添付資料

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７．PDM 改訂案

添付資料１．ミニッツ

MINUTES OF MEETINGS
BETWEEN THE JAPANESE MID-TERM EVALUATION TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH ON JAPANESE TECHNICAL COOPERATION PROJECT FOR STRENGTHENING PRIMARY TEACHER TRAINING ON SCIENCE AND MATHEMATICS

The Japanese Mid-term Evaluation Team (hereinafter referred to as "the Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Eiichiro CHO, visited the People's Republic of Bangladesh from November 17 to December 12, 2006. The purpose of the Team was to monitor the activities and evaluate the achievements made so far in the JICA Support Program for strengthening primary teacher training on science and mathematics (hereinafter referred to as "the JSP").

During its stay, both the Team and authorities concerned of the People's Republic of Bangladesh (hereinafter referred to as "both sides") had a series of discussions and exchanged views on the JSP. Both sides jointly monitored the activities and evaluated the achievement based on the JSP (Project) Design Matrix (hereinafter referred to as "PDM").

As a result of the discussions, both sides agreed to the matters referred to in the documents attached hereto.

Dhaka, December 11, 2006

Eiichiro CHO
Leader
The Mid-term Evaluation Team
Japan International Cooperation Agency
Japan

M.Emdadul Haque
Deputy Secretary
Economic Relations Division
Ministry of Finance
The People's Republic of Bangladesh

A.S. Shameem Ahmed
Joint Secretary (development)
Ministry of Primary and Mass Education
The People's Republic of Bangladesh

1. Conclusion of the Mid-term Evaluation

The JSP has introduced a new approach of quality teaching cycle by conducting Study Group Activities (SGAs) and Study Workshops (SWs) as well as developing teaching packages (TPs). Three TPs of mathematics for Grades 1 and 2, and science for Grade 3 have been developed as planned.

To date, the following changes have been observed towards the purpose of the JSP:

- The professional capacity of NAPE has been strengthened to some degree, to facilitate the improvement of quality of teaching at different levels.
- There is some positive change in collegial relationship through SGAs and SWs.
- Some changes have been observed in science and mathematics lessons at Field Testing Schools (FTSs).

These indicate that the approach introduced by the JSP has been effective to some degree. It should be emphasized that NAPE is to play a leading role to promote this approach among stakeholders.

In view of the above, further effort is needed by the JSP to strengthen the capacity of NAPE and to share its outputs with other trainings and research activities being conducted by NAPE, so that the purpose stipulated in PDM shall be achieved by the end of the cooperation period.

2. Evaluation

2.1 Achievement of the JSP

2.1.1 Outputs

Output 1: *The teaching ability of science & mathematics and collegial relationship are improved at NAPE, PTI, URC, UEO's office and the FTSs (field testing schools).*
The JSP has introduced an approach to improve the expertise of counterparts by organizing the Study Group Activity (SGA) and the Study Workshop (SW), in which new method of "quality teaching cycle" is introduced. As a result of seventy-six (76) SGAs and seven (7) SWs, this mechanism has developed an academic relationship among the JSP concerned people in order to have discussion on improving science and mathematics lessons. The changes in attitude/critical thinking of the counterparts are observed. The teachers of FTSs also have gradually changed their view for what a good lesson is.
Output2: *Science and mathematics trainings are properly conducted at NAPE, PTI, URC and UEO's office*
Science and mathematics trainings for the developed TPs have not been organized by the time of the mid-term evaluation by NAPE, URC and UEOs. Instructors of URC, UEO and AUEOs in the targeted Upazila have participated in seven SWs. NAPE has a plan to carry out a PTI superintendents training in Jan-Feb. 2007 and a PTI instructor training in February 2007 with the technical assistance by the JSP. The JSP technically supported for development of one leaflet for sub-cluster training by UEO offices.

Output 3: *The appropriate curriculum and valid assessment are recommended (the C-in-Ed exam at PTI and cluster exam. at the FTSs)*
The curriculum and method for assessment of science and math for the C-in-Ed were analyzed. And then, based on the analysis, the recommendation was submitted. By this time, National Committee has been constituted to review the C-in-Ed curriculum. Also during the process of testing the TPs at the FTSs, the JSP analyzed the curriculum, textbooks and terminal & annual examinations on both science and mathematics of the primary school level. Based on the analysis, suggestions were made.
Output 4: *The relationship between NAPE, PTI, URC, UEO's office and FTSs is strengthened.*
The SGAs & SWs made the relationship among the concerned organization stronger in terms of academic linkage. The teachers of FTSs have received more technical advice from NAPE CPs.
Output 5 : *Teaching packages are authorized at the central level (DPE)*
TPs for Grades 1 and 2 mathematics and Grade 3 science are completed through try-out at the FTSs. The TPs are on the final process of approval by the government. NAPE in coordination with the JSP will make a further step to disseminate the developed teaching packages in nationwide. In early 2007, PTI instructor and superintendent trainings are scheduled to be conducted with the technical cooperation by the JSP.

2.1.2 Purpose

The quality of teaching in Science and Mathematics is improved in real setting. (NAPE and PTI are the major targets, but the support program also includes some URCs and UEO's offices; and some schools for the field testing.)

The quality of teaching is improving (on the basis of the protocol analysis made by the JSP) in lessons of science and mathematics of the FTSs compared with CGS. The some changes in FTSs' science and mathematics classes were observed in three level (1) teaching-learning pattern, (2) teaching-learning materials (3) pupils' participation in lessons.

2.1.3 Overall Goal

The pupil attainment of science and mathematics in primary education is improved in the target area.

The target area for the overall goal has not been clearly defined and shared among stakeholders. The intervention of the JSP to the school level to date has been limited to five (5)FTSs through SWs , and no training has been conducted by NAPE for URC and UEOs to disseminate the developed TPs to the school level. As for the PTI level, trainings for superintendents and instructors for the developed TPs are to be conducted in early 2007. Therefore, it is not possible to discuss the impact on the improvement of pupils' attainment at this moment.

3. Result of the Evaluation

3.1 Implementation Process

The JCC mentioned in RD has not been organized, because the JSP is being implemented under the framework of approach of PEDP-II. In stead of the JCC, the PCU and the training division of the DPE monitor the progress of the JSP. The JSP develops its annual operational plan (AOP) in

consultation with the training division and the PCU. The AOP includes detailed activities that are described in PDM. Also the JSP reports its progress based on the AOP on the monthly basis to the training division. The JSP does not have any mechanism where major stakeholders can discuss and solve issues and problems arising in the process of its implementation.

PDM has not been utilized as a tool for monitoring the progress of the JSP. Instead the AOP of PEDPII is being used for such purpose.

3.2 Evaluation by Five Criteria

Relevance	The objectives of JSP are consistent with the GOB's policy for education sector. NAPE appreciates the new approach that has been introduced by the JSP.
Effectiveness	The JSP's outputs show that the approach of the JSP is proved to be effective enough to change the classroom teaching-learning. The JSP need more effort to adequately improve the professional ability of CPs.
Efficiency:	The Japanese experts are not fully utilized for NAPE counterparts to improve their expertise and capacity, because NAPE CPs are not fully assigned to the JSP.
Impact	It is too early to forecast that the pupil attainment of science and mathematics would be improved in the target area. However, some evidences are observed to utilize the JSP efforts at a URC and FTSs level.
Sustainability	NAPE needs to set overall strategy and prepare resources to disseminate the TPs as an autonomous body. NAPE CPs need more technical assistance by the JSP to organize the SGAs and SWs by themselves.

4. Recommendations

4.1 Building a sustainable institutional base in NAPE

• Strengthening coordination between the JSP and the management of NAPE

The coordination between the Japanese expert team and the management of NAPE needs to be strengthened and enhanced in order to explore the possibilities to integrate outputs of the JSP into other training and research activities for improving efficiency and impact. Monthly meeting at NAPE should be continued. The Mymensingh PTI superintendent should participate.

Appointment of full-time counterparts

An adequate number of specialists with appropriate academic and technical background are necessary to work as full-time CPs as far as practicable. In addition to that, instructors from URCs and PTIs will also be deputed at NAPE to work as CPs so that technical capacity of NAPE shall be sufficiently developed in a timely manner.

• Sharing experiences and outputs of the JSP among NAPE staff members

The experiences and achievements of the JSP are worth sharing among NAPE to explore more opportunities to disseminate the essence of the JSP to wider stakeholders at the field level through regular training activities conducted by NAPE. In this way, outputs and the essence of the JSP shall be disseminated to stakeholders such as UEOs and AUEOs through such training activities.

- **Development of a Strategic Plan of NAPE**

NAPE should develop a strategic action plan from short to mid term perspectives with its strong initiative and ownership to fulfill a leading role in providing academic and technical support for the improvement of primary education in Bangladesh.

4.2 Revision of Curriculums for C-in-Ed and School level

- A series of suggestions and recommendations has been made and submitted to the DPE for the improvement of curriculums of C-in-Ed and primary schools, and assessment methods on science and mathematics. It is recommended that such suggestions shall be taken into consideration when revisions are made.

4.3 Strengthening Monitoring and Communication among stakeholders

- Periodic meetings replaced JCC as monitoring mechanism should be held, involving key high ranking participants such as DG of DPE, DG of NAPE, Resident Representatives of JICA. Problems and solutions relating to implementation of the JSP shall be discussed in such meetings.
- Representatives of NAPE should participate in the monthly meeting and discussions on technical and quality issues should be included as a topic.

4.4 Enhancing coordination with PDEP-II for nationwide expansion (scaling up)

- Tools and guidelines for the introduced approach should be developed to facilitate further dissemination.
- The training courses for PTIs, targeting for science and math instructors and superintendents, on the developed TPs and the approach of quality teaching cycle shall be conducted by NAPE, with the technical assistance of the JSP.
- Coordination between UNICEF and NAPE/ the JSP should be further strengthened, especially for expected revisions of the training materials for the subject based training at URC in science and mathematics.
- Dissemination of the effectiveness of the JSP approach and its outputs for quality improvement at the classroom level should be promoted among educational authorities and donor partners. This is an important process for the scaling up of the JSP to be supported by the wide range of stakeholders. In doing so, tangible results at the classroom level should be accumulated to encourage the policy/ program planners to support the scaling up

添付資料２．投入実績

1. 投入（日本側） (ア) 専門家：11 ポジション、短期専門家 15 名

名前（ポジション）	1 年次（2004 年 10 月～2005 年 5 月）	２年次（2005 年 6 月～2006 年 5 月）	３年次途中（2006 年 6 月～10 月末）	計（実績）
加藤徳夫 （総括/ PDM の Chief Advisor)	予定：現地 4.23M/M ：国内 0.43M/M 実績：現地 4.77M/M ：国内 0.53M/M	予定：現地 6.00M/M 実績：現地 6.00M/M	実績：現地 2.5M/M	現地 13.27 国内 0.53 M/M
馬場卓也 （副総括）	予定：現地 1.20M/M ：国内 1.13M/M 実績：現地 0.97M/M ：国内 0.83M/M	予定：現地 2.00M/M ：国内 0.50M/M 実績：現地 2.17M/M ：国内 0.50M/M	実績：現地 0.5M/M	現地 3.64 国内 1.33 M/M
鈴木勲彦 （研修計画、２年次から副総括（マネジメント）兼任/ PDM の Coordinator）	予定：現地 4.50 M/M ：国内 0.27M/M 実績：現地 5.17 M/M ：国内 0.27M/M	予定：現地 9.00M/M 実績：現地 9.00M/M	実績：現地 3.67M/M	現地 17.84 国内 0.27 M/M
高橋光治 （算数１/ PDM の Math Education)	予定：現地 2.50 M/M 実績：現地 2.67M/M	予定：現地 8.00M/M 実績：現地 8.00M/M	実績：現地 2.33M/M	現地 13.0 M/M
二宮裕之 （算数２/ PDM の Math Education）	予定：現地 1.03 M/M ：国内 0.80M/M 実績：現地 0.67 M/M ：国内 0.80M/M	予定：現地 1.33M/M 実績：現地 1.16M/M	実績：現地 0.5M/M	現地 2.33 国内 0.80 M/M
相馬敬（１～３年次途中） 高橋勉（３年次途中～） （理科１/PDM の Science Education）	予定：現地 2.50 M/M 実績：現地 2.67 M/M	予定：現地 6.83M/M 実績：現地 6.83M/M	実績：現地 2.8M/M	現地 12.3 M/M
池田秀雄 （理科２/PDM の Science Education）	予定：現地 0.47 M/M ：国内 0.50M/M 実績：現地 0.50 M/M ：国内 0.50M/M	予定：現地 1.00M/M 実績：現地 1.00M/M	実績：現地 0.33M/M	現地 1.83 国内 0.50 M/M
林 武広 （理科３/PDM の Science Education)）	予定：現地 0.00M/M 実績：現地 0.00M/M.	予定：現地 0.33M/M 実績：現地 0.33M/M	実績：現地 0.0M/M	現地 033 M/M
南雲達也（１～２年次） 園田亜矢（３年次） （データベース/PDM の Database Development）	予定：現地 2.50M/M 実績：現地 1.50M/M	予定：現地 3.00M/M 実績：現地 3.00M/M	実績：現地 1.0M/M	実績 現地 5.5 M/M
中村聡 （評価/ PDM の Evaluation）	予定：現地 2.00M/M ：国内 0.00M/M 実績：現地 1.97M/M ：国内 0.17M/M	予定：現地 2.00M/M ：国内 0.50M/M 実績：現地 2.00M/M ：国内 0.50M/M	実績：現地 1.0M/M	現地 4.97 国内 0.67 M/M
安藤ゆうこ（１年次） 塩田恵（２、３年次） 久野由里子（２、３年次） （業務調整/ PDM の Coordinator）	(予定：現地 1.50 M/M 実績：現地 1.50 M/M)	(予定：現地 1.00M/M 実績：現地 1.00M/M)	(実績：現地 1.0M/M)	現地 3.5 M/M)
計（業務調整除く）	予定：現地 20.91M/M ：国内 3.13M/M 実績：現地 20.89M/M ：国内 3.10M/M	予定：現地 39.49M/M ：国内 1.00M/M 実績：現地 39.49M/M ：国内 1.00M/M	実績：現地 14.63M/M	現地 75.01 国内 4.10 M/M

(イ) CP トレーニング：計 3 回 20 名（本邦研修 2 回 11 名、フィリピン技術交換 1 回 9 名）

① 第一回本邦研修（2005 年 2 月 16 日～3 月 24 日）主に広島大学で研修。
計 7 名（行政官 4 名、2 週間/教科専門家 3 名、1 ヶ月）

所属	役職	名前
初等・大衆教育省（MOpME）	次官補	Ms. Masuda Benth-E Quadir
教育局(DPE)	計画課　DD	Mr. A.K.M. Dinarul Islam
	訓練課課長	Md. Mujibor Rahman
	PCU　AD	Mr. Md. Ziaul Huq
初等教育アカデミー	専門官	Mr. A.H.M. Mohiuddin
	準専門官	Mr. MD. Shah Alam Saker
マイメンシン PTI	教官	Mr. Mazharul Islam Khan

② 第二回本邦研修（2006 年 2 月 26 日～3 月 25 日)
計４名、１ヶ月。主に広島大学で研修を受ける

所属	役職	名前
初等教育アカデミー	専門官	Mr. Md Abdul Wahab
	準専門官	Mr. Md Abdul Jalil
	準専門官	Mr. Md Mazharul Haque
マイメンシン PTI	教官	Mr. Shamsuddin Ahmed

③ フィリピン技術交換（2006 年 5 月 10 日～18 日)
計 9 名、１週間。JICA プロジェクト（SMTP）他を訪問

所属	役職	名前
初等教育アカデミー	所長	Mr. M.A Kashem Masud
	準専門官	Mr. Md. Shah Alam Sarker
	専門官	Mr. A.H.M Mohiuddin
	準専門官	Ms. Ayesha Akter Khathun
マイメンシン PTI	所長	Mr. Md. Waliul Islam
	教官	Mr. Md. Mazaharul Islam Khan
チッタゴン PTI	教官	Ms. Shuvrata Guha
ガジプール PTI	教官	Mr. Hasnarul Ferdouse
タンガイル PTI	教官	Mr. Md. Ismail Hossain

(ウ) 機材購入：計 821.7 万円　理数科機材、コンピュータ機材、ワークショップ関連機材など。1 年次供与機材 277.2 万円、携行機材 292.5 万円、2 年次携行機材 252 万円

第一年次　〔2005〕　￥5,697,000				第二年次〔2006〕￥2,520,000			
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対物マイクロメーター	1	パソコン	4	スキャナー	2	電解装置	1
精密はかり	1	IPS UPS	2	パソコン	1	電源装置	1
ばねばかり	1	ビデオ　カメラ	2	理科実験室用エアコン	1	UPS	1
ゼネコンセット	1	TV	2	理科実験室用エアコン	1	IPS	1
蒸留水製造装置	1	プロジェクター	2	PC ソフト(Db)	2		
解剖メスセット	1	エアコン	2	カラープリンター	1		
土壌生物採集実験機	1	製本機	1	理科消耗品棚	2		
惑星モデル	1	コピー機	1	プリンター	1		
遮光板	1	PC ソフト(SPSS)	2	静電界実験セット II	1		
雨量計	1	理科実験机（7’×7’)	2	電流による磁界観察実験器	1		
水銀気圧計	1	理科実験机（7’×7’)	2	電磁力実験器	1		
万能工具セット	1	園芸用具	1	モーター原理説明器	2		
大工工具セット	1			電気回路実験器　JH	2		
教材製作用具	1			滑車装置　B	1		
生物顕微鏡	20			力学台車	5		
スポティングスコープ	1			衝突球	1		
双眼鏡	1			共鳴おんさ	1		
地球儀	1			光学台	2		
幹熱滅菌器	1			光学用水そう	1		

(エ) ローカルコスト負担：直接経費全体 8,736 万円/一般業務費 1,708 万円（2 年次まで）

直接経費全体：34,405,000 円（1 年次）、52,956,000 円（2 年次）

一般業務費：4,927,000 円（1 年次）、12,155,000 円（2 年次）

<table>
<tr><td colspan="3">日本側負担分</td><td>バンラデシュ側負担分</td></tr>
<tr><td colspan="3">一般業務費</td><td>教育局/NAPE による執務室や施設の提供</td></tr>
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NAPE： 執務室と理科実験室の提供
NAPE 講堂
他 ：マイメンシン PTI の会議室
ガウリプール教育事務所</td></tr>
<tr><td>2006</td><td>￥12,155,000</td></tr>
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<tr><td>運営費</td></tr>
<tr><td colspan="3"></td><td>教育局：JICA ティームは電気、水道、電話代の負担している。
NAPE : JICA ティームは電話代のみの負担
電気、水道は NAPE が負担
CP の給料 CP がプロジェクトに半日係わっている前提で試算すると 2 年間分負担は 246,000TK（￥420,000）となる。</td></tr>
</table>

(オ) カウンターパートのリスト

名前	役職 （初等教育アカデミー）
Mr. MD. Abdul Wahab	専門官 理数科課の課長（JSA の調整役）
Mr. A.H.M. Mohiuddin	専門官 理数科課
Mr. MD. Sha Alam Saker	準専門官 理数科課
Mr. Abdul Jalil	準専門官 理数科課
Mr. MD. Mzuhaarul Haque	準専門官 理数科課
Mr. S.M. Mpfizur Rahaman	準専門官 理数科課
Mr. Shamsuddin Ahmed	教官 マイメンシン PTI

1. Table of Achievements

<table>
<tr><th>Evaluation Items</th><th>Confirmation Items</th><th>Results</th></tr>
<tr>
<td><u>Super Goal</u>
The quality of pupil learning and performance outcomes (i.e. achievement) of science and mathematics are improved across the country.</td>
<td>1. Completion rate
2. Pupil learning and performance outcomes (i.e. achievement) of science and mathematics.</td>
<td>1. Completion Rate
<table>
<tr><th colspan="2"></th><th>Before the JSP</th><th>Oct.2006</th></tr>
<tr><td colspan="2">Whole Country(NER,GER)</td><td>94% - 109%　(UNESCO 2004)</td><td>-</td></tr>
<tr><td rowspan="2">Mymensingh District</td><td>Urban（Sadar）</td><td>67.35% (2004)</td><td>60%(2005)</td></tr>
<tr><td>Rural（Gouripur）</td><td>58%　(/2004)</td><td>61% (2005)</td></tr>
</table>
2. Basic Learning Competency of science and mathematics of Grade 5 students in National Assessment in 2001
<table>
<tr><th></th><th>Before the JSP</th><th>.2006</th></tr>
<tr><td>Science</td><td>79%</td><td>-</td></tr>
<tr><td>Mathematics</td><td>73%</td><td>-</td></tr>
</table>
</td>
</tr>
</table>

Overall Goal

The Pupil attainment of science and mathematics in primary education is improved in the target area.

1. The pupil attainment of science and mathematics in primary education
2. Number and rate of successful students in science and mathematics in the target area.

1. Annual Exam of science and mathematics in Mymensingh District（FTS・CGS, Grade 5）

	Before the JSP (2004)		.2005	
	Math	Science	Math	Science
FTS/Urban (Sadar)				
SHAKHARI PATTI School (GPS)	60.05	47.33	81.73	57.26
VASANI School (RNGPS)	45.14	40.28	18.07	26.30
Experimental Schools	59.48	30.00	55.28	30.33
<FTS/Rural> (Gouripur)				
TATKURA School (GPS)	37.83	31.16	44.90	40.46
GAVI SHIMUL School (RNGPS)	49.10	43.66	68.52	56.94
<CGS/Urban> (Sadar)				
CHASME RAHAMAT School (GPS)	25.10	30.55	40.26	44.76
KRISTAPUR School (MPS)	29.19	38.10	21.52	21.80
<CGS/Rural> (Gouripur)				
BOKAI　NAGAR School (GPS)	49.00	38.10	34.94	36.35
GUJIKHAN School (RNGPS)	14.38	18.04	10.34	34.63

2. Results of Scholarship Pass in Mymensingh

	2004	2005
FTS Sadar	7	9
CGS sadar	4	3
FTS Gouripur	1	0
CGS Gouripur	0	1

<table>
<tr>
<td>JSP (Japan’s Support Program) Purpose
The quality of teaching in science and mathematics is improved in real setting below in the target area.
- NAPE
- PTI
- URC and UEO's office
- The Field Testing Schools</td>
<td>The degree of improvement of the following aspects in science and mathematics (The degree of improvement of consciousness in terms of understanding and interest of trainees and pupils).
(1) Teacher's class teaching,
(2) Teacher's class management,
(3) Teacher's attitude</td>
<td>
<table>
<tr><th>【Before the JSP】</th><th>【Oct.2006】</th></tr>
<tr>
<td>(PAS)
-Acquisition of knowledge and techniques is emphasized
-Teachers ask same type of questions. Memorization is emphasized.
-Lecture style classes are most common. Few Group works and individual activities are implemented.
- Classes are implemented in an unilateral approach by teachers. Teachers repeat ‘Closed questions’ (which can be answered by Yes or No) and therefore students’ actual participation is limited.</td>
<td>- more activities based lessons were observed. And FTS teachers try to verify what the textbooks said, rather than to explain it.
-No change in CGS
-There is a change in the teachers’ questions to students in FTS. For example, the number of teachers, who ask questions that encourage their pupils to express opinions, has increased.</td>
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<table>
<tr>
<td rowspan="2"><u>Outputs</u>
1. The teaching ability in science and mathematics and collegial relationship is improved at NAPE, PTI, URC, UEO's office and the Project pilot schools (Field Testing Schools).</td>
<td>1-1. The degree of improvement of the teaching ability in science and mathematics at NAPE, PTI, URC, UEO's Office and the Project pilot schools (Field testing schools).</td>
<td>
<table>
<tr><th>【Before the JSP】</th><th>【Oct.2006】</th></tr>
<tr><td>1-1 （PAS（ADSL））
-At NAPE, the implement trainings to 1000 to 2000 teachers every year. (See Prior Evaluation Report[2004. 6])
-At PTI, 190 teachers have received C-in-Ed Training in 2004/5.
-At URC, Training has not been implemented since Jan.2005. Therefore, cannot be analyzed.
-At UEO, sub-cluster trainings are implemented.
-At School: See the JSP Purpose</td><td>1-1.
-At NAPE and PTI: No Change is seen. Training has not been implemented under the project. However, a change in the teachers’ understanding of the textbooks and classes is seen through SGA and SW. Details can be seen from the minutes of SGA and SW.
-At URC and UEO: Significant change is not seen. Project intervention is limited to the participation in SW.
-At School: Compared with CGS, there is a change in the teachers’ questions in FTS. Details can be seen from the Protocol Analysis.
-For collegial relationship, JSP organized 76 times of study group activity (SGA) and 7 times of Study workshop.</td></tr>
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</tr>
<tr>
<td>1-2. The frequency of activities by study group(s) and daily discussion among teachers.</td>
<td>
<table>
<tr><th>【Before the JSP】</th><th>【Oct.2006】</th></tr>
<tr><td>1-2 Contact between NAPE and PTI, PTI and URC, NAPE and URC is limited to business contact. There are few chances in which teachers can exchange their opinions regarding their teaching skills.</td><td>1-2. At NAPE and FTS, SGA has been implemented more than 76 times in total. SW in which people from NAPE, URC, UEO and FTS meetings has been implemented once in quarterly period (More than 7 times in total). In addition, through the trial of TP, meeting with FTS teachers has been conducted.</td></tr>
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<table>
<tr>
<td>2. Science and mathematics trainings are properly conducted at NAPE, URC, and UEO's office.</td>
<td>2. Number of trainings, duration of each training and number of participants</td>
<td colspan="2">
<table>
<tr><th>【Before the JSP】</th><th>【Oct.2006】</th></tr>
<tr>
<td>2.
- At URC: Subject-based Training was implemented for six days. (This training was not actually implemented from 2004 to 2005.)
-At UEO: Sub-cluster training has carried out by using leaflets for one day per month. PEDP-II financed the sub-cluster training from Feb. 2005.
-At PTI: Training for newly-employed teachers based on the C-in-Ed training was implemented for one year (Every year)
-At NAPE: Training for PTI experimental teachers was implemented once a year. Training for PTI instructors by NAPE: Trainings for science and mathematics are not mentioned in PAS (once in 3 to 4 years)</td>
<td>2.
-At URC: The activities of URC had not been implemented by 2005. From 2006, URC has conducted discussion between UNICEF continuously.
-At UEO: Technical Support to making leaflets of the sub-cluster trainings has been done.
-At PTI: Because of the delay in C-in-Ed revision, there was no direct involvement.
-At NAPE: Trainings supported by this Program have not been implemented so far. Training for PTI head teachers in whole country will be implemented in November 2006. Also, training for PTI instructors of M&S in whole country will be implemented in February 2007.
- Among the ordinary trainings by NAPE. technical support to the contents of the science and mathematics training to PTI experimental schools was implemented at Oct. 2005.</td>
</tr>
</table>
</td>
</tr>
<tr>
<td>3. The appropriate curriculum and valid assessment are recommended (the C in Ed exam at PTI and cluster exams at the project pilot schools (Field Testing Schools).</td>
<td colspan="3">3.
1) The following two repots were made and submitted.
-「Proposal for PTI Science and Mathematics Curriculum and Evaluation （C-in-Ed）」
-「Proposal for Science and Mathematics Curriculum and Evaluation through the trial of Teaching Package（English）」
2) The revision of C-in-Ed has been delayed and therefore the revision is not conducted.</td>
</tr>
</table>

<table>
<tr><td>4. The relationship between NAPE, PTI, URC, UEO's office and schools is strengthened</td><td colspan="2">4. The Study Group Activities was implemented in 76 times, mainly NAPE CPs have been participated the SGAs with frequent participation of PTI instructors.
The study workshops were implemented in 7 times in order to have lesson study through teaching packages by using the method of demonstration classes by teachers and PTI instructors. All concerned organizations participated for this SWs.
（See Annex-5 ）</td></tr>
<tr><td>5. Teaching packages are authorized at the central level (MOPME, DPE, and NCTB)</td><td colspan="2">5. 18 units of TP (draft) is completed, and are on test at FTS (5 units of math for Grade 1, 5 units of Grade 2 Math, 8 units of Grade 3 science) By the end of 2006, TP of Mathematics of Grade 1&2 and Science of Grade 3 will be approved. (The grade 3-4 M& S will be completed by 2007/8. The grade 5 science and mathematics will be completed in 2008. The JSP will not have time to organize training for the TPs of grade 5.</td></tr>
<tr><td rowspan="2"><u>Inputs</u>
1. Japanese side</td><td>1-1. Japanese Experts</td><td>15 Short Term Experts were dispatched (75.01MM at Bangladesh, 4.10MM in Japan till 2006/Oct.)
<table>
<tr><th colspan="2"></th><th>1st year (04/Oct.05/May)</th><th>2nd year (05/Jun-06/May)</th><th>3rd year (06/Jun.-06/Oct)</th><th>Total</th></tr>
<tr><td>Planned</td><td>Bangladesh</td><td>20.91</td><td>39.49</td><td>14.63</td><td>75.03</td></tr>
<tr><td></td><td>Japan</td><td>3.13</td><td>1.00</td><td>-</td><td>4.13</td></tr>
<tr><td>Actual</td><td>Bangladesh</td><td>20.89</td><td>39.49</td><td>14.63</td><td>75.01</td></tr>
<tr><td></td><td>Japan</td><td>3.10</td><td>1.00</td><td>-</td><td>4.10</td></tr>
</table></td></tr>
<tr><td>1-2 Training
1) Training in Japan
at Hiroshima University.
2) Technical Exchange Program
SMTP at Philippine</td><td>Counter part trainings were carried out 3 times. 11 were participated in the training in Japan. 9 were participated in a technical exchange program at Philippine.
<table>
<tr><th>Training</th><th>Content</th><th>Period</th><th>No. Participants</th><th>Venue</th></tr>
<tr><td>Training in Japan</td><td>Science and mathematics</td><td>05/Feb/16-Mar./24</td><td>7</td><td>Hiroshima Univ.</td></tr>
<tr><td></td><td>Science and mathematics</td><td>06/Feb/26-Mar/25</td><td>4</td><td>Hiroshima Univ.</td></tr>
<tr><td>Technical Exchange with Philippine</td><td>Science and mathematics</td><td>06/May/10-18</td><td>9</td><td>SMTP</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td>1-3 Equipment Provision</td><td>Total ¥8,217,000（1 BDT=1.67Japanese Yen　as of April 26, 2005）
-Equipment necessary for Project Activities such as computers, photocopier, and for running workshops have been procured.
-Also, science & math related equipment have been supplied

<table><tr><td></td><td>1st year</td><td>2nd year</td></tr><tr><td>Equipment Provision</td><td>¥2,772,000</td><td>—</td></tr><tr><td>Equipment for JICA Experts</td><td>¥2,925,000</td><td>¥2,520,000</td></tr></table>For details〔see List of Equipment Provided by JICA)</td></tr>
<tr><td></td><td>1-4 Operational Local Cost Expenditure</td><td>Local Cost
The Japanese side has allocated necessary budgets for the JSP as of Oct.2006 as shown in the table below. It includs local staff: Adviser (1) Secretary (1) Translators (2)　Driver (1)<table><tr><td></td><td>1st year</td><td>2nd year</td><td>Total</td></tr><tr><td>Local Cost</td><td>¥4,927,000</td><td>¥12,155,000</td><td>¥17,082,000</td></tr></table></td></tr>
<tr><td>2. Bangladeshi side</td><td>2-1. Counterparts
- DPE
- NAPE
- PTI
- URC and UEO's office
- The Project pilot schools (Field Testing Schools)"</td><td>2-1 Number of total counterparts: 7
[DEP] DPE training section coordinate with PEDP-II (no direct technical transfer, no direct support & cooperation)
[NAPE] 5 counterpart at present (Stability rate 5/7)
The team started with 7 counterparts. The 7 counterparts have not been assigned specifically to the JAS. They have been assigned for jobs for DPE or other purpose than　the JSP. That causes the team to have slow progress in the Teaching Package preparation.
In May 2005, one of the 7 counterparts was transferred to a PTI. Also, Jan. 2006, one of the 6 counterparts was again transferred to a PTI.
[PTI]　Since Sep. 2005, two instructors from Mymensingh PTI have worked with NAPE counterparts at NAPE.
[URC & UEO] 2 URCs & 2 UEOs participated the study workshops
[FTS] The teachers & head teachers from 4 field testing schools have participated to the study workshop and supported the JSP for testing the teaching packages that are developed at NAPE.</td></tr>
</table>

	2-2. Office Space and Facility made available to the Japan's Support Program.	2-2 Provision of facilities [DPE] Office space for the Japanese team with some PCs [NAPE]- Office space & laboratory space for science and mathematics -Other rooms for meetings, conference & workshop [PTI] Mymensingh PTI provided its meeting room for the team
	2-3. Running cost	Total about ¥500,000 at OCT. 2006 [DPE] DPE has no payment for the Program. [NAPE] -NAPE covers bills for electricity & water supply. The Japanese team pays its telephone bill. -NAPE pays about 246,060TK for the salary of CPs. CP specialist and assistant specialist work for the support Program about half of month in average (11,430TK/M/2+9,075TK/2=10,252TK×24 months)
	2-4. Expenses for seminars and workshop at NAPE	[DPE] Not shared by DPE [NAPE] not shred by NAPE (the Japanese team pays TADA, accommodation for seminars & workshops organized by the support Program..

1. Implementation Process (how the project has been implemented)

Evaluation Questions	Results
1. Is the operational management of the JSP (Japan's Support Program) appropriate?	-At the central level, DPE training division and PCU of PEDP-II plays vital role to monitor the JSP. The JSP submit its annual operational plan (AOP) to the DEP training & PUC. Based on the AOP, the JSP, DPE training and PCU have monthly meeting on the progress of the JSP. However, the issues and problem found during the JSP's implementation has not discussed in this meeting. -At the NAPE level, the NAPE organized weekly meeting with Japanese team so that the both side discuss progress, issues, and problems. -At the local level the GSAs and SWs are effective tools not only to transfer the skills, methods and knowledge but also to monitor the local level activity. Especially the GSA and SW caused the SA to have better communication with NAPE counterparts, PTIs principal & instructors, FTSs' head teachers & teachers. Also the CPs often visited FTSs to monitor the field testing of TP.
2. Have the activities Implemented as planned?	In AOP, JSP planned 8 main activities and 38 detailed activities. Basically these activities have progressed as planned. -The pre-activity study was delayed about three months because of political strikes, Ramadan holiday and school examination. This delay affected to other activities of JSP such as the development of data analysis system, study of school curriculum and C-in-Ed curriculum. However, the recommendation and suggestion for C-in-Ed curriculum as well as school curriculum and method of assessment were made by OCT. 2006. -The JSP has not had progress in the activity to support URC subject based training, because the URC subject based training has not operated since 2004.
3. Was the method of technical transfer appropriate?	The JSP organizes a series of group study activity (76 times till Oct.2006) with NAPE counterparts, as well as Study workshop (7times till Oct. 2006) with JSP related organization such as NAPE, PTIs, URCs, UEO and FTSs. The GSA & SW are effective strategy for technical transfer. During GSA & SW, the both side have discussion on developing the teaching package that would be used in science and mathematics lessons in primary schools. The discussion is an effective tool for transferring skills, method and knowledge to study classroom lessons toward child-centered lessons. This strategy is appropriate for the CPs to understand what is good lesson
4. Has an appropriate CP been allocated?	At the beginning of the JSP, NAPE allocated seven counterparts. At present five counterparts have been working with the Japanese team. But the problem is that the counterparts for JSP are not specifically assigned to the JSP. It often happed for the counterparts not to share their time with Japanese experts because they were busy for NAPE's duty work other than the JSP's. They are partially assigned to the JSP.
5. How is the relationship between the recipients and concerned organizations?	-The teachers of FTS have participated in the Study Workshops to show the demonstration classes to test his/her lesson plan for a draft of teaching packages. Then, all of the participants (including URC instructors and UEO officers and even the pupils in the demonstration class) are involved in discussions on reaction for revising and completing the draft teaching package. In the SWs, The JSP has tried to develop a collegial relationship to equally express their views and opinions among the participants. Thus, the SWs have been leading the entire participants to have better relationship.

6. Are there any problems that prevent a smooth management of the activities?	-From the beginning the JSP, NAPE has not prepared TADA for the SGA & SW of the JSP. Because of this, it became difficult to precede the JSP from OCT. 2006. -The Japanese team faced difficulty to have smooth management of the JSP, due to the location of NAPE. The team has to stay at Dhaka to make cooperation with PEDP-II, and to stay at Mymensingh for technical transfer. It is difficult for the team to concentrate on technical transfer. -NAPE counterparts have assigned partially to the JSP. They share the half of their time to work for the JSP.

Five Evaluation Criteria (value judgment from comprehensive view points)

Criteria	Evaluation questions	Results
Relevance	1. Is the JSP consistent with the development policy of Bangladesh?	-National policy 「National Strategy for Economic Growth and Poverty Reeducation (ERD, Mar.) 2003] put high priority for the quality development in primary education and universalization of the primary education. -EFA Plan of Action II (2003-2015) focus the improvement the attendance, completion, dropout rate, the quality, the academic performance and assessment method in primary education. -PEDP-II aims to improve the access (enrolment & completion rate) and to improve quality of pupils' learning achievement. Especially the component 2 of the PEDP-II focus on quality improvement in school and classroom (enhancing quality teaching and learning). The JSP has been involved in the component 2-2 to improve the quality improvement of school & classroom.
	2. Is the JSP relevant to the needs of target group?	-NAPE C/P, URC instructor, FTS teachers had good opportunity to improve their expertise in teaching science and mathematics or in academically supervising schools. Also, URC instructors and FTS teachers appreciate to friendly discuss academic issues with NAPE (assistant) specialists. In the process of discussion, they learned the new approach for "Quality Teaching Cycle". -FTS pupils became interested in science and mathematics due to more activities in class. They became able to concentrate on the class.
	3. Is the SA consistent the Japan's foreign aid policies?	-Japan's ODA policy put high priority to the education sector as a strategy for poverty reduction through human development. -In Bangladesh, the Bangladesh model started by collaboration with the three main actors (the Embassy of Japan, JBIC and JICA) emphasis on the education sector among five major sectors to be focused -In the JICA's country program, human resource development (especially education) is one of the priority sector.
Effectiveness	1. Are the outputs produced as planned? (Compared with planned value)	Improvement of Teaching Ability and Collegial Relationship (Output1): In order to improve the training and teaching ability and collegial relationship among the concerned organization, SGA has been organized seventy-six times and SW has been organized seven times. as the result, the following changes were observed: At school level, by using a protocol analysis, it is found that some change are observed, when it is compared with the PAS. -Teaching-Learning Pattern: The FTSs teachers tend to have communication with pupils through practical activities. Meanwhile, CGs teachers tend to have one sided instruction (talk and chalk teaching-learning pattern). -Teacher-Learning Material: The FTSs teachers organized science class in such a way that their pupils were able to verify what their textbooks said by using teaching-learning materials. On the other hand, the CGSs teachers use teaching-learning materials simply to conform what their textbooks explain. Thus, the difference is observed in the purpose of using teaching-learning materials. The teachers of FTSs encourage their pupils to have learned more scientific way of thinking through activity oriented teaching-learning.

		- Pupils participation in lessons: In Science, FTSs have higher rate of (instruction/explanation). This is because that FTSs have more practical activities than CGS, and that FTS teachers must give instructions on what the pupils should do. In science class of a FTS in which TPs was used, the pupils expressed their opinion from the activities that they engaged in their lessons. This is a notable change compared with PAS. When a pupil ask a question to his/her teacher, the teachers ask other pupils' idea on the question. The teachers became to play a facilitators role in their classes. Thus, Interaction between teachers and pupils have been changing. <u>NAPE Counterparts (including Mymensingh PTI instructors)</u> - An attitude/ critical thinking changes of CPs are observed. At the beginning of the JSP, CPs insisted to teachers to teach strictly based on textbook and curriculum. However, at present they became to understand that teachers have to have an ability to make use of teaching packages and textbooks according to their needs. - In a lesson plan, consideration between pupil's activity and a teacher's explanations became to be described. Also, description concerning "what a good lesson is" appeared more by emphasizing on the importance of teachers' question to make pupils think about. <u>URC level</u> - Although URC instructors were involved in SWs, It is difficult to tell if the training ability to the URC instructors have been improved, because URC subject training was not carried out until the time of the mid-term evaluation.
		<u>Improved science and mathematics trainings (Output 2)</u> -At NAPE & PTIs level, no improved science and mathematics training was conducted. However, at Nov. 2006, the JSP has planed to have seminar for PTI superintendents to discuss about the TPs. In Feb-Mar., 2007, the JSP have planned to carry out PTI science and mathematics instructors' trainings for TPs. -At FTSs level, improved lessons were conducted by the FTS teachers to text the TPs developed by the JSP. -UEO's sub-cluster training: The development of the leaflets of the sub-cluster training was technically supported by the JSP. But it is not clear if the sub-cluster training has carried out or not. -URC subject training had not been implemented during the period of 2004-05, because URC staff was not allocated.
		<u>Curriculum & assessment (Output 3)</u> -The JSP submitted a report for PTI Science and Mathematics Curriculum and Evaluation (C-in-Ed) recommendation through the discussion on structuring of topics. By this time, National committee has been constituted to review the C-in-Ed curriculum. -The JSP submitted a report for the suggestion for the curriculum and evaluation. The decision on how to utilize the suggestion by the GOB has not been made.

<table>
<tr><td></td><td></td><td>Relationship among the JSP related institutions (Output4)
-Study workshops were organized seven (7) times until the time of the Mid-Term Evaluation. The relationship among the organizations became stronger. One suggestion, made to have more strong relationship among the organization, that workshop can be organized at Upazila level inviting UEO, AUEO, head teachers and teachers.</td></tr>
<tr><td></td><td></td><td>.Authorization of TPs (Output5)
TP of Mathematics of Grade 1&2 and Science of Grade 3 are approved to use them in the PTI superintendents and instructors training (Superintendent training will start from Dec.2006. Instructors training will start from Feb.-Mar. 2007)</td></tr>
<tr><td></td><td>2. Is the JSP purpose likely achieved?</td><td>Practical use of the new method in daily training/classroom
-NAPE C/P has gradually changed their views on teaching science and mathematics. But they have not been able to organize SGA & SW and train the PTI instructors by themselves. Further technical transfer is needed to CPs (For NAPE CPs, seven types of techniques has been planned from the beginning of the JSP. The CPs achieved four techniques among the seven techniques. (1. Quality Teaching Cycle 2. Method to analyzing content of training 3. Method of planning, implementation and evaluation of training 4. Method of preparing teaching-learning materials 5. Method for studying education 6. Method of studying science & mathematics for primary education 7. Analysis of education by using Data base.)</td></tr>
<tr><td></td><td></td><td>FTS head teachers view
- The teachers have gradually been changing their view for teaching-learning and improving the way to organize their lessons. Especially, they have improved the way to ask questions to their pupils in lessons.</td></tr>
<tr><td></td><td></td><td>Constraining factor to achieve the JSP purpose
- No action for revision of C-in-Ed made difficult to achieve the JSP purpose.
-Delay of URC staff allocation has affected the JSP to start the URC subject based training.</td></tr>
<tr><td></td><td>3. Are the important assumptions to achieve the SA purpose appropriate at this timing?</td><td>The instructor or trainer-trainee ratio/ teacher-pupils ratio
<table>
<tr><th></th><th colspan="2">2004/05</th><th>2005/06</th><th>2006/07</th><th></th></tr>
<tr><td rowspan="2">PTI</td><td>1st shift</td><td>188</td><td>184</td><td>205</td><td rowspan="2"></td></tr>
<tr><td>2nd shift</td><td>79</td><td>73</td><td>183</td></tr>
<tr><td rowspan="2">URC</td><td>Sadar</td><td>142/2</td><td>-</td><td>-</td><td rowspan="2">During 2004/5-2005/6, Subject based training has not been carried out</td></tr>
<tr><td>Gaulipur</td><td>344/2</td><td>-</td><td>-</td></tr>
<tr><td rowspan="2">UEO</td><td>Sadar</td><td>673/8</td><td>713/8</td><td>753/8</td><td rowspan="2">UEO has sub-cluster training by AUEO. No. of trainers is No. of AUEO.</td></tr>
<tr><td>Gaulipur</td><td>671/5</td><td>686/5</td><td>736/5</td></tr>
<tr><td>PS</td><td colspan="2">565288/8053 (70.2)</td><td>515139/7773(66.3)</td><td>NA</td><td>only for the JSP related schools</td></tr>
</table></td></tr>
</table>

Efficiency	1. Is the achievement level of the outputs adequate, compared with the target value?	Japanese experts &Equipment provided by the JICA are fully utilized to produce 5 outputs in PDM. However, there are some factors constraining the achievement of the outputs. the followings are the factors: -The JSP has not have input for URC, since URC subject based training has stopped since 2004 (the two URC instructors participated in SWs). -NAPE C/P have no been fully assigned to the JSP. The JSP faced difficulty to share time to work with them. -The decision on how to utilize the recommendation and suggestion made for C-in-ED curriculum and school curriculum and assessment method has not been made yet.
	2. Is the input of quantity and quality implemented adequately on the right time, considering the achievement of outputs?	<u>Japanese experts</u> All of the Japanese experts were dispatched as planned. The number, specialization and communication skill were appropriate. The dispatched timing was also appropriate.
		<u>Counterparts</u> NAPE has not prepare budget to support the JSP (budget such as TADA for the participant of SGA& SWs) -All C/Ps are not fully assigned to the JSP. The CPs work for other duties than the JSP.
		<u>Making use of the experience of other/past activities</u> -JICA had organized training program for several PTI science instructors at JICA Sapporo Center in Japan. The participated PTI instructors had training on experimental activity for primary school science.
		<u>Training in Japan (TIJ) & Technical Exchange Program (TEP)</u> -Number of trainees, contents and duration of training was appropriate. (one month for TIJ, one week for TEP) The main objective for the training in Japan was 'what is a good lesson?' The discussions on this topic were carried out during school visits and observation of recorded video of some lessons. In the SGAs at Hiroshima and Ehime Universities, the participating CPs concentrated on the preparation of teaching-learning materials based on their lesson plans for four topics on science and mathematics. The CPs had good opportunity to improve their expertise. The duration was appropriate to learn the preparation of the materials. The trainings in Japan were useful to utilize the development of TPs. -Technical Exchange in Philippine: CPs has exchange views on teachers training system, curriculum & textbooks, teacher guide books. The CPs also had knowledge on School Based Training Program. The two types of trainings were appropriate for the CPs.
		<u>Equipment supplied by the JICA</u> All equipment supplied by the JICA is used and kept appropriately.
	3. Are there any factors which may inhibit the	<u>Social, political or cultural factors</u>

	effective achievement of the outputs?	-In order to improve the classroom teaching-learning, it would be needed for all of the concerned personnel to be equally involved in all the activities of the JSP. Despite of it, the Japanese experts observed that there is a social hierarchical relationship between education officers and primary school teachers. This relationship would be a constraining factor against establishing better collegial relationship among the JSP concerned organizations. So, the team tried to encourage the CPs to visit schools and to develop the collegial relationship with teachers. And then the CPs would be able to encourage education officers to develop better collegial relation with the primary teachers. -Many general political strike (31 days until Sep. 2006) caused the Japanese experts to stop thier activities.
Impact	1. Is there prospect of the achievement of the overall goal?	-It is too early to for cast that performance the primary school pupils in Mymensingh District improve, since the JSP has not completed the dissemination to school level yet.(The JSP has a plan to organize trainings for PTI instructors from Feb. 2007.) -The achievement of the JSP purpose does not necessary improves the attainment of the pupils. The pupils' attainment depends on various factors such as the curriculum & the method assessment.
	2. Will the JSP promote the improvement of the educational policies?	<u>Revision of curriculum (C-in-Ed & school level, evaluation method)</u> -The JSP made a recommendation on revision of the C-in-Ed curriculum and a suggestion for school curriculum & the method of evaluation. By this time, National committee has been constituted to review the C-in-Ed curriculum. The decision has not been made on how to utilize the recommendation.
	3. Are there any effects or influence to the school level?	Some positive impacts were identified from interview with the concerned people. 1) At Mymensingh a PTI instructor suggested trainees to use TPs for their practice teachings. 2) an URC instructor used the JSP approach for academic advice to the schools of his cluster. 3) At a FTS, teachers encourage each other to organize demonstration lessons.
	1. Are there any negative impacts?	No negative impact was observed
Sustainability	1. From the point of policy and system, what is the realistic situation to keep the benefit of the project after this SA	<u>Policy for training PTI science and mathematics instructors</u> -NAPE has a plan to carry out two training; for fifty-three PTI superintendents, and fifty-three PTI science and mathematics instructors on the TPs of the Grade 1-2 math, and Grade 3 sciences. However, there is no plan to train them on the TPs for Grade 3-5 Science and mathematics that will be prepared in the next year. -NAPE needs to set overall strategy and prepare resources to disseminate the TPs. At present, there is not clear strategy for it.

	finishes?	Use of achievement of the JSP -By this time, National committee has been constituted to review the C-in-Ed curriculum. -TPs would be approved to be utilized for the trainings for PTI superintendent and instructors scheduled in Jan-Mar. 2007.. Also a PTI instructor suggests using the TPs for practice teaching of C-in-ED training to practically guide the trainees on setting lesson plan, preparing teaching-learning materials, running their class. Policy for URC & Sub cluster training -URC subject based training has stopped from 2004. It is not clear when it will start. -DPE training section continue the sub-cluster training Monitoring science and mathematics classes and PTI training for science and mathematics -At the time of mid-term evaluation, there is no plan for monitoring science and mathematics classes. However, the JSP plan to address this issue in PTI superintendent and instructor trainings.
	2. From the point of view of organization and techniques, is the benefit of the project kept after this SA finishes?	Technical transfer to CPs The CP has understood the way in which technical transfer has been done, since they have had seventy-six SGAs. However, CPs need further improvement in technical aspect so as to have enough capacity to organize SGAs & SWs by themselves and implement training program such as training for PTI superintendent & instructors. According toe the Japanese team, the C/Ps needs another one month training to have enough skill for the dissemination of the JSP.
		Number of CPs for dissemination The number of CPs is seven. That is enough to carry out the PTI instructor and superintendent trainings scheduled in Feb.-Mar. 2007 (The trainings are planned to have four periods per day. One CP can manage two periods per day).
		PTI instructors At present, training for PTI instructors has not been organized.
		URC instructors & AUEOs They have not been trained enough to disseminate the skills to their trainees in subject trainings at URC and sub-cluster trainings by AUEOs.
	3. From financial point of view, can the benefit of the project be kept after this SA finishes?	Financial plan for dissemination At the time of the evaluation, NAPE is not ready to set plan for dissemination and for securing the financial resources. NAPE should discuss on it with PEDP-II for financial support.

11 月 19 日 DPE 訓練課 （Mr. Md.Mahuzul Islam） AD training Divi DPE
PP の改訂は MTR で訓練課を通じて原案が提出される。プロジェクトの活動と財源の追加についても、訓練課と協議をしながら原案を作成することは可能である。 PEDPII 開始時の PP (Program Performa)では日本の支援活動はアネックスに記載されているが、PP の本文に記載されように要請してはどうか。これにより PEDPII の実質的な活動とみなされプールの資金が活用されることが可能になり、TADA の問題解決が期待できる。
11 月 19 日 PCU（Prof. Kafil Uddin Ahmed: コンサルタント）
PP では、PTI 教官訓練は、PEDPII 期間中各科目一回ずつとなっている。つまり、本年は理科・算数を含めた数科目を実施、来年は他の科目の研修を実施予定。これに対して、理数科のみ来年から毎年実施できるように PP 改訂を提案したい。JICA の活動については現在の PP にはアネックスに UNICEF とともに記述されているが本文には記述ない。PP の改訂に向けて訓練課で改訂案を作成予定であり、JICA から提案があれば早めに出すように話がある。これに対して、SW、SGA 他活動についての頻度や参加者、費用の詳細を計画して、改訂版 PP に記載して、TADA についてはバ側（プールファンド）負担とし 来年以降の SGA や SW あるいは PTI 理数科教官向け研修を提案したい旨伝を伝える。
11 月 19 日 DEP 計画課 （Mr. Shiraj Ullah）
UPEP と SLIP の関係は SLIP の積み上げが UPEP となる。 TST1 のコンサルタントが赴任していないので、進捗に遅れがでている。現在では 6District の 6 ウパジラで SLIP の試行がおこなわれているが、学校は SLIP の枠組みで負担できないような巨額の資金で建設やトイレ等施設建設・増設への資金要請への傾向が強い。計画課では教材費等質の向上のための費目を設定しているが、学校とのギャップを感じている。 プロジェクトの対象となっているマイメンシが UPEP と SLIP の試行に選択されていないので、こちらからマイメンシンのショドールでの試行をお願いしてみた。

11 月 20 日 ADB　（Mr. Bradesh Panth）
PEDPII の進捗は各ドナーによって受け取り方が異なっている。ADB は 1 年目は遅れていたが、2 年目になり大きな進捗が見られたと感じている。それは建設が始まり多く支出されたために支出面で大きな進捗がみられた。Optimistic である。プログラムの中にプロジェクトが入っていることについて：　JICA についてはプールへの参加など、さらなる協調が必要と考えるが、プログラムの枠組みのなかで、PEDPII の目標に向かって機能している。プロジェクトの CP の問題について：ＣＰが専任でないので、技術移転が遅れていると説明をし、PEDPII 開始時に ADB のプログラム計画準備チームに ADB の資金（PEDPII の資金）で日本の技術支援のための専任のＣＰを 2 人お願いしていたと過去の経緯を説明した。現状で 2 人の専任の CP を NAPE につけることは困難であるとの回答であった。 TADA: TADA や全国展開で必要な財源について日本が負担できない部分について PEDPII からの捻出についてお願いをした。 PP には活動の詳細が説明されていないので、PP 活動実施時に生じた必要な財源については、MTR を待たずに支援できる可能性がある旨説明があった。

11 月/21 日協力隊　五十嵐幸雄協力隊隊員
H16 年 12 月に派遣されて 2 年間の任期を満了する。　自分では 2 年間の活動に満足はしている。赴任当初は CP 教官のサポートをして、自分で授業をすることはなかった。プロジェクトの TP は 8 月頃からプロジェクトに申し出て PTI の授業で活用してみた。方法は現行の小学校算数の教科書と TP との比較をしながら、教科書における各トピックスがどうして TP と異なっているかを訓練生と議論することとした。訓練生の反応は：TP の内容はバングラデシュでは新しいことなので、訓練生は TP の方法を理解でないようであった。しかし教科書に対して疑問をもつ程度にまでは達成できた。隊員が TP を PTI で実施するためには、以下の 2 課題について指摘した。 ①TP の内容を隊員に訓練する必要がある。隊員は TP を実施するレベルではないであろう。②TP のベンガル語を理解するまでにはかなりの時間を要する。その他プロジェクトとの連携方法として PTI 教官が TP を使っているところをモニタリングするという役目も考えられる。

11 月/22 日　PCU　（Ms. Vivien Casteel）
PCU のコンサルタントは、成果を見せることができずに、数人が交代している。私も同様で、9 ヶ月 PCU にいるが成果を見せることができていない。その原因は PEDPII の運営が全くなっていない。PEDPII の運営がなっていない原因は PEDPII の構造が DPE の組織とあっておらず、DEP の責任と役割が全く分からなくなっている。次にドナーは政治的観点から（モスリムの国）で援助を増やしているが、その使用方法が的確ではない。さらに大きな原因は、「バ」側の人員が頻繁に異動することである。DG が 1 年間で 3 回異動している。各課の課長も頻繁に交代する。さらに一般職ポストが多く、教育職ポストの職員が少なくなっている。リーダーシップがなく、物事が決まらない。プログラムの中での JICA の存在については、特に不釣合いを感じていない。しかし C-in-Ed のカリキュラムの改正が、PEDPII に入っていないのは残念で、カリキュラムや教科書の改正はタイミングがよくない。 　教育の質改善では校長や教員の訓練が重要である。PEDPI で 18 種類の訓練がなされたが、PEDPII では PEDPI の成果を使用することもない。また DPE の訓練課とモニタリング・評価課との連携が全くなく、訓練のモニタリングはなされているが、その内容は評価できない。 　PP について DEP の計画課の課長が PP の活動の変更を進めている。全国展開に向けて、PTI 理数科教官向け研修を PP にいれることについて問題はないだろう。また、今後の活動や TADA の問題については、訓練課と早急に議論したほうがよい。質の向上には教員の訓練が必要であるが PEDPII はまったく教員の訓練を実施していない。TADA 問題はどこの国でも問題であり、もっとドナー間で議論されるべき。

11 月 22 日　DFID　(Ms. Barbara Payne)　初等教育セクターのドナーグループ議長
本部への報告で初年度は 4 をつけたが、今年度は 3 とした（進捗は改善されている）。この国は援助に頼りきっているし、11 国のドナー(ドナーの数も多い)もそれぞれの思惑や手法があり政府とドナー間での意思統一は難しい。政府の責任感やリーダーシップが不足している。DFID は SWAPs からでていましたい。PEDPII のデザインはもっと簡略化すべきである。 PEDPII での JICA と UNICEF はプロジェクトとなっている。 PEDPII では建設が始まり大きく進捗したが、学校の位置などは次期選挙との関係が強く、非常に政治がらみで進捗した。地方レベルでは中央レベルほど、政治的でなく、役人の異動も少ないので、地方分権を進めるのが良い対策であろう。JICA の C-in-Ed カリキュラムや学校の教科書・カリキュラムも政治的なものである。（外国人には触らせたくない。） 教育の質には教員訓練が全体的に必要であり、そのためには NAPE が高い技術をもち強力なリーダシップを発揮することが必要である。DFID は、これまでに 29M ポンドをバングラデシュの教育分野つぎ込んでおり、後戻りは出来ないので支援を続けていく、DFID は英語教育にも力をいれたい、幼児教育（ECD）や Feeding Program (おやつ)なども考えている。 JICA の活動のための TADA について MTR で PP に追加することに対しては：バ側は、DPE で PP 改訂作業をすすめているので、そこに JICA の活動はのせるようにしてよいのでは。PP に対する方向性について、保健 SWAP のように PP はなくし、AOP を毎年承認する形ですすめたい。ついては、MTR では PP 自体をなくしたい。もっと柔軟性のある PEPDII にしたい。 実は、ADB があまり乗り気でないこともあり、ドナー会議で TADA 問題は積極的に話し合われていない。

Interview to Teachers of FTS Gouripur)

	Question Items	Tatukura (GPS)		Gavi Shimul (RNGPS)
		Mr. Abdul Karim (Math teacher)	Ms. Raziya Pervwn (Science teacher)	Mr. MD. Abdur Rahim (S&M teachers)
1	What kind of ability is most important	Skills for question &Answer is important	-Experiment is important to show my pupils and prove the content of textbooks -Skills for Q&A for judgment by the pupils	I jus follow what the TP says.
2	Needs of JSA	SW is a good opportunity for teachers to discuss with specialist on subject matters. We never had this type of training.	We can discuss on what we want freely. Sub-cluster training do not fulfill our whishes.	It is good opportunity to discuss with all of the concerned people.
3	SW is useful to improve your capacity to teach	My capacity is increasing, but we need teaching-learning materials	SW has a patter for plan-do-see. That improve my capacity.	It is useful to learn new method. I could learn new methods from the SWs. Before the SW, my teacher did not use many materials, but now they are able to use materials effectively.
4	Any change in your pupils	They became active and interested in class. Their attendance got better and they had good result in final exam	My pupils can learn more because they learn by doing. (I made a rule to raise their hand when they want to give response to my question)	My pupils enjoy classes. More0ver, they seem to be able to answer easily in classes.
5	More involvement for SW	I would like to be involved more because they became very friendly.	I may get more good technique as a teacher.	If we continuously involved in the activities, we will be good teachers.
6	Having more support from NAPE, PTI	They come to my school more than before (one a month)	NAPE specialist come to school for monitoring of TP, once a three month. AUEO come every week	Before the project, NAPE just visited schools, but now they suggest /give comments on teaching and even praise teachers, Also, they did not come so much before, but now AUEO visit schools twice per month. NAPE visit one per three months. We think if we could have them more in future.
7	About TP	Some unit are not easy, because we need materials	MWTL very general in content/ TP more practical/ready made	It is easy because specific guidelines are included in. Contents are sometime difficult, but teaching methods are easy to follow.

パイロット校の校長からの聞き取り

	質問項目	Gavi Shimul (RNGPS) Delwar Jahan (Head teacher)	Shakhari Patti (GPS) Ms. Monira Haib
1	JSA の必要性	児童の意見を聞くことは新しい方法である。一歩づつ段階的に学び、楽しんでいる。	TP だけが必要である。この学校は出席率がわるいので、もっとインセンティブが必要である。制服、カバン、奨学金など。
2	TP の使用		理科の先生が「宇宙」について SW と TP に基づいて模擬授業をした。そのときに自分の家から地球儀を持参した。
3	授業での変化	TP に従がうと授業が容易になり、先生達は自身がついてくる。	除々に教材使用頻度が多くなった。
4	児童の変化	一人の児童が考えを述べているとき、他の児童はその考えから学習することができる。授業が楽しくなり、先生への集中力も高まっている。T	児童はより意見の述べるようになり、教師へ注目するようになっている。
5	新しい方法の活用	児童が活発になり、授業への参加度が向上した。	SW で取得した手法で授業を行っている。
6	困難なこと	先生が教材を自分で用意する（家から持ってくる）	この学校では一日に 8 時間の授業があり、さらに TP を活用するとさらに仕事量が増える。TP は一つの単元を教えるのに多くのステップがあり準備がかかる。
7	児童数/教師数	2006 2005 2004 160/3 214/3 164/3	2006 2005 2004 162/5 172/5 160/5

パイロット校での聞き取り（英文）

This questionnaire is to be used in the mid-term evaluation of the above-mentioned study. Your answer and comments will be utilized to improve the implementation of the said support activity and technical cooperation for NAPE by Japan International Cooperation Agency (JICA) in latter part of the support activity. The answer what you give us is used only for the study and this response sheet is kept within JCA evaluation team.

Interviewing Items to FTS School Teacher involved in the activity

School Name Tatkura GPS (Gouripur) Address _____

NAME: Mr. Abdul (Math) Position Title: _____ Telephone No: _____

No.		Question Items
1	Q	Please tell What kind of ability you think is most important when you teach science or mathematics in your school?
	A	Q&A is very important, because collecting information from students in class is very important.
2	Q	The contents that you have discussed at the Study Workshops are the one that you really needed? ■Yes ☐ NO. If no, please explain what kind of method/skills/knowledge you would like to have.
	A	Yes. Because we could discuss on subject based issue in the workshops. Also, we could get new techniques/skills, which are necessary and effective to teachers, so that it is necessary even though training time is limited. Q&A, teaching-learning material based, are most important leaning from the workshops.
3	Q	Has the Study Workshops been useful to improve your teaching capacity at your school? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes, I improved my capacity, but it is very difficult.
4	Q	Have you observed any change in your pupils since you are involved in the support activity? ■Yes ☐ NO. If yes, please explain what kind of change you have observed.
	A	Yes. Students has became more active (they became participating activities in class), and showed their interests increased in classes. Then, I feel quality of education has improved since the project support started, shown by the increase of all of attendance rate, result of final exam of upazila data, result of monthly exam (which is orally performed by him) and pupils classroom performance. *the increase was attained by new teaching method, with their traditional evaluation way.
5	Q	Would you like to be strongly involved in this support activity? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes, for it is very supportive.

6	Q	Have you observe any change in your feeling of academic support by NAPE, PTI&URC, because of this support activity ■Yes ☐ NO. If yes, please explain it.
	A	Yes, there are some changes. NAPE and URC became visits more frequently compared to before the support (once a two months before is now 15th a month.). Also, we have sub-cluster training once a month. Compared the sub-cluster training by AUEO, JICA workshop/TP are different in quantity (though methods are almost same).
7	Q	Is the Teaching Package easy to use? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Some of lesson of TP is difficult to perform, if there is not enough equipment with us. Also, the concept of lesson plan is sometime difficult to learn. However, instruction in the TP is very detailed and easy to learn/do in classroom.

Thank you for you kind cooperation!

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Interviewing Items to FTS School Teacher involved in the activity

School Name Tatkura GPS (Gouripur) Address _____

NAME: Ms. Raziya (Science) Position Title: _____ Telephone No: _____

No.		Question Items
1	Q	Please tell What kind of ability you think is most important when you teach science or mathematics in your school?
	A	Experiment is important, because pupils need to prove the evidence. Q&A is also important.
2	Q	The contents that you have discussed at the Study Workshops are the one that you really needed? ☐Yes ☐ NO. If no, please explain what kind of method/skills/knowledge you would like to have.
	A	We can discuss the content of S/W and other interesting issues there. I want subject based training (*she seems to want science itself more for herself to teach pupils better), curricula, and teaching-learning materials.
3	Q	Has the Study Workshops been useful to improve your teaching capacity at your school? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes, lesson plan is sometime difficult. I faced difficulty to use it without S/W, but S/Ws help her a lot.
4	Q	Have you observed any change in your pupils since you are involved in the support activity? ■Yes ☐ NO. If yes, please explain what kind of change you have observed.
	A	Yes, lesson plan is sometime difficult. I faced difficulty to use it without S/W, but S/Ws help her a lot.
5	Q	Would you like to be strongly involved in this support activity? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes, because students increased their interest to learn, while teachers got good techniques as teachers.
6	Q	Have you observe any change in your feeling of academic support by NAPE, PTI&URC, because of this support activity ■Yes ☐ NO. If yes, please explain it.
	A	Yes. NAPE visit schools for monitoring once three months. AUEO visit every week.
7	Q	Is the Teaching Package easy to use? ■Yes ☐ NO. Please tell the reason why Yes/No.

	A	Yes. Because TP includes ready-made lesson plans and it is very helpful. Compared to IDEAL lesson plans, it does not urge to make homework.

Thank you for you kind cooperation!

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Interviewing Items to FTS School Head

School Name Gavi Shimul School (Gouripur) Address _____

NAME: Mr. Delwar Jahan Position Title: Head Teacher Telephone No: _____

No		Question Items
1	Q	Is the Japan's Support Activity the one that you needed? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes. T/P is useful for pupils/teachers. Step by step, pupils have become more active and responsible. Teachers also changed their way: they became to collect information from pupils, which are new attitudes after the JSA. Nowadays, teaching among pupils appears in some classes. Pupils seem to enjoy the classes, accordingly they improve their achievement.
2	Q	Have you ever seen that your science or math teachers use the teaching package that is developed by NAPE? ■Yes ☐ NO. If yes, please tell how they used the TP. If no, please tell the reason why.
	A	Yes. I observed that teachers bring TP to classrooms and sometime utilize it to support their lessons.
3	Q	Do you observe any change in the teaching of your teachers who were involved in the support activity? ■Yes ☐ NO. If yes, please tell what kind of change.
	A	Yes. Teachers have got confidence in their class, because TP is easy to follow and very practical with many detailed information. I observed teachers applied to their classes.
4	Q	Do you observe any change in your children? ■Yes ☐ NO. If yes, please explain it.
	A	Yes. Pupils have become to participate in their classes more actively and seem to understand the classes.
5	Q	Do you observe any case in which your teachers involved in the activity taught the method/skills that they learned in the activity? ■Yes ☐ NO. if yes, please explain it.
	A	Yes. For instance, 'Air' session of Science class, a teacher applied TP instruction. He prepared/used teaching materials such as belun, box, paper, and plastic straw.
6	Q	Have you faced any difficulty when the activity started? ☐Yes ■ NO. If yes, please explain it.

	A	No. Since average number of the class is 23, so it is not difficult to apply the methods in classes.
7	Q	Please tell us if there is a big change in ratio on your pupils and your teacher, before and after the activity started.
	A	160 pupils per 3 teachers in 2004, 214 pupils per 3 teachers in 2005, 160 pupils per 3 teachers in 2006.

Thank you for kind cooperation!

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Interviewing Items to FTS School Teacher involved in the activity

School Name Gavi Shimul School (Gouripur) Address _____

NAME: Mr. Abdur Rahim (Science & Math) Position Title: _____ Telephone No: _____

No.		Question Items
1		Please tell What kind of ability you think is most important when you teach science or mathematics in your school?
		Contents / subject-based teaching methods are important, but the most important thing is the utilization of teaching materials. Using teaching materials, pupils can understand lessons easily.
2		The contents that you have discussed at the Study Workshops are the one that you really needed? ■Yes ☐ NO. If no, please explain what kind of method/skills/knowledge you would like to have.
		Yes. Discussion was good, for it was the only chance to discuss academic issues. Monthly coordinate meeting at AUEO has been held, but the discussion there are all for administrative issues, so the contents of the discussion in SW is very necessary to me.
3		Has the Study Workshops been useful to improve your teaching capacity at your school? ■Yes ☐ NO. Please tell the reason why Yes/No.
		Yes. I could learn new methods from the SWs. Before the SW, teachers did not use many materials, but now they are able to use materials effectively.
4		Have you observed any change in your pupils since you are involved in the support activity? ■Yes ☐ NO. If yes, please explain what kind of change you have observed.
		Yes. Pupils enjoy classes. Moreover, they seem to be able to answer easily in classes.
5		Would you like to be strongly involved in this support activity? ■Yes ☐ NO. Please tell the reason why Yes/No.
		Yes, for if we continuously involved in the activities, we will be good teachers.
6		Have you observe any change in your feeling of academic support by NAPE, PTI&URC, because of this support activity ■Yes ☐ NO. If yes, please explain it.
		Yes. Before the project, NAPE just visited schools, but now they suggest / give comments on teachings, and even praise teachers. Also, they did not come so much before, but now AUEO visit schools 2 per month, NAPE visit 1 per 3 months. We think if we could have them more in future.

7		Is the Teaching Package easy to use? ■ Yes ☐ NO. Please tell the reason why Yes/No.
		Yes. It is easy because specific guidelines are included in. Contents are sometime difficult, but teaching methods are easy to follow.

Thank you for you kind cooperation!

This questionnaire is to be used in the mid-term evaluation of the above-mentioned study. Your answer and comments will be utilized to improve the implementation of the said support activity and technical cooperation for NAPE by Japan International Cooperation Agency (JICA) in latter part of the support activity. The answer what you give us is used only for the study and this response sheet is kept within JCA evaluation team.

Interviewing Items to FTS School Teacher involved in the activity

School Name: PTI Experimental School (Sador) Address _____

NAME: Mr. Shah Sultan (Grade 3 Math & Grade 4 Science) Position Title: _____ Telephone No: _____

No.		Question Items
1	Q	Please tell What kind of ability you think is most important when you teach science or mathematics in your school?
	A	Gang, knowledge, attitude are important. I want to get subject knowledge mostly among them, followed by skill for delivery of knowledge, and teachers' positive behavior/attitude/mind. The behavior means to be helpful, friendly, and nice to pupils.
2	Q	The contents that you have discussed at the Study Workshops are the one that you really needed? ■Yes ☐ NO. If no, please explain what kind of method/skills/knowledge you would like to have.
	A	Yes, it increased subject knowledge through the S/W subject.
3	Q	Has the Study Workshops been useful to improve your teaching capacity at your school? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes, he learned teaching method for science and math.
4	Q	Have you observed any change in your pupils since you are involved in the support activity? ■Yes ☐ NO. If yes, please explain what kind of change you have observed.
	A	Yes. They are very interested in doing some group activities. Pupils are very active and seem to enjoy their classes.
5	Q	Would you like to be strongly involved in this support activity? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes. It can increase my knowledge. He wants to attend the WS, because he wants to increase his teaching capacity.
6	Q	Have you observe any change in your feeling of academic support by NAPE, PTI&URC, because of this support activity ☐Yes ☐ NO. If yes, please explain it.
	A	SGA gives us an opportunity of knowing other teachers idea, and he can build human relationship among them (before, there are no communication among teachers, but now they can share many opinions and issues among them)
7	Q	Is the Teaching Package easy to use? ■Yes ☐ NO. Please tell the reason why Yes/No.

	A	Yes, it is easy. It is understandable, child-centered, and gives opportunity of group works. There is a difference between JICA support program and what he learnt by himself: i. T/P has scope of group works, and ii. T/P is very much child-centered. (*He has B-in Ed, but he does not get any academic training such as lesson plan, although he learnt it by himself.) Before T/P, he created lesson plan by himself, but it was not child-centered. Also, the usage of teaching materials in class became more frequent before the project support. He also learned the way of use materials more: before the project, teachers just used the materials by themselves in classes, but now pupils use the materials in classes. He learned that "learning by doing" is very good to pupils: only memorizing before is not enough.

Thank you for you kind cooperation!

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Interviewing Items to FTS School Head

School Name: Shakari Patti GPS (Sador) Address _____

NAME: Ms. Monira Habib Position Title: Head teacher Telephone No: _____

No		Question Items
1	Q	Is the Japan's Support Activity the one that you needed? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes, but I am not satisfied with it. T/P is useful, but it itself is not enough to perform good classes. She needs more information on teaching methods. In fact, main problem in this school is that pupils' attendance rate is very low. Some pupils cannot come to school for child labor and for other reasons, so that if JICA gives money/incentive to them, it would be more helpful for us. She needs JICA support to money to purchase bags, school uniforms, and so forth.
2	Q	Have you ever seen that your science or math teachers use the teaching package that is developed by NAPE? ■Yes ☐ NO. If yes, please tell how they used the TP. If no, please tell the reason why.
	A	Yes it is important and useful. I saw that teachers are preparing exam and class by utilizing the TP.
3	Q	Do you observe any change in the teaching of your teachers who were involved in the support activity? ■Yes ☐ NO. If yes, please tell what kind of change.
	A	Yes. She observes the changes in frequency of using teaching materials: before the project, they did not use materials but now they became to use it.
4	Q	Do you observe any change in your children? ☐Yes ☐ NO. If yes, please explain it.
	A	Students are very active. Also she observes pupils achievement in exams has improved. As for attendance rate, it depends on grade: some are OK, but some are not.
5	Q	Do you observe any case in which your teachers involved in the activity taught the method/skills that they learned in the activity? ■Yes ☐ NO. if yes, please explain it.
	A	Yes. S/W showed us a lesson model demonstration (our universe, science), so teachers use the model in the classroom, using glove, candle, and ants (school did not prepared but a teacher prepared by himself). It was good because pupils became more active and learning outcomes were increased.

6	Q	Have you faced any difficulty when the activity started? ■Yes □ NO. If yes, please explain it.
	A	Yes. Difficulties lie in limited lesson period (50 min). It is difficult to use the new methods TP suggests, regardless of subject. She already raised this issue and discussed it with others in SW. She also complained there about teachers' workload (8 periods/day for 1 teacher is very hard). Performing TP methods takes time to prepare, so it is difficult. Teachers feel pressures under a situation of 160 pupils and 5 teachers in this year. When teachers prepare teaching materials, they ask head teacher money to purchase marble, papers, models, pictures, photocopies, color pencils, scale, and scissors, for instance.
7	Q	Please tell us if there is a big change in ratio on your pupils and your teacher, before and after the activity started.
	A	162/5 in 2004, 172/5 in 2005, and 160/5 in 2006 *In JICA workshop, head teachers do not get any chance to monitor (NAPE personnel do instead.) *Exam will start from 5th Dec. so all class are review.

Thank you for kind cooperation!

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Interviewing Items to FTS School Teacher involved in the activity

School Name: Shakari Patti GPS (Sador) Address _____

NAME: Ms. Hasna Ara Begum (Math) Position Title: _____ Telephone No: _____

No.		Question Items
1	Q	Please tell What kind of ability you think is most important when you teach science or mathematics in your school?
	A	Teaching materials are most important
2	Q	The contents that you have discussed at the Study Workshops are the one that you really needed? ■Yes ☐ NO. If no, please explain what kind of method/skills/knowledge you would like to have.
	A	Yes. He needs opportunities to discuss effective teaching method.
3	Q	Has the Study Workshops been useful to improve your teaching capacity at your school? ☐Yes ■ NO. Please tell the reason why Yes/No.
	A	No. It is still not fully satisfied. T/P is incomplete, in the sense of it does not have any materials. She needs to prepare the materials by herself
4	Q	Have you observed any change in your pupils since you are involved in the support activity? ■Yes ☐ NO. If yes, please explain what kind of change you have observed.
	A	Yes. Her objectives have changed. I am now experimenting the new methods in class. Introducing materials and activities, pupils have been interested in classes.
5	Q	Would you like to be strongly involved in this support activity? ■Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes. Thorough the JICA support, she got more chance to improve her ability, discussing subject-based issues.
6	Q	Have you observe any change in your feeling of academic support by NAPE, PTI&URC, because of this support activity ■Yes ☐ NO. If yes, please explain it.
	A	Yes, especially NAPE personnel. She did not get communication with them frequent, but now she got the chance more frequently/
7	Q	Is the Teaching Package easy to use? ■Yes ☐ NO. Please tell the reason why Yes/No.

	A	Yes, it is easy. However, she needs to work harder than before, for many activities regarding one issue are introduced in the TP. (* their routine is 9.00-4.15)

Thank you for you kind cooperation!

*Compared to MWTA, T/P is much better because it contains more details (though it is difficult to memorize to perform).
*T/P tells only one question, but MWTA does not limit question, so that teacher can ask pupils more freely.
*What is a message from JICA W/S? --- A. Developing teaching capacity. Literacy rate will be increased if teacher do good education. Why did you become to use the teaching materials? --- A. Using teaching materials, pupils learning outcomes increased.

Notes:

- Head teacher and teachers claimed that the school lack supply. They asked us that financial support (especially to purchase school uniforms, bags, pens, notebooks, and so forth).
- They also want more frequent school visits by NAPE and JICA
- (As for the draft of math TP,) teacher pointed out that there are some mistakes and difficult sentences which are not easy to understand. She is doing her best to contribute the development of teaching by herself.

バシャニ共学校（Boys & Girls）におけるインタビューで指摘されたUNICEFのIDEALプロジェクトの授業案と本プロジェクトのTPの中の授業案についての意見

IDEAL Project での授業案	プロジェクトの授業案
・考える項目が 3 項目のみで自由に記入する形式であり容易である。1)目的はなにか　2) 教材　3) 評価 ・力のない教師には、自由記入形式では確りとした授業案をつくるのは難しい。 ・あまり決められていないので、途中で違った方向へ行ってしまうこともある。	・考える項目がより詳細に決めてある（前回の復習やこれからの授業目的など） ・作成するのは時間がかかり難しい。しかし一旦作成すると授業案にそって授業が進めるようになっているので楽になる。 ・誰もが同じレベルの授業ができるようになる。 ・しかし案が長くなっているので授業の途中で忘れてしまうこともある。

NAPE の DG に対する質問票とその回答

This questionnaire is to be used in the mid-term evaluation of the above-mentioned study. Your answer and comments will be utilized to improve the implementation of the said support activity and technical cooperation for NAPE by Japan International Cooperation Agency (JICA) in latter part of the support activity. The answer what you give us is used only for the study and this response sheet is kept within JICA evaluation team.

Interviewing Items NAPE DG

NAME: M.A. Kashem Masud Position Title: NAPE DG Telephone No: 091-54805 (Office) 091-54070 (Home)

No.		Question Items
1	Q	Is the Japan's Support Activity (JSA) really necessary to strength the Science & Math Section of NAPE? ☐Yes ☐ NO Please tell us the reason why Yes/No.
	A	Yes. Because new concepts are introduced by JSA, for instance SGAs, lesson plans, QTC cycle, subjects-teaching methods, and S&M section are strengthened through JSA. I am sure that the development of the section would lead whole capacity development of NAPE.
2	Q	Do you observe the improvement of instructional capacity of your specialists (assistant specialist) at S&M? ☐Yes ☐ NO Please tell us the reason why Yes/No.
	A	Yes. The specialists became more confident. Their preparation of trainings, workshops, and other activities, became better. So I would say quality of them are improved.
3	Q	Do you observe any change in your staff 's working together toward academic improvement at all level (NAPE, PTI, URC UEO and the pilot schools) after the JSA started? ☐Yes ☐ NO . Please tell us the reason why Yes/No.
	A	Yes, especially in their group activities (e.g. group work and information collection). The relationships among staff have been developed.
4	Q	Do you think that all Japanese experts have been sufficiently utilized to achieve the SA goal? ☐Yes ☐ NO Please tell us the reason why Yes/No.
	A	JSA has no detailed/particular/specific (consistent) work plan. For instance, Japanese experts changed so many times, which is obvious obstacle of the progress of this program. Japanese experts should continue their post throughout a program.
5	Q	How do you evaluate the Teaching Package that the SA has been developing? Is it well organized and applicable to use at all level (NAPE, PTIs, URC, Sub-cluster training and schools) ☐Yes ☐ NO. Please tell us the reason why Yes/No.

	A	-Process is good. In particular, NAPE, PTI, and FTS teachers, have positively joined in TP development, while other teachers and URC have not done that much. -Regarding TP contents, there are many issues behind as follows: -In short, current TP is not sufficiently meet the actual school/classroom situation/demands. There are various school environment (schools in costal area, mountainous area, poor area, and so forth), various classroom situation (double shift school, one shift school), and mostly teachers are too few to pupils. These "Bangladeshi context" need to be reflected in the TP: i.e. number of activities TP suggest are too many for one lesson, and teaching materials suggested in TP are sometime not available to prepare. Program team has to consider these issues for further development of TP. -Also, current TP does not follow the scope of other projects on going / in past, such as NORAD and UNICEF have suggested. In other words, different approaches/skills have been introduced by various donors in the area of S&M education / teacher training. Therefore, the sustainability of TP is doubtful. This project should be integrated in other project under PEDP II.
6	Q	Have you decided to use the new teaching method/skills introduced by this JSA in your NAPE? ☐Yes ☐ NO Please tell us the reason why Yes/No.
	A	No. Because teaching method/skills introduced by JSA are sometime not acceptable in real situation.
7	Q	Do you have budget to implement trainings for 5~6 times in order that NAPE disseminate the JSA teaching method/skills to all S&M PTI instructors? Or Is there any way to get the budgets? ☐Yes ☐ NO. Please tell us the reason why Yes/No.
	A	For the moment, we do not have. However, it is definitely possible to get the budgets from MOPME, for NAPE respects the effect of the JSA.
8	Q	Do you observe any negative impact by this JSA? ☐Yes ☐ NO If yes, please explain it.
	A	No, there are only positive impacts.
9	Q	Please tell us if the NAPE has any change on the role in PEDPII after its autonomy ☐Yes ☐ NO. Please explain how NAPE has budget for its activities plan.
	A	Yes. NAPE became freer to make budget after its autonomy: NAPE became able to request its budget from MOPME directly. Regarding the change of relationship between PRDP II (or DPE) and NAPE, we could say that PEDP II (or DPE) is a service provider and NAPE is a customer, which means NAPE was only a recipient who does not have any power to request before getting its autonomy, but now have more power.

10	Q	Is there any possibility for NAPE to allocate CPs who work only for the Japan's support activity? ☐Yes, ☐No Please tell us the reason why Yes/No.
	A	Yes, we can allocate CPs who could permanently work for JSA, because there are many resources in NAPE.

Thank you for your kind cooperation!

CP に対する質問票の結果まとめ

	質問項目	Mr. AHM Mohiuddin （S）	Mr .Md..Abdul Jalil (AS)	Md. Shah Sarkar
1	何を学びましたか？ 専門性は向上しましたか？	授業研究、QTC、SGA, 専門性の向上には有効	授業研究､QTC, SGA,SW, TP の準備、教材作成等　役に立っている。	授業研究 QTC, SGA, SW である。専門性の向上には必要。
2	JSA は訓練能力の改善となりましたか？同僚との関係は？	自分自身の専門性の向上に役に立っている。 バングラデシュにとっての必要性の要検討	理数科の訓練能力向上に有効。同僚は変化がおきている。	訓練能力に変化がみられる。しかし適切な評価をして、次の行動計画が必要である。
3	訓練カリキュラムとカリキュラム及び評価の提言は政府によって受け入れられますか？	カリキュラム検討の際に現地の専門家が参加していると政府に提言が受け入れやすくなっていた。	政府の承認が必要である。	政府からの承認が必要である。また初等教育のバングラ人の専門家を巻き込む必要がある。
4	SGA と SW は専門性の改善に有効でしたか？	有効であるが､学校レベルで SGA を実施するためには友好的な雰囲気作りが必要である。	SGA は教員不足により実施が困難。SW は効果的である。	バングラデシュの特性（教員不足など）を考える必要がある。
5	JSA で習得したことを他訓練で使ってことがありますか？	部分的に活用した。現在では JSA で習得したことを活用するチャンスがない。	FTS の理数科の先生の訓練および AUEO の教科別訓練にて活用した。	部分的に活用しているが、広範囲で活用する機会はまだない。
6	TP は PTI 訓練､URC 訓練や AUEO による訓練に活用されると思いますか？	政府の決断による。	PTI 訓練や URC 訓練で TP が活用されれば、教官によって活用される。サブクラスター訓練での活用は現実的ではない。研修会が必要である。	政府の承認が必要である。
7	日本人専門家は十分に活用されていますか？	未回答	活用されている。しかし広い観点かでみるとそうでもない。	十分に活用されているが、100%ではない。
8	JSA は児童の学力向上につながると思いますか？	JSA の手法は要検討 学校レベルへの普及 AUEC と URC の JSA への参加	教材の配布が必要 全国展開が必要 全ての関係者への TP の研修会が必要	全国展開が必要である。AUEO や URC 教官への訓練が必要。初等教育関係者間での共有化が必要

CP に対する質問票の結果まとめ

	質問項目	Md. Mazharul Haque	Mr. Shamsuddin Ahmed	Md. Mazharul Islam Khan
1	何を学びましたか？ 専門性は向上しましたか？	授業研究 QTC, SGA, SW, 授業における教材のありかた。専門性の向上には必要。	TP, SGA, 授業研修、SW. 専門性の向上に必要なものです。	TP 開発、学習者中心的参加型授業方法、 授業を楽しくする方法
2	JSA は訓練能力の改善となりましたか？同僚との関係は？	バングラデシュの状況を考慮する必要がある。	JSA は理数科の訓練能力向上に役になっている。平等に意見や提言を述べられる良い機会です。同僚性も改善している。	訓練能力の向上に必要です。NAPE, PTI, URC,UEO やパイロット校の関係者はお互いに顔見知りではなかった。自立発展性についてはバングラデシュでは難しいので、政府による支援が必要である。
3	訓練カリキュラムとカリキュラム及び評価の提言は政府によって受け入れられますか？	バングラデシュ人の専門家を巻き込こむことが必要である。	JICA ティームが現行のカリキュラムと現実にもとづいて提言をする。	JSA の提言は適切である。NAPE 所長、DPE 局長を巻き込む必要がある。
4	SGA と SW は専門性の改善に有効でしたか？	学校での SGA の実施は教員不足で困難となっている。定期的に SGA を実施するシステムが必要	他の人々の意見や考えを聞くことにより自分の専門性の向上につながる。	SGA 活動により自分の弱点を発見することができた。しかし SGA を学校レベルで実施することは難しい。SW では様々な関係者の意見により専門性を高めることは可能である。
5	JSA で習得したことを他訓練で使ってことがありますか？	部分的に活用している。NAPE の訓練に応用するのは難しい。	TP を PTI の訓練で活用したことがある。	PTI の訓練での教育実習で TP を使った。強化別訓練の TOT でも活用する機会があった。
6	TP は PTI 訓練、URC 訓練や AUEO による訓練に活用されると思いますか？	政府の承認が必要	承認があれば、訓練で活用できる。	TP が教科別訓練のマニュアルに組み込まれると活用可能になる。DPE はドナーのプロジェクトや活動の連携を強化すべきである。
7	日本人専門家は十分に活用されていますか？	部分的である。	未回答	長期的に滞在すると TP 作成や SGA 活動をより効果的にできる。広島大学の先生の MM が限られている。またダッカ大学の専門家を巻き込むことも必要である。
8	JSA は児童の学力向上につながると思いますか？	全国展開が必要。AUEO や URC の視学が必要となる。	未回答	PEDPII の他の活動との連携が必要である。教科別訓練において JICA と UNICEF の連携強化が必要である。

CP に対する質問票とその回答（素データ）

Interviewing Items to NAPE C/P

NAME: Mr. A.H.M. Mohiuddin　　Position/Title: Specialist, NAPE, Mymensingh　　Telephone No: 01199-112434

NO		Question Items
1	Q	Please tell us what you are learning from the Japan's support activity. Is it what you needed to improve your expertise?
	A	Lesson Study, Quality Teaching Circle, Study Group Activity. Yes, it is necessary for the improvement of my expertise.
2	Q	Is the SA useful to improve your teaching ability of science and mathematics? Is there any change in relationship between you and your colleagues at NAPE, PTIs, URC, UEO and FTSs? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes, it is useful to improve my capacity but it is necessary to evaluate whether the techniques followed by JICA Support Program is useful in the context of Bangladesh or not.
3	Q	Do you think that the recommendation of appropriate C-in-Ed curriculum and valid assessment for a cluster examination would be accepted by the government? ☐Yes ☐ NO. Please explain why Yes/No.
	A	The local experts will have to be included in the process of review and recommendations of the curriculum for making it acceptable.
4	Q	Are the SGAs and the SWs useful in order to improve your expertise? ☐Yes ☐ NO Please explain why yes/no.
	A	Yes, it is effective but for this purpose we have to create a favorable environment for conducting SGA at school level.
5	Q	Have you ever utilize the method & skills in other training sessions than JSA? ☐Yes ☐ NO. If yes, please explain it. If no, please tell why?
	A	Done partially. Because it has less opportunity to apply the JICA approach to the others training.
6	Q	Do you think that TP would be utilized in training program such as PTI trainings, URC subject trainings or sub-cluster trainings by AUEO? ☐ Yes ☐ NO. Please tell us the reason why yes/no.
	A	It depends on the decision of the Government.
7	Q	Do you think that Japanese experts are fully utilized? ☐Yes ☐ NO Please tell why Yes/No.
	A	

8	Q	Please suggest what would be needed to improve the children's academic performance through this JSA. Is the SA enough to improve the performance?
	A	- The techniques of JICA Program need to be reviewed. - This program will have to be scaled-up in the selected schools of throughout the country. - Concerned AUEO, URC will have to be involved in the program.

Thank you for your kind cooperation!

Interviewing Items to NAPE C/P

NAME: Md. Abdul Jalil Position/Title: Assistant Specialist, NAPE, Mymensingh Telephone No: 091-62896

NO		Question Items
1	Q	Please tell us what you are learning from the Japan's support activity. Is it what you needed to improve your expertise?
	A	Quality Teaching Circle, Study Group Activity, Workshop, Lesson Study, preparation of Teaching Package, Protocol Analysis, preparation of low-cost materials. Yes, it is necessary for improvement of my expertise.
2	Q	Is the SA useful to improve your teaching ability of science and mathematics? Is there any change in relationship between you and your colleagues at NAPE, PTIs, URC, UEO and FTSs? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes, it is useful to improve my teaching capacity in science and mathematics. Yes, I think that our colleagues acquired positive changes. Which can be seen during the observation of the class.
3	Q	Do you think that the recommendation of appropriate C-in-Ed curriculum and valid assessment for a cluster examination would be accepted by the government? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes, it is expected. In this connection Government approval is necessary.
4	Q	Are the SGAs and the SWs useful in order to improve your expertise? ☐Yes ☐ NO Please explain why yes/no.
	A	Yes. a) But Study Group Activity could not be implemented for the shortage of teachers.] b) Study Workshop found very effective.
5	Q	Have you ever utilize the method & skills in other training sessions than JSA? ☐Yes ☐ NO. If yes, please explain it. If no, please tell why?
	A	Yes. a) Training in science and math for the FTS teachers b) Subject-based training for the AUEOs
6	Q	Do you think that TP would be utilized in training program such as PTI trainings, URC subject trainings or sub-cluster trainings by AUEO? ☐ Yes ☐ NO. Please tell us the reason why yes/no.

	A	Yes. a) If TP is used in the PTI Training, teachers will be trained by the Instructor in PTI. b) If TP is used in the URC, Teachers will be trained by the Instructor and they will be skilled in Science and Math teaching. c) It is not practical to use TP in sub-cluster training, but TP briefing session is necessary.
7	Q	Do you think that Japanese experts are fully utilized? ☐Yes ☐ NO Please tell why Yes/No.
	A	Yes. But they are not utilized in all aspect.
8	Q	Please suggest what would be needed to improve the children's academic performance through this JSA. Is the SA enough to improve the performance?
	A	Not sufficient, because: a) It is necessary to provide lesson related teaching materials to the school. b) It needs to be scaled-up throughout the country. c) A sharing session is necessary on the TP with all the officers involved with the primary education.

Thank you for your kind cooperation!

Interviewing Items to NAPE C/P

NAME: Md. Shah Alam Sarker Position/Title: Assistant Specialist, NAPE, Mymensingh Telephone No: 01712-173133

NO		Question Items
1	Q	Please tell us what you are learning from the Japan's support activity. Is it what you needed to improve your expertise?
	A	Quality Teaching Circle, Study Group Activity, Lesson Study, Study Workshop. Yes, it is necessary to improve my expertise.
2	Q	Is the SA useful to improve your teaching ability of science and mathematics? Is there any change in relationship between you and your colleagues at NAPE, PTIs, URC, UEO and FTSs? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes, it is useful to improve my teaching capacity. Changes have taken place partially, but it is necessary to determine the next action after appropriate evaluation for the expected change.
3	Q	Do you think that the recommendation of appropriate C-in-Ed curriculum and valid assessment for a cluster examination would be accepted by the government? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes. But it is necessary to get approval from the higher authority. Besides local national experts of Primary Education needs to be included with this program.
4	Q	Are the SGAs and the SWs useful in order to improve your expertise? ☐Yes ☐ NO Please explain why yes/no.
	A	Yes it is useful. But it is necessary to think about its usefulness in the context of Bangladesh's various kinds of environment and shortage of teachers.
5	Q	Have you ever utilize the method & skills in other training sessions than JSA? ☐Yes ☐ NO. If yes, please explain it. If no, please tell why?
	A	Yes partially used. But still we do not have opportunity to use it in large scale.
6	Q	Do you think that TP would be utilized in training program such as PTI trainings, URC subject trainings or sub-cluster trainings by AUEO? ☐ Yes ☐ NO. Please tell us the reason why yes/no.
	A	Yes. But on the basis of Government approval.
7	Q	Do you think that Japanese experts are fully utilized? ☐Yes ☐ NO Please tell why Yes/No.
	A	Yes, they are utilized but I cannot say 100%.

8	Q	Please suggest what would be needed to improve the children's academic performance through this JSA. Is the SA enough to improve the performance?
	A	- Not enough. The program should be taken for all over the country. - It is necessary to involve all the AUEO's and URC Instructors. - It is necessary to reset the target on the basis of the opinion received from the Mid Term Evaluation. - A sharing session may be conducted with the all concerned stakeholder of the Primary Education.

Thank you for your kind cooperation!

Interviewing Items to NAPE C/P

NAME: Md. Mazharul Haque Position/Title: Assistant Specialist, NAPE, Mymensingh Telephone No: 01712-223429

NO		Question Items
1	Q	Please tell us what you are learning from the Japan's support activity. Is it what you needed to improve your expertise?
	A	Lesson Study, Quality Teaching Circle, Study Group Activity, how to develop TP, how to develop teaching materials etc. Yes, it is necessary to improve my expertise.
2	Q	Is the SA useful to improve your teaching ability of science and mathematics? Is there any change in relationship between you and your colleagues at NAPE, PTIs, URC, UEO and FTSs? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes, it is useful to improve my capacity. But it is necessary to consider the context of Bangladesh.
3	Q	Do you think that the recommendation of appropriate C-in-Ed curriculum and valid assessment for a cluster examination would be accepted by the government? ☐Yes ☐ NO. Please explain why Yes/No.
	A	To make the recommendations acceptable, proper activity in the process of review is necessary and it will be highly accepted if local Bangladeshi Expert could be involved in Support Program.
4	Q	Are the SGAs and the SWs useful in order to improve your expertise? ☐Yes ☐ NO Please explain why yes/no.
	A	Yes. Of course useful. But school is not conducting the SGA regularly. Implementation was hampered for the shortage of teachers. For this reason we have to develop the system of conducting SGA regularly.
5	Q	Have you ever utilize the method & skills in other training sessions than JSA? ☐Yes ☐ NO. If yes, please explain it. If no, please tell why?
	A	Yes. Utilized the method partially. It is not possible to apply JICA approach to the other trainings organized by NAPE. Most of the cases scope is limited.
6	Q	Do you think that TP would be utilized in training program such as PTI trainings, URC subject trainings or sub-cluster trainings by AUEO? ☐ Yes ☐ NO. Please tell us the reason why yes/no.
	A	Yes. But the decision of authority is essential.
7	Q	Do you think that Japanese experts are fully utilized? ☐Yes ☐ NO Please tell why Yes/No.
	A	Yes, they are utilized partially.

8	Q	Please suggest what would be needed to improve the children's academic performance through this JSA. Is the SA enough to improve the performance?
	A	- To increase the acceptance of JICA Support Program. It is necessary to scaled-up the program throughout the country. - To enhance the sustainability AUEOs, URCs needs to be involved in the supervision matter.

Thank you for your kind cooperation!

Interviewing Items to NAPE C/P

NAME: Mr. Shamsuddin Ahmed Position/Title: Instructor, PTI, Mymensingh Telephone No: 0191-738215

NO		Question Items
1	Q	Please tell us what you are learning from the Japan's support activity. Is it what you needed to improve your expertise?
	A	Teaching Package, Study Group Activity, Lesson Study, Study Workshop. Yes, it is necessary for improvement of my expertise.
2	Q	Is the SA useful to improve your teaching ability of science and mathematics? Is there any change in relationship between you and your colleagues at NAPE, PTIs, URC, UEO and FTSs? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes. Support Program is useful to improve teaching ability of science and mathematics. Yes, positive change on relationship with our colleagues has taken place. Everyone is getting opportunity to put their own suggestion.
3	Q	Do you think that the recommendation of appropriate C-in-Ed curriculum and valid assessment for a cluster examination would be accepted by the government? ☐Yes ☐ NO. Please explain why Yes/No.
	A	JICA will make a recommendation on the basis of present curriculum and the reality.
4	Q	Are the SGAs and the SWs useful in order to improve your expertise? ☐Yes ☐ NO Please explain why yes/no.
	A	Yes, We can discuss any issue, we can share our idea, we can also be able to know others' opinions. In this process we can improve our skill.
5	Q	Have you ever utilize the method & skills in other training sessions than JSA? ☐Yes ☐ NO. If yes, please explain it. If no, please tell why?
	A	Yes. In C-in-Ed class (TP).
6	Q	Do you think that TP would be utilized in training program such as PTI trainings, URC subject trainings or sub-cluster trainings by AUEO? ☐ Yes ☐ NO. Please tell us the reason why yes/no.
	A	Yes. If there is an administrative approval, they can be trained.
7	Q	Do you think that Japanese experts are fully utilized? ☐Yes ☐ NO Please tell why Yes/No.
	A	
8	Q	Please suggest what would be needed to improve the children's academic performance through this JSA. Is the SA enough to improve the performance?
	A	

Thank you for your kind cooperation!

Interviewing Items to NAPE C/P

NAME: Md. Mazharul Islam Khan Position/Title: Instructor, PTI, Mymensingh Telephone No: 01716-632607

NO		Question Items
1	Q	Please tell us what you are learning from the Japan's support activity. Is it what you needed to improve your expertise?
	A	Yes. It is necessary for skill development, especially in the following area: - How to develop teaching package - How to make participatory/learners-centered teaching - How to make lesson enjoyable (e.g. utilization of games, stories, group activities)
2	Q	Is the SA useful to improve your teaching ability of science and mathematics? Is there any change in relationship between you and your colleagues at NAPE, PTIs, URC, UEO and FTSs? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes. It is useful to improve my teaching ability of S&M. Besides relationship between me and my colleagues at NAPE, PTIs, URC, UEO, and FTSs has been created. We didn't know each other before the project starts, but now we know and have some time to discuss on teaching methods, classroom activities, TP development in SGAs. Although such opportunity is very limited, I personally discuss such issues with my colleagues. However, it is difficult to customize this system (discussion) in our society. It would be possible if government could support us by formally giving additional sessions to discuss educational issues in future.
3	Q	Do you think that the recommendation of appropriate C-in-Ed curriculum and valid assessment for a cluster examination would be accepted by the government? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes, it might be. I think JICA's evaluation is appropriate. Therefore, only if it can be recommended through appropriate authorities like NAPE DG, DG DPE, and MOPME, then it will be accepted by the government.
4	Q	Are the SGAs and the SWs useful in order to improve your expertise? ☐Yes ☐ NO Please explain why yes/no.
	A	Yes. The weakness can be identified very easily through SGAs, and it is possible to be removed. But in our country circumstances, it is not possible to organize SGAs for some different reasons. It is possible to develop the skill through sharing the opinion in different stakeholders through Study Workshops.
5	Q	Have you ever utilize the method & skills in other training sessions than JSA? ☐Yes ☐ NO. If yes, please explain it. If no, please tell why?

	A	Yes. I used it in C-in Ed course, directly in demonstration class and indirectly in ordinal classes. Also, I had a chance to utilize it in subject-based ToT trainings.
6	Q	Do you think that TP would be utilized in training program such as PTI trainings, URC subject trainings or sub-cluster trainings by AUEO? ☐ Yes ☐ NO. Please tell us the reason why yes/no.
	A	Yes. Only if the TP could be integrated with the manual of subject-based ToT training, which has been organized by UNICEF, and leaflet prepared by DPE. I think education sector now needs such integrations/collaborations among donors/projects/activities. (In the meantime, the subject-based ToT training supported contacted in the field.)
7	Q	Do you think that Japanese experts are fully utilized? ☐Yes ☐ NO Please tell why Yes/No.
	A	Some team members can stay in this site for a long time and we can share/develop our education activities such as SGAs/TP together. Meanwhile, professors' MM is very limited and we would like to learn from them more. Asides, it would be very good opportunities for us to have Bangladesh Academia (like professors at Dhaka Univ.) in our activities, for they know Bangladeshi context very well.
8	Q	Please suggest what would be needed to improve the children's academic performance through this JSA. Is the SA enough to improve the performance?
	A	Just for S&M, JSA only could improve children's academic performance. However, if we expect to improve children's performance in general, we strongly need to collaborate with other projects under PRDPII more. In particular, UNICEF and JICA should cooperate more in the area of subject-based training.

Thank you for your kind cooperation!

INTERVIEW WITH MR. MAZHARUL ISLAM KHAN (28.Nov.2006)

This questionnaire is to be used in the mid-term evaluation of the above-mentioned study. Your answer and comments will be utilized to improve the implementation of the said support activity and technical cooperation for NAPE by Japan International Cooperation Agency (JICA) in latter part of the support activity. The answer what you give us is used only for the study and this response sheet is kept within JCA evaluation team.

Interviewing Items to Mymensing PTI Instructors

NAME: Md. Mazharul Islam Khan Position Title: Instructor, PTI Mymensingh Telephone No: 01716-632607

No.		Question Items
1	Q	Is the Japan's support activity is the one that you really needed? ☐Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes. Because teachers can be beneficiated from JSA, especially by learning new methods for making lesson plans. Currently, I teach PTI trainees the new methods, which JSA has suggested, through my demonstration class. Opportunity for applying actually is a bit limited now, for it is not authorized to apply T/P into whole C-in Ed curricula yet.
2	Q	Is the support activity useful to improve your expertise? Does it bring any change in your capacity? ☐Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes. It has increased my teaching competency. Now I can support teachers (trainees) to prepare their lesson plan, which is on activity-based/child-centered methods.
3	Q	In your training classes, have you utilized the method/skills that you learned? ☐Yes ☐ NO. If yes, please tell us what the reaction of your trainees is.
	A	Yes. First, I can directly use the methods/knowledge, which I got from JSA, in the demonstration class in my course. Second, I indirectly use these skills (learners-centered methods) in my ordinal classes. In the both cases, I have experienced that my trainees got increased their interest in my lessons and they increased their thinking abilities through my lesson.
4	Q	Do you think that the Teaching Package is applicable to your classroom situation? ☐Yes ☐ NO. If yes, please explain why. If no, please tell us recommendation to improve it.
	A	Yes/No. I can use TP only in demonstration class, which I already explained in Q1: there are opportunities to use TP in C-in Ed curricula only in demonstration class, but it is possible to deliver some of the idea of JICA program in training classes in general. For instance, a method of how to make classes participatory and learners-centered.
5	Q	Please tell what would you do, if you have too many trainees in you training session and carry out the TP.

	A	It is possible to carry out TP even though we have too many trainees, if one can keep the following necessary points: - First, divide the trainees into some small groups - Give them clear instruction of the class/activities, and try to get reply from them at this stage. - Keep proper monitoring throughout the group work/class (occasionally support some groups if they need) - Be a good facilitator.
6	Q	Please tell your idea on what difficulty your trainees would face, they would like to teach science and mat by using the TP.
	A	I have already heard that some teachers cannot complete all activities TP suggest in one lesson. In particular, teachers in double shift class have only 30 min for one lesson. For these cases, I think it is necessary to reduce the number of activities according to each situation.
7	Q	Please explain how you manage expense for constructing teaching-learning materials in TP.
	A	Actually, money is not necessary to collect most of teaching materials. Besides, the materials can be prepared through the trainees' practical works. In my case, I make a list of their practical work through a course, and try to give them opportunities to prepare teaching materials, such as measure scale, abacus, dice, and so forth.

Thank you for you kind cooperation!

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Interviewing Items to NAPE C/P

NAME: Md. Mazharul Islam Khan Position Title: Instructor, PTI Mymensingh Telephone No: 01716-632607

NO		Question Items
1	Q	Please tell us what you are learning from the Japan's support activity. Is it what you needed to improve your expertise?
	A	Yes. It is necessary for skill development, especially in the following area: - How to develop teaching package - How to make participatory/learners-centered teaching - How to make lesson enjoyable (e.g. utilization of games, stories, group activities)
2	Q	Is the SA useful to improve your teaching ability of science and mathematics? Is there any change in relationship between you and your colleagues at NAPE, PTIs, URC, UEO and FTSs? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes. It is useful to improve my teaching ability of S&M. Besides relationship between me and my colleagues at NAPE, PTIs, URC, UEO, and FTSs has been created. We didn't know each other before the project starts, but now we know and have some time to discuss on teaching methods, classroom activities, TP development in SGAs. Although such opportunity is very limited, I personally discuss such issues with my colleagues. However, it is difficult to customize this system (discussion) in our society. It would be possible if government could support us by formally giving additional sessions to discuss educational issues in future.
3	Q	Do you think that the recommendation of appropriate C-in-Ed curriculum and valid assessment for a cluster examination would be accepted by the government? ☐Yes ☐ NO. Please explain why Yes/No.
	A	Yes, it might be. I think JICA's evaluation is appropriate. Therefore, only if it can be recommended through appropriate authorities like NAPE DG, DG DPE, and MOPME, then it will be accepted by the government.
4	Q	Are the SGAs and the SWs useful in order to improve your expertise? ☐Yes ☐ NO Please explain why yes/no.
	A	Yes. The weakness can be identified very easily through SGAs, and it is possible to be removed. But in our country circumstances, it is not possible to organize SGAs for some different reasons. It is possible to develop the skill through sharing the opinion in different stakeholders through Study Workshops.

5	Q	Have you ever utilize the method & skills in other training sessions than JSA? ☐Yes ☐ NO. If yes, please explain it. If no, please tell why?
	A	Yes. I used it in C-in Ed course, directly in demonstration class and indirectly in ordinal classes. Also, I had a chance to utilize it in subject-based ToT trainings.
6	Q	Do you think that TP would be utilized in training program such as PTI trainings, URC subject trainings or sub-cluster trainings by AUEO? ☐ Yes ☐ NO. Please tell us the reason why yes/no.
	A	Yes. Only if the TP could be integrated with the manual of subject-based ToT training, which has been organized by UNICEF, and leaflet prepared by DPE. I think education sector now needs such integrations/collaborations among donors/projects/activities. (In the meantime, the subject-based ToT training supported contacted in the field.)
7	Q	Do you think that Japanese experts are fully utilized? ☐Yes ☐ NO Please tell why Yes/No.
	A	Some team members can stay in this site for a long time and we can share/develop our education activities such as SGAs/TP together. Meanwhile, professors' MM is very limited and we would like to learn from them more. Asides, it would be very good opportunities for us to have Bangladesh Academia (like professors at Dhaka Univ.) in our activities, for they know Bangladeshi context very well.
8	Q	Please suggest what would be needed to improve the children's academic performance through this JSA. Is the SA enough to improve the performance?
	A	Just for S&M, JSA only could improve children's academic performance. However, if we expect to improve children's performance in general, we strongly need to collaborate with other projects under PRDPII more. In particular, UNICEF and JICA should cooperate more in the area of subject-based training.

Thank you for your kind cooperation!

Interviewing Items to Participant for Technical Exchange program

NAME: Md. Mazharul Islam Khan Position Title: Instructor, PTI Mymensingh Telephone No: 01716-632607

No.		Question Items
1	Q	Does training program in Japan/Philippine improve your capabilities? ☐Yes ☐ NO. If yes, please tell what kind of improvement did you get by the training that you participated. If no, please tell the reason why no.
	A	Yes. In C/P training in Japan, I learnt classroom techniques to conduct successful classes from Japanese professors. In the Philippines, I realized the difference of teachers' motivation in Bangladesh and the Philippines. I considered that pre-service training is important to foster teachers' motivation. Also, I learned a lot from Philippines' developed educational system.
2	Q	Do the topics discussed in the trainings meet your needs? ☐Yes ☐ NO. Please tell the reason why Yes/No.
	A	Yes. Especially, discussion on TP development and effective teaching techniques in classrooms.
3	Q	Did you meet any difficulties/problems during the training period? ☐Yes ☐ NO. If yes, please explain it.
	A	Yes, I found some problems in coordination. In the trainings, some groups took same programs so it was very hard to concentrate on. For instance, classroom are moderated in Japanese and translated in English by translators and CP discussed in Bengali, meanwhile Arabic group follow the same process in the same classroom. It is not a good idea to make several groups together. In training in the Philippines, we did not get opportunities of school visits and classroom observation, since schools are in holidays. Which was very disappointed.
4	Q	Have you disseminated the things that you gained in the training to improve your trainees/pupils performance. ☐Yes ☐ NO. If yes, please tell what reaction of your trainees/pupils. If no, Please tell the reason why no.
	A	Yes, and have got positive reactions. They are very interested in the methods from overseas.
5	Q	Have you implemented any sharing session for your colleagues? ☐Yes ☐ NO. If yes, please tell the reaction of your colleagues. If no, please tell the reason why no.
	A	Yes. I had sharing session at NAPE formally. Also, I had informally had sharing session at PTI with my colleagues. They are very interested in listening to.

Thank you for your kind cooperation!

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Interviewing Items to Mymensingh PTI Trainees

NAME: Ms Anjuman Ara Lovely Position/Title: Trainee, PTI Mymensingh Telephone 011199-381535

No		Question Items
1	Q	Please explain your idea on what kind of lessons makes children learn more.
	A	Students can learn more with the activity-based method. If the students do it practically then the lesson becomes easier and elarning becomes sustainable and attractive.
2	Q	Have you observed any change in the lessons that you have received in PTI training, since your instructors were involved in the Japan's support activity? ☐ yes ☐No. If yes, Please tell how it has changed.
	A	Yes, the works have to be done by students. In this vase teacher will not involved with the work directly and students will think and perform the work practically by themselves.
3	Q	Do you know anything about the Teaching Package that has been developed by NAPE ? ☐Yes, ☐No. If yes, is it applicable to your lessons in your schools? ☐Yes, ☐No Please tell the reason why Yes/No.
	A	Yes, Teaching Package has a system of thinking and of solving problems by themselves.
4	Q	Do you think that you ca prepare the teaching-learning material suggested in the Teaching Package? ☐Yes, ☐No. Please tell the reason why Yes/No/
	A	Most of the teaching learning materials van be prepared.

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Interviewing Items to Mymensingh PTI Trainees

NAME: Md. Mohibur Rahman Position/Title: Trainee, PTI Mymensingh Telephone

No		Question Items
1	Q	Please explain your idea on what kind of lessons makes children learn more.
	A	The students learning in a group through practical work.
2	Q	Have you observed any change in the lessons that you have received in PTI training, since your instructors were involved in the Japan's support activity? ☐ yes ☐No. If yes, Please tell how it has changed.
	A	Yes, students do it by themselves practically. They think and learn by doing.
3	Q	Do you know anything about the Teaching Package that has been developed by NAPE ? ☐Yes, ☐No. If yes, is it applicable to your lessons in your schools? ☐Yes, ☐No Please tell the reason why Yes/No.
	A	If lessons are delivered through teaching methods in TPs, students can understand the lessons easily. Students take their decisions by thinking and discuss in Science and Math subjects
4	Q	Do you think that you ca prepare the teaching-learning material suggested in the Teaching Package? ☐Yes, ☐No. Please tell the reason why Yes/No/
	A	Students can understand math easily if teachers follow the TPs

This questionnaire is to be used in the mid-term evaluation of the above-mentioned study. Your answer and comments will be utilized to improve the implementation of the said support activity and technical cooperation for NAPE by Japan International Cooperation Agency (JICA) in latter part of the support activity. The answer what you give us is used only for the study and this response sheet is kept within JCA evaluation team.

Interviewing Items to Mymensingh PTI Trainees

NAME: Ms. Umme Akteri Nadira Position/Title: Trainee, PTI Mymensingh Telephone 01717-226892

No		Question Items
1	Q	Please explain your idea on what kind of lessons makes children learn more.
	A	To make students learn by doing, lesson should be activity-based method.
2	Q	Have you observed any change in the lessons that you have received in PTI training, since your instructors were involved in the Japan's support activity? ☐ yes ☐No. If yes, Please tell how it has changed.
	A	The present education method is; teacher is only a facilitator and students will learn by doing by themselves.
3	Q	Do you know anything about the Teaching Package that has been developed by NAPE ? ☐Yes, ☐No. If yes, is it applicable to your lessons in your schools? ☐Yes, ☐No Please tell the reason why Yes/No.
	A	The daid matter had be developed in the TP in such a way so that students can be active in the lesson all the time. So TP of NAPE is TP with the participation of the trainers. Because the students solve their problem by themselves.
4	Q	Do you think that you ca prepare the teaching-learning material suggested in the Teaching Package? ☐Yes, ☐No. Please tell the reason why Yes/No/
	A	The teaching learning materials of the TP is based on Science and Math most fo which can be prepared at home. We can prepare the teaching learning materials easily by expressing through pictures.

This questionnaire is to be used in the mid-term evaluation of the above-mentioned study. Your answer and comments will be utilized to improve the implementation of the said support activity and technical cooperation for NAPE by Japan International Cooperation Agency (JICA) in latter part of the support activity. The answer what you give us is used only for the study and this response sheet is kept within JCA evaluation team.

Interviewing Items to Mymensingh PTI Trainees

NAME: Ms. Sahnez Begum Position/Title: Trainee, PTI Mymensingh Telephone 01716-412120

No		Question Items
1	Q	Please explain your idea on what kind of lessons makes children learn more.
	A	Students like to learn by doing and lessons would have to be based on activity-based method. The lesson becomes easier if students learn by doing practically. Then learning becomes sustainable.
2	Q	Have you observed any change in the lessons that you have received in PTI training, since your instructors were involved in the Japan's support activity? ☐ yes ☐No. If yes, Please tell how it has changed.
	A	Yes, work will have to be done by students. In this case teacher will not do the work directory. Students will think and do the work practically by themselves.
3	Q	Do you know anything about the Teaching Package that has been developed by NAPE ? ☐Yes, ☐No. If yes, is it applicable to your lessons in your schools? ☐Yes, ☐No Please tell the reason why Yes/No.
	A	The said matter has been developed in the TP in such a way so that students can be active in the lesson all the time. So TP of NPE is TP with the participation of the trainers. Because the students solve their problem by themselves.
4	Q	Do you think that you ca prepare the teaching-learning material suggested in the Teaching Package? ☐Yes, ☐No. Please tell the reason why Yes/No/
	A	The teaching learning materials of the TP is based on Science and math most of which can be prepared by own.

This questionnaire is to be used in the mid-term evaluation of the above-mentioned study. Your answer and comments will be utilized to improve the implementation of the said support activity and technical cooperation for NAPE by Japan International Cooperation Agency (JICA) in latter part of the support activity. The answer what you give us is used only for the study and this response sheet is kept within JCA evaluation team.

Interviewing Items to Mymensingh PTI Trainees

NAME: Md. Siful Haque Position/Title: Trainee, PTI Mymensingh Telephone

No		Question Items
1	Q	Please explain your idea on what kind of lessons makes children learn more.
	A	Practical work, group work, participation, drilling, does it yourselves.
2	Q	Have you observed any change in the lessons that you have received in PTI training, since your instructors were involved in the Japan's support activity? ☐ yes ☐No. If yes, Please tell how it has changed.
	A	Encourage to do practical work, activity in participatory work, opportunity to think by themselves.
3	Q	Do you know anything about the Teaching Package that has been developed by NAPE ? ☐Yes, ☐No. If yes, is it applicable to your lessons in your schools? ☐Yes, ☐No Please tell the reason why Yes/No.
	A	Still we don't have opportunity to know how the TP has developed. But we have gone through the TPs.
4	Q	Do you think that you ca prepare the teaching-learning material suggested in the Teaching Package? ☐Yes, ☐No. Please tell the reason why Yes/No/
	A	All the materials of all subject are not possible to prepare.

添付資料５．　授業分析結果

平成 18 年 10 月 19 日
広島大学国際協力研究科
中村　聡　（教育評価）

バングラデシュ国初等理数科教育強化計画
中間評価に向けての授業分析結果

標記に関し、以下に分析結果及び提言の概要を報告致します。

今回の調査においては、基礎調査（Pre-Activity Study、以下 PAS）と条件を揃えることが第一義であったため、一つの例外を除き、TP がまだ開発・実施されていない5年生の授業を分析することとなった。プロジェクトにとっては、まだ協力を行っていない部分を用いてその評価を行うため、必ずしもその効果が現れない可能性がある反面、これまで他学年において使用した TP の経験をどこまで応用しうるかという観点からすると、ある意味プロジェクトの意図がどれだけ対象者に理解・吸収されているかを量ることにもなったといえる。

今回の調査に当たっては、プロジェクト協力校（Field Testing School、以下 FTS）と統制群校（Control Group School 以下 CGS）及び初等教員訓練校（Primary Teachers Training Institute、以下 PTI）附属実験校の第五学年の算数及び理科の授業を1時間ずつビデオ撮影すると共に、PAS による枠組みに準拠して、面接調査等を行った。各学校において観察した授業において実施された単元は以下の通り。

表 1. 中間評価準備のために調査された授業で取りあげられた単元

学校種		算数授業で取りあげられた単元	理科授業でとりあげられた単元
都市部公立校 (Urban GPS)	FTS	足し算と引き算	衛生（Hygiene）下痢と対処法
	CGS	百分率	救急医療
都市部登録非公立校 (Urban RNGPS)	FTS	Unitary Method	光の進み方
	CGS	Unitary Method	花の分類
農村部公立校 (Rural GPS)	FTS	平均	空気の必要性
	CGS	かけ算	木の分類
農村部登録非公立校 (Rural RNGPS)	FTS	百分率の分数への転換	空気の特徴
	CGS	分数	光：昼と夜の起こり方
PTI 附属実験校	FTS	円の描き方	植物の分類

著者により作成

1. 授業案について

FTS、CGS 共に UNICEF の協力のもと実施された IDEAL プロジェクトにおいて指導された授業案作成法を踏襲した形で記述が行われている。そのため、両者の形態は非常に類似したものとなっている。また、PAS 時に収集された授業案と比較しても、一部簡略化されている事例が見られるものの大きな変化は見られなかった。本調査時に収集した授業案で FTS 教員が作成したもののうち TP の形式を引用、参照した事例は見られなかった。教員によっては、プロジェクトで提供した TP を用いるため自分で改めて案を作成しなかったもの、何度も実施しているため授業案を特に

作成していないと述べる教員もおり、2校分収集を行えなかった。

2. インタビュー結果について

理科、算数科の授業を実施していく上での問題点については、教材など外的要因を挙げる教員がほとんどで訓練の必要性を述べるものは少数であった。生徒の状況を言及するものも少数ながらあった。

本時の授業における留意点については、CGS においては表層的な意見が多かったのに対し、FTS においては授業上で用いる方略に言及するなどより具体的に回答する傾向にあった。

本時の目的については、FTS、CGS ともに依然として、「Teach them~」、「Make them understood」といった教員主導による知識の獲得や操作の習熟に重点があるように見受けられる。他方、FTS の教員からは、シラバスにおける記述を踏襲しているものの、「To prove~」、「To express~」等より具体的かつ多様な用語を駆使して目的を述べているようであった。

本時の授業の達成度については、FTS、CGS 共に前回の調査より高く出す傾向にあった。両者を比べた場合、FTS の教員の方が自己評価を高くする傾向が見受けられた。自分の授業の評価と子どもの達成度に関して比較をした場合には、FTS においては、同じと全員回答していたが、CGS においては子どもの達成度を高く見積もる教員が約半数いた。

授業を成功させる重要な要因については、FTS の教員の方がより具体的かつ教科の教授に特化し形での回答を行う傾向にあった。

現在必要と感じる研修の内容としては、「近代的」、「教科中心」並びに「長期(1ヵ月程度)」が主なキーワードであった。

3. プロトコル分析について

3-1. 授業形態について

算数に関し、FTS 及び CGS 共に一斉講義型の授業を展開しているといえる。但し、両者を比較した場合、CGS においては教師の一方的な指導形態である講義1が高い傾向にあるのに対して、FTS においては生徒とのある程度のやりとりが行われる講義2及び演習が高い傾向にあり、同じ一斉講義型といえども FTS の方が生徒の授業への関わりが高くなっているといえる。

理科に関しては、FTS における生徒の学習形態において一斉学習に重点があることは変わらないものの、実験など生徒の実習を採り入れていることから個別学習の割合が減少しグループ活動が増加している。これは、授業の指導形態にも影響を及ぼしている。FTS、CGS 共にその他の指導形態が大幅に増加している学校が2校ずつあるが、FTS においては、それが生徒の実習の実施に関係しているのに対して、CGS は教科書読みの実施によるものであった。また、FTS においては、より生徒とのやりとりを重視する講義2の形態が増加した学校が2校あった。

3-2. 教材・題材の特徴について

算数においては、PTI 実験校において顕著な向上が見られた以外は、FTS と CGS の間で特筆すべき差異は見られなかった。いずれの学校においても計算演習が主となっていたため、問題の目的や数学的思考・活動の喚起という点で差が生じにくかったものと思われる。また、実際の問題演習においては、教科書の演習問題を順番にさせており、演習における問題間の関係については教科書の影響も大きいといえる。(一方で、生徒が発展的に学習出来るように授業を構成し、教員が問題を選択しなければならないという考え方もあるが、現状ではそこまでの分析力は期待出来ない。)

理科においては、授業の系統性をより意識しているとした学校が、FTS で2校 CGS で1校見られた。教材の位置づけについては、FTS、CGS それぞれ1校ずつ増加しているが、両者とも教材を

教科内容の説明に使用しているものの、CGS は教科書記載事項の単純な確認に留まっているのに対して、FTS では生徒による検証を試みておりその質に違いがあった。科学的思考・活動の喚起については、TP を用いた1校を含む FTS の2校で確認された。

PTI 実験校については、今回の調査でいずれの項目に対しても大きな向上が見られた。

3-3. 子どもの教科への取り組みについて(発言分析)

算数における教師の発言に関して、基礎調査時に「指示型」、と「説明型」の2種類の教授の型が指摘されたが、今回の調査により、CGS においては「説明型」で FTS においては「指示型」で授業を行う傾向にあることが見出された。こうした指導の型に呼応するように、子どもの発言においても CGS においては「単純な応答」が多い傾向がある一方、FTS においては「教員に対する応答」が多くなっている傾向にある。授業自体は、教員に対して生徒が受動的に応答する形態であるという点においては同列であるが、以上の発言の種類の相違から生徒の授業へ関わる度合については、FTS の方が相対的に高くなっているといえる。基礎調査時での結果を見た場合、今回の調査程には教授の型の差異が出ていないところ、この1年半の間での変化と考えられるが、プロジェクトの影響についてまでは残念ながら検証出来ない。

個別の学校に注目した場合、都市部公立校の FTS において生徒の意見が全体の発言の 12%を占めているが、これは生徒が問題を解答している時に、教員が他の生徒に対してその解答に対して意見を述べるように促したことによるものである。

理科における教師の発言に関しては、基本的に「説明」、「閉じた質問」並びに「指示」が主な発言である傾向については変化がなかった。但し、FTS と CGS を比較した場合、実習を採り入れている学校が FTS に多かったため、「説明」の割合が、CGS の同種校より低く、「指示」の割合が高くなる傾向にあった。また、「開いた質問」の占める割合が、FTS の方が CGS よりやや高い傾向にあった。

子どもの発言に関しては、やはり教師に対する応答が全体の8割から9割近くを占める傾向は前回とほぼ変化がなかった。他方、TP を用いた農村部公立校の FTS においては、生徒の発言の1割近くが「意見の提示」であり、これらは実験から観察されたことを自分の言葉で述べたものであった。また、同校の教員の特徴として、「承認を求める質問」が多いことが挙げられるが、これも基礎調査時では自分の発言に対して同意を求めることが多かったが、今回の調査では生徒の意見を受けて、他の生徒に問いかける場面も多く見られ発言の質の変化が見ることができた。

発言の割合からすると、都市部公立校 FTS でも同様な数値が得られているが、この場合の生徒の意見は、授業内容と本質的には関連のない事項に関してであった。

農村部公立校 FTS とは対照的に農村部登録非公立校 CGS においては、実験に関する生徒とのやりとりにおいて、教科書の記載事項の繰り返しがなされるのみで、教科書を単純に確認する非常に表面的な活動にとどまっていた。また、農村部の CGS では、生徒の発言の2割以上が依然として教科外のことに費やされていることが見出された。

3-4. 授業の構造について(意味のかたまりの構成)

理科における教材開発においては、目に見える現象や身近な題材を用いることが多いため、教師にとっても実感のわきやすく TP でのイメージを他の単元でも応用することはあるレベルまで可能といえる。他方、算数においては、各単元の抽象的な概念や生徒の認知レベルも考慮しつつ教材開発を行う必要があるため、各単元における個別性が高く FTS 教員の現状を考えるとこれまでの TP から応用して対象学年に即した教材を準備することは非常に困難であったと考えられる。結果、PTI 実験校を除いて、基本的な授業の構造については、例題を示し後は演習を行う類似の形態がほとんどであった。但し、同じ形態とはいえ例題の出し方、演習問題の提示のタイミングや

答え合わせの方法、生徒の学習形態の選択など各教員による工夫はある程度観察されたものの、理科で見られる程の差異はFTSとCGSの間で見出しにくかった。

理科においては、まず CGS では導入部分で依然として生徒の状況チェック並びに教科と関連のない活動が取り入れられているのに対して、FTS においては1校を除いてこうした活動は最小限に抑えられているか、そうでなければ教科に関連した歌などが使用されていた。また、CGS においては依然として教科書記載内容の忠実な暗記を目的として授業の展開がなされていた。そのため、実験が行われる場合やポスターなどで説明する場合においても、前もって教科書の読みが行われたり、前半に活動を行ってもその後教科書の書き写しが行われるような構成となっている。

一方、FTS においては、同じく教科書を基本においているとはいえ、実験の結果を生徒に実感させそれを自分たちの言葉で述べさせたり、実験後に教科書で確認を行う場合でも実際に見たものと比較するよう注意を促すなど授業における教科書の位置づけについては教員達の認識に変化が見られるようであった。

3-5. その他

算数に関し、PTI 実験校において以前の SW において実施された授業の展開を応用して図形の授業が行われていたが、SW 時の学年が2年生だったのに対し、今回5年生を対象としたため内容のレベルと対象学年の間で不整合を起こしていたようであった。

また、問題演習中の教師の対応については、FTSとCGSとの差よりは、個人差が大きいようであった。机間巡視において、ただ回っているケースから解答をしっかりチェックし指導しているケースまで見受けられた。生徒との答え合わせの場合は、生徒を黒板に出して解答させるケースが多かったが、その場合の生徒の当て方、他の生徒の関わりなどは教員によって変化があり、学校種での傾向は見つけられなかった。

理科の授業においては、CGS のみならず FTS においても同じ質問に対する回答を不必要に別の生徒に繰り返し述べさせた事例が散見された。

4. 授業観察チェックシートについて

4-1. 項目別の授業観察結果について

本分析に当たっては、基礎調査(PAS)時と今回の調査において授業観察者が異なったため、それぞれの観点における尺度の取り方が必ずしも一致しないことが判明した。そのため、同一校における経時的変化を分析するのは困難であるため、今回の分析では、同一学校カテゴリーに属するFTSとCGSの結果を各調査において比較し、その差異から間接的にプロジェクトの効果を量る手法をとることとした。この際、2校間の数値の差異が1より大きいものに注目した。学校カテゴリー横断的な特徴であるかどうかについては、3カテゴリー以上において同じ差異の傾向が見られたものを取りあげた。

まずPASでは、理科、算数共通で「板書計画」において学校カテゴリー横断的にCGSの数値が高い傾向が出た以外は特に顕著な差異は見られなかった。カテゴリー内の2校における比較では、都市部の GPS を除き、CGS の方が数値の高い観察項目が多かった。

一方、今回の調査においては、この傾向について大きな変化が見られた。

まず、理科、算数共通で、「生徒が考えようとする態度に対する奨励」、「実際に触れて行う(hands-on)活動の導入」、「授業中の個人学習、グループ活動の適切な活用」の 3 点について、学校カテゴリー横断的にFTSにおいて高い数値を示した。その他算数では、「主要概念を提示するために適切な例を使用していること」、「生徒間の議論を盛り込んでいること」、そして「授業の終わりにまとめを行っていること。」が、FTS 優勢の項目として見出された。

また、理科においては、「前時との関連が明解」、「理解の遅い生徒への支援」、「教えることを楽しんでいる」、「生徒が自由に意見を言えるよう仕向けていること」、「生徒が多様な意見を示すことの奨励」、そして「生徒が能動的に学習に携わっていること」の6点についても FTS 優勢の傾向を示した。

CGS に関しては、学校カテゴリー横断的に優勢であった項目は見出されなかった。

4-2. 自由記述の部分について

FTS における授業の方が、教員主導の色彩が弱く、生徒にとって自由に発言出来る雰囲気を作り出しているようであった。

授業で重要視されていると感じられた項目については、CGS については、「操作の習熟」と「概念理解」に集約されたが、FTS においては、複数項目が示された事例が、8 校中 6 校あった。

5. 総括と提言

今回の調査の結果から、基礎調査時と比べ顕著な差異は見られなかったが、プロジェクトがこれまで意図してきた方向へ向けての変化の兆しが見えてきたように思われる。

まず、教科内容と教材、教授法についてはその関係性が意識されつつあるように思われる。又、指導形態の適切な活用に対する評価が今回向上していることから、まだ表面的なレベルであるが、教材、教授法の意図についても理解されつつあるようである。ただし、いくつかの授業場面から教材、教授法の意図を完全に把握できるほど、教科内容を理解しているとはいえず、SGA や事前打合せにおいて適宜補完的な指導をする必要がある。

理科については、まだ科学的思考・活動を喚起するところまではいかないものの、教材の取扱いについては、教科書内容の単純な確認あるいは権威づけのために演示中心の実験・実習が実施されていた基礎調査時の状況と比較し、生徒に検証させようとする努力が見られたことは今後に向けての明るい材料といえよう。但し、生徒に確実に実験内容を検証させるためには、その実験と教授内容との間の関連や実験操作上の留意点を把握している必要があり、ここでも教科知識が不可欠となってくる。学校レベルの SGA や TP モニタリングの機会を捉え、根気よく指導していく必要があると思われる。

TP を使用した教員の授業の結果から、TP 授業案の再現については、現段階の教員の力量においてもある程度まで実施可能であり期待される効果についてもいくらか得ることができるといえる。他方、TP が導入されていない他の授業を実施させた場合に従来のやり方を踏襲する傾向があり、プロジェクトとして意図している内容を教員達が内面化するには、時間とともに何らかの工夫が必要であるように思われる。特に授業案については、特に指導を行っていないこともあるが、前(IDEAL)プロジェクトの亜流が用いられていた。対象教員に対する協力内容の内面化や応用力の向上のため、TP のうちモニタリングを実施する時間の授業に対しては、授業案の掲載を一部にとどめ、教員や C/P と案を作成するといった方策も必要であるように思われる。

授業後の自己評価並びに生徒の学習状況への理解については、まだまだ観察、分析力が低いように思われる。特に子どもに対する分析力は、自分の授業の評価と子どもの理解がほぼ同じとする傾向にあり、今後の SW、SGA において授業中の子どものようすを観察・分析させるような最近の試みを継続的に実施することは有効であろうと思われる。

最後に、今回は、基礎調査で用いたツールをそのまま用いて、プロトコル分析を行った。これまでの協力活動により、教員の授業実施形態がより複雑化していく中で、ツールを規定している枠組みの網目では捉えきれない事例が散見され、判断に苦慮した場面がいくつかあった。今後行われる TP モニタリング活動や終了時評価を行うに当たって検討すべきと思料されるところ、以下にその事例を示す。

(1)プロトコル分析における「意味の塊」の取扱について

今回の分析枠組みの特徴として、発言を意味のある塊としてグループ化することにある。講義形式が中心の授業の場合には、一つの塊において費やされる物理的時間よりは、講義の中での指導形態の方がより生徒への教授効果に影響を与えるといえる。そのため、どの様な形態がどのくらいの頻度でどのタイミングで行われたかということに焦点を当てれば良かったため、現在の枠組みでの分析で問題は生じなかった。他方、今回の分析では、実習や教師による演示、実験が行われたとき、その前後の活動も含め、それぞれの塊にどれくらい時間を費やしているかということも大きな要因となってくる。ついては、実習等を交えた授業の場合には、各塊の占める時間についても、分析事項として加える必要があるものと考える。

また、「検証型」の実習や実験を行う場合、その活動に対応する意味の塊は「講義型」とは明らかに違うものの、「探求－発見型」とも言い難く、「本読み」や「授業開始時の諸活動」と同じ「その他」にいったん分類されることになる。ここの差異を明示するために、カテゴリーの追加が必要であるように思われる。

(2)発言のカテゴリーについて

今回の授業分析においては、実験や他の生徒の発言を受けて生徒の回答や意見を促すような教師の発言が、特にFTSの教員において散見された。今回のカテゴリーでは、「指示」の部分に分類されたがために、その特徴を記述しきれない状況となった。今回の結果を鑑み、発言の分類についても、新カテゴリーの追加を検討する必要があるように思われる。

下の表はプロジェクトが実施したプロトコル分析を CGS の 4 校とFTSの 5 校の各数値の平均値を求め、基礎調査（PAS）と中間評価〔MTE〕時とで比較したものである。（田中作成）

1 授業形態の分析

	算数		一斉授業	グループ活動	個別活動	その他
授業形態〔算数〕	CGS(4 校)	基礎調査	74.55	7.55	7.23	10.65
		中間評価	79.33	5.38	10.05	5.23
	FTS (5 校)	基礎調査	79.58	2.48	9.18	0
		中間評価	77.48	13.34	9.18	0
	理科		一斉授業	グループ活動	個別活動	その他
授業形態〔理科〕	CGS(4 校)	基礎調査	84.73	3.10	14.63	0
		中間評価	87.05	1.68	11.3	0
	FTS(5 校)	基礎調査	79.92	4.48	14.9	0.72
		中間評価	86.86	9.56	3.56	0

2. 指導形態の分析

	算数		講義タイプ 1	講義タイプ 2	ドリル	発見学習	他
授業形態〔算数〕	CGS(4 校)	基礎調査	32.68	20.08	10.52	0.42	16.28
		中間評価	42.54	6.16	9.78	0	21.54
	FTS (5 校)	基礎調査	36.16	35.24	13.14	0.64	14.8
		中間評価	46.12	19.34	22.08	1.42	11.04
	理科		一斉授業	グループ活動	個別活動	発見学習	他
授業形態〔理科〕	CGS(4 校)	基礎調査	46.18	23.63	6.75	2.03	15.75
		中間評価	38.88	6.25	19.8	0	35.08
	FTS(5 校)	基礎調査	62.48	15.38	8.24	0.26	13.62
		中間評価	56.56	17.58	5.62	0	20.26

講義タイプ 1：教師の一方的な指導形態

講義タイプ 2:児童とのある程度のやりとりがおこなわれる講義形式

3. 教材･題材の特徴

	算数		問題の関係性	問題の目的	算数的思考	解決へ方向	問題数
教材･題材の特徴〔算数〕	CGS (4 校)	基礎	32.68	20.08	10.52	0.42	16.28
		中間	42.54	6.16	9.78	0	21.54
	FTS (5 校)	基礎	36.16	35.24	13.14	0.64	14.8
		中間	46.12	19.34	22.08	1.42	11.04
	理科		系統性	教材の位置付	科学的思考	日常生活のと関係	
教材･題材の特徴〔理科〕	CGS (4 校)	基礎	1.15	0.68	0.33	1.33	
		中間	0.5	0.75	0	2	
	FTS (5 校)	基礎	0.72	0.66	0.12	1	
		中間	1.4	1.2	0.8	2	

4. 子どもの教科への取り組み(発言分析)

	算数		説明	質問〔閉〕	質問(開)	承認	確認	指示	批判	他
教師の発言〔算数〕	CGS (4 校)	基礎	14.40	21.60	3	6.30	12.1	29.1	2.9	10.8
		中間	16.6	20.7	3	5.2	13.7	23.7	6.5	10.9
	FTS (5 校)	基礎	24.5	22.7	2.7	5.5	13.2	22.8	2.9	7.4
		中間	21.8	25.3	2.7	3.8	4.2	24.4	8.8	9.2
	理科		説明	質問(閉)	質問(開)	承認	確認	指示	批判	他
教師の発言〔理科〕	CGS (4 校)	基礎	27.6	27.1	4.6	2.1	4.4	23	2.6	6.2
		中間	27.3	22.2	0	0.8	8.2	25.5	7.1	8.9
	FTS (5 校)	基礎	24	27.4	2.1	5.7	10.6	20.6	3.3	6.2
		中間	16.8	25.2	2.4	1.8	12.1	29.3	5.4	7.1

	算数		簡単な応答	教師への応答	無答	質問	意見	その他
児童の発言〔算数〕	CGS (4 校)	基礎	37.80	47.40	4.80	1.1	0.4	8.6
		中間	59.3	34.2	0.8	0.88	0	4.85
	FTS (5 校)	基礎	31.3	57.3	1.2	2.2	1.5	6.5
		中間	35.5	54.9	0	1.56	2.4	5.74
	理科		簡単な応答	教師への応答	無答	質問	意見	その他
児童の発言〔理科〕	CGS (4 校)	基礎	22.50	64.10	6.4	2.5	10.7	10.2
		中間	39.6	44.3	1.4	0.6	0.7	13.5
	FTS (5 校)	基礎	28.9	62.6	2.9	0.8	0.8	4
		中間	41.8	50.5	0.9	0.7	3.3	2.7

Summary of findings （プロトコル分析の要約）

There were some changes between PAS and MTE

(1) There are some efforts to let students verify facts and promote scientific thinking in science lessons. In mathematics most of the lessons targeted at acquisition of calculation skills, and no much difference is observed between FTS and CGS.

		Systemicity of the topic before and after the lesson	Places given to the materials in the lesson	Promotion of Scientific thinking & activities to students	Relation to the daily life
Urban, GPS, CGS	PAS	0.3	0.3	0.0	1.3
	MTE	1	1	0	2
Urban, GPS, FTS	PAS	1	1	0	0
	MTE	1	1	0	2
Urban, RNGPS, CGS	PAS	2	0	0	2
	MTE	1	0	0	2
Urban, RNGPS, FTS	PAS	1.3	1	0.3	1
	MTE	1	1	1	2
Rural, GPS, CGS	PAS	1.3	1.7	1	1.3
	MTE	0	1	0	2
Rural, GPS, FTS	PAS	0	1	0	1.3
	MTE	1	1	1	2
Rural, RNGPS, CGS	PAS	1	0.7	0.3	0.7
	MTE	0	1	0	2
Rural, RNGPS, FTS	PAS	0.3	0.3	0.3	2
	MTE	2	1	0	2
PTI Exp. Sch.	PAS	1	0	0	0.7
	MTE	2	2	2	2

(2) There are some difference between lessons with developed TP and those without them. It will take some time for teachers to digest essence of TP and apply to other topics.

Table 3.14 Comparison of numbers and types of expressions made in Science lesson (Rural and PTI)

Teachers' Expressions									School Type	Students' Expressions						
Explanation	Closed questions	Open-ended questions	Questions for acceptance	Confirmation	Giving Directions	Criticizing & justifying Authority	Others	Total		Simple response	Response to teachers	No answer	Asking Questions	Expression of opinion	Others	Total
29.2	38.9	0.7	3.5	0.7	15.9	4.2	6.9	100	Rural, GPS, CGS (PAS)	28.2	57.7	4.2	1.4	0	8.5	100
41.1	28.2	0.0	0.0	0.8	17.7	0.0	12.1	100	Rural, GPS, CGS (MTE)	15.8	63.2	0.0	0.0	0.0	21.1	100
17.9	17.2	0.5	19.5	11.2	23.9	4.6	5.2	100	Rural, GPS, FTS (PAS)	48.7	44.4	1.1	1.1	1.8	2.9	100
17.5	17.8	4.7	2.9	16.0	30.2	3.6	7.3	100	Rural, GPS, FTS (MTE)	51.4	37.8	0.0	0.0	8.1	2.7	100
29.3	17.2	2.2	2.2	2.2	32.7	3.0	11.2	100	Rural, RNGPS, CGS (PAS)	19.2	44.9	6.4	5.1	1.3	23.1	100
25.8	8.1	0.0	0.5	10.2	36.0	4.3	15.1	100	Rural, RNGPS, CGS (MTE)	55.9	17.6	2.9	0.0	0.0	23.5	100
17.7	24.2	7.4	4.9	17.3	20.1	2.8	5.6	100	Rural, RNGPS, FTS (PAS)	33.7	56.4	3.4	1.4	0.7	4.4	100
19.3	24.7	3.1	3.4	18.0	24.5	1.5	5.4	100	Rural, RNGPS, FTS (MTE)	52.0	46.3	0.0	0.0	0.0	1.6	100
18.5	34.5	0.7	1.6	10.4	18.8	0.4	15.2	100	PTI Exp. Sch. (PAS)	32.8	60.3	1.2	1.2	0.5	4.0	100
17.4	38.2	3.2	1.1	9.4	23.4	1.9	5.4	100	PTI Exp. Sch. (MTE)	35.4	63.5	0.0	0.0	0.0	1.0	100

(3) Relationship between content, teaching material and method is recognized.
Some teachers in FTS described importance of interrelationship between lessons as the following interview showed.

(4) Analysis of children's status in both FTS and CGS is still at weak level. This is very fundamental for good lesson. Therefore, the approach during the recent SWs, which is to observe children behavior and understanding level, is to be enhanced. However, through the interview, regarding factors which contribute to success of lessons, some FTS teachers tend to be more specific.

What do you think are the most important factors for successful lesson? Why do you think so?

FTS	CGS
• Students should concentrate on class providing their regular attendance. Teacher should present class more attractive and easy ways because any subject, if subject matter is taught in easy ways, students will understand easily and concentrate more in the class. • In today's lesson, he used the paper with 100 boxes in it. He thinks it might be better if that paper was bigger, then students could understand more easily. • To understand topics, doing practical experiment using teaching materials. To have knowledge about previous lesson is important for students and teacher both since science is interconnected. If students do experiment with their own hands and activity based learning, they will understand properly and will remember. If they just learn theoretically, they will not understand properly and forget and after class, teacher himself can feel satisfaction that students learn with activity based. • To prepare lesson plan and to have mapping what we will do in the class. Mental preparation. Teacher should maintain continuous process in one lesson. Stage by stage • Without any planning, students can't achieve the target.	• Students should give more attention to teacher. Students don't feel fear against teacher; teacher should be like a member. Students should be more interested in class. Because if the above mentioned condition is filled, students will listen to his word and try to keep what he says. • Preparation because teacher can memorize how to present and stages of class. • Giving class with tension-free and willingness to give a good presentation. Students' active participation. Otherwise the lesson outcome will fail and students will not understand. • Good relationship between teacher and students. Teacher should have a pre-preparation of lesson plan and teaching materials.

• Teacher should have more interest in teaching. To let students understood process and let them do practice. She wants students to become able to use knowledge in real situation as most of students will be not able to go on class 6 or 7 because of poverty.	• Teacher should prepare beforehand. If teacher has not prepared mentally and if teacher is not prepared with materials and proper lesson plan, he can't give successful lesson.

添付資料6. 学習グループ活動とスタディ・ワークショップ

1) 学習グループ活動 （Study Group Activity）

学習グループ活動はプロジェクト活動で中心的な役割を担っている。特に日本人専門家とカウンターパートが理科・算数教育に関する基本的な問題点や課題を議論する場となっている。この活動を通じて NAPE のカウンターパートが理科・算数教育に関しての技術移転がなされる。2006 年 11 月までに 76 回の SGA がなされている。(1-3 回の報告はされていない)

回	日付	場所	内容	参加者数	
				C/P	日本側
			2005 年		
4	3 /2	NAPE	【算】1 年生単元構成		
5	3/5	NAPE	【算】繰り下がりのある引き算	3	2
6	3/6	NAPE	【算】10 のかたまり（数感覚の違い）	4	2
7	3/8	NAPE	【算】2 年生算数単元構成	3	2
8					
9	3/30	NAPE	【算】3 年生単元構成	3	1
11	4/3	NAPE	【算】4 年生単元構成	6	4
12	4/6	NAPE	《両》TP 作成計画概要の確認	5	1
13	4/20	NAPE	〔理〕3 年生単元構成	4	1
14	4/24	NAPE	〔理〕4 年生単元構成	5	1
15	6/26	NAPE	〔理〕4 年生単元構成（新教科書）	5	1
16	7/5	NAPE	〔理〕モデル授業の内容検討（情報シート）	5	3
17	7/11	NAPE	〔理〕デモンストレーション授業の検討	7	3
18	7/13	NAPE	〔理〕TP 開発の手順、模擬授業プラン、授業評価用紙の開発	4	2
19	7/25	NAPE	〔理〕研究授業用の授業案、PTI 訪問、授業観察用紙	6	2
20	8/1	NAPE	〔理〕PTI 講師による模擬授業（ヴィデオ撮影）	6	3
21	-	NAPE	【算】2 年生（分数の TP の検討）	3	1
22	-	NAPE	SW3 の反省点議論(授業観察用紙・情報共有)	7	3
23	8/14	NAPE	【算】ビデオ鑑賞「授業における教師の役割」	-	-
24	8/15	NAPE	【算】TP（計測）の検討（4 年生までの改訂教科書）	3	2
25	8/15	NAPE	〔理〕TP(宇宙)の最終版への議論	4	1
26	8/17	NAPE	【算】2 年生分数 TP における授業評価方針	2	1
27	8/21	NAPE	【算】評価方法（子供－教師－教材）	2	1
28	8/22	NAPE	〔理〕TP(空気・宇宙)開発・授業観察用紙	3	1
29	8/25	NAPE	【算】TP（計測）議論→授業評価方法	3	1
30	8/29	NAPE	〔理〕TP(宇宙)のドラフト議論	4	1
31	9/19	NAPE	〔理〕PTI 模擬授業の指導案	4	6

32	9/19	NAPE	【算】2 年生図形（SW へ向けて授業素案）	3	4
33	9/22	NAPE	〔理〕L C の意味・用語、概念の帰納	4	4

回	日付	場所	内容	参加者	
				バ側	日本側
34	9/22	NAPE	【算】SW の研究授業について （図形の性質－定義）	7	4
35	9/25	NAPE	〔理〕教材開発/生徒 - 教師 - 教材/教科書の内容/構造化	5	3
36	9/26	NAPE	【算】SW のための研究授業指導案詳細	6	4
37	9/26	NAPE	【算】研究授業（PTI の A.K.教諭への説明）	6	3
38	9/27	PTI	【算】研究授業の詳細（PTI 講師、実験校教員）	8	4
39	9/28	PTI	【算】午前中研究授業と明日研究授業議論	10	3
40	9/29	PTI	【算】第 2・3 次授業（研究授業）の批評	6	3
41	10/2	PTI	【算】第 4 次研究授業延期（雨のため）	8	2
42	10/9	SP 校	【算】2 年分数〔理科〕月の授業観察	4	1
43	10/10	NAPE	《両》評価法素案への方向性	7	2
44	10/17	NAPE	《両》C/P からの評価項目の表への整理	4	2
45	11/10	NAPE	〔理〕TP(空気)[11 月に終了予定]　O_2・CO_2	4	2
46	11/21	NAPE	〔理〕TP の進捗再確認	5	4
47	11/28	NAPE	〔理〕環境教育の具体的な活動	5	3
48	11/29	NAPE	〔理〕温度計観測と測定値のグラフ化	4	4
49	11/30	NAPE	〔理〕環境教育の中の水の扱い/空気		
			2006 年		
50	1/24	NAPE	〔理〕TP(空気)のファイナライズ及び TP(水)	4	1
51	-	-	〔理〕教師用ガイド（新版）の疑問点検証 TP 開発の分担案検討及び SW への予定 TP(空気)開発状況	3	1
52	-	-	〔理〕基本的な科学的プロセススキル 酸素と二酸化炭素の性質	3	3
53	2/12	-	〔理〕実験：水の三態	3	4
54	2/13	ﾀﾄｸﾗ	〔理〕公開授業のトピック、教材、実験内容	5	3
55	2/16	NAPE	〔理〕研究授業案の再検討	5	1
56	2/20	ﾀﾄｸﾗ	〔理〕SW のデモンストレーション模擬授業	6	2
57	8/6	-	【算】TP の検討(3 年生「計量」、「幾何」)	2	1
58	8/7	-	【算】TP の検討(3 年生「計量」、「幾何」)	2	1
59	8/8	-	【算】TP の検討(3 年生「計量」、「幾何」)	4	1
60	8/22	-	《両》授業のプロトコル分析	2	3
61	8/28	-	《両》授業のプロトコル分析 （授業の構造理解、授業の評価）	-	-
62	9/3	-	《両》授業のプロトコル分析 （教師、生徒の発言の分類）	-	-

63	9/6 AM	-	【算】TP ブリーフィングセッションに向けての話し合い（3 年生「計量」、4 年生「少数」）	2	1
64	9/6 PM	-	【算】TP ブリーフィングセッションに向けての話し合い（3 年生「計量」）	6	1
65	9/11	-	《両》授業のプロトコル分析 （授業の評価、授業の構造）	-	-
66	9/13	-	〔理〕任国内研修の内容	3	1
67	9/25	-	【算】TP の検討（3 年生「計量」、「幾何」）	2	1
68	9/26	-	〔理〕4 年生の TP の開発（「電気」、「音」）	2	2
69	9/26	-	【算】TP の検討 （3 年生「分数」、4 年生「データ」）	3	1
70	9/27	-	〔理〕TP の検討 （4 年生「情報コミュニケーション技術〔ITC〕」、「人口と環境」）	1	2
71	9/27	-	〔理〕TP の検討 （4 年生「電気」、「音」）	2	2
72	9/28	-	〔理〕TP の検討（4 年生「音」）	2	2
73	9/27	-	【算】TP の検討 （4 年生「幾何」、「小数」、「分数」）	3	1
74	10/3	ﾌﾟﾛｼﾞｪｸﾄ･ﾙｰﾑ	《両》ﾃﾞｰﾀﾍﾞｰｽ（DB）管理・更新の講習会	2	1
75	10/10	-	〔理〕TP の教案確認（「音」）	1	1
76	10/10	-	〔理〕TP の教案確認（「電気」）	1	1

＊ 資料は 73 回となっているが、日本人専門家とインタビューでは 76 回が実施されている。

2) **スタディ・ワークショップ　〔Study Workshop (SW) 〕**

スタディ・ワークショップ(SW)は、3 ヶ月毎に実施され JICA 支援活動(JSA)関係者を招き、理数科教育関係者間の縦の関係強化を高めることを目的としている。 SW への参加は理数科教育の向上に教員が参加しているという感覚を高め、また教育省や教育局の関係者に理科・算数の実際の問題を考える機会を提供します。2006 年の 11 月までに 7 回の SW が実施されている。

<table>
<tr><th>回数</th><th>日付</th><th>場所</th><th>内容</th><th>参加者</th></tr>
<tr><td>1</td><td></td><td>NAPE</td><td>プロジェクト関係者間でプロジェクトについての理解を深める。</td><td><table><tr><td>NAPE</td><td>7</td><td>DPEO</td><td>1</td></tr><tr><td>PTI</td><td>7</td><td>UEO</td><td>6</td></tr><tr><td>URC</td><td>1</td><td>FTS</td><td>17</td></tr><tr><td>JOCV</td><td>1</td><td></td><td></td></tr></table>参加者</td></tr>
<tr><td>2</td><td>2005
3/11</td><td>PTI
(My)</td><td>【算】2 年生の掛け算の模擬授業で QTC 説明
D1「子供の視点で」
D2「教師の視点で」
教材 : 5WS(12×12)/赤パスタ（36）
緑パスタ（12）</td><td>参加者<table><tr><td>NAPE</td><td>7</td><td>DPEO</td><td>1</td></tr><tr><td>PTI</td><td>7</td><td>UEO</td><td>6</td></tr><tr><td>URC</td><td>1</td><td>FTS</td><td>17</td></tr><tr><td>JOCV</td><td>1</td><td></td><td></td></tr></table></td></tr>
<tr><td>3</td><td>8/04</td><td>PTI
(My)</td><td>(1)【理科】PTI 実験校の先生が始めての公開授業（宇宙）
(2) TP 作成の情報集め
・「3 年生理科教科書で難しい単元」
・「なぜ教師が教え難いか」
・「なぜ学習者が理解し難い」
・「この問題解決なめにどんなサポートが必要か」</td><td>参加者<table><tr><td>NAPE</td><td>6</td><td>DPEO</td><td>0</td></tr><tr><td>PTI</td><td>7</td><td>UEO</td><td>6</td></tr><tr><td>URC</td><td>2</td><td>FTS</td><td>17</td></tr><tr><td>JOCV</td><td>2</td><td>JICA</td><td>2</td></tr></table></td></tr>
<tr><td>4</td><td>10/06</td><td>PTI
(My)</td><td>【算数】授業研究の手法のための PTI の講師の公開授業（幾何学的図形）授業観察用紙について
・ グループ討論
(模擬授業の強みと弱み)</td><td>参加者<table><tr><td>NAPE</td><td>9</td><td>DPEO</td><td>1</td></tr><tr><td>PTI</td><td>7</td><td>UEO</td><td>6</td></tr><tr><td>URC</td><td>2</td><td>FTS</td><td>12</td></tr><tr><td>DPE</td><td>2</td><td>UNICEF</td><td>2</td></tr><tr><td>JOCV</td><td>2</td><td>JICA</td><td>1</td></tr></table></td></tr>
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<tr><td>5</td><td>2006
2/23</td><td>PTI
(Go)</td><td>【理科】研究授業のため 3 年理科（水）の公開授業(ラジア先生)
・授業評価用紙の検討</td><td>参加者<table><tr><td>NAPE</td><td>10</td><td>PTI</td><td>8</td></tr><tr><td>UEO</td><td>6</td><td>FTS</td><td>20</td></tr><tr><td>DPE</td><td>1</td><td>UNICEF</td><td>1</td></tr><tr><td>JOCV</td><td>8</td><td></td><td></td></tr></table></td></tr>
<tr><td>6</td><td>4/27</td><td>PTI
(My)</td><td>・ TP の説明（掛け算・空気）
・ 算数/理科/行政グループで討論</td><td>参加者<table><tr><td>NAPE</td><td>10</td><td>DPEO</td><td>1</td></tr><tr><td>PTI</td><td>9</td><td>UEO</td><td>6</td></tr><tr><td>URC</td><td>17</td><td>URC</td><td>1</td></tr><tr><td>IER</td><td>2</td><td>JICA</td><td>2</td></tr><tr><td>JOCV</td><td>3</td><td></td><td></td></tr></table></td></tr>
<tr><td>7</td><td>7/27</td><td></td><td>・ ビデオで撮影した 4FTS での授業の授業研究
・ 生徒の立場にたった視点を身につける（C/P は教師の行動にコメントがいくので生徒への視点を強調）
・ TP の良さについて説明</td><td>参加者<table><tr><td>NAPE</td><td>11</td><td>DPEO</td><td>1</td></tr><tr><td>PTI</td><td>9</td><td>UEO</td><td>6</td></tr><tr><td>URC</td><td>2</td><td>FTS</td><td>21</td></tr><tr><td>IER</td><td>1</td><td>JICA</td><td>2</td></tr><tr><td>JOCV</td><td>4</td><td>UNICEF</td><td>1</td></tr></table></td></tr>
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(注)　IER : Institute for Educational Research Dhaka University

Narrative Summary	Objectively Verifiable Indicators (OVI)	
【Super Goal】 - The quality of pupil learning and performance outcomes (i.e. achievement) of science and mathematics are improved across the country.	- Completion rate - Pupil learning and performance outcomes (i.e. achievement) of science and mathematics	
【Overall Goal】 Attainment in science and mathematics in primary education is improved in the target institutions.	- Number and rate of successful learners in science and mathematics in the target institutions	
【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	The degree of improvement of teacher's class teaching, class management and attitude in S&M (The degree of improvement of consciousness in terms of understanding and interest of trainees and pupils). - Learning forms of students - Teacher's strategy in classroom teaching - Teacher's handling of topics - The numbers and types of expressions both teachers and students	
【Outputs】 1. New teaching and leaning 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 PEDPII.	1-1-1. Number of authorized Teaching Packages. 2-1-1. Frequency of activities of SGAs and SWs 2-1-2. Degree of improvement of the teaching ability in science and mathematics at FTSs and a selected PTI 2-2-1. Number of training programmes implemented 2-2-2. Degree of improvement of the teaching ability in science and mathematics at PTIs 2-3-1. Number of adopted materials. 3-1-1. Frequency of activities of SGAs and SWs 3-1-2. Degree of improvement of the teaching ability in science and mathematics at NAPE 3-2-1. Reports for all grades of science and mathematics 3-3-1. Report on C-in-Ed Develop and utilize science and mathematics database. 3-4-1. Frequency of using the educational database for the activities conducted by NAPE. 3-5-1. Number of overseas/in-country trainees 4-1-1. The number of progress report and approved Annual Operation Plan	
【Activities】 1-1. Develop and test Teaching Packages for heuristic and problem-solving 1-2. Hold technical committee meetings at DPE to authorize and coordinate developed teaching packages 2-1. Operationalise quality teaching cycle in science and mathematics at FTSs and a selected PTI. 2-2. Conduct training of PTI instructors using developed Teaching Packages at NAPE. 2-3. Improve Science and Mathematics training conducted by URCs and UEOs. 3-1. Operationalise quality teaching cycle in science and mathematics at NAPE. 3-2. Analyse and recommend improved school curriculum and assessment. 3-3. Work to improve C-in-Ed in PTIs for Science and Mathematics 3-4. Enhance research capacity of NAPE by introducing research methodology and know-how in Science and Mathematics. 3-5. Conduct Overseas/In-country training 4-1. Report/coordinate activities with DPE under PEDPII program	【Inputs】 <Japanese side> 1. <u>Experts</u> - Chief Advisor - Science Education - Mathematics Education - Coordinator - Education Evaluation - Database Development 2. <u>Counterpart training in Japan and the Philippines</u> 3. <u>Equipment and local cost</u> <u>4.Expenses for seminars and workshop (Cost share)</u>	<Bangladesh side> 1. <u>Counterparts</u> - DPE - NAPE - Mymensingh PTI - 2 URC and 2 UEO's office in Mymensingh - The Field Testing schools - Additional PTI/URC instructors selected by MoPME/DPE 2. <u>Project offices and facilities at DPE and NAPE</u> 3. <u>Running cost</u> 4. <u>Expenses for seminars and workshop (Cost share)</u>

Means of Verification	Important Assumptions
- National statistics - Results of examinations	- The policy that gives priority to the educational sector is not changed by the Bangladesh government.
- Results of final examinations	- The policy that gives priority to EFA is not changed by the Bangladesh government. - New curriculum implementation and examination reform does not delay.
1-1. Records of training and lesson observations 1-2. Questionnaires for trainers and teachers 1-3. Questionnaires for trainees and pupils	- The teacher-pupil ratio is not drastically increased at the primary schools in the target area. - Counterparts, Trainers and teachers are not transferred.
1-1-1. Approved Teaching Packages 2-1-1. Questionnaires and protocol analysis 2-1-2. Monitoring reports of SGAs and the minutes of SWs 2-2-1. Records of trainings 2-2-2. Questionnaire for the participants 2-3-1. Developed training manuals for URC/UEO 3-1-1. Record of activities by SGAs and SWs 3-1-2. Questionnaires for NAPE counterparts 3-2-1. Reports on the analysis and recommendation of current primary science and mathematics curriculum. 3-3-1. Report on the curriculum and assessment of C-in-Ed 3-4-1. Education database on science and mathematics 3-4-2. Report of Educational database 3-5-1. Training records 3-1-1. Annual operation plan, monthly report to training division, financial report to financial division	- The instructor or trainer-trainee ratio is not drastically increased at NAPE, PTI, URC and UEO's office. - The teacher-pupil ratio is not drastically increased at the Field testing schools. - C-in-Ed curriculum is revised during the project period.
【Inputs】	- The necessary budget for PEDP II is duly financed by the donors and the Bangladesh government. - PEDP-II/DPE continues to be supportive to the support program. - NAPE continues to take the initiative in development of teaching packages and holding trainings. - Specialists and assistant specialists in Science and Mathematics continue to work at NAPE and/or their posts are not vacant at all times. - Instructors in Science and Mathematics continue to work at PTI and/or their posts are not vacant at all times. - Teachers in Science and Mathematics continue to work at the Field testing schools and/or their posts are not vacant at all times.
	【Pre-conditions】 - This support program is consistent with PEDP II.


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