴ Ibid (2005)

the improvement of educational quality through the development of science and mathematics teaching materials.

2. Project Overview

(1) Overall Goal

Attainment in science and mathematics in primary education is improved in the target institutions.

(2) Project Purpose

The quality of teaching in S&M is improved in the target institutions.

- NAPE
- PTIs
- The Field Testing Schools

Selected URCs and UEOs

(3) Outputs/Activities

1. New teaching and learning methodologies are introduced through the development of Teaching Packages
2. The lessons of science and mathematics are improved in the target institutions through the use of Teaching Packages.
3. The capacity of NAPE for training and research in science & mathematics is enhanced.
4. The progress of activities is reported regularly in DPE and PEDPIL.

(4) Inputs (as of the end of March 2008)

Japanese side:

Dispatch of experts: 142.21M/M (17 people in gross total)

Equipment provision: Approximately 11.43 million yen (besides general operating expenses of approximately 5 million yen)

Training in Japan: 11 counterpart personnel (in FY 2004 and FY2005)

Technical exchange: 9 counterpart personnel (in FY2006/the Philippines)

Bangladeshi side:

Counterpart: 7 people

Project office and other necessary running costs

II. Evaluation Team

Members of the evaluation team	<p>Leader: Nobuko KAYASHIMA , Resident Representative, JICA Bangladesh Office</p> <p>Educational policy: Yosuke KOBAYASHI, Chief, Basic Education Division I, Human Development Department, JICA</p> <p>Education evaluation: Mariko ADACHI, Junior Expert, JICA Bangladesh Office</p> <p>Cooperation planning: Keiji EHARA, Assistant Resident Representative, JICA Bangladesh Office</p> <p>Evaluation analysis: Satoru TAKAHASHI, Senior Researcher, IMG Corporation</p>
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* Although Mr. Nagaoka, who was dispatched to Bangladesh as a primary education advisor, is not included in the evaluation team because he belongs in the MOPME, he supported the evaluation as a coordinator with the Bangladeshi side.

Period of evaluation April 27, 2008 – June 4, 2008 Type of evaluation: Terminal Evaluation

III. Results of Evaluation

1. Confirmation of Actual Performances

(1) Achievements of Output

(i) New teaching and learning methodologies are introduced through the development of Teaching Packages

Teaching packages for 1st-4th grades in primary school were developed and approved by the DPE during the period shown below. A package for 5th grade is currently being developed, and the draft is scheduled to be completed by August 2008. However, because it is expected that its approval will be around November 2008, it probably will not be completed during the current project period (until September 2008).

Subject/grade	1	2	3	4	5
Science	—	—	Apr. 2007	Feb. 2008	Under development
Mathematics	Apr. 2007	Apr. 2007	Feb. 2008	Feb. 2008	Under development

The new teaching methods utilized in the teaching package has already been being introduced at NAPE, the Primary Teacher Training Institute (PTI) and the experimental school attached to the Mymensingh PTI.

(ii) The lessons of science and mathematics are improved in the target institutions through the use of Teaching Packages.

NAPE Deputy Directors (including Assistant Directors), PTI instructors and teachers at testing schools are realizing that science and mathematics classes have improved through the introduction of the ideas, methods and educational materials written in the teaching package. The draft of the Post-Activity Study Report in 2008 states that compared to 2004, the subject knowledge of teachers at field testing schools (FTSs) increased dramatically and classes they teach have become more interactive.

The Terminal Evaluation Team also confirmed through an on-site survey that the relevant parties in the target organizations are strongly aware of the importance and meaning of the child-centered approach and classes including group work. They say that they are now able to link abstract concepts with concrete matters and events, and to provide more easy-to-understand classes to their students. Furthermore, it is also mentioned that teachers and instructors used to be afraid of teaching science and mathematics, but they now have reached a level of confidence in giving classes and are enjoying the classes with students and trainees.

(iii) The capacity of NAPE for training and research in science & mathematics is enhanced

By March 2008, NAPE had implemented study group activity (SGA) 143 times, and study workshop (SW) 11 times. Such continuous efforts improved the collegial relationship among C/Ps and strengthened the C/Ps' training and research abilities in science and mathematics, as well as promoting the exchange of opinions between relevant parties belonging to different organizations. NAPE also implemented training

sessions on the concepts of the teaching packages and the usage thereof to the principals of PTIs and science and mathematics instructors throughout the country as shown in the table below.

Training period		Trainees	Subjects	No. of trainees
2007	June	Principals of PTIs	G3 science/G1-2 mathematics	52
	July-August	PTI instructors (mathematics/3 batches)	G1-2 mathematics	52
	August-September	PTI instructors (science/2 batches)	G3 science	38
2008	February	Principals of PTIs	G4 science/G3-4 mathematics	53
	February-March	PTI instructors (mathematics/3 batches)	G3-4 mathematics	50
	February-March	PTI instructors (science/3 batches)	G4 science/G3-4 mathematics	50

According to the answers to a questionnaire on the training session, trainees evaluated the training as practical, realistic and useful. One person requested that NAPE visit all PTIs and grasp the current situation before giving instructions and advice. Another person asked NAPE to develop teaching packages for subjects other than science and mathematics. In addition, it can also be pointed out that NAPE Deputy Directors became able to critically analyze the details of Certificate in Education (C-in-Ed) curriculum, national curriculum and textbooks, through the development of the teaching packages.

(iv) The progress of activities is reported regularly in DPE and PEDPII.

This project submits a monthly monitoring report to the Training Division of DPE, and the quarterly accounting report to the Finance and Procurement Division. It also submits a report on the progress of activities every quarter to the Training Division. The Project supports the preparation of the Annual Operational Plan (AOP) related to the implementation of the PEDP II as a project activity. In addition, presentations on the activities of the Project were implemented twice in the educational forum held by the PEDP II.

(2) Project Purpose Achievements

“Purpose :The quality of teaching in S&M is improved in the target institutions.

- NAPE
- PTIs
- The Field Testing Schools:”

By working closely with JICA experts toward the development of the teaching packages, NAPE Deputy Directors obtained the knowledge and skills that represent the fundamentals of high-quality science and mathematics education. PTI instructors improved their basic skills on the cycle of “planning classes, giving classes and reviewing” (plan-do-see). However, as of the Terminal Evaluation it has yet to be confirmed whether the instructors who participated the training program were able to utilize and fixate the teaching packages when they returned to each of their PTIs, or if they were able to improve the quality of C-in-Ed training.

However, based on the child-centered approach, teachers at testing schools are giving classes using easier-to-understand methods by frequently using aids to learning. As a result, students have started to enjoy studying through interactions (between teachers and students, and among students). Such favorable changes are noted by the teachers themselves, and are also included in the draft of the Post-Activity Study Report.

(3) Overall Goal Achievements

“Overall Goal: Attainment in science and mathematics in primary education is improved in the target institutions.”

Teachers at FTSs (four schools) and teachers at the Mymensingh PTI experimental school (one school) introduced the new teaching methods shown in the teaching packages to subjects other than science and mathematics, and they confirmed that the methods are effective. Some teachers say that because learning by itself has become enjoyable to students, students have begun to like school life, eventually leading to the improvement of the attendance rate, the promotion rate and the completion rate in the school as a whole.

2. Evaluation based on the Five Criteria

Item	Summary
Relevance	“Quality education” is given as one of the important items in the “building strategies” of the Poverty Reduction Strategy Paper (PRSP). Accordingly, this Project is integrated into Component 2 of the PEDP II, and is consistent with the overall national policy of Bangladesh and the educational program.
Effectiveness	Tangible results, such as educational packages for grades 1-4, were developed and approved by DPE. It is expected that the draft of a package for the 5th grade is to be submitted to the Technical Committee by August 2008 (it is expected to be approved by around November 2008). Through the development and utilization of teaching package, SGA, SW and relative trainings, abilities of Deputy Directors/instructors/teachers at NAPE, PTI and testing schools were strengthened. However, the fixation of the teaching packages at PTI and the improvement of the quality of classes are yet to be confirmed.
Efficiency	All inputs, including human resources and equipment, are indispensable elements for the implementation of the Project. Inputs were managed appropriately and efficiently, and activities were implemented in line with the AOP.
Impact	Teachers at FTSs (four schools) and teachers at the Mymensingh PTI experimental school (one school) introduced the new teaching methods shown in the teaching package to subjects other than science and mathematics, and they confirmed that the methods are effective. It made classes more active, and students began to like not only

	<p>science and mathematics but also other subjects, and they began to like the school. Teachers say that such a series of changes resulted in the improvement of the attendance rate, the promotion rate and the completion rate. It is possible to further expand the impact by trying to fixate the teaching packages in PTIs throughout the country.</p>
Sustain-ability	<p>The technical foundation for the Faculty of Science and Mathematics of NAPE was built. As long as the C/Ps continue to work there, it is expected that the expertise and ability obtained through the project will spread to all PTIs. In order to realize this in a sustainable manner, it is highly important that monitoring and instructions from NAPE to PTI be carried out on a regular basis. In actuality, DPE and NAPE inform all PTIs in writing the usage of the teaching packages in the current C-in-Ed curriculum. In addition, it is already agreed that expenses for printing and distributing the teaching packages are to be paid from the pool fund of the PEDP II.</p>

3. Factors that Promoted the Realization of Effects

- Favorable human relationships with DPE and NAPE, and the establishment of a smooth communication system

It is particularly conducive to employ a well-experienced person who served as the Director General of DPE for many years as a local consultant. The way to implement activities under cooperation with individual experts (primary education advisor) contributes largely to running the Project.

- Cooperation between consultant companies and universities

While consultants actually implemented activities, university teaching staff made academic inputs accordingly. Both parties worked in close coordination, and are implementing activities by supplementing each other, utilizing their own expertise and strong points

4. Factors that Impeded the Realization of Effects

- Change in personnel within DPE and NAPE

Although it is not so frequent within NAPE, change in personnel frequently occurs in DPE. Therefore, human resources who received training in Japan, with whom a trust relationship has been established, may move to other organizations. Therefore, in order to gain continuous support, it is necessary to explain the Project and establish relationships anew every time there is a change in personnel.

- Absence of local experts in specific subjects

Bangladesh does not have a system to foster subject-specific experts in higher education. Even PTI instructors may not focus on a single subject but flexibly handle multiple subjects. This can also be said with NAPE C/Ps. Therefore, the development of the teaching packages initially required substantial time.

5. Conclusion

The purpose of the project is being achieved to a certain extent, with cooperation between the Bangladeshi side and Japanese experts. In specific, teaching packages for grades 1-4 were developed under the project, and were officially approved by DPE. Also, NAPE Deputy Directors acquired the basic knowledge and skills necessary for high-quality science and mathematics education. As their abilities improved and they gained confidence, favorable changes started to appear in training sessions and classes at NAPE, PTI and testing schools.

However, considering the official approval of the teaching package for 5th grade and the diffusion/fixation of all teaching packages (especially at the PTI level), it is desirable to extend the project period to March 2010.

IV. Recommendations

(1) Approval of the educational package for 5th grade

It is scheduled that the draft of the teaching package for 5th grade is submitted to the Technical Committee of DPE by July 2008. It is desirable to take appropriate steps to ensure early approval.

(2) Printing and distribution of the educational packages

As stated above, it is agreed in the operational plan of the Mid-term Review (MTR) of the PEDP II to pay expenses to print and distribute the teaching packages for all primary schools in the country from the pool fund of the PEDP II. Appropriate administrative procedures to print and distribute the teaching packages should be taken promptly without losing this momentum.

(3) Extensive use of the educational packages in all organizations related to primary education

DPE and NAPE should encourage the extensive use of the teaching packages in PTIs, URCs, subclusters and other appropriate areas. Training of PTI principals and instructors on the teaching package for 5th grade, as well as the training of trainers (TOT) on URC instructions, should be implemented as project activities by JICA in the future.

(4) Monitoring and mentoring on TP at the PTI level

NAPE should continuously serve an important role in monitoring/mentoring of PTIs and in giving instructions and advice on the use of the teaching packages in the future. In order to realize the appropriate use of the teaching packages in all PTIs, NAPE prepared a proposal on monitoring and mentoring. This approach should achieve further effects with technical support from JICA.

(5) Integration of the educational packages into the revised C-in-Ed curriculum

The careful investigation and revision of C-in-Ed will start in a short while at NAPE. In order to extend the teaching packages in PTIs and primary schools, it is essential to include the teaching packages into the revised C-in-Ed curriculum. It is expected that DPE and NAPE will be proactively engaged in this work.

(6) Extension of project period

In order to implement activities given in recommendations above, the period of the JICA Project should be extended until March 2010.