

## 付 属 資 料

1. 調査日程
2. 主要面談者
3. 終了時評価ミニッツ
4. 当初の PDM (PDM0)
5. 運営指導調査時に改訂された PDM (PDM1)
6. エンドライン調査サンプル (教員の発問分析)
7. 終了時評価時アンケート集計結果
  - 7-1 SBTP 参加教員
  - 7-2 青年海外協力隊員 (シニア隊員を除く)



## 1. 調査日程

月日	曜	活動内容
11月21日	日	(鶴田団員) 成田→マニラ
11月22日	月	JICA フィリピン事務所との打合せ プロジェクト専門家及びシニア協力隊員に対するインタビュー
11月23日	火	プロジェクト専門家へのインタビュー、デラサール大学からのエンドライン調査結果説明
11月24日	水	教育省 C/P に対するインタビュー、協力隊員に対するインタビュー
11月25日	木	マニラ→レガスピ (第5地域) 第5地域教育事務所関係者 (副所長、指導主事、シニア協力隊員) 及び地区事務所関係者 (指導主事) に対するインタビュー
11月26日	金	SBTP 研修視察、フォーカスグループインタビュー (教員及び生徒)
11月27日	土	レガスピ→マニラ、調査結果分析
11月28日	日	調査結果分析
11月29日	月	ミニッツ案作成
11月30日	火	(田中団長及び小泉団員) 成田→マニラ 団内打合せ (エンドライン調査結果及び第5地域調査結果) JICA 事務所打合せ
12月1日	水	日本大使館表敬 マニラ→イロイロ (第6地域)
12月2日	木	第6地域教育事務所関係者 (副所長、指導主事、協力隊員) 及び地区事務所関係者 (指導主事) に対するインタビュー 西ビサヤ大学 RSTC 所長に対するインタビュー
12月3日	金	(田中団長及び小泉団員) 第6地域専門家及び協力隊員に対するインタビュー (鶴田団員) イロイロ→セブ (第7地域)、第7地域教育事務所関係者 (副所長、指導主事、協力隊員) 及び地区教育事務所関係者 (指導主事) に対するインタビュー、セブ→イロイロ
12月4日	土	レガスピ→マニラ 調査結果分析
12月5日	日	ミニッツ案作成
12月6日	月	第11地域教育事務所及びダバオ地区教育事務所関係者に対するインタビュー フィリピン側評価メンバーとの評価結果協議
12月7日	火	ミニッツ案作成、JICA 事務所との打合せ
12月8日	水	国家経済開発庁 (NEDA) 表敬、フィリピン国家ボランティアサービス調整庁 (PNVSCA) 表敬、教育省とのミニッツ案協議
12月9日	木	ステアリングコミッティ、ミニッツ署名
12月10日	金	日本大使館報告、マニラ→成田

## 2. 主要面談者

<b>国家経済開発庁 (NEDA)</b>	
Mr. Napoleon B. Imperial	Chief Development Specialist, Social Development Staff
<b>フィリピン国家ボランティア調整庁 (PNVSCA)</b>	
Mr. Joselito C. De Vera	Executive Director
Ms. Fe Turingan Nadado	Program Officer
<b>教育省 (DepEd)</b>	
Mr. Florencio B. Abad	Secretary
Dr. Orfelina O. Tuy	Director, National Educators Academy of the Philippines
Ms. Zaida Talosig-Azcueta	Chief, Staff Development Division, Human Resource Development Division
Ms. Elsie C. Esmer	Senior Education Program Specialist, Staff Development Division, Bureau of Secondary Education
<b>教育省 (DepEd) 第 5 教育地域事務所</b>	
Dr. Alice Q. Engay	Assistant Regional Director
Dr. Lourdes Santiago	Chief, Elementary Education Division
Ms. Amy V. Deniega	Chief, Secondary Education Division
Ms. Nueve G. Carrascal	Education Supervisor II for Elementary Mathematics
Ms. Celerina B. Donor	Education Supervisor II for Secondary Mathematics
Ms. Leticia B. Bustamante	Education Supervisor II for Secondary Science
<b>教育省 (DepEd) 第 6 教育地域事務所</b>	
Dr. Jesus L. Nieves	Assistant Regional Director
Mr. Toribio M. Berano	Education Supervisor II for Secondary Science
<b>西ビサヤ州立大学地域科学教育センター (RSTC)</b>	
Dr. Lourdes N. Morano	Director
<b>教育省 (DepEd) 第 7 教育地域事務所</b>	
Dr. Carolino B. Mordeno	Regional Director
Dr. Gloria E. Pinili	Assistant Regional Director
Dr. Gumersinda A. Sasam	Assistant Chief, Elementary Education Division
Dr. Marcial P. Degamo	Chief, Secondary Education Division
Ms. Josefina S. Samson	Education Supervisor II for Secondary Mathematics
<b>教育省 (DepEd) 第 11 教育地域事務所</b>	
Ms. Corazon P. Escalera	Education Supervisor II for Elementary Mathematics
<b>在フィリピン日本大使館</b>	
野口 智明	一等書記官
<b>JICA フィリピン事務所</b>	
松浦 正三	所長
高田 裕彦	次長
高田 健二	所員
石澤 朋子	企画調査員
<b>プロジェクト専門家、協力隊員</b>	
原 芳久	教員研修
中井 一芳	教員研修行政
糸 結美子	教員研修運営管理/業務調整
長谷 宏司	シニア隊員

3. 終了時評価ミニッツ

MINUTES OF MEETING  
BETWEEN  
JAPANESE FINAL EVALUATION TEAM  
AND  
AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE PHILIPPINES  
ON  
THE PROJECT  
FOR  
STRENGTHENING OF CONTINUING SCHOOL BASED TRAINING PROGRAM FOR  
ELEMENTARY AND SECONDARY SCIENCE AND MATHEMATICS TEACHERS  
(SBTP-ELSSMAT)

The Japanese Final Evaluation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Seiho Tanaka visited the Republic of the Philippines from November 30 to December 10, 2004 for the purpose of the final evaluation of the Project for Strengthening of Continuing School Based Training Program for Elementary and Secondary Science and Mathematics Teachers (SBTP-ELSSMAT) (hereinafter referred to as "the Project").

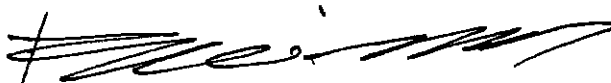
During its stay in the Philippines, the Team had a series of discussions with the Philippine authorities concerned and jointly evaluated the achievement of the Project.

The Project Steering Committee Meeting held on December 9, 2004 discussed and adopted the evaluation. As a result of the discussions, both sides agreed to report to their respective Governments the matters referred to in the document attached hereto.

Pasig City, December 9, 2004



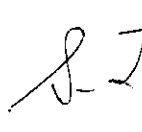

Mr. Seiho Tanaka  
Leader  
Japanese Final Evaluation Team  
Japan International Cooperation Agency  
Japan



Mr. Florencio B. Abad  
Secretary  
Department of Education  
The Republic of the Philippines

## ABBREVIATIONS

BEE	Bureau of Elementary Education, DepEd
BSE	Bureau of Secondary Education, DepEd
CPMT	Central Project Management Team
DepEd	Department of Education
DPMT	Division Project Management Team
HRDS	Human Resource Development Service, DepEd
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers
JY	Japanese Yen (=P0.535 on November 17, 2004)
NEAP	National Educators Academy of the Philippines, DepEd
NEDA	National Economic and Development Authority
P	Philippine Peso (=JY1.87 on November 17, 2004)
PNVSCA	Philippine National Volunteer Service Coordinating Agency
RPMT	Regional Project Management Team
RSTC	Regional Science Teaching Center
SBTP	School Based Training Program
SDD-HRDS	Staff Development Division - Human Resource Development Service, DepEd
TEI	Teacher Education Institute



## CONTENTS

<b>1. Introduction</b>	<b>1</b>
1.1. Preface	1
1.2. Objectives of Evaluation	1
1.3. Schedule of Japanese Evaluation Team	1
1.4. Evaluators	2
1.5. Methodology and Process of Evaluation	2
<b>2. Background and Summary of the Project</b>	<b>2</b>
2.1. Brief Background of the Project	2
2.2. Summary of the Project	3
2.3. Project Design Matrix	3
2.4. Plan of Operation	3
<b>3. Evaluation</b>	<b>3</b>
3.1. Achievement of the Plan	3
3.2. Results of Evaluation	9
<b>4. Conclusion and Recommendations</b>	<b>14</b>
4.1. Conclusion	14
4.2. Recommendations	14
4.3. Summary of Lessons Learned from the Project	15

## ANNEXES

**Annex 1. Summary Tables of End-line Survey Results (Preliminary)**

**Annex 2. Project Design Matrix**

**Annex 3. Plan of Operation and Progress of Achievement**

**Annex 4. Expansion of SBTP**

**Annex 5. Results of Evaluation**

**Annex 6. References**

**Reference 1. Dispatched Experts and JOCV Members**

**Reference 2. Assignment of Counterparts**

**Reference 3. Counterpart Personnel Trained in Japan**

**Reference 4. Equipment Provided by JICA**

**Reference 5. Organization Chart of Department of Education**

**Reference 6. List of Philippine Interviewees**



## ATTACHED DOCUMENT

### 1. Introduction

#### 1.1. Preface

The Project was initiated in April 2002 and will be completed in April 2005<sup>1</sup>. The Team dispatched by JICA visited the Republic of the Philippines from November 21 to December 10 for the purpose of evaluating the achievement of the Project. The evaluation has been undertaken jointly by the Philippine authorities concerned and the Team.

#### 1.2. Objectives of Evaluation

Main objectives of the evaluation were as follows:

- (1) to review the achievements and assess the major outcomes of the Project according to the Project Design Matrix (PDM);
- (2) to evaluate the Project according to the five evaluation criteria: relevance, effectiveness, efficiency, impact and sustainability; and
- (3) to recommend further actions and arrangements to be taken for successful completion of the Project.

#### 1.3. Schedule of Japanese Evaluation Team

Date	Day	Major Activities
21-Nov	Sun	(Mr. Tsuruta) Narita → Manila
22-Nov	Mon	Meeting with JICA Philippines Office Meeting with Experts and JOCV Senior (JICA Office) Endline Survey Results Analysis and Overall Evaluation with Experts and JOCV Senior (JICA Office)
23-Nov	Tue	Interview with Experts and Endline Survey Results Briefing by De La Salle Univ. (JICA Office)
24-Nov	Wed	Interview with C/Ps (DepEd) Interview with JOCVs (JICA Office)
25-Nov	Thu	Manila → Legaspi Interviews with DepEd Region Office V (Assistant Director, Supervisors, JOCV Senior etc.) and Division Offices
26-Nov	Fri	School Visits, Focus Group Interview (teachers, students)
27-Nov	Sat	Legaspi → Manila Data Analysis
28-Nov	Sun	Ditto
29-Nov	Mon	Drafting M/M
30-Nov	Tue	(Mr. Tanaka and Ms. Koizumi) Narita → Manila Report on Endline Survey Results and Field Survey by Mr. Tsuruta Meeting with JICA Philippines Office
1-Dec	Wed	Courtesy Call on Japanese Embassy Manila → Iloilo
2-Dec	Thu	Interviews with DepEd Region Office VI (Assistant Director, Supervisors, JOCVs etc.) and Division Office Interview with RSTC, West Visayas State University
3-Dec	Fri	(Mr. Tanaka and Ms. Koizumi) Interviews with Expert and JOCVs in Region VI (Mr. Tsuruta) Interviews with DepEd Region Office VII (Director, Supervisors, JOCVs etc.) and Division Office
4-Dec	Sat	Iloilo → Manila Data Analysis
5-Dec	Sun	Drafting M/M
6-Dec	Mon	Interviews with staff of DepEd Region Office XI and Davao Office Meeting with DepEd (Discussion on M/M draft) (DepEd)
7-Dec	Tue	Drafting M/M, Meeting with JICA Philippines Office
8-Dec	Wed	Meetings with NEDA and PNVSCA, Meeting with DepEd (Discussion on M/M draft) (DepEd)
9-Dec	Thu	Steering Committee (DepEd Bulwagan) Signing M/M (DepEd Bulwagan)
10-Dec	Fri	Report to JICA Philippines Office and Japanese Embassy Manila → Narita

<sup>1</sup> Dispatch of JOCVs will be continued until April 2007, according to the Minutes of Discussions signed in March, 2002.



#### 1.4. Evaluators

The final evaluation was carried out by the joint evaluation team consisting of both Japanese and Philippine evaluators.

##### 1.4.1. Japanese Evaluators

Mr. Seiho Tanaka	Team Leader
Ms. Takako Koizumi	Evaluation and Planning
Mr. Shinsuke Tsuruta	Analysis for Evaluation

##### 1.4.2. Philippine Evaluators

Dr. Fe A. Hidalgo	Undersecretary for Programs and Projects of DepEd
Dr. Teresita G. Inciong	Director of Bureau of Elementary Education of DepEd
Ms. Bella O. Marinas	Assistant Chief, Staff Development Division, Bureau of Secondary Education of DepEd
Ms. Psyche Vetta G. Olayvar	Officer in Charge, Office of Planning Service, Project Development and Evaluation Division of DepEd

#### 1.5. Methodology and Process of Evaluation

The original project design matrix (PDM) of the Project jointly approved in March 2002 was revised during the visit of the Project Consultation Team in December 2003 (Annex 2). In principle, therefore, the Project progress is measured against the revised PDM.

The Project achievement is also evaluated by the following five criteria through discussions among the joint evaluation team.

- 1) Relevance: How relevant the project is to the specific national context.
- 2) Effectiveness: How effectively the project purpose is achieved through the activities and the outputs.
- 3) Efficiency: How efficiently the project's inputs generate the activities to produce the outputs.
- 4) Impact: Positive and negative effects indirectly made by the project.
- 5) Sustainability: The ability of the Philippine stakeholders to maintain and develop the project achievement after the external assistance is terminated.

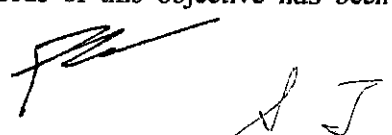
The evaluation process included the following activities.

- (1) Interviews with Philippine stakeholders such as members of the Project Management Teams, elementary and secondary schools, universities, NEDA and PNVSCA
- (2) Interviews with Japanese stakeholders (Japanese experts, JOCV members staff of JICA and the embassy)
- (3) Observation of SBTP session
- (4) Focus group interviews with teachers and students
- (5) Questionnaire surveys to participant teachers of SBTP and JOCV members

## 2. Background and Summary of the Project

### 2.1. Brief Background of the Project

The Philippine Government has listed among its key educational objectives the improvement of science and mathematics in basic education and a particular focus of this objective has been the



capacity development of teachers. For this reason, the Philippine Government has requested assistance from the Government of Japan for the Package Cooperation for the Development of Elementary and Secondary Science and Mathematics Education (the "Package Cooperation") from 1994 to 1999. After completion of the Package Cooperation, in order to further respond to teachers' needs such as implementing learner-centered teaching and learning and devising teaching materials according to local context, in 1999, the Philippine Government, with support of the Japanese Government, launched the School-Based Training Program (the "SBTP") which was piloted in three regions (Regions V, VI, and XI).

Based on the promising results observed in the pilot SBTP, the Philippine Government requested the Japanese Government for "the Project for Strengthening of Continuing School Based Training Program for Elementary and Secondary Science and Mathematics Teachers (SBTP-ELSSMAT)" aiming at establishment and expansion of the SBTP. The project has been launched in 2002 for a period of three years (and five years for the dispatch of JOCVs). The target regions has been slightly modified in 2002 (to Regions V, VI, and VII) and in 2003 (to the above three regions and Region XI).

## **2.2. Summary of the Project**

The project management has been based on PDM. Its main points are as follows:

### **(1) Overall Goal**

Performance level of pupils and students in science and mathematics at basic education is continuously improved.

### **(2) Project Purpose**

To upgrade teaching skills and deepen understanding of subject matter content for facilitating learner-centered classroom instruction in science and mathematics education.

### **(3) Outputs**

(a) The operation and management method of SBTP is strengthened.

(b) The content of SBTP is upgraded.

(c) SBTP is implemented in non-pilot clusters in pilot regions (Region V, VI, XI).

(d) SBTP is implemented in a non-pilot region (Region VII).

## **2.3. Project Design Matrix**

The major revisions of the PDM made in December 2003 are as follows.

(1) Inclusion of Region XI in the target region, considering the achievement of the SBTP in the Region by the DepEd

(2) Elaboration of the objectively verifiable indicators in the PDM based on the baseline survey results

## **2.4. Plan of Operation**

The plan of operation corresponding to the PDM and its achievements are shown in Annex 3.

## **3. Evaluation**

### **3.1. Achievement of the Plan**

#### **3.1.1. Inputs**

##### **(1) Inputs from Japanese side**

The following inputs have been provided by JICA for the Project.

### **1) Dispatch of Experts**

Three long-term experts for the teacher training are assigned and four short term experts for the instruction, monitoring and evaluation of science and mathematics were dispatched. In addition, a total of two senior volunteers and 20 volunteers of the Japan Overseas Cooperation Volunteers (JOCV) have been dispatched to support the SBTP in science and mathematics, of whom one senior volunteer and 12 volunteers are currently assigned. (Annex 6)

### **2) Counterpart Training**

A total of 10 counterparts underwent training in Japan to be familiarized with in-service teacher training in Japan. Among them, one is the Project Manager of the CPMT, two from the RPMT of Region V, one from the RPMT of Region VI, three from the RPMT of Region VII, two from the RPMT of Region XI and one from the DPMT of Davao City Region XI. (Annex 6)

### **3) Provision of Equipment**

JICA has provided basic equipment for multi-uses to help improve the lessons. The total amount is approximately JY19,300,000. They are highly appreciated by the recipient schools and fully utilized. (Annex 6)

### **4) Local Cost Disbursement**

The local operation cost disbursement by JICA amounted to JY19,400,000. The budget is efficiently used for travels of the experts and their articles of consumption.

## **(2) Inputs from Philippine Side**

The following inputs have been provided by the Philippine side.

### **1) Assignment of Counterpart Personnel**

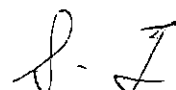
The DepEd organized three levels of counterpart teams of the Project, namely the Central Project Management Team, Regional Project Management Teams and Division Project Management Teams of the divisions having introduced the SBTP. The CPMT comprises nine members from four sections of the headquarters of DepEd, namely National Educators Academy of the Philippines, Staff Development Division of the Human Resource Development Service, Bureau of Elementary Education and Bureau of Secondary Education. The RPMT involves the Regional Director, Assistant Regional Director, Chiefs and supervisors of elementary and secondary education divisions. In addition, the RPMT of Region VI includes the Director of RSTC of West Visayas State University and Region XI includes the Director of RSTC of Ateneo de Davao University. Each RPMT comprises eight counterpart members on the average. The DPMTs increases as the SBTP expands. Currently, 39 DPMTs are organized with a total of 117 members assigned as counterpart staff.

### **2) Project Offices and Facilities**

Based on the principle to maximize the use of existing resources, the Project has been utilizing facilities of central and local DepEd offices.

### **3) Funds for Running Expenses**

At the national level, part of the Training and Development budget is allocated to fund the SBTP. In 2004, the amount allocated is P3,860,000. The fund is mainly for monitoring purposes and the semiannual consultative conferences.



At the regional level, although no budget item for the SBTP is appropriated, expenses for regional activities are covered by budget from the DepEd Central Office. At the division level, the special education fund (SEF) was tapped for the SBTP activities upon approval of the local school board in addition to the regular budget of the division.

### 3.1.2. Outputs

The achievements of the outputs through the corresponding activities are summarized below.

#### (1) Output 1. "The operation and management method of SBTP is strengthened."

The SBTP system has been strengthened to operate and manage expanded activities.

The CPMT is a team rather than a single bureau. Composition, roles and responsibilities of the CPMT, RPMT and DPMT are identified by DepEd Order regarding the Project. Within this framework, annual activity plans are prepared at central, regional and division level.

The consultative conferences are held twice a year under the initiative of the CPMT. Participants to the conferences are not limited to SBTP implementers. As a result, cooperation and coordination between SBTP implementers and other stakeholders are established. In a conference held in 2004, discussions were held between the representatives of the RSTCs and the implementers of the SBTP. Close coordination between RSTCs and regional offices in Regions V and VII are established, while cooperation has been established between the RSTC of West Visayas State University and the RPMT in Region VI. Also, link between pilot and expansion regions has been created in this conference.

Data on the SBTP are regularly collected and consolidate by the CPMT. Major items are (1) expansion of the program, (2) best practice cases, (3) problems encountered and (4) appropriate measures taken.

The SBTP activities have been directly monitored by the supervisors of the DPMT. Basically they attend all the SBTP sessions so far but they can observe only selected samples of demonstration lessons for now over 6,000 schools participate in the SBTP. The DPMTs' activities are supervised by the RPMT and the CPMT.

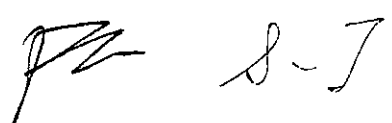
The first version of the implementation manual of the SBTP was completed in 2003. The manual was developed to document the activities while actual practice has been incorporated in the manual. The revision of the manual was intended to be a process in which the CPMT, the RPMTs and DPMTs would strengthen their capability to analyze and evaluate SBTP activities. The second version of the manual was completed in October 2004 according to the schedule. The new manual is utilized as a guide book for planning and implementation of the SBTP. In particular, copies of the manual are distributed for expansion of the SBTP and used in divisions that introduce the program. The manual is therefore an output of the activities as well as a teaching/learning guide.

#### (2) Output 2. "The content of SBTP is upgraded."

Owing to the efforts of the facilitators and participants, the contents of the SBTP have been improved. However, there are cases in which the quality of the SBTP sessions is not fully satisfactory, indicating the need for capacity development of the facilitators and training managers (principals).

Both the writing workshops and the training of trainers were held in 2003 and 2004. Monthly trainers meetings have also been held in order to prepare for the SBTP sessions.

A model of session guides and lesson plans was developed and incorporated in the second version of the implementation manual. Actual session guides and lesson plans are prepared by trainers and teachers and then monitored by the supervisors. By referring on the trainers' lesson plans, parallel lesson plans are prepared and presented by teachers for discussions among themselves as part of the



SBTP activities.

Various instructional materials have been prepared by the experts, JOCV members and their counterpart staff. More notably, participant teachers have prepared such materials as part of the SBTP sessions. However, sometimes it is difficult to replicate demonstration lessons in actual classes due to shortage of materials such as chemicals as well as lenses and magnets. Whenever possible, improvisation of instructional materials is encouraged and the JOCV members assist teachers in improvising some of the teaching materials.

**(3) Output 3. "SBTP is implemented in non-pilot clusters in pilot regions. (Region V, VI, XI)"**

In each of the first and second years of the Follow-up Program, three pilot clusters were organized in Regions V and VI. In the three regions, the SBTP expanded beyond the target as follows.

**a. Region V**

The percentage of elementary school teachers participating in the SBTP is 86% in 2004. Secondary schools participating in the SBTP account for 100% and so the percentage of science and mathematics teachers participating in the SBTP is thought to be also 100%. Therefore, the target of 80% has been exceeded.

**b. Region VI**

The percentage of elementary school teachers participating in the SBTP is 42%. That of secondary school teachers participating in SBTP is 30% of all the secondary school teachers. Considering that science and mathematics teachers account for 35% to 40% of all, the percentage of teachers participating in the SBTP is thought to be around 75% of all the secondary science and mathematics teachers. Therefore the target of 30% has been exceeded.

**c. Region XI**

The percentage of elementary school teachers participating in the SBTP is 91%. Secondary schools participating in the SBTP account for 100% and so the percentage of science and mathematics teachers participating in the SBTP is thought to be also 100%. Therefore, the target of 80% has been exceeded.

**(4) Output 4. "SBTP is implemented in a non-pilot region. (Region VII)"**

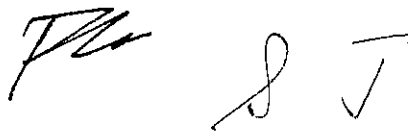
Three pilot divisions started in 2003 involving one elementary school cluster and two secondary school clusters. In 2004, four new divisions introduced the SBTP and now a total of 17 clusters with a participation of 1,898 teachers are covered by the SBTP. This has exceeded the target based on the PDM.

As the SBTP expanded in Region VII, the implementation manual was prepared mainly by the CPMT. The manual was fully utilized for the orientation for new divisions. In addition, various formats in the attachment of the manual were reviewed and improved for the introduction of the SBTP in Region VII. The CPMT also prepared a flow chart for the introduction of the SBTP in new regions and incorporated it in the revised manual.

Through the experiences in Region VII, the methodology and materials (manual, brochure and video) have been developed for the introduction of the SBTP.

**3.1.3. Project Purpose**

The Project purpose is to upgrade teaching skills and deepen understanding of subject matter content for facilitating learner-centered classroom instruction in science and mathematics education.



The preliminary results of the end-line survey conducted by Lasallian Institute for Development and Educational Research of De La Salle University are summarized according to the indicators as follows. Notable positive signs are observed that indicate on-going process of improvement, although the Project has not fully achieved a set of target indicators.

a. From SY2002-2003 to SY2004-2005, the lesson plan objectives classified as other than knowledge level of cognitive domain will increase from 62.2% to 70% in SBTP schools.

The indicator in the end-line survey sharply dropped from the base-line survey in all the three regions irrespective of whether the samples are targets of the SBTP or not. The causes are yet to be thoroughly investigated. However, common external factors are thought to contribute to the results, such as practice of preparing lesson plans by replicating the sample lesson plans distributed by the DepEd. The difference in the survey time of the school year is also a candidate cause.

b. From SY2002-2003 to SY2004-2005, the lesson plan objectives classified as other than declarative level of knowledge domain will increase from 49.8% to 55% in SBTP schools.

Unlike the above a), the indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose from the base-line survey to nearly reach the target, while that of the non-SBTP samples in Regions VI and VII rose as well.

c. From SY2002-2003 to SY2004-2005, the teachers' questions classified as other than knowledge level of cognitive domain will increase from 18.8% to 25% in SBTP schools.

The indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose very slightly from the base-line survey to 19.0%, while that of the non-SBTP samples in Regions VI and VII dropped by over 10%. These results indicate that the SBTP considerably contributed to maintaining non-knowledge questions in classes.

d. From SY2002-2003 to SY2004-2005, the teachers' questions classified as other than declarative level of knowledge domain will increase from 20.1% to 25% in SBTP schools.

The indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose slightly from the base-line survey to 23.0%, while that of the non-SBTP samples in Regions VI and VII dropped by over 6%. These results indicate that the SBTP contributed to increasing the share of non-declarative questions in classes.

e. From SY2002-2003 to SY2004-2005, the number of teachers using teaching aids will increase from 82.5% to 90% in SBTP schools.

The indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose remarkably from the base-line survey to 94.9% and exceeded the target, while that of the non-SBTP samples in Regions V and VII rose very slightly by less than 1%. These results indicate that the SBTP satisfactorily promoted use of teaching aids in classes.

It is noted that the results of Region XI in the above a) and b) are between the SBTP schools and non-SBTP schools in Regions V, VI and VII combined. For c) and d), the results of Region XI were lower than the averages of those of both SBTP and non-SBTP schools in the three regions, indicating the need for improving questions in classes. On the other hand, the Region showed higher use of teaching aids than the averages.

Handwritten signatures in black ink, appearing to be initials or names, located at the bottom right of the page.

f. From SY2002-2003 to SY2004-2005, the mean scores for the following factors in students' questionnaire will increase in SBTP schools.

- f-1) Teaching for understanding,
- f-2) Positive affect in classroom,
- f-3) Application and relevance,
- f-4) Appropriate assessment,
- f-5) Independent learning,
- f-6) Inquiry learning

The number of improved items minus the number of regressed items in the SBTP target schools (In brackets is the balance in non-SBTP sample schools.)

Subject	Region V	Region VI	Region VII
Science	+4	+2 (-2)	0 (-4)
Mathematics	+6	+6 (+6)	-1 (-2)

Regions V and VI showed improvement in science and mathematics. In Region VII, the numbers of improved items and worsened items are equal in science, while the balance between the number of improved items and that of worsened items was minus one in mathematics. However, compared to the non-SBTP schools, the results were better in both subjects.

g. From SY2002-2003 to SY2004-2005, the mean scores for the following factors in students' questionnaire will decrease in SBTP schools.

- g-1) Negative affect in classroom,
- g-2) Passive learning,
- g-3) Low self-efficacy

The number of improved items minus the number of worsened items in the SBTP target schools (In brackets is the balance in non-SBTP sample schools.)

Subject	Region V	Region VI	Region VII
Science	+1	-1 (-1)	-1 (-1)
Mathematics	+3	-3 (+1)	+1 (-3)

Regions V showed improvement in science and mathematics. In Region VI, all items were worsened in science and mathematics, while non-SBTP schools showed two improved items with one worsened item in mathematics. In Region VII, mathematics showed more improved items than worsened items in mathematics but the result in science was as negative as that of the non-SBTP schools.

Besides the above survey results, there exist a number of indications of the improvement in teachers. Many of the supervisors, the teachers themselves, the experts and the JOCV members think that the teachers knowledge and skills are improving. Typical comments are as follows.

- The majority of the teachers participating in the SBTP are becoming more confident in teaching their pupils.
- The teachers try to make sure the correctness of the lesson plans during the preparation processes.
- Teachers willing to invite the principals and the supervisors to their classes.
- The SBTP clusters are expanding rapidly.

On the other hand, it is also commonly recognized that the quality of the SBTP varies from one cluster to another heavily depending on the facilitators and participants.

**3.1.4. Overall Goal**

The overall goal is that performance level of pupils and students in science and mathematics at basic education is continuously improved.

Indications and comments on the changes in the performance vary a lot. It is however widely thought that some improvement of children’s abilities is attributed to the SBTP, while in general it takes longer time for the effects of the SBTP to fully reach the children. The following are among encouraging evidences.

The pupils having been taught by the SBTP participant teachers show more positive and active attitude than before toward science and mathematics classes. They also show exploring attitude thinking for themselves fostered by participatory activities and experiments. Therefore it is expected that the overall goal of the Project will be achieved as the pupils’ academic ability and performance level will be improved.

For example in the divisions covered by the SBTP in Region VI, many reports reveal that pupils’ performance in diagnosis tests at the beginning and achievement tests at the end of school semesters is considerably improving compared to their performance when the SBTP was launched. In some divisions, significant difference in pupils’ performance is observed between divisions that have already introduced the SBTP and those that have not. Moreover, the gap is widening over the years. The RPMT is therefore pushing the expansion of the SBTP to all the divisions of the Region. The team also plans to investigate to measure the extent of the improvement and to identify the contribution by the SBTP. In particular, the Division of Iloilo and the Division of Negros Occidental are also formulating detailed ideas of the survey activities.

According to past data of Davao City in Region XI, average achievement scores in 2003-2004 school year are considerably higher than those in 1999-2000 school year in science and mathematics an of both elementary and secondary schools as shown below.

**Changes in Average Achievement Scores in Davao City in Region XI**

		Without SBTP	With SBTP			
		1999 - 2000	2000 - 2001	2001 - 2002	2002 - 2003	2003 - 2004
Elementary schools	Science	74.25	77.81	78.23	79.26	81.05
	Mathematics	73.65	77.52	78.64	79.18	80.28
Secondary schools	Science	53.67	65.27	69.38	71.58	73.89
	Mathematics	52.46	64.05	68.38	70.84	73.29

(Source: Division Achievement Test, Davao City)

**3.2. Results of Evaluation**

**3.2.1. Relevance**

Effects of the former Package Cooperation did not fully reach the school level. Its Follow-up Program, during which the SBTP actually started, emphasized two aspects. The one was the generation of effects at the school level and the other was the sustainability of the activities. Based on the program, the Project therefore has built in special features, namely, (1) equal opportunity of all teachers for participation, (2) conducting demonstration lessons at schools as the base of training, (3) training sessions conducted by small groups of teachers, (4) regular monthly training sessions, and (5) relatively small requirement for special fund.

The Medium-Term Philippine Development Plan (2004-2010) states development of education and youth opportunity, in which reinforcement of mathematics, science, English and values education is



emphasized among others. For the reinforcement, the implementation plan includes (1) institutionalized capacity development of teachers based on their needs, (2) continuation of students' achievement tests and (3) utilization of effective teaching methods including those supported by international cooperation programs. For development of education and youth opportunity, the development plan also states strengthening of operation and management capabilities of schools and their monitoring.

The Philippine Education for All - 2015 Plan (draft) expects to get all teachers to continuously improve their teaching practices, emphasizing also the need for school self-management that can motivate and enable teachers to continuously improve their teaching practices throughout their career.

According to the speech of the Secretary of Education during the National Education Congress in October 2004, the Philippine ranked 36-th out of 38 countries in the Third International Mathematics and Science Study (TIMSS). In the speech, the Secretary recognized the fact as an evidence of the crisis in the national education and called for joint efforts to improve schools. The new secretary puts forward "Schools First Initiative", which involves more stakeholders of education such as parents. This means change from heavy dependence on higher offices to school empowerment to address their issues. Roles of the central office should be limited to policy, rules and regulations, liaison and coordination, etc. Resources should be generated by schools. Local Government Units (LGUs), Parents, Teachers and Community Associations (PTCAs), and NGOs can also be mobilized. The Secretary's initiative is similar to the SBTP and it needs to be elaborated to identify project components.

As shown above, the SBTP's overall goal of improvement of the performance level in science and mathematics coincides with the national policies.

Among the issues to be addressed for upgrading children's performance, upgrading teachers' skills and knowledge is a key, together with provision of classrooms and equipment and improvement of textbooks.

On the other hand, in general, children and their parents place priority on science and mathematics. Willingness toward higher education is strong in the Philippines and the two subjects are among the core fields for entering universities and colleges.

There are a number of signs that the SBTP is contributing to the improvement of the children's performance level. In order to raise the relevance of the SBTP to the actual classes, efforts are being made. An example is a trial to hold demonstration lessons with as many students as in actual classes. As another example, lack of apparatus is being coped with by improvisation. In such cases, teachers produce improvised teaching materials as part of the SBTP activities. The teacher networks formed by the SBTP enable them to borrow some materials from other schools as well.

Thus, the SBTP keeps relevance to the classes and to the improvement of the children.

### **3.2.2. Effectiveness**

According to the preliminary results of the end-line survey, notable positive signs are observed that indicate on-going process of improvement, although the results have not fully achieved a set of target indicators. Use of teaching aids increased beyond the target, indicating that the practical work approach is reflected in classes. Improvement is also found in teachers' questions in classes as the share of non-declarative questions increased.

Changes in children reported by the questionnaire survey vary. Region V showed general improvement. In Regions VI and VII, the results are not totally positive but most results were better than those of non-SBTP schools, indicating that full changes in children generated by their teachers' improvement may require more time.

It is noted that the survey results were affected by a number of factors such as external conditions of



the SBTP like instructions from DepEd and also technical conditions of the survey like the survey time of the school year. Some of the indicators set in the PDM may have to be reviewed considering local situation in order to identify more appropriate ones.

According to the questionnaire survey to a total of 81 teachers who participated in the SBTP session for the secondary education on November 26 2004, almost all the teachers are gaining useful knowledge and skills through the SBTP and also their perception of science or mathematics and attitude to teaching these subjects are changing by the program. Teachers' improvement in subject knowledge, teaching skills and attitudes are also reported by a number of supervisors and teachers.

So far no critical constraints on the SBTP's activities are found: however, the following points should be considered to maintain the quality and further promote the effects.

- Vacant positions of retiring staff of education offices are not always filled due to budgetary constraints.
- Capacity of monitors/supervisors and principals is yet to be strengthened.
- Facilities, equipment and teaching/learning materials need to be improved.
- Clusters remote from the education offices incur financial and time costs.
- Preparation for the demonstration lessons needs considerable time.

The following promoting factors can be pointed out.

- Useful lessons from the former Package Cooperation were shared by both Japanese and Philippine participants and the activities of the follow-up period were taken over by the SBTP.
- School based participatory approach can reduce cost requirement.
- Philippine teams have shown initiatives and the Japanese members have played supportive roles.
- Many teachers have motivation/willingness to improve their capacity.
- Support is given from teacher education institutions, such as RSTC of West Visayas State University in Region VI.
- Japanese experts have experiences in education in Japan and abroad.

### 3.2.3. Efficiency

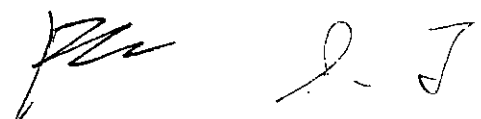
The experts have been properly assigned, although it might be better if the project coordinator could have been dispatched from the beginning. It would be more practical if lectures of short-term experts had incorporated more local factors.

According to the former trainees, the training in Japan is very useful in terms of subject contents, pedagogy, the education management system and culture of teachers. After the training, they present the results in various occasions including the SBTP activities. In addition, introduction of a scheme of teacher education throughout the career is discussed at the CPMT level. In Region VII, inspired by the training, the director has been promoting the involvement of parents for their children's education and the formation of teachers groups.

The provided equipment for improvement of the lessons are fully utilized supported by instructions from the experts and JOCV members.

The operation budget is efficiently used for travels of the experts and their articles of consumption. It is noted that operation of the SBTP sessions is financed by the Philippine side.

On the occasion of the Project Consultation Team in December 2003, the Philippine counterpart staff was reinforced by adding members from Bureau of Elementary Education and Bureau of Secondary Education to fill the original Record of Discussions. Although the counterpart staff members at any



level are not exclusively assigned to the SBTP and occupied with various tasks, the program has been operated without major constraints owing to its commonly recognized status in the regions and the efforts of the key participants. The four outputs have been successfully achieved as shown in the previous sections.

The RSTC of West Visayas State University in Region VI is cooperating with the SBTP through monitoring and advice as well as dispatching their students to the demonstration lessons. The cooperation connects the in-service training and the pre-service training of teachers. Such cooperation can be maintained and reinforced by exchanging an official memorandum of agreement.

The Board of Education and the Education Center of Saitama Prefecture in Japan have been fully supporting the program by dispatching some of the short-term experts and receiving the Philippine trainees.

The Project is financially efficient, owing to the school based approach. Travel costs of the participants are within their affordability. As a principle, the SBTP utilizes existing resources and no special facilities are required for the operation.

### **3.2.4. Impact**

#### **(1) Changes in Perception, Attitudes and Ability of Children**

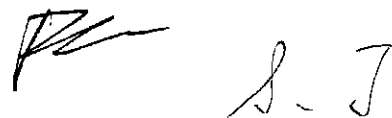
The perception of science and mathematics and the attitude to teaching/learning of teachers and children are changing with the SBTP as indicated by a number of teachers and supervisors. A number of children who used to be frightened by mathematics and science started to be interested in these subjects and sometimes feel the fun of learning them. Signs for improvement of the children's performance level in science and mathematics are observed (Refer to the overall goal). It is expected that sustaining the quality SBTP will lead to the children's improvement. For example, regional and division supervisors in Region V report that marked improvement in both ability and attitudes of children is observed in this year, to which the SBTP is thought to have contributed. According to the questionnaire survey to a total of 81 teachers who participated in the SBTP session for the secondary education on November 26 2004, almost all the teachers think that the SBTP is strengthening their students' academic ability. Almost all of them also think that the SBTP is changing their students' perception of science and mathematics or their attitudes to learning these subjects.

#### **(2) Formation of Educators' Networks**

Science and mathematics education networks have been formed involving teachers, principals and supervisors on an equal footing, where they can freely exchange their information and advice and sometimes borrow/lend teaching/learning materials. Cooperation between elementary and secondary sections has been strengthened at different levels promoted by the SBTP activities. The networks are also developing the members' social relations and promoting them to share ideas and become confident. Thus the SBTP is a venue to foster leaders in teaching. Moreover in Region VII, secondary school teachers started visiting elementary schools to help the teachers. In Region VI, the SBTP and a teacher training institute started cooperation so that the in-service training and the pre-service training have become more interactive.

#### **(3) Introduction of SBTP Approach for Other Subjects**

Some moves are observed that the approach of the SBTP is being introduced to other subjects. For example, a number of divisions in the three regions have introduced school based training to English and social studies, etc.

Handwritten signature and initials, possibly 'S. J.', located at the bottom right of the page.

#### **(4) Expansion of SBTP**

The CPMT plans to institutionalize the SBTP in all the regions and so it invites all the regions to the consultative conferences of the SBTP. Regions I, III, IV-A and the National Capital Region are starting the SBTP. On the other hand, the Singapore Volunteers Overseas Programme of the Singapore International Foundation plans to start their “mentoring program” for science and mathematics education in Gapan City, Region III. The program includes a school based teacher training component.

#### **3.2.5. Sustainability**

##### **(1) Institutional Aspect**

The DepEd intends to continue to provide teachers with useful knowledge and skills. The current organization of the CPMT comprises members from NEAP, SDD-HRDS, BEE and BSE. Considering the need for cooperation of the bureaus and the experiences of training of principals accumulated in NEAP and HRDS, the current organization has advantages. On the other hand, discussions for organizational rationalization of the DepEd are on-going and the new organizational set-up is planned to be announced within a couple of months. Although the organization in charge of the SBTP after the rationalization is yet to be identified, there is a possibility for the four groups to merge, which is also a practical alternative for the sustainability of the SBTP. In any case, the activities of the SBTP are thought to be sustained as continuation of the on-going thrust for development.

The “Schools are first” initiative of the new Secretary of DepEd emphasizes decentralized responsibilities for implementation of education and it shares the basic idea with the SBTP. Therefore, as the initiative is translated into project components, the SBTP’s approach is expected to be further featured.

Proper policy orientation, overall coordination and supervision are required at the central level within the framework of the initiative, while implementation capability needs to be strengthened at local and school levels.

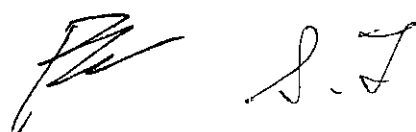
Overall improvement of the basic education needs to be implemented together with the SBTP and also coordination needs to be strengthened between DepEd, Commission on Higher Education and Technical Education and Skills Development Authority for the consistent career development of children and the youth.

##### **(2) Financial Aspect**

The national budget for the SBTP is increasing but still limited. Currently Philippine government is in time of financial difficulty. At this point, it is difficult to foresee increased financial support from the central government. It is therefore expected to seek for ways to sustain the SBTP with minimal financial support from the CPMT. This direction is in line with the basic concept which the SBTP has borne so far. In addition to the teachers, the schools, PTCAs/communities and LGUs are expected to contribute to the program.

##### **(3) Technical Aspect**

The current participants of the SBTP became capable enough to maintain the activities. In order to sustain the quality of the program in terms of the subject contents, teaching skills and their application to classes, supervision and monitoring are the keys. The current issues include (1) Support and monitoring of the SBTP of the expanding clusters and (2) Support for the contents of the SBTP to strengthen the teachers’ skills and understanding. The technical capability to supervise teachers in subject contents varies among the supervisors of the RPMT and DPMT so that their instructions may cause some confusion. It is therefore necessary to hold training for the supervisors in order for them to

Handwritten signatures in black ink, appearing to be initials or names, located at the bottom right of the page.

share common understanding to support the SBTP. Strengthening the supervisors for proper monitoring and principals for proper school management are needed. In addition, subject experts are required to advise the teachers, who may be lead teachers, supervisors, principals or teacher education institution staff.

Considering the importance for the SBTP activities to maintain high quality, the CPMT intends to continue playing important roles in consultation and supervision for the SBTP at the national level. The expansion of the SBTP is to keep pace with the local willingness and intension to conduct their effective SBTP.

In order to reduce travel time and cost for school based teacher training within each cluster, some divisions are starting school based training within each school. In this case, external supervision and monitoring are particularly important to provide the school teachers with proper knowledge and skills.

#### **4. Conclusion and Recommendations**

##### **4.1. Conclusion**

The Project successfully promoted the activities of school based in-service teacher training and contributed to improvement in teachers' subject knowledge, teaching skills and attitudes towards science and mathematics education by fully utilizing existing resources. The activities are geographically expanding and also covering other subjects in a number of areas. Positive signs of changes in children's performance are observed, while teachers' networks have been formed. The Project shall be terminated in April 2005 and participation of JOCV in the SBTP shall be continued until 2007. In order to sustain and develop the quality of the SBTP, further efforts of all the participants are required.

##### **4.2. Recommendations**

###### **4.2.1 Short-term recommendations**

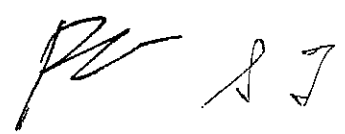
The Team recommends DepEd to take the following arrangements and actions prior to the closing of the Project:

- (1) To issue and order creating a structure that will ensure continuity of implementation of the SBTP
- (2) To launch trainings for supervisors in charge of SBTP implementation
- (3) To prepare Action Plan on the SBTP (including JOCV activities) for 2005-2007
- (4) To organize the year-end assessment meeting (SY 2004-2005) inviting all regions
- (5) DepEd Region VI and West Visayas State University agree and sign the Memorandum on mutual cooperation

###### **4.2.2 Long-term recommendations**

###### **(1) Training of supervisors and principals on instructional guidance to the teachers**

Excellent facilitators/mentors are essential in order for the SBTP to avoid mere teachers' self-satisfaction and develop further. As the SBTP scales up and the capacity of the teachers improves, the need for resource persons has become greater both in quantity and quality, and thus the need for upgrading the capacity of resource persons. Given that education depends on schools, schools depend on teachers, and teachers depend on trainings, it is critical the responsibility of these resource persons in implementing the SBTP. It is recommended that these resource persons should have proper philosophy of education and learning, as well as capacity to observe the learners from broad, long-term, and basic perspectives.

Handwritten signatures in black ink, appearing to be initials or names, located at the bottom right of the page.

## **(2) Strengthening collaboration with Teacher Education Institutes (TEIs)**

Another important method to enhance the quality of the SBTP is to have support and technical advice from TEIs. During the field visits, the Team has observed that in some regions the collaborations has already started with these TEIs. It is recommended to consolidate these partnerships by Memorandum of Agreement between each region and key TEIs in respective region.

## **(3) Promoting school-based management**

School-based management includes a wide range of topics, such as preparing vision and mission of school, planning school activities, staff development, and improving teaching and learning environment. In this regard, the school principals' roles are very crucial, which include assistance and monitoring of the SBTP participant teachers. As is often said, change of school principal is the best way for change of the school. Their leadership matters even more as the DepEd launched the "School First" Initiative.

## **(4) Enhancing the relationships among schools, parents and community**

In order for schools to be truly for pupils/students, it is necessary to have understanding and cooperation of parents and community. Therefore, schools are expected to open up its facilities to parents and community, and let them observe daily interaction between teachers and pupils/students by setting up open class day. Given that educating children is also the learning process for their teachers and parents, the SBTP is a continuous program that lays the groundwork for such learning process. It is recommended that the school and community and parents will jointly examine the issues and concerns that the school is facing, and try to solve the problems in a joint effort.

### **4.3. Summary of Lessons Learned from the Project**

#### **(1) Effective use of existing resources**

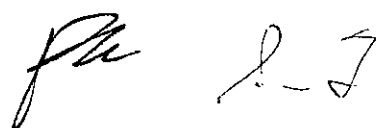
In the Philippines most in-service teacher training programs has been conducted on temporary or annual basis but not on continuous basis throughout the school year, mainly due to financial reasons and also the traditional belief that "training is costly". The Project challenged this belief, and featured school-based in-service teacher training. Training among the clustered schools has provided not only selected but all teachers opportunity for professional development. It is remarkable that the cost for SBTP monthly sessions is borne by the Philippine side. This initiative was supported by the memorandum from DepEd, which enabled teachers in the target regions to participate in the SBTP sessions during weekdays.

#### **(2) Practical and flexible training contents**

Most of the in-service teacher training projects implemented so far used to provide contents and materials that were designed at central level. Therefore, it was difficult for classroom teachers to adopt these training materials to their local context. In the Project, needs assessment was conducted by each division and teachers in the cluster selected topics for the training. This approach was effective to better meet teachers' needs and improve teachers' commitment.

#### **(3) Involving stakeholders in teacher training**

The Project promoted developing links and collaborations with various stakeholders (teacher, community, university, etc.). Before launching the SBTP, new divisions and clusters invited local governments as well as parents to advocacy programs and obtained their understanding and support. Some local governments provided schools equipments and materials to support educational

Handwritten signatures in black ink, appearing to be initials or names, located at the bottom right of the page.


improvements. Collaboration with Teacher Education Institutes (TEIs) faculty members as well as student teachers benefited both schools and universities and contributed to the improvement of teaching and learning at classroom level.

**(4) Inputs for different level of project implementation (collaboration of Experts and JOCVs)**

Throughout the Project period, both experts and JOCVs were dispatched and supported the Philippine side from respective aspects: experts and senior volunteers supported mainly management aspect of SBTP at central and regional level while JOCVs provided advices on technical aspects (teaching strategy and subject contents) at divisional and school level. These inputs for different level were well-balanced and effective for successful project implementation.

**(5) Multidimensional approach for evaluating teachers' capability**

Evaluation methods need to be reliable and accessible. In the case of this Project, in order to assess the changes in teachers' capability, evaluation study (baseline and endline) was contracted to external research institute, which enabled the Project implementers to assess the Project from professional and academic perspective. However, it might be of use if this Project has conducted their own evaluation so that the Project can compare the results from different source and approach and assess the changes more precisely.

Handwritten signature and initials in black ink, located at the bottom right of the page.

ANNEX 1. Summary Tables of End-line Survey Results (Preliminary)

a) Lesson Plan Objectives according to Bloom's Taxonomy

Total

Region V Region VI Region VII	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	377	37.9%	Knowledge	563	53.4%
		Non-Knowledge	619	62.1%	Non-Knowledge	491	46.6%
		Total	996	100.0%	Total	1054	100.0%

Region VI Region VII	Non-SBTP	Baseline	N	%	Endline	N	%
		Knowledge	386	52.0%	Knowledge	346	61.6%
		Non-Knowledge	356	48.0%	Non-Knowledge	216	38.4%
		Total	742	100.0%	Total	562	100.0%

Per Region

Region V	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	142	30.7%	Knowledge	286	52.2%
		Non-Knowledge	320	69.3%	Non-Knowledge	262	47.8%
		Total	462	100.0%	Total	548	100.0%

Region VI	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	123	42.7%	Knowledge	122	48.8%
		Non-Knowledge	165	57.3%	Non-Knowledge	128	51.2%
	Total	288	100.0%	Total	250	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Knowledge	153	46.4%	Knowledge	156	57.6%
Non-Knowledge		177	53.6%	Non-Knowledge	115	42.4%	
Total	330	100.0%	Total	271	100.0%		

Region VII	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	112	45.5%	Knowledge	155	60.5%
		Non-Knowledge	134	54.5%	Non-Knowledge	101	39.5%
	Total	246	100.0%	Total	256	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Knowledge	233	56.6%	Knowledge	190	65.3%
Non-Knowledge		179	43.4%	Non-Knowledge	101	34.7%	
Total	412	100.0%	Total	291	100.0%		

Region XI	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	-	-	Knowledge	341	56.8%
		Non-Knowledge	-	-	Non-Knowledge	259	43.2%
		Total	-	-	Total	600	100.0%



b) Lesson Plan Objectives according to Type of Knowledge

Total

Region V Region VI Region VII	SBTP	Baseline	N	%	Endline	N	%
		Declarative	533	53.6%	Declarative	481	45.5%
Non-Declarative	462	46.4%	Non-Declarative	576	54.5%		
Total	995	100.0%	Total	1057	100.0%		

Region VI Region VII	Non-SBTP	Baseline	N	%	Endline	N	%
		Declarative	491	66.2%	Declarative	300	53.4%
Non-Declarative	251	33.8%	Non-Declarative	262	46.6%		
Total	742	100.0%	Total	562	100.0%		

Per Region

Region V	SBTP	Baseline	N	%	Endline	N	%
		Declarative	167	36.2%	Declarative	240	43.8%
Non-Declarative	294	63.8%	Non-Declarative	308	56.2%		
Total	461	100.0%	Total	548	100.0%		

Region VI	SBTP	Baseline	N	%	Endline	N	%
		Declarative	188	65.3%	Declarative	115	46.0%
		Non-Declarative	100	34.7%	Non-Declarative	135	54.0%
	Total	288	100.0%	Total	250	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Declarative	232	70.3%	Declarative	137	50.6%
Non-Declarative		98	29.7%	Non-Declarative	134	49.4%	
Total	330	100.0%	Total	271	100.0%		

Region VII	SBTP	Baseline	N	%	Endline	N	%
		Declarative	178	72.4%	Declarative	126	48.6%
		Non-Declarative	68	27.6%	Non-Declarative	133	51.4%
	Total	246	100.0%	Total	259	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Declarative	259	62.9%	Declarative	163	56.0%
Non-Declarative		153	37.1%	Non-Declarative	128	44.0%	
Total	412	100.0%	Total	291	100.0%		

Region XI	SBTP	Baseline	N	%	Endline	N	%
		Declarative	-	-	Declarative	308	51.3%
Non-Declarative	-	-	Non-Declarative	292	48.7%		
Total	-	-	Total	600	100.0%		

c) Teachers' Questions according to Bloom's Taxonomy

Total

Region V Region VI Region VII	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	19172	81.2%	Knowledge	17457	81.0%
Non-Knowledge	4452	18.8%	Non-Knowledge	4103	19.0%		
Total	23624	100.0%	Total	21560	100.0%		

Region VI Region VII	Non-SBTP	Baseline	N	%	Endline	N	%
		Knowledge	8918	74.5%	Knowledge	7764	84.6%
Non-Knowledge	3049	25.5%	Non-Knowledge	1414	15.4%		
Total	11967	100.0%	Total	9178	100.0%		

Per Region

Region V	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	11604	87.8%	Knowledge	11275	79.5%
Non-Knowledge	1610	12.2%	Non-Knowledge	2900	20.5%		
Total	13214	100.0%	Total	14175	100.0%		

Region VI	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	3692	59.8%	Knowledge	2539	75.4%
		Non-Knowledge	2480	40.2%	Non-Knowledge	829	24.6%
	Total	6172	100.0%	Total	3368	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Knowledge	3485	57.5%	Knowledge	3969	80.7%
Non-Knowledge		2581	42.5%	Non-Knowledge	947	19.3%	
Total	6066	100.0%	Total	4916	100.0%		

Region VII	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	3876	91.5%	Knowledge	3643	90.7%
		Non-Knowledge	362	8.5%	Non-Knowledge	374	9.3%
	Total	4238	100.0%	Total	4017	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Knowledge	5433	92.1%	Knowledge	3795	89.0%
Non-Knowledge		468	7.9%	Non-Knowledge	467	11.0%	
Total	5901	100.0%	Total	4262	100.0%		

Region XI	SBTP	Baseline	N	%	Endline	N	%
		Knowledge	-	-	Knowledge	10581	85.1%
		Non-Knowledge	-	-	Non-Knowledge	1846	14.9%
Total	-	-	Total	12427	100.0%		

d) Teachers' Questions according to Type of Knowledge

Total

Region V Region VI Region VII	SBTP	Baseline	N	%	Endline	N	%
		Declarative	18942	79.9%	Declarative	16605	77.0%
Non-Declarative	4767	20.1%	Non-Declarative	4955	23.0%		
Total	23709	100.0%	Total	21560	100.0%		

Region VI Region VII	Non-SBTP	Baseline	N	%	Endline	N	%
		Declarative	8820	73.8%	Declarative	7336	79.9%
Non-Declarative	3125	26.2%	Non-Declarative	1842	20.1%		
Total	11945	100.0%	Total	9178	100.0%		

Per Region

Region V	SBTP	Baseline	N	%	Endline	N	%
		Declarative	11007	83.4%	Declarative	10642	75.1%
Non-Declarative	2196	16.6%	Non-Declarative	3533	24.9%		
Total	13203	100.0%	Total	14175	100.0%		

Region VI	SBTP	Baseline	N	%	Endline	N	%
		Declarative	4215	67.3%	Declarative	2658	78.9%
		Non-Declarative	2051	32.7%	Non-Declarative	710	21.1%
	Total	6266	100.0%	Total	3368	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Declarative	3577	59.7%	Declarative	3764	76.6%
Non-Declarative		2417	40.3%	Non-Declarative	1152	23.4%	
Total	5994	100.0%	Total	4916	100.0%		

Region VII	SBTP	Baseline	N	%	Endline	N	%
		Declarative	3720	87.7%	Declarative	3305	82.3%
		Non-Declarative	520	12.3%	Non-Declarative	712	17.7%
	Total	4240	100.0%	Total	4017	100.0%	
	Non-SBTP	Baseline	N	%	Endline	N	%
		Declarative	5243	88.1%	Declarative	3572	83.8%
Non-Declarative		708	11.9%	Non-Declarative	690	16.2%	
Total	5951	100.0%	Total	4262	100.0%		

Region XI	SBTP	Baseline	N	%	Endline	N	%
		Declarative	-	-	Declarative	10527	84.7%
		Non-Declarative	-	-	Non-Declarative	1900	15.3%
Total	-	-	Total	12427	100.0%		

e) Teaching Aids

Total

Region V Region VI Region VII	SBTP	Baseline	N	%	Endline	N	%
		Use	993	82.5%	Use	1616	94.9%
		None Use	211	17.5%	None Use	87	5.1%
		Total	1204	100.0%	Total	1703	100.0%

Region VI Region VII	Non-SBTP	Baseline	N	%	Endline	N	%
		Use	935	94.0%	Use	710	94.9%
		None Use	60	6.0%	None Use	38	5.1%
		Total	995	100.0%	Total	748	100.0%

Per Region

Region V	SBTP	Baseline	N	%	Endline	N	%
		Use	405	75.8%	Use	899	96.6%
		None Use	129	24.2%	None Use	32	3.4%
		Total	534	100.0%	Total	931	100.0%

Region VI	SBTP	Baseline	N	%	Endline	N	%
		Use	389	91.3%	Use	392	96.6%
		None Use	37	8.7%	None Use	14	3.4%
		Total	426	100.0%	Total	406	100.0%
	Non-SBTP	Baseline	N	%	Endline	N	%
		Use	429	92.7%	Use	367	97.6%
None Use		34	7.3%	None Use	9	2.4%	
	Total	463	100.0%	Total	376	100.0%	

Region VII	SBTP	Baseline	N	%	Endline	N	%
		Use	199	81.6%	Use	325	88.8%
		None Use	45	18.4%	None Use	41	11.2%
		Total	244	100.0%	Total	366	100.0%
	Non-SBTP	Baseline	N	%	Endline	N	%
		Use	506	95.1%	Use	343	92.2%
None Use		26	4.9%	None Use	29	7.8%	
	Total	532	100.0%	Total	372	100.0%	

Region XI	SBTP	Baseline	N	%	Endline	N	%
		Use	-	-	Use	776	95.7%
		None Use	-	-	None Use	35	4.3%
		Total	-	-	Total	811	100.0%

f) Students' Questionnaire

Region V

		Science		Mathematics	
		Baseline	Endline	Baseline	Endline
SBTP	Positive Factors				
	f-1) Teaching for understanding	3.373	3.430	3.376	3.480
	f-2) Possitive affect in cllsroom	3.025	3.180	3.035	3.247
	f-3) Application and relevance	-	-	2.727	2.799
	f-4) Appropriate Assessment	3.112	3.165	3.110	3.210
	f-5) Independent learning	2.778	2.863	2.792	2.914
	f-6) Inquiry learning	-	-	2.521	2.547

Region VI

		Science		Mathematics	
		Baseline	Endline	Baseline	Endline
SBTP	Positive Factors				
	f-1) Teaching for understanding	3.478	3.451	3.337	3.360
	f-2) Possitive affect in cllsroom	3.138	3.188	3.028	3.086
	f-3) Application and relevance	-	-	2.666	2.681
	f-4) Appropriate Assessment	3.160	3.196	3.045	3.090
	f-5) Independent learning	2.664	2.836	2.788	2.820
	f-6) Inquiry learning	-	-	2.545	2.621
Non-SBTP	Positive Factors				
	f-1) Teaching for understanding	3.469	3.407	3.433	3.502
	f-2) Possitive affect in cllsroom	3.140	3.136	3.083	3.196
	f-3) Application and relevance	-	-	2.713	2.744
	f-4) Appropriate Assessment	3.203	3.169	3.159	3.205
	f-5) Independent learning	2.696	2.767	2.781	2.853
	f-6) Inquiry learning	-	-	2.569	2.638

Region VII

		Science		Mathematics	
		Baseline	Endline	Baseline	Endline
SBTP	Positive Factors				
	f-1) Teaching for understanding	3.144	3.103	3.186	3.182
	f-2) Possitive affect in cllsroom	2.779	2.818	2.828	2.845
	f-3) Application and relevance	-	-	2.552	2.470
	f-4) Appropriate Assessment	2.878	2.866	2.895	2.812
	f-5) Independent learning	2.669	2.696	2.653	2.681
	f-6) Inquiry learning	-	-	2.469	2.469
Non-SBTP	Positive Factors				
	f-1) Teaching for understanding	3.400	3.333	3.381	3.295
	f-2) Possitive affect in cllsroom	2.983	2.963	2.990	2.949
	f-3) Application and relevance	-	-	2.625	2.602
	f-4) Appropriate Assessment	3.094	2.971	3.032	2.931
	f-5) Independent learning	2.739	2.663	2.638	2.751
	f-6) Inquiry learning	-	-	2.435	2.517

Region XI

		Science		Mathematics	
		Baseline	Endline	Baseline	Endline
SBTP	Positive Factors				
	f-1) Teaching for understanding	-	3.300	-	3.257
	f-2) Possitive affect in cllsroom	-	3.023	-	3.001
	f-3) Application and relevance	-	-	-	2.633
	f-4) Appropriate Assessment	-	3.014	-	2.979
	f-5) Independent learning	-	2.888	-	2.798
	f-6) Inquiry learning	-	-	-	2.568

g) Students' Questionnaire

Region V

		Science		Mathematics	
SBTP	Negative Factors	Baseline	Endline	Baseline	Endline
	g-1) Negative affect in classroom	-	-	1.817	1.754
	g-2) Passive learning	-	-	2.562	2.483
	g-3) Low self-efficacy	1.705	1.635	1.905	1.839

Region VI

		Science		Mathematics	
SBTP	Negative Factors	Baseline	Endline	Baseline	Endline
	g-1) Negative affect in classroom	-	-	1.828	1.847
	g-2) Passive learning	-	-	2.503	2.584
	g-3) Low self-efficacy	1.544	1.628	1.928	1.990
Non-SBTP	Negative Factors	Baseline	Endline	Baseline	Endline
	g-1) Negative affect in classroom	-	-	1.657	1.644
	g-2) Passive learning	-	-	2.327	2.467
	g-3) Low self-efficacy	1.493	1.684	1.852	1.799

Region VII

		Science		Mathematics	
SBTP	Negative Factors	Baseline	Endline	Baseline	Endline
	g-1) Negative affect in classroom	-	-	1.883	1.868
	g-2) Passive learning	-	-	2.512	2.526
	g-3) Low self-efficacy	1.835	1.865	2.013	1.948
Non-SBTP	Negative Factors	Baseline	Endline	Baseline	Endline
	g-1) Negative affect in classroom	-	-	1.655	1.818
	g-2) Passive learning	-	-	2.414	2.522
	g-3) Low self-efficacy	1.629	1.676	1.894	1.942

Region XI

		Science		Mathematics	
SBTP	Negative Factors	Baseline	Endline	Baseline	Endline
	g-1) Negative affect in classroom	-	-	-	1.881
	g-2) Passive learning	-	-	-	2.628
	g-3) Low self-efficacy	-	1.729	-	1.962

**Project Design Matrix on Strengthening of Continuing School Based Training Program (SBTP)  
for Elementary and Secondary Science and Mathematics Teachers**

Period of Cooperation: 2002.4.10-2005.4.9

Project Site: Region V, VI, VII, XI

Target Group: Science and Mathematics Teachers in Project Sites

Prepared by: Project Steering Committee  
Version: No. 2

Date Prepared: December 3, 2003

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>Overall Goal</b></p> <p>Performance level of pupils and students in science and mathematics at basic education is continuously improved.</p>	<p>a) The results of Standardized Achievement Test at National, Regional and Division levels in the project schools are improved compared to those in the beginning of Project or compared to that in non-project schools by 2010.</p>	<p>a) Standardized Achievement Test at National, Regional and Division level</p>	<ul style="list-style-type: none"> <li>• DepEd policies concerning emphasis on science and mathematics education and on teachers' training are maintained.</li> <li>• Curriculum is not drastically changed.</li> <li>• Educational budget on maintenance and other operation expenses, (i.e., training budget) is increased.</li> <li>• Teachers utilize learning skills acquired in SBTP in their classroom.</li> </ul>
<p><b>Project Purpose</b></p> <p>To upgrade teaching skills and deepen understanding of subject matter content for facilitating learner-centered classroom instruction in science and mathematics education.</p>	<p>a) From SY2002-2003 to SY2004-2005, the lesson plan objectives classified as other than knowledge level of cognitive domain will increase from 62.2% to 70% in SBTP schools.</p> <p>b) From SY2002-2003 to SY2004-2005, the lesson plan objectives classified as other than declarative level of knowledge domain will increase from 49.8% to 55% in SBTP schools.</p> <p>c) From SY2002-2003 to SY2004-2005, the teachers' questions classified as other than knowledge level of cognitive domain will increase from 18.8% to 25% in SBTP schools.</p> <p>d) From SY2002-2003 to SY2004-2005, the teachers' questions classified as other than declarative level of knowledge domain will increase from 20.1% to 25% in SBTP schools.</p> <p>e) From SY2002-2003 to SY2004-2005, the number of teachers using teaching aids will increase from 82.5% to 90% in SBTP schools.</p>	<p>a) Lesson plans of teachers</p> <p>b) Lesson plans of teachers</p> <p>c) Classroom observations</p> <p>d) Classroom observations</p> <p>e) Lesson plans of teachers / Classroom observations</p>	<ul style="list-style-type: none"> <li>• DepEd offices continuously conduct SBTP.</li> <li>• The policy on conducting of SBTP on weekdays is maintained.</li> <li>• Teachers trained in SBTP are continuously involved in Project.</li> </ul>

<p>(1) The operation and management method of SBTP is strengthened.</p>	<p>Output</p> <p>(3) SBTP is implemented in non-pilot clusters in pilot regions (Region V, VI, XI).</p> <p>(4) SBTP is implemented in a non-pilot region. ( Region VII )</p>	<p>f) From SY2002-2003 to SY2004-2005, the mean scores for the following factors in students' questionnaire will increase in SBTP schools. f-1) Teaching for understanding, f-2) Positive affect in classroom, f-3) Application and relevance, f-4) Appropriate assessment, f-5) Independent learning, f-6) Inquiry learning</p> <p>g) From SY2002-2003 to SY2004-2005, the mean scores for the following factors in students' questionnaire will decrease in SBTP schools. g-1) Negative affect in classroom, g-2) Passive learning, g-3) Low self-efficacy</p>	<p>f) Questionnaire for students</p> <p>g) Questionnaire for students</p>	<p>• Teachers trained in SBTP are continuously involved in the Project.</p>
<p>(2) The content of SBTP is upgraded.</p>	<p>a) A workplan of DepEd Central Office is prepared annually.</p> <p>b) A SBTP implementation manual including operation formats is developed and revised.</p> <p>c) SBTP consultative conferences are conducted twice a year under the initiative of DepEd Central Office.</p> <p>d) Status data of SBTP are collected in every six (6) months by DepEd Central Office</p> <p>e) Management staff in DepEd Central, Regional or Division Offices attend 80% of SBTP for monitoring.</p> <p>a) Writing workshop and Training of Trainers are held annually.</p> <p>b) Monthly trainers meetings are held.</p> <p>c) Session Guides (SG) and Lesson Plans (LP) are developed and modified.</p> <p>d) Instructional materials are prepared by the teachers.</p> <p>e) Parallel lesson plans are prepared by the teachers.</p>	<p>a) CPMT workplans</p> <p>b) SBTP implementation manual / SBTP formats</p> <p>c) Status report</p> <p>d) Status report</p> <p>e) Status report/Monitoring and evaluation sheet/CPMT workplans</p>	<p>a) CPMT workplans</p> <p>b) SBTP implementation manual / SBTP formats</p> <p>c) Status report</p> <p>d) Status report</p> <p>e) Status report/Monitoring and evaluation sheet/CPMT workplans</p>	<p>a) Status report</p> <p>b) Status report</p> <p>c) SG/LP</p> <p>d) Instructional materials</p> <p>e) Parallel LPs / Questionnaires for Teachers</p> <p>a) Status report</p>
<p>(3) SBTP is implemented in non-pilot clusters in pilot regions (Region V, VI, XI).</p> <p>(4) SBTP is implemented in a non-pilot region. ( Region VII )</p>	<p>a) The percentages of science and mathematics teachers participating in SBTP are increased from 71.0% to 80% in Region V, from 27.8% to 30% in Region VI and from 71.1% to 80% in Region XI.</p> <p>a) SBTP is implemented in three (3) pilot clusters in Region VII.</p> <p>b) SBTP is expanded to additional three (3) clusters in Region VII.</p> <p>c) Workshops for evaluating method of expansion are held.</p>	<p>a) Status report</p> <p>b) Status report</p> <p>c) Status report</p>	<p>a) Status report</p> <p>b) Status report</p> <p>c) Status report</p>	



Activities	Input: JAPAN	Input: PHILIPPINES	Important Assumption
<p>[Implementation of pilot SBTP]</p> <p>(1-1) To prepare an implementation plan for pilot SBTP</p> <p>(1-2) To implement pilot SBTP</p> <p>(1-3) To monitor and evaluate pilot SBTP</p> <p>[Development of a SBTP implementation manual]</p> <p>(1-4) To assess the current situation and problems arisen in SBTP implementation</p> <p>(1-5) To solve problems arisen in SBTP implementation</p> <p>(1-6) To develop a SBTP implementation manual</p> <p>(1-7) To prepare monitoring and evaluation sheets</p> <p>[Upgrade of the capability in SBTP planning and management]</p> <p>(2-1) To hold regular meetings and workshops</p> <p>[Upgrade of the capability of trainers and writers]</p> <p>(2-2) To hold Writing Workshop</p> <p>(2-3) To hold Training of Trainers</p> <p>(2-4) To hold Monthly Trainers' Meeting</p> <p>[To develop and disseminate instructional materials]</p> <p>(2-5) To develop Session Guide/ Lesson Plan (SG/LP) models including user manuals</p> <p>(2-6) To develop and disseminate instructional materials</p> <p>[Implementation of SBTP for new cluster]</p> <p>(3-1) To assess the current situation and problems of implementing SBTP in non-pilot clusters</p> <p>(3-2) To prepare an action plan to implement SBTP.</p> <p>(3-3) To implement SBTP in the non-pilot clusters based on the action plan</p> <p>(3-4) To monitor and evaluate SBTP implementation</p> <p>(3-5) To evaluate the method of dissemination of SBTP</p> <p>[Implementation of SBTP in non-pilot Region]</p> <p>(4-1) To develop a manual for expansion of SBTP to non-pilot region.</p> <p>(4-2) To implement SBTP in a new region based on the manual</p> <p>(4-3) To monitor and evaluate SBTP implementation</p> <p>(4-4) To evaluate the method of expansion of SBTP</p>	<p><u>Long-term Experts:</u> 3 persons</p> <p>a) Teacher Training / Project Leader 36M/M</p> <p>b) Teacher Training Administration 36M/M</p> <p>c) Management of teacher training program / Project Coordinator 24M/M</p> <p><u>Short-term Experts:</u></p> <p>a) Science and Mathematics Instruction</p> <p>b) Monitoring &amp; Evaluation for Teacher Training</p> <p><u>JOCV Senior:</u> 1 person, Field Coordinator</p> <p><u>JOCV:</u> 8 persons x 2 batches, Science &amp; Math. Education</p> <p><u>C/P Training:</u> Counterpart Training Program in Japan: 1 person x 3 years</p> <p><u>Equipment &amp; Local Cost:</u></p> <p>a) Provision of basic Science and Math. Equipment: 25 million yen</p> <p>b) Provision of General Local Cost, Local Application Cost: 10 million yen</p>	<p><u>Counterparts:</u></p> <p>a) DepEd Central Office: 12 persons</p> <p>b) DepEd Regional Office: 7 persons x 4 regions</p> <p>c) DepEd Division Office: 3-5 persons x 40 divisions</p> <p><u>Resources:</u></p> <p>a) Trainers &amp; Writers trained by other projects</p> <p>b) SG/LP prepared by other projects</p> <p>c) Existing teaching materials</p> <p><u>Project Office &amp; Facilities:</u></p> <p>a) DepEd Central Office</p> <p>b) DepEd Regional Office</p> <p>c) DepEd Division Office</p> <p><u>Supplies &amp; Cost for the Project:</u></p> <p>a) Office supplies</p> <p>b) Secretarial services</p> <p>c) Expenses for Seminars and Training of Trainers</p> <p>d) Local Cost: 3.4 million pesos</p>	<p>• The counterparts in DepEd Central, Regional and Division Offices remain in those positions.</p> <p>• DepEd Fund for the project is secured properly.</p>
			<p><u>Pre-conditions</u></p> <p>• Teachers are willing to improve their capability in teaching.</p> <p>• DepEd is willing and committed to support the conduct and institutionalization of SBTP.</p>





ANNEX 4. Expansion of SBTP

Number of Clusters		2000		2002		2003		2003		2004		2004	
Region	Level	Whole Region	April	March	October	March	October	March	October	March	October	March	December
V	Elementary		51	73	130	130	130	130	182				
	Secondary		14	14	19	19	19	23					
	Total		65	87	149	149	149	205					
VI	Elementary		9	26	46	46	50	87					
	Secondary		7	9	12	13	21						
	Total		16	35	58	63	108						
VII	Elementary		0	0	1	1	1	11					
	Secondary		0	0	2	2	2	6					
	Total		0	0	3	3	3	17					
XI	Elementary		6	10	90	90	104						
	Secondary		6	28	30	30	31						
	Total		12	38	120	120	135						
Total	Elementary		66	109	271	271	384						
	Secondary		27	51	64	64	81						
	Total		93	160	335	335	465						

Number of Schools		2000		2002		2003		2003		2004		2004	
Region	Level	Whole Region	April	March	October	March	October	March	October	March	October	March	December
V	Elementary	3,057	62	963	1,364	2,452	2,452	2,452	2,857				
	Secondary	494	42	320	364	420	420	494					
	Total	3,551	104	1,283	1,928	2,872	2,872	3,151					
VI	Elementary	3,314	59	219	505	860	860	957	1,175				
	Secondary	525	24	132	210	232	302	272	442				
	Total	3,839	83	351	715	1,092	1,259	1,447					
VII	Elementary	2,834	0	0	0	4	4	62	0.1				
	Secondary	526	0	0	0	16	16	48	0.0				
	Total	3,360	0	0	0	20	20	110	0.0				
XI	Elementary	1,562	6	71	1,028	1,261	1,261	1,526	0.4				
	Secondary	246	19	87	198	213	213	246	7.7				
	Total	1,808	25	158	1,226	1,474	1,474	1,772	1.4				
Total	Elementary	10,767	127	1,253	3,097	4,577	4,577	5,420	1.2				
	Secondary	1,791	85	539	772	881	951	1,060	4.7				
	Total	12,558	212	1,792	3,869	5,458	5,625	6,480	1.7				

Number of Teachers		2000		2002		2003		2003		2004		2004	
Region	Level	Whole Region	April	March	October	March	October	March	October	March	October	March	December
V	Elementary	26,060	13,891	20,748	20,748	22,383	22,383	22,383	22,383	22,383	22,383	22,383	22,383
	Secondary	8,711	1,561	2,021	2,021	3,127	3,127	3,127	3,127	3,127	3,127	3,127	3,127
	Total	34,771	15,452	22,769	22,769	25,510	25,510	25,510	25,510	25,510	25,510	25,510	25,510
VI	Elementary	32,110	4,333	7,631	10,710	13,502	13,502	13,502	13,502	13,502	13,502	13,502	13,502
	Secondary	12,486	1,731	1,731	2,486	3,724	3,724	3,724	3,724	3,724	3,724	3,724	3,724
	Total	44,596	6,064	9,362	13,196	17,226	17,226	17,226	17,226	17,226	17,226	17,226	17,226
VII	Elementary	24,225	0	72	72	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390
	Secondary	7,145	0	111	111	508	508	508	508	508	508	508	508
	Total	31,370	0	183	183	1,898	1,898	1,898	1,898	1,898	1,898	1,898	1,898
XI	Elementary	16,040	10,722	13,897	14,552	14,552	14,552	14,552	14,552	14,552	14,552	14,552	14,552
	Secondary	5,883	1,441	1,712	2,267	2,267	2,267	2,267	2,267	2,267	2,267	2,267	2,267
	Total	21,923	12,163	15,609	16,819	16,819	16,819	16,819	16,819	16,819	16,819	16,819	16,819
Total	Elementary	98,435	28,946	45,427	51,827	51,827	51,827	51,827	51,827	51,827	51,827	51,827	51,827
	Secondary	34,225	4,733	6,330	8,626	8,626	8,626	8,626	8,626	8,626	8,626	8,626	8,626
	Total	132,660	33,679	51,757	61,453	61,453	61,453	61,453	61,453	61,453	61,453	61,453	61,453

Note: Number of secondary school teachers includes those who do not teach science or mathematics.

Evaluation Items	Verification Items	Sources	Results
<p><b>Project Purpose</b> To upgrade teaching skills and deepen understanding of subject matter content for facilitating learner-centered classroom instruction in science and mathematics education.</p>	<p>a) From SY2002-2003 to SY2004-2005, the lesson plan objectives classified as other than knowledge level of cognitive domain will increase from 62.2% to 70% in SBTP schools.</p> <p>b) From SY2002-2003 to SY2004-2005, the lesson plan objectives classified as other than declarative level of knowledge domain will increase from 49.8% to 55% in SBTP schools.</p> <p>c) From SY2002-2003 to SY2004-2005, the teachers' questions classified as other than knowledge level of cognitive domain will increase from 18.8% to 25% in SBTP schools.</p> <p>d) From SY2002-2003 to SY2004-2005, the teachers' questions classified as other than declarative level of knowledge domain will increase from 20.1% to 25% in SBTP schools.</p>	<p>a) Lesson plans of teachers</p> <p>b) Lesson plans of teachers</p> <p>c) Classroom observations</p> <p>d) Classroom observations</p>	<p>The results of the end-line survey conducted by Lasallian Institute for Development and Educational Research of De La Salle University are summarized as follows.</p> <p>The indicator in the end-line survey sharply dropped from the base-line survey in all the three regions irrespective of whether the samples are targets of the SBTP or not. The causes are yet to be thoroughly investigated. However, common external factors are thought to contribute to the results, such as practice of preparing lesson plans by replicating the sample lesson plans distributed by the DepEd. The difference in the survey time of the school year is also a candidate cause.</p> <p>Unlike the above a), the indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose from the base-line survey to nearly reach the target, while that of the non-SBTP samples in Regions VI and VII rose as well.</p> <p>The indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose very slightly from the base-line survey to 19.0%, while that of the non-SBTP samples in Regions VI and VII dropped by over 10%. These results indicate that the SBTP considerably contributed to maintaining non-knowledge questions in classes.</p> <p>The indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose slightly from the base-line survey to 23.0%, while that of the non-SBTP samples in Regions VI and VII dropped by over 6%. These results indicate that the SBTP contributed to increasing the share of non-declarative questions in classes.</p>

## ANNEX 5. Results of Evaluation

Project Name: The Project for Strengthening of Continuing School Based Training Program for Elementary and Secondary Science and Mathematics Teachers (SBTP-ELSSMAJ)  
 Period of Cooperation: 2002.4.10-2005.4.9

Project Site: Region V, VI, VII, XI

Target Group: Science and Mathematics Teachers in Project Sites

### 1. Achievement of PDM

Evaluation Items	Verification Items	Sources	Results
<p>Overall Goal            Performance level of pupils and students in science and mathematics at basic education is continuously improved.</p>	<p>The results of Standardized Achievement Test at National, Regional and Division levels in the project schools are improved compared to those in the beginning of Project or compared to that in non-project schools by 2010.</p>	<p>Standardized Achievement Test at National, Regional and Division level</p>	<p>The pupils having been taught by the SBTP participant teachers show more positive and active attitude than before toward science and mathematics classes. They also show exploring attitude thinking for themselves fostered by participatory activities and experiments. Therefore it is expected that the overall goal of the Project will be achieved as the pupils' academic ability and performance level will be improved.</p>
			<p>For example in the divisions covered by the SBTP in Region VI, many reports reveal that pupils' performance in diagnosis tests at the beginning and achievement tests at the end of school semesters is considerably improving compared to their performance when the SBTP was launched. In some divisions, significant difference in pupils' performance is observed between schools that have already introduced the SBTP and those that have not. Moreover, the gap is widening over the years. The RPMT is therefore pushing the expansion of the SBTP to all the divisions of the Region. The team also plans to investigate to measure the extent of the improvement and to identify the contribution by the SBTP. In particular, the Division of Iloilo and the Division of Negros Occidental are also formulating detailed ideas of the survey activities.</p> <p>As another example, average achievement scores in Davao City in Region XI have been continuously increasing since the SBTP was launched.</p>

Evaluation Items	Verification Items	Sources	Results												
<p><b>Project Purpose</b> To upgrade teaching skills and deepen understanding of subject matter content for facilitating learner-centered classroom instruction in science and mathematics education.</p>	<p>e) From SY2002-2003 to SY2004-2005, the number of teachers using teaching aids will increase from 82.5% to 90% in SBTP schools.</p>	<p>e) Lesson plans of teachers / Classroom observations</p>	<p>The indicator of the aggregated results of the SBTP targets of the three regions in the end-line survey rose remarkably from the base-line survey to 94.9% and exceeded the target, while that of the non-SBTP samples in Regions V and VII rose very slightly by less than 1%. These results indicate that the SBTP satisfactorily promoted use of teaching aids in classes.</p> <p>It is noted that the results of Region XI in the above a) and b) are between the SBTP schools and non-SBTP schools in Regions V, VI and VII combined. For c) and d), the results of Region XI were lower than the averages of those of both SBTP and non-SBTP schools in the three regions, indicating the need for improving questions in classes. On the other hand, the Region showed higher use of teaching aids than the averages.</p>												
<p>f) From SY2002-2003 to SY2004-2005, the mean scores for the following factors in students' questionnaire will increase in SBTP schools.</p> <p>f-1) Teaching for understanding, f-2) Positive affect in classroom, f-3) Application and relevance, f-4) Appropriate assessment, f-5) Independent learning, f-6) Inquiry learning</p>	<p>f) Questionnaire for students</p>	<p>f) Questionnaire for students</p>	<p>The number of improved items minus the number of regressed items in the SBTP target schools (In brackets is the balance in non-SBTP sample schools.)</p> <table border="1" data-bbox="617 613 718 1182"> <tr> <td>Subject</td> <td>Region V</td> <td>Region VI</td> <td>Region VII</td> </tr> <tr> <td>Science</td> <td>+4</td> <td>+2 (-2)</td> <td>0 (-4)</td> </tr> <tr> <td>Mathematics</td> <td>+6</td> <td>+6 (+6)</td> <td>-1 (-2)</td> </tr> </table> <p>Regions V and VI showed improvement in science and mathematics. In Region VII, the numbers of improved items and worsened items are equal in science, while the balance between the number of improved items and that of worsened items was minus one in mathematics. However, compared to the non-SBTP schools, the results were better in both subjects.</p>	Subject	Region V	Region VI	Region VII	Science	+4	+2 (-2)	0 (-4)	Mathematics	+6	+6 (+6)	-1 (-2)
Subject	Region V	Region VI	Region VII												
Science	+4	+2 (-2)	0 (-4)												
Mathematics	+6	+6 (+6)	-1 (-2)												
<p>g) From SY2002-2003 to SY2004-2005, the mean scores for the following factors in students' questionnaire will decrease in SBTP schools.</p> <p>g-1) Negative affect in classroom, g-2) Passive learning, g-3) Low self-efficacy</p>	<p>g) Questionnaire for students</p>	<p>g) Questionnaire for students</p>	<p>The number of improved items minus the number of worsened items in the SBTP target schools (In brackets is the balance in non-SBTP sample schools.)</p> <table border="1" data-bbox="1016 613 1116 1182"> <tr> <td>Subject</td> <td>Region V</td> <td>Region VI</td> <td>Region VII</td> </tr> <tr> <td>Science</td> <td>+1</td> <td>-1 (-1)</td> <td>-1 (-1)</td> </tr> <tr> <td>Mathematics</td> <td>+3</td> <td>-3 (+1)</td> <td>+1 (-3)</td> </tr> </table> <p>Regions V showed improvement in science and mathematics. In Region VI, all items were worsened in science and mathematics, while non-SBTP schools showed two improved items with one worsened item in mathematics. In Region VII, mathematics showed more improved items than worsened items in mathematics but the result in science was as negative as that of the non-SBTP schools.</p>	Subject	Region V	Region VI	Region VII	Science	+1	-1 (-1)	-1 (-1)	Mathematics	+3	-3 (+1)	+1 (-3)
Subject	Region V	Region VI	Region VII												
Science	+1	-1 (-1)	-1 (-1)												
Mathematics	+3	-3 (+1)	+1 (-3)												

Evaluation Items	Verification Items	Sources	Results
<p><b>Output</b></p> <p>(1) The operation and management method of SBTP is strengthened.</p>	<p>a) A work plan of DepEd Central Office is prepared annually.</p> <p>b) A SBTP implementation manual including operation formats is developed and revised.</p> <p>c) SBTP consultative conferences are conducted twice a year under the initiative of DepEd Central Office.</p> <p>d) Status data of SBTP are collected in every six (6) months by DepEd Central Office</p> <p>e) Management staff in DepEd Central, Regional or Division Offices attend 80% of SBTP for monitoring.</p>	<p>a) CPMT work plans</p> <p>b) SBTP implementation manual / SBTP formats</p> <p>c) Status report</p> <p>d) Status report</p> <p>e) Status report/ Monitoring and evaluation sheet/CPMT work plans</p>	<p>The CPMT is a team rather than a single bureau. Composition, roles and responsibilities of the CPMT, RPMT and DPMT are identified by DepEd Order regarding the Project. Within this framework, annual activity plans are prepared at central, regional and division level.</p> <p>The first version of the implementation manual of the SBTP was completed in 2003. The manual was put in use in order to consolidate the activities and also to feed back the practice to the manual. Revision of the manual was intended to be a process in which the CPMT, the RPMT and DPMT would strengthen their capability to analyze and evaluate SBTP activities. The second version of the manual was completed in October 2004 according to the scheduled. The new manual is fully utilized as a guide book for planning and implementation of the SBTP. In particular, copies of the manual are distributed for expansion and implementation utilized in divisions that newly introduced the program. The manual is therefore an output as well as a teaching/learning material.</p> <p>The consultative conference was held twice a year under the initiative of the CPMT. Invites of the conference are not limited to the SBTP members. In a conference held in 2004, discussions were held between the representatives of the RSTCs and the members of the SBTP for close coordination between the two groups in Regions V and VII, while cooperation has already been established between the RSTC of West Visayas State University and the RPMT in Region VI.</p> <p>Data on the SBTP are regularly collected and integrated by the CPMT. Major items are (1) expansion of the program, (2) best practice cases, (3) problems encountered and (4) appropriate measures taken.</p> <p>The SBTP activities have been directly monitored by the supervisors of the DPMT. Basically they attend all the SBTP sessions so far but they can observe only selected samples of demonstration lessons for now over 6,000 schools participate in the SBTP. The DPMTs' activities are supervised by the RPMT which is in turn supervised by the CPMT.</p>



Evaluation Items	Verification Items	Sources	Results
<p>Output (2) The content of SBTP is upgraded.</p>	<p>a) Writing workshop and Training of Trainers are held annually.</p> <p>b) Monthly trainers meetings are held.</p> <p>c) Session Guides (SG) and Lesson Plans (LP) are developed and modified.</p> <p>d) Instructional materials are prepared.</p> <p>e) Parallel lesson plans are prepared by the teachers.</p>	<p>a) Status report</p> <p>b) Status report</p> <p>c) SG/LP</p> <p>d) Instructional materials</p> <p>e) Parallel LPs / Questionnaires for Teachers</p>	<p>Both the writing workshops and the training of trainers were held in 2003 and 2004.</p> <p>Monthly trainers meetings have been held in order to prepare for the SBTP.</p> <p>A model of session guides and lesson plans was developed and incorporated in the second version of the implementation manual. Actual session guides and lesson plans are prepared by trainers and teachers and monitored by the supervisors.</p> <p>Various instructional materials have been prepared by the experts, JOCV members and their counterpart staff at their Project management offices. More notably, participant teachers are preparing such materials as part of the SBTP sessions. However, sometimes it is difficult to replicate demo lessons in actual classes due to shortage in materials such as chemicals as well as lenses and magnets. Improvisation of instructional materials is encouraged and the JOCVs are advising how to improvise some of the teaching materials.</p> <p>Parallel lesson plans are prepared and presented by teachers for discussions among them as part of the SBTP activities.</p> <p>There exist some clusters where quality of the SBTP sessions is not fully satisfactory.</p>

Evaluation Items	Verification Items	Sources	Results
<p><b>Output</b> (3) SBTP is implemented in non-pilot clusters in pilot regions (Region V, VI, XI).</p>	<p>a) The percentages of science and mathematics teachers participating in SBTP are increased from 71.0% to 80% in Region V, from 27.8% to 30% in Region VI and from 71.1% to 80% in Region XI.</p>	<p>a) Status report</p>	<p>In each of the first and second years of the Follow-up Program, three pilot clusters were newly designated in each of Region V and Region VI. Refer to Table "Expansion of SBTP".</p> <p>Region V: The percentage of elementary school teachers participating in the SBTP is 86% in 2001. Secondary schools participating in the SBTP account for 100% and so the percentage of science and mathematics teachers participating in the SBTP is thought to be also 100%. Therefore, the target of 80% has been exceeded.</p> <p>Region VI: The percentage of elementary school teachers participating in the SBTP is 42%. That of secondary school teachers participating in SBTP is 30% of all the secondary school teachers. Considering that the science and mathematics teachers account for 35% to 40% of all, the percentage of teachers participating in the SBTP is thought to be around 75% of all the secondary science and mathematics teachers. Therefore the target of 30% has been exceeded.</p> <p>Region XI: The percentage of elementary school teachers participating in the SBTP is 91%. Secondary schools participating in the SBTP account for 100% and so the percentage of science and mathematics teachers participating in the SBTP is thought to be also 100%. Therefore, the target of 80% has been exceeded.</p>
<p><b>Output</b> (4) SBTP is implemented in a non-pilot region. (Region VII)</p>	<p>a) SBTP is implemented in three (3) pilot clusters in Region VII. b) SBTP is expanded to additional three (3) clusters in Region VII. c) Workshops for evaluating method of expansion are held.</p>	<p>a) Status report b) Status report c) Status report</p>	<p>Three pilot divisions started in 2003 involving one elementary school cluster and two secondary school clusters. In 2004, four new divisions introduced the SBTP and now a total of 17 clusters with participation of 1,898 teachers are covered by the SBTP. This has exceeded the target based on the PDM.</p> <p>As the SBTP is expanded in Region VII, the implementation manual was prepared mainly by the CPMT. The manual was fully utilized for the orientation for new divisions. In addition, various formats in the attachment of the manual were reviewed and improved for the introduction of the SBTP in Region VII. The CPMT also prepared a flow chart for the introduction of the SBTP in new regions and incorporated it in the revised manual.</p> <p>Through the experiences in Region VII, the methodology and materials (manual, brochure and video) have been developed for the introduction of the SBTP.</p> <p>Workshops for evaluating method of expansion are held by the CPMT and the Japanese experts with occasional participation of the RPMT.</p>

Evaluation Items	Results
<p>[Implementation of pilot SBTP]            (1-1) To prepare an implementation plan for pilot SBTP</p>	<p>Implementation plans were prepared for the pilot SBTP for a total of 24 clusters in Region V (7 elementary and 3 secondary), Region VI (4 elementary and 3 secondary) and Region XI (4 elementary and 3 secondary).</p>
<p>(1-2) To implement pilot SBTP</p>	<p>The SBTP have been maintained in these pilot clusters according to the plans.</p>
<p>(1-3) To monitor and evaluate pilot SBTP</p>	<p>The monitoring results of the SBTP have been reported to the CMPTI. One key issue is that the monitoring capability varies on supervisors. Their capabilities strengthened especially in the subject contents.</p>
<p>[Development of a SBTP implementation manual]            (1-4) To assess the current situation and problems arisen in SBTP implementation</p>	<p>The baseline survey was conducted by Lasallian Institute for Development and Educational Research of De La Salle University.</p>
<p>(1-5) To solve problems arisen in SBTP implementation</p>	<p>In 2003, the first version of the SBTP implementation manual was completed. In October 2004, the second version was completed, which includes monitoring and evaluation sheets such as "Format for checking lesson plan", "Teaching-learning observation checklist", "Form of evaluation teaching skills", "SBTP session evaluation form", "Year-end evaluation questionnaire format" and "Regional expansion monitoring form".</p>
<p>(1-6) To develop a SBTP implementation manual</p>	<p>In March 2004, a brochure, a promotional video, a CD and a web site were prepared for introduction of the SBTP. The CD also includes the manual, brochure, data for presentation as well as the video. The materials are fully utilized not only for PR and promotion of the SBTP in new divisions but also for sharing understanding the purpose and significance of the Project in the clusters already covered by the SBTP.</p>
<p>(1-7) To prepare monitoring and evaluation sheets</p>	<p>The writing workshop for the implementation manual was held behind schedule because of the financial constraint. In addition, revision and reproduction of the manual are time consuming.</p>

Evaluation Items	Results
<p>[Upgrade of the capability in SBTP planning and management] (2-1) To hold regular meetings and workshops</p>	<p>When the SBTP started in 2000 as the follow-up of the former Package Project, the basic unit session was composed of two demonstration classes and their review discussions. The style of the lesson plan was changed from the traditional narrative description to a visual table form with columns of time allocation, teacher's activity, learners' activity and teacher's note. These two points were shared as a basic rule of the SBTP. Then various improvement ideas were proposed by participant teachers and supervisors and school principals through the processes of the SBTP. Such examples are:</p> <ul style="list-style-type: none"> <li>- Demonstration class and discussions in the morning and reproduction of teaching/learning materials used in the class in the afternoon</li> <li>- Whole day workshop called "walk-through" to discuss on lesson plans instead of demonstration classes</li> <li>- Inviting lecturers of teacher training institutes or universities of the region for intensive courses on challenging topics</li> <li>- Formation of inter-grade groups and demonstration of classes to each other</li> <li>- Field work to explore biological and geological objects in the surroundings and presentation of them in the classes</li> <li>- Involving not only science and mathematics teachers but also teachers of social studies, English and Makabayan?</li> <li>- Involving university students majoring in education in the SBTP</li> </ul>
<p>[Upgrade of the capability of trainers and writers] (2-2) To hold Writing Workshop</p>	<p>According to the school principals, these ideas were introduced and their impact is recognized. Such a bottom-up approach is new in the Philippines and highly appreciated by teachers.</p>
<p>(2-3) To hold Training of Trainers</p>	<p>The frequency of the meetings is left to each region or division. There should be some guidelines to conduct regular meetings to maintain the quality of the SBTP.</p>
<p>(2-4) To hold Monthly Trainers' Meeting</p>	<p>Some regions/divisions do not conduct the Monthly Trainers' Meeting regularly. Lack of these meetings results in session guides with poor quality. In this regard, roles of the principals are important. Triggered by the SBTP, they became involved in monitoring classes and the relation among the principals, teachers and the supervisors has been close on an equal footing. However, the school management capabilities of principals should yet to be strengthened.</p>
<p>[To develop and disseminate instructional materials] (2-5) To develop Session Guide/ Lesson Plan (SG/LP) models including user manuals</p>	<p>The compilation of SG/LP and materials depends on the policy of the region or division. For the further expansion, those materials should be kept in usable form.</p>
<p>(2-6) To develop and disseminate instructional materials</p>	<p>Though some SG/LP still has poor quality, SG/LP is not always submitted before the sessions and some supervisors are too busy to have enough time to check them.</p>

Evaluation Items	Results
<p>[Implementation of SBTP for new cluster]            (3-1) To assess the current situation and problems of implementing SBTP in non-pilot clusters</p> <p>(3-2) To prepare an action plan to implement SBTP.</p> <p>(3-3) To implement SBTP in the non-pilot clusters based on the action plan</p> <p>(3-4) To monitor and evaluate SBTP implementation</p> <p>(3-5) To evaluate the method of dissemination of SBTP</p>	<p>The expansion of the SBTP to new divisions in the three regions exceeded the targets. The achievement is attributed to the following interactive factors generated by efforts of the Philippine staff as well as the Japanese experts and volunteers.</p> <ol style="list-style-type: none"> <li>1. The flexible and easy-to-adapt nature of the SBTP promotes its introduction by stakeholder in new divisions.</li> <li>2. The operation of the SBTP does not require much cost from stakeholders at various levels such as the DepEd and the participating teachers.</li> <li>3. The SBTP provides high quality training opportunities equally to all the teachers and the its widely recognized by teachers that the SBTP is highly potential teacher training. As the result, strong requests to introduce the SBTP came from many new divisions.</li> <li>4. The project management teams at various levels fully understand the purpose, characteristics and system of the SBTP and actively promoted it.</li> <li>5. The project management teams promoted understanding and support of school principals, PTGAs and local government units</li> <li>6. The SBTP is a continuous process and so it is being established as a day-to-day undertaking.</li> </ol> <p>Some supervisors are so busy that they do not have enough time to go for monitoring.</p> <p>The method of dissemination of the SBTP has been studied through the practical activities and consolidated in the implementation manual.</p>

Evaluation Items	Results
<p>[Implementation of SBTP in non-pilot Region]            (4-1) To develop a manual for expansion of SBTP to non-pilot region.</p> <p>(4-2) To implement SBTP in a new region based on the manual</p> <p>(4-3) To monitor and evaluate SBTP implementation</p> <p>(4-4) To evaluate the method of expansion of SBTP</p>	<p>There were more requests than the achieved record. However, both the Japanese experts and the members of the CPMT and the RPMT were reluctant to accept all of them because premature introduction of the SBTP without sufficient preparation is likely to result in decrease in quality of the program. In order to sustain the quality, they are counseling candidate clusters and starting the SBTP according to the priority depending on their prearrangement.</p> <p>On the occasion of the consultative conference in 2004, the RPMT discussed with the invited representatives of RSTC of San Carlos University for possible cooperation in future. Then, one of the issues is requirement for arrangement of the university staff's remuneration and the status of their participation. On the other hand, the majority of the RPMT members graduated from Cebu Normal University, that is a public university for teacher training and so it is an option to seek for cooperation with the already close university.</p> <p>In 2003, the Regional Office of the DepEd hosted the training of the trainers and the cost was shared equally by the headquarters of DepEd, the Regional Office and the participating divisions. However, it was recognized that the budget might not be very secure, in 2004 therefore division offices or central schools in the divisions host the training of trainers, incurring cost only for local transport and snacks with no need for accommodation. Thus, a cost saving system has been established and so the financial aspect is not a serious constraint to the sustainability of the SBTP.</p> <p>The SBTP expanded to some divisions in Region VII and now coordination between elementary and secondary levels in RPMT needs to be strengthened.</p> <p>In practice, preparation of the manuals and expansion of the coverage have been taking place in parallel. The manual includes monitoring and evaluation methods.</p>

Evaluation Items	Results	Evaluation Items	Results
<p><u>Input: JAPAN</u></p> <p><u>Long-term Experts: 3 persons</u>  a) Teacher Training / Project Leader 36M/M  b) Teacher Training Administration 36M/M  c) Management of teacher training program / Project Coordinator 24M/M</p> <p><u>Short-term Experts:</u>  a) Science and Mathematics Instruction  b) Monitoring &amp; Evaluation for Teacher Training</p> <p><u>JOCV Senior:</u> 1 person, Field Coordinator</p> <p><u>JOCV:</u> 8 persons x 2 batches, Science &amp; Math. Education</p> <p><u>C/P Training:</u>  Counterpart Training Program in Japan: 1 person x 3 years</p> <p><u>Equipment &amp; Local Cost:</u>  a) Provision of basic Science and Math. Equipment: 25 million yen  b) Provision of General Local Cost, Local Application Cost: 10 million yen</p>	<p>Three long-term experts</p> <p>Five short-term experts</p> <p>Two senior volunteers of JOCV (cumulative total)  23 volunteers of JOCV (Cumulative total)</p> <p>10 members of the counterpart staff underwent training in Japan. (Two in 2003 and eight in 2004)</p> <p>Provision of basic science and mathematics equipment amounts to 19.3 million Yen (9.6 million Pcs)</p> <p>Local operation cost amounts to 19.4 million Yen.</p>	<p><u>Input: PHILIPPINES</u></p> <p><u>Counterparts:</u>  a) DepEd Central Office: 12 persons  b) DepEd Regional Office: 7 persons x 4 regions  c) DepEd Division Office: 3-5 persons x 40 divisions</p> <p><u>Resources:</u>  a) Trainers &amp; Writers trained by other projects  b) SG/LP prepared by other projects  c) Existing teaching materials</p> <p><u>Project Office &amp; Facilities:</u>  a) DepEd Central Office  b) DepEd Regional Office  c) DepEd Division Office</p> <p><u>Supplies &amp; Cost for the Project:</u>  a) Office supplies  b) Secretarial services  c) Expenses for Seminars and Training of Trainers  d) Local Cost: 3.4 million pesos</p>	<p>CPMT: 9 members</p> <p>RPMT: 32 members (8 in Region V, 7 in Region VI, 8 in Region VII and 9 in Region XI)  DPMT: 39 DMPTs with 177 members</p> <p>SBTP operation cost: P7,850,000.</p>

Approximate exchange rates as of November 2004: \$1 = P56 and JY1 = P0.535

Evaluation Items	Results
<p><b>Important Assumptions</b></p> <p><b>Overall Goal Level</b></p> <ul style="list-style-type: none"> <li>- DepEd policies concerning emphasis on science and mathematics education and on teachers' training are maintained.</li> <li>- Curriculum is not drastically changed.</li> <li>- Educational budget on maintenance and other operation expenses, (i.e., training budget) is increased.</li> <li>- Teachers utilize learning skills acquired in SBTP in their classroom.</li> </ul>	<p>The government policies on basic education of science and mathematics and on teacher training have been supportive of the SBTP.</p> <p>The current basic education curricula were introduced in 2002 after the revision by the Curriculum Development Division of DepEd according to the discussions of the Committee on Curriculum Reform. Since its introduction, the curricula have not been changed.</p> <p>At the national level, part of the teacher training budget is allocated to the fund for the SBTP. It amounted to P3,860,000 in 2004. The fund is mainly for the traveling expenses of the staff and the operation cost of the semiannual consultative conferences. The fund is in an increasing trend. Although the amount is limited, it has not constrained the most activities of the SBTP. The regional offices do not have their own budget specifically for the SBTP. However they appropriate part of their budget from its headquarters for the SBTP.</p> <p>The extent of utilization of the skills acquired in the SBTP is yet to be increased. The constraints on the utilization in their schools may be lack of equipment, an excessive number of pupils/students, inappropriateness of the demo lessons, indicating needs for further improvement of the activities and further strengthening of the key participants such as the supervisors and the principals.</p>



Evaluation Items	Results
<p><b>Important Assumptions</b></p>	
<p><b>Project Purpose Level</b></p>	
<ul style="list-style-type: none"> <li>- DepEd offices continuously conduct SBTP.</li> </ul>	<p>The SBTP is already institutionalized to a certain extent. The SBTP is being launched in Region I, Region III, Region IV-A and NCR.</p>
<ul style="list-style-type: none"> <li>- The policy on conducting of SBTP on weekdays is maintained.</li> </ul>	<p>The SBTP is maintained on weekdays, though a variety of programs have been worked out and implemented.</p>
<ul style="list-style-type: none"> <li>- Teachers trained in SBTP are continuously involved in Project.</li> </ul>	<p>The dominant majority of teachers do not leave the profession. For the teachers, attending the SBTP is part of their duties.</p>
<p><b>Output Level</b></p>	
<ul style="list-style-type: none"> <li>- Teachers trained in SBTP are continuously involved in the Project.</li> </ul>	<p>Ditto</p>
<p><b>Activity Level</b></p>	
<ul style="list-style-type: none"> <li>- The counterparts in DepEd Central, Regional and Division Offices remain in those positions.</li> </ul>	<p>Most staff remain in their work places. Currently recruitment of new staff of DepEd is suspended due to the budgetary constraint.</p>
<ul style="list-style-type: none"> <li>- DepEd Fund for the project is secured properly.</li> </ul>	<p>The central budget accounted approximately for 10% of the whole teacher training budget of the DepEd in 2003, that was P22,749,000. The ordinary SBTP sessions do not incur substantial costs. Transportation expenses are paid by the teachers. Snacks may be provided by the session schools. Only larger scale operations like the training of trainers and writing sessions are financed by the local offices of DepEd.</p>

Evaluation Items	Results
<p><b>Pre-conditions</b></p> <ul style="list-style-type: none"> <li>- Teachers are willing to improve their capability in teaching.</li> <li>- DepEd is willing and committed to support the conduct and institutionalization of SBTP.</li> </ul>	<p>The majority of teachers are willing to improve their capacity in teaching, although motivation and attitudes of some are yet to be raised through the SBTP sessions.</p> <p>The CPMT of DepEd is supportive of the SBTP. However, the approach of the SBTP is field-oriented and the understanding of the program is yet to be fully shared by the whole department.</p>

DepEd SBTP Funds	Total
FY2002	P1,841,861
FY2003	P2,153,208
FY2004	P3,860,000
FY2005(Proposal)	P4,179,400

Breakdown
<u>Training (88%)</u>
(Regional Training in Region V, VI, VII & XI, Mid-Year & Year-End Consultative Conferences)
-Board & Lodging
-Materials & Supplies
-Travel Expenses & Per diem
<u>Monitoring &amp; Coordination (10%)</u>
-Travel Expenses & Per diem
<u>Communication (2%)</u>
-Telephone Charge
-Shipping Charge
-Postage

## 2. Review of Process

Criteria	Evaluation Items	Verification Items	Results
Process of activities	Activities continued from the previous projects		The Package Cooperation for the Development of Elementary and Secondary Science and Mathematics Education was carried out from 1994 to 1999. The Package Cooperation's cascade approach consisted of three steps, namely the national training program by the national trainers for the regional trainers, the regional training program for division trainers and the division training program for teachers in the divisions. Recognizing that the cooperation ended with limited effects on local stakeholders, its follow-up adopted a cluster approach in which school based teacher training was conducted. The SBTP is the continuation and development of the follow-up.
	Monitoring	<ul style="list-style-type: none"> <li>- Major changes of PDM</li> <li>- Background of inclusion of Region XI</li> </ul>	The PDM was revised in December 2003 as follows. It was confirmed by the Project Consultation Team that the DepEd had been promoting implementation of the SBTP in Region XI and that the region could implement the SBTP. Therefore Region XI was added to the target regions. The indicators were also revised based on the results of the base-line survey conducted in March 2003.
	Overall project management system	Coordination between the central, regional, division, cluster and school levels	The three experts and the CPMT are meeting monthly or sometime bi-monthly to discuss the project management. Coordination has been good. Differences of opinions between different groups were coped with by through discussions among them. Basically, the SBTP's approach has been bottom-up rather than top-down. Higher authorities played facilitation roles to support activities at the school cluster level.
	Technology transfer to the core counterpart staff	Process and achievement of the technology transfer to the counterpart staff	<ul style="list-style-type: none"> <li>- The concept and approach of the SBTP have been repeatedly emphasized by the experts for the key participants to fully understand it.</li> <li>- Technical knowledge and skills including both subject contents and pedagogy have been provided during the processes of the SBTP by the experts and the JOCVs.</li> <li>- Training in Japan was conducted for a total of 10 members and found to be effective.</li> <li>- Among others, the Philippine initiatives have been prioritized so that they innovated and obtained necessary technical and management technologies through the implementation of the SBTP.</li> </ul>
	Cooperation between Japanese experts and counterparts	Working relationship between the two parties	Good working relationships have been maintained with emphasis on the Philippine ownership and the Japanese experts' partnership as supporters.
	Roles and cooperation of Japanese experts and JOCV members		The experts have been mainly in charge of the operation and management of the SBTP, while the JOCV members have been providing day-to-day technical support for the program. The two groups were fairly coordinated. The experts are occasionally providing the JOCV members with orientation of the SBTP's approach, advice and consultation. The JOCV members are exchanging information and advice through e-mails and occasional visits among themselves.

	<p>Feedback from the local personnel in the project sites</p> <p>Ownership of the Philippine Side</p> <p>Relation with other donors</p>	<p>Feedback utilized for the project operation</p> <p>Level of participation of the management staff of DepEd</p> <p>Level of participation of local organizations and schools in the project sites</p> <p>Coordination between the Project and other donor assisted projects and programs</p>	<p>The SBTP adopted a flexible school based approach. Findings, lessons and ideas have been fed back from the field experiences to the manuals and systems. In other words, the SBTP is a learning process with self-developing mechanism. The consultative conferences also provide opportunities of the feedback and exchange of the information and lessons of activities in different regions.</p> <p>The counterparts are not exclusively assigned to the SBTP. However it is clarified well in DepEd as part of their tasks.</p> <p>The SBTP is already recognized as a Philippines' scheme and the majority of the stakeholders are willing to participate in the activities. Now the quality of the activities is a key issue indicating the importance of monitoring and its feedback with the leadership of the supervisors and the principals.</p> <p>Regions I, III, IV-A and the National Capital Region are starting the SBTP. On the other hand, the Singapore Volunteers Overseas Programme (SVO) of the Singapore International Foundation plans to start their mentoring program for science and mathematics education in Capan City, Region III. The program includes a school based teacher training component and so a manager of the SVO consulted with the SBTP members to learn the experiences.</p> <p>In Regions V, VI, VII and XI, the SBTP is supported only by Japan. So far no close coordination with other donors has been kept.</p>
--	---	--	--

### 3. Evaluation by Five Criteria

Criteria	Evaluation Items	Verification Items	Results
Relevance	<p>Lessons from the former projects which have been incorporated in the Project to make it highly relevant</p>		<p>Effects of the former Package Cooperation did not fully reach the school level. It was a large scale project with large amount of external input. There were difficulties to sustain the project. The follow-up, during which the SBTP actually started, emphasized two aspects. The one was the generation of effects at the school level and the other was the sustainability of the activities. The SBTP therefore has built in special features, namely, (1) equal opportunity of all teachers for participation, (2) conducting demonstration lessons of schools as the base of training, (3) training sessions conducted by small groups of teachers, (4) regular monthly training sessions, and no requirement for special fund.</p>
	<p>Consistency between the overall goal and Philippines' national development policies</p>	<ul style="list-style-type: none"> <li>- Medium-Term Philippine Development Plan</li> <li>- The Philippine Education for All - 2015</li> <li>- Schools First Initiative</li> </ul>	<p>The Medium-Term Philippine Development Plan (2004 - 2010) states development of education and youth opportunity, in which reinforcement of mathematics, science, English and value education is emphasized among others. For the reinforcement, the implementation plan includes (1) institutionalized capacity development of teachers based on their needs, (2) continuation of students' achievement tests and (3) utilization of effective teaching methods including those supported by international cooperation programs. For development of education and youth opportunity, the development plan also states strengthening of operation and management capabilities of schools and their monitoring.</p>
			<p>The Philippine Education for All - 2015 (draft) expects to get all teachers to continuously improve their teaching practices, emphasizing also the need for school self-management that can motivate and enable teachers to continuously improve their teaching practices throughout their career.</p>
			<p>The new secretary puts forward School First Initiative, which involves more stakeholders of education such as parents. This means change from heavy dependence on higher offices to school empowerment to address their issues. Roles of the central office should be limited to policy, rules and regulations, liaison and coordination, etc. Resources should be generated by schools. Local government units, PTCA and NGOs can also be mobilized. The new secretary's initiative is similar to the SBTP and it needs to be elaborated to identify project components.</p>
			<p>As shown above, the SBTP's overall goal of improvement of the performance level in science and mathematics coincides with the national policies.</p>

<p>Consistency between the overall goal and the grassroots needs of ordinary families</p>	<p>Priority issues of basic education (for example, overcrowded schools)</p> <p>Average level of academic achievement of pupils/students in basic education of science and mathematics</p> <p>Ordinary families' priority on the basic education of science and mathematics (considering the willingness to have higher education and the university entrance system)</p>	<p>There are issues requiring measures complementary to the SBTP for its overall goal, such as shortage of classrooms and equipment and need for improvement of textbooks. Upgrading teachers' skills and knowledge is a key issue to be addressed.</p> <p>According to the speech of the Secretary of Education during the National Education Congress in October 2004, the Philippine ranked 36-4th out of 38 countries in the TIMSS, the Third International Mathematics and Science Study. In the speech, the Secretary recognized the fact as an evidence of the crisis in the national education and called for joint efforts to improve schools.</p> <p>In general, children and their parents place priority on science and mathematics. Willingness toward higher education is strong in the Philippines and the two subjects are among the core fields for entering universities and colleges.</p>
<p>Relevance of the contents and systems of the Project to the achievement of the overall goal</p>		<p>There are a number of signs that the SBTP is contributing to the improvement of the children's performance level. In order to raise the relevance of the SBTP to the actual classes, efforts are being made. An example is a trial to hold demonstration lessons with as many students as in actual classes. As another example, lack of apparatuses may be coped with by improvisation. In such cases, teachers produce improvised teaching materials as part of the SBTP activities. The teacher networks formed by the SBTP enable the teachers to borrow some materials from other school as well.</p> <p>Thus, the SBTP keeps relevance to the classes and to the improvement of the children.</p>
<p>Consistency with Japan's ODA policy</p>	<p>Project's consistency with the ODA policy for Philippines</p>	<p>Based on the guidelines for Japanese international development cooperation and the common goals of the international society such as the Millennium Development Goals, JICA is providing support for human resources development and capacity building to achieve the ultimate goal of poverty alleviation.</p> <p>Human resource development and institutional building are one of the four priority issues and areas of JICA's assistance for the Philippines. In the issues, improved quality of primary and secondary education is one of the major components.</p>
	<p>Utilization of Japan's technological advantages</p>	<p>One of the essential factors which Japan's socio-economic development is attributed to is its assets of science and technology as well as the education of these subjects. In addition, JICA has accumulated experiences of supporting science and mathematics education overseas through technical cooperation including dispatch of the Japan Overseas Cooperation Volunteers. This Project is fully mobilizing such expertise and experts in addition to the lessons from the former Package Cooperation.</p>

Criteria	Evaluation Items	Verification Items	Results
Effectiveness	Achievement of Project purpose	<ul style="list-style-type: none"> <li>- Quantitative changes observed by the end-line survey, etc</li> <li>- Qualitative changes not included in the end-line survey</li> </ul>	<p>According to the questionnaire survey to a total of 81 teachers who participated in the SBTP session for the secondary education on November 26 2004, almost all the teachers are gaining useful knowledge and skills through the SBTP.</p> <p>For almost all of them the perception of science or mathematics and the attitude to teaching these subjects are changing by the program.</p>
	Specific factors constraining the achievement of the Project purpose through the outputs	<p>Major constraints and challenges of the Project and ways to cope with them</p> <ul style="list-style-type: none"> <li>- Internal factors</li> <li>- External factors</li> </ul>	<p>The following points should be considered to maintain the quality and further promote the effects.</p> <ul style="list-style-type: none"> <li>- Vacant positions of retiring staff of education offices are not always filled due to budgetary constraints.</li> <li>- Capacity of monitors/supervisors of supervisors and principals is yet to be strengthened by recognizing the need.</li> <li>- Facilities, equipment and teaching/learning materials need to be improved.</li> <li>- Clusters remote from the education offices incur financial and time costs.</li> <li>- Preparation for the demonstration lessons needs considerable time.</li> </ul>
	Specific factors promoting the achievement of the Project purpose through the outputs	<p>Major factors promoting the achievement of the Project</p> <ul style="list-style-type: none"> <li>- Internal factors</li> <li>- External factors</li> </ul>	<ul style="list-style-type: none"> <li>- Useful lessons from the former Package Cooperation were shared by both Japanese and Philippine participants and the activities of the follow-up period were taken over by the SBTP.</li> <li>- School based participatory approach can reduce cost requirement.</li> <li>- Philippine teams have shown initiatives and the Japanese members have played supportive roles.</li> <li>- Many teachers have motivation/willingness to improve their capacity.</li> <li>- Support is given from teacher education institutions, such as RSTC of West Visayas State University in Region VI.</li> <li>- Japanese experts have experiences in education in Japan and abroad. Therefore, they have sufficient knowledge and skills both in basic education of science and mathematics and in the operation of international development programs.</li> </ul>

Criteria	Evaluation Items	Verification Items	Results
Efficiency	<ul style="list-style-type: none"> <li>- Quantity, quality and timing of the inputs (Philippines and Japanese)</li> <li>- Utilization of the inputs</li> </ul>	<ul style="list-style-type: none"> <li>- Selection of counterpart training (timing and contents)</li> <li>- Utilization of the knowledge and skills learned in the training</li> </ul>	<p>According to the former trainees, the training in Japan is very useful in terms of subject contents, pedagogy, the education management system and culture of teachers. After the training, they present the results in various occasions including the SBTP activities. In addition, introduction of a scheme of teacher education throughout the career is discussed at the CPMT level.</p> <p>In Region VII, inspired by the training, the director has been promoting the involvement of parents for their children's education and the formation of teachers groups.</p>
	<ul style="list-style-type: none"> <li>- Selection of the equipment and materials and the timing to supply them</li> <li>- Utilization of provided equipment</li> </ul>	<ul style="list-style-type: none"> <li>- Efficiency of the use of operation budget</li> </ul>	<p>All the provided equipment is basic items for multi-uses for improvement of the lessons and they are highly appreciated and fully utilized.</p>
		<ul style="list-style-type: none"> <li>- Efficiency of the use of operation budget</li> </ul>	<p>The operation budget is efficiently used for travels of the experts and their articles of consumption. It is noted that operation of the ordinary SBTP sessions is financed by the Philippine side.</p>
		<ul style="list-style-type: none"> <li>- Sufficiency of assignment of the counterpart staff at the central, regional and division levels</li> </ul>	<p>On the occasion of the Project Consultation Team in December 2003, the Philippine counterpart staff was reinforced by adding members from Bureau of Elementary Education and Bureau of Secondary Education to fill the original Record of Discussions. The counterpart staff members at any level are not exclusively assigned to the SBTP and occupied with various tasks. However, the program has been operated without major constraints owing to its commonly recognized status and the efforts of the counterpart staff.</p>
		<ul style="list-style-type: none"> <li>- Timing to dispatch the long and short-term experts</li> </ul>	<p>The experts have been properly assigned, although it might be better if the project coordinator could have been dispatched from the beginning.</p>
	<ul style="list-style-type: none"> <li>- Production of the outputs</li> </ul>	<ul style="list-style-type: none"> <li>- Indicators of results</li> </ul>	<p>The four outputs have been successfully achieved.</p>
	<ul style="list-style-type: none"> <li>- Linkage and cooperation with Philippine organizations other than the counterpart agencies</li> </ul>	<ul style="list-style-type: none"> <li>- For example, linkage with teacher training institutes</li> </ul>	<p>West Visayas State University in Region VI is cooperating with the SBTP through monitoring and advice as well as dispatching their students to the demonstration lessons. The cooperation connects the in-service training and the pre-service training of teachers.</p>
	<ul style="list-style-type: none"> <li>- Linkage and cooperation with other Japanese ODA activities</li> </ul>	<ul style="list-style-type: none"> <li>- Major Japanese ODA schemes complementing this project other than JOCV</li> </ul>	<p>There is no coordinated ODA project.</p> <p>The Board of Education and the Education Center of Saitama Prefecture of Japan have been fully supporting the program by dispatching some of the short-term experts and receiving the Philippine trainees.</p>
	<ul style="list-style-type: none"> <li>- Cost efficiency of the Project</li> </ul>	<ul style="list-style-type: none"> <li>- A set of cost conscious approaches and components of the Project</li> </ul>	<p>Owing to the school based approach, travel costs of the participants are within their affordability. As a principle, the SBTP utilizes existing resources and no special facilities are required for the operation.</p>



Criteria	Evaluation Items	Verification Items	Results
Impact	Impact on the overall basic education system (not limited to science and mathematics)	Impact on teachers' and pupils' perceptions of science and mathematics classes (outside of subject contents or pedagogy)	<ul style="list-style-type: none"> <li>- Some moves are observed that the approach of the SBTP is being introduced to other subjects. For example, some divisions in Region V have introduced school based training to English and social studies, etc.</li> <li>- Cooperation between EED and SED has been strengthened at different levels promoted by the SBTP activities.</li> <li>- In Region VI and XI, the SBTP and teacher training institutes started cooperation so that the in-service training and the pre-service training have become more interactive.</li> </ul>
	Impact in the project sites	The perception of science and mathematics and the attitude to teaching/learning of teachers and children are changing with the SBTP. A number of children who used to be frightened by mathematics and science started to be interested in these subjects and sometimes feel the fun of learning them.	
	Impact outside the project sites	Science and mathematics education networks have been formed involving teachers, principals and supervisors on an equal footing, where they can freely exchange their information and advice and sometimes borrow/lend teaching/learning materials.	
	Current situation and future prospects of achievement of the overall goal	Regions I, III, IV-A and the National Capital Region are starting the SBTP. The CPMT plans to institutionalize the SBTP in all the regions and so it invites all the regions to the consultative conferences of the SBTP.	Signs for improvement of the children's performance level in science and mathematics are observed (Refer to the overall goal). It is expected that sustaining the quality SBTP will lead to the children's improvement.
			According to regional and division supervisors in Region V, marked improvement in both ability and attitudes of children is observed in this year, to which the SBTP is thought to have contributed.
			According to the questionnaire survey to a total of 81 teachers who participated in the SBTP session for the secondary education on November 26 2004, almost all the teachers think that the SBTP is strengthening their students' academic ability.
			Almost all of them also think that the SBTP is changing their students' perception of science and mathematics or their attitudes to learning these subjects.

Criteria	Evaluation Items	Verification Items	Results
Sustainability	A set of measures built in the Project for its sustainable development	Motivation of teachers for the vocation and their incentives to SBTP	Based on the experience of the former Package Cooperation, the SBTP has built in features intended for the sustainability, namely, (1) equal opportunity of all teachers for participation, (2) conducting demonstration lessons of schools as the base of training, (3) training sessions conducted by small groups of teachers, (4) regular monthly training sessions, and (5) no requirement for special fund.
	Institutional sustainability	Continued policy and institutional support for SBTP	The SBTC should continue to provide teachers with useful knowledge and skills. In order to reduce travel time and cost, some divisions are starting school based training of each school. In this case, external supervision and monitoring are particularly important to provide the school teachers with knowledge and skills. The current organization of the CPMT comprises members from NEAP, SDD-HRDS, BEE and BSE. Considering the need for cooperation of the bureaus and the experiences of training of principals accumulated in NEAP and HRDS, the current organization has advantages. On the other hand, discussions for organizational rationalization of the DepEd are on-going and the new organizational set-up is planned to be announced within a couple of months. Although the organization in charge of the SBTP after the rationalization is yet to be identified, there is a possibility for the four groups to merge, which is also a practical alternative for the sustainability of the SBTP. In any case, the activities of the SBTP are thought to be sustained as continuation of the on-going thrust for development. The "School first" initiative of the new Secretary of DepEd emphasizes decentralized responsibilities for implementation of education and it shares the basic idea with the SBTP. Therefore, as the initiative is translated into project components, the SBTP's approach is expected to be further featured. Proper policy orientation, overall coordination and supervision are required at the central level within the framework of the initiative, while implementation capability needs to be strengthened at local and school levels.
	Technical sustainability	Capacity of counterpart staff and lead teachers for implementing quality SBTP and its monitoring	The current participants of the SBTP became capable enough to maintain the activities. In order to sustain the quality of the program in terms of the subject contents and instruction methods, supervision and monitoring are the keys. In other words, strengthening the supervisors for proper monitoring and principals for proper school management are needed. In addition, subject "scholars" are required to advise the teachers, who may be lead teachers, supervisors, principals, teacher education institution staff or foreign experts or volunteers.
	Financial sustainability	Trend and prospects of budgets from the central and local governments and from other sources	The national budget for the SBTP is increasing but still limited. Currently Philippine government is in time of financial difficulty. At this point, it is difficult to foresee increased financial support from the central government. It is therefore expected to seek for ways to sustain the SBTP with minimal financial support from the CPMT. This direction is in line with the basic concept which the SBTP have borne so far.
		Supplementary self-financing of schools or contribution from the communities	In addition to the teachers, the schools, PTCAs/communities and local government units are expected to contribute to the program.

	Condition for further development	Measures to be taken to complement in-service teacher training  Preparation for nationwide expansion and institutionalization  Coordination with other similar programs, if any	Overall improvement of the basic education needs to be implemented together with the SBTP and also coordination needs to be strengthened between DepEd, Commission on Higher Education and Technical Education and Skills Development Authority for the consistent career development of children and the youth.  Considering the importance for the SBTP activities to maintain high quality, the CPMT intends to continue playing important roles in consultation and supervision for the SBTP at the national level. The expansion of the SBTP is to keep pace with the local willingness and intention to conduct their effective SBTP.  Coordination may be needed with the Singapore Volunteers Overseas Programme of the Singapore International Foundation, if they start a program similar to the SBTP. The PROBE Project in Region VII and the BEAM Project in Region XI may also need to be coordinated with the SBTP.
--	-----------------------------------	---	---

## ANNEX 6

Reference 1: Dispatched Experts and JOCV Members

Long-term Experts		Subject	Term	Assignment
1	Yoshihisa Hara	Teacher Training / Project Leader	2002.4.10~2005.4.9	DepEd Regional Office VI
2	Kazuyoshi Nakai	Teacher Training Administration	2002.9.1~2005.4.9	DepEd Regional Office VII
3	Yumiko Kume	Management of teacher training program / Project Coordinator	2003.6.20~2005.4.10	DepEd Central Office

Short-term Experts		Subject	Term
1	Hideo Yamaura	Monitoring and Evaluation for Teacher Training	2003.2.19~2003.2.28
2	Shimboku Miyakawa	Science and Mathematics Instruction	2003.11.17~2003.11.29
3	Shojiro Higashihara	Monitoring and Evaluation for Teacher Training	2004.3.8~2004.3.17
4	Shinji Yamamoto	Science and Mathematics Instruction	2004.9.20~2004.10.8
5		Monitoring and Evaluation for Teacher Training	2005.2

JOCV members		Subject	Term (* Short-term)	Assignment
1	Sumiyo Fukuda	Field Coordinator	2000.8.17~2003.2.16	DepEd Central Office
2	Naoko Hori	Elementary Science	2002.6.6~2003.6.4 *	DepEd Regional Office VI
3	Kan Motoyama	Secondary Math	2002.6.6~2003.6.4 *	Division of Albay, R-V
4	Emiko Sakuta	Secondary Science	2002.7.18~2003.2.12 *	DepEd Regional Office V
5	Tetsu Yamaguchi	Secondary Science	2002.12.5~2004.12.4	Division of Sorsogon, R-V
6	Koji Hase	Field Coordinator	2003.4.25~2005.4.24	DepEd Regional Office V
7	Yuka Anzai	Secondary Math	2003.5.9~2004.5.5 *	Division of Lapu-Lapu City, R-VII
8	Jyunichi Nakatani	Elementary Science	2003.7.17~2005.3.27	Division of Albay, R-V
9	Ryoko Takiguchi	Elementary Science	2003.7.17~2005.3.27	Division of Iloilo, R-VI
10	Takako Miyoshi	Elementary Math	2003.7.17~2004.5.22	Division of Sorsogon, R-V
11	Takafusa Okamura	Secondary Science	2003.8.23~2004.8.24 *	Division of Negros Occidental, R-VI
12	Matsuyo Utsunomiya	Secondary Science	2003.8.23~2004.8.24 *	Division of Lapu-Lapu City, R-VII
13	Kan Motoyama	Secondary Math	2003.8.23~2004.8.24 *	Division of Talisay City, R-VII
14	Noriyuki Imagire	Secondary Math	2003.12.8~2005.12.7	Division of Albay & Tabaco, R-V
15	Hitoshi Ozeki	Secondary Science	2004.4.10~2006.4.9	Division of Lapu-Lapu City, R-VII
16	Masako Ikeda	Secondary Science	2004.4.10~2006.4.9	Division of Talisay City, R-VII
17	Naohiro Yamaguchi	Secondary Science	2004.4.10~2005.4.3 *	Division of Talisay City, R-VII
18	Sakiko Nomura	Elementary Math	2004.7.12~2006.3.27	Division of Iloilo City, R-VI
19	Nobuhiro Tanaka	Elementary Science	2004.7.12~2006.3.27	Division of Bago City, R-VI
20	Makoto Saito	Secondary Math	2004.7.12~2006.3.27	Division of Negros Occidental, R-VI
21	Rumiko Ito	Secondary Science	2004.7.12~2006.7.11	Division of Camarines Sur, R-V
22	Takumi Soda	Secondary Math	2004.7.12~2006.7.11	Division of Lapu-Lapu City, R-VII
23	Katsuo Takizawa	Secondary Science	2004.12.6~2006.12.5	Division of Iloilo, R-VI
24	Takahiro Yano	Secondary Science	2004.12.6~2006.12.5	Division of Negros Occidental, R-VI
25	Takuya Kawa	Secondary Math	2004.12.6~2006.12.5	Division of Talisay City, R-VII

Reference 2: Assignment of Counterparts

CPMT: Central Project Management Team		
1	Grfelina O. Tuy Project Manager	Director, National Educators Academy of the Philippine (NEAP)
2	Zaida Talosig-Azcueta Project Deputy Manager	Chief, Staff Development Division, Human Resource Development Service (SDD-HRDS)
3	Alice A. Panares	Deputy Director, NEAP
4	Cleofe S. Velasquez-Ocampo	Human Resource Management Officer II, SDD-HRDS
5	Carol A. Cruz	Science Education Program Specialist II, Staff Development Division, Bureau of Elementary Education (BEE)

6	Abelardo Medes	Math. Education Program Specialist II, Staff Development Division, BEE
7	Dominador D. Mangao	Science Education Program Specialist II, Curriculum Development Division, BEE
8	Elsie C. Esmer	Math. Senior Education Program Specialist, Staff Development Division, Bureau of Secondary Education (BSE)
9	Ma. Amparo R. Ventura	Science Education Program Specialist II, Curriculum Development Division, BSE

**RPMT: Regional Project Management Team in Region V**

1	Teresita Diaz-Naz	Regional Director
2	Alice Q. Engay	Assistant Regional Director
3	Lourdes Santiago	Chief, Elementary Education Division (EED)
4	Amy V. Deniega	Chief, Secondary Education Division (SED)
5	Eva O. Carpio	Science Education Supervisor II, EED
6	Neuve G. Carrascal	Math. Education Supervisor II, EED
7	Celerina B. Donor	Science Education Supervisor II, SED
8	Leticia B. Bustamante	Math. Education Supervisor II, SED

**RPMT: Regional Project Management Team in Region VI**

1	Victoriano B. Tirol, Jr.	Regional Director
2	Jesus L. Nieves	Assistant Regional Director
3	Mina Celia L. Angostura	Chief, Elementary Education Division (EED)
4	Elmer A. Carbon	Chief, Secondary Education Division (SED)
5	Maria H. Cabag	Math. Education Supervisor II, EED
6	Toribio M. Berano	Science Education Supervisor II, SED
7	Lourdes N. Morano	Director, Regional Science Teaching Center, West Visayas State University

**RPMT: Regional Project Management Team in Region VII**

1	Carolino B. Mordeno	Regional Director
2	Gloria E. Pinili	Assistant Regional Director
3	Gumersinda A. Sasam	Assistant Chief, Elementary Education Division (EED)
4	Marcial P. Degamo	Chief, Secondary Education Division (SED)
5	Lia S. Chavez	Science Education Supervisor II, EED
6	Policronia B. Garsuta	Math. Education Supervisor II, EED
7	Miguela P. Savellon	Science Education Supervisor II, SED
8	Josefina S. Samson	Math. Education Supervisor II, SED

**RPMT: Regional Project Management Team in Region XI**

1	Diamar P. Kadon	Regional Director
2	Susana Teresa B. Estigoy	Assistant Regional Director
3	Erlina M. Manuzon	Chief, Elementary Education Division (EED)
4	Ursula C. Valderama	Chief, Secondary Education Division (SED)
5	Corazon T. Sabio	Science Education Supervisor II, EED
6	Corazon P. Escalera	Math. Education Supervisor II, EED
7	Milagros Francisco	Science Education Supervisor II, SED
8	Cesor Cole	Math. Education Supervisor II, SED
9	Perla E. Funa	Director, Regional Science Teaching Center, Ateneo De Davao University

Reference 3: Counterpart Personnel Trained in Japan

In-Service Teacher Training (October 26, 2003 – November 15, 2003)		
1	Orfelina O. Tuy	Director, National Educators Academy of the Philippine (NEAP)
2	Carolino B. Mordeno	Regional Director, Region VII

In-Service Teacher Training (October 17, 2004 – November 2, 2004)		
1	Neuve G. Carrascal	Science Education Supervisor II, EED, Region V
2	Celerina B. Donor	Science Education Supervisor II, SED, Region V
3	Maria H. Cabag	Math. Education Supervisor II, EED, Region VI
4	Gumersinda A. Sasam	Assistant Chief, EED, Region VII
5	Josefina S. Samson	Math. Education Supervisor II, SED, Region VII
6	Corazon P. Escalera	Math. Education Supervisor II, EED, Region XI
7	Milagros Francisco	Science Education Supervisor II, SED, Region XI
8	Gloria P. Labor	Schools Division Superintendent, Davao City, Region XI

Reference 4: Equipment Provided by Japan

JFY2002 (Total: Php 2,725,560)		Region V	Region VI	Region VII	Region XI	Total
1	Microscope	90	90	90	0	270
2	Triangles	90	90	90	0	270
3	Protractor	90	90	90	0	270
4	Digital Multimeter	120	120	120	0	360
5	Digital Stopwatch	120	120	120	0	360
6	Bar Magnets	120	120	120	0	360
7	Magnifying Glass	600	600	600	0	1800
8	Thermometer	240	240	240	0	720
9	Tape Measure	60	60	60	0	180
10	Spring Balance	180	180	180	0	540
11	Magnetic Compass	30	30	30	0	90
12	Litmus Paper-Red	30	30	30	0	90
13	Litmus Paper-Blue	30	30	30	0	90
14	Test Tube	30	30	30	0	90
15	Test Tube Rack	120	120	120	0	360

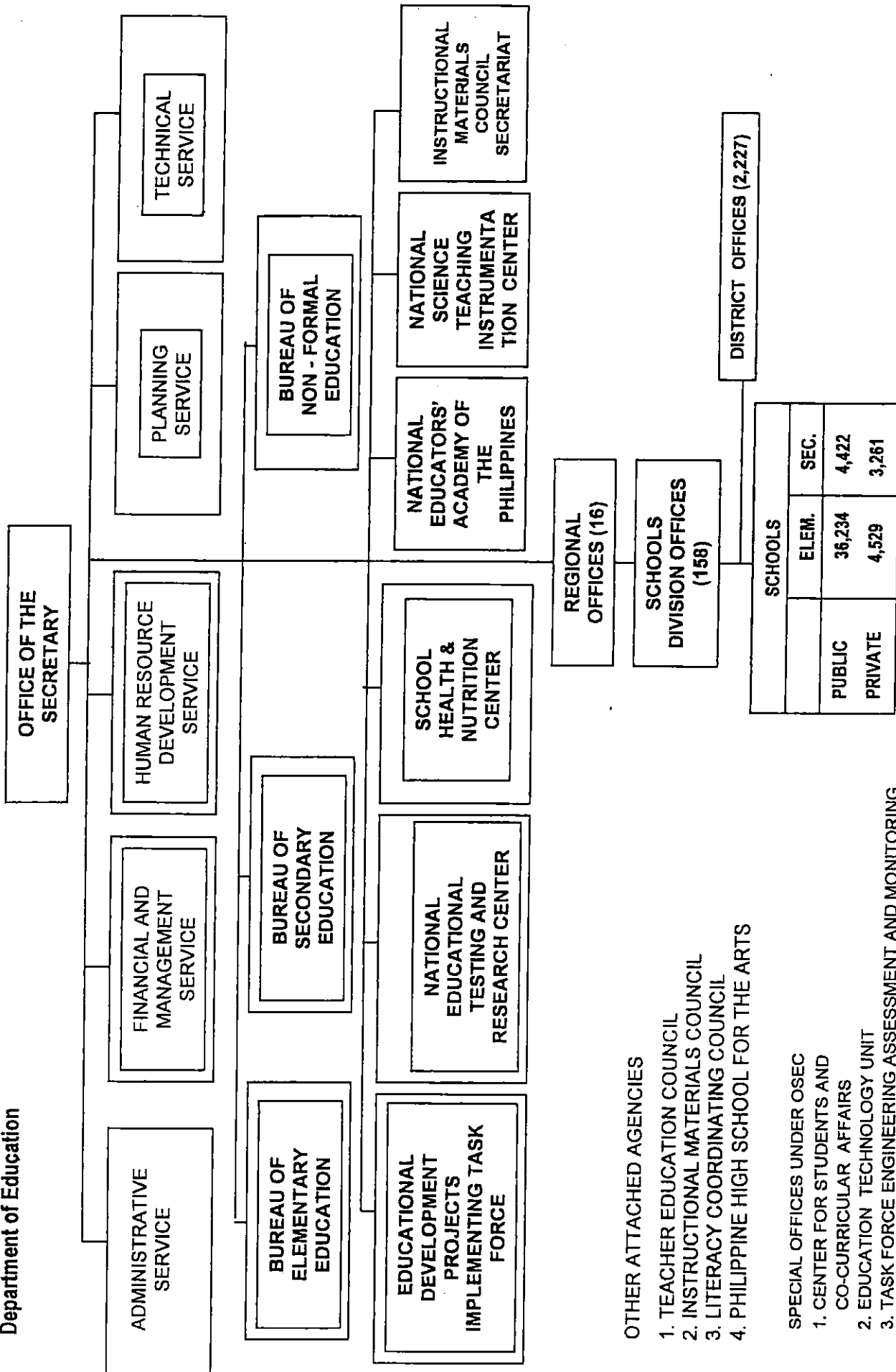
JFY2003 (Total: Php 3666,999)		Region V	Region VI	Region VII	Region XI	Total
1	Microscope	210	210	210	180	810
2	Compass	150	150	150	90	540
3	Triangles	60	60	60	90	270
4	Protractor	60	60	60	90	270
5	Digital Multimeter	80	80	80	120	360
6	Digital Stopwatch	80	80	80	120	360
7	Bar Magnets	80	80	80	120	360
8	Magnifying Glass	400	400	400	600	1800
9	Thermometer	160	160	160	240	720
10	Tape Measure	40	40	40	60	180
11	Spring Balance	120	120	120	180	540

12	Round Magnet	20	20	20	30	90
13	Litmus Paper-Red	20	20	20	30	90
14	Litmus Paper-Blue	20	20	20	30	90
15	Test Tube	20	20	20	30	90
16	Test Tube Rack	80	80	80	120	360

JFY2004 (Total: Php 3,251,692)		Region V	Region VI	Region VII	Region XI	Total
1	Microscope	120	120	120	120	480
2	Preparation of Plants and Animals	120	120	120	120	480
3	Compass	60	60	60	60	240
4	Triangles	60	60	60	60	240
5	Protractor	60	60	60	60	240
6	Digital Multimeter	80	80	80	80	320
7	Bar Magnets	80	80	80	80	320
8	Magnifying Glass	400	400	400	400	1600
9	Thermometer	160	160	160	160	640
10	Spring Balance	120	120	120	120	480
11	Magnetic Compass	20	20	20	20	80
12	Litmus Paper-Red	20	20	20	20	80
13	Litmus Paper-Blue	20	20	20	20	80
14	Test Tube	20	20	20	20	80
15	Test Tube Rack	80	80	80	80	320
16	Test Tube Tongs	160	160	160	160	640
17	Alcohol Lamp	200	200	200	200	800
18	Clear Plastic Geometric Volume Set	120	120	120	120	480

# DEPARTMENT OF EDUCATION Organizational Chart

Reference 5.  
Organization Chart of  
Department of Education



**OTHER ATTACHED AGENCIES**

1. TEACHER EDUCATION COUNCIL
2. INSTRUCTIONAL MATERIALS COUNCIL
3. LITERACY COORDINATING COUNCIL
4. PHILIPPINE HIGH SCHOOL FOR THE ARTS

**SPECIAL OFFICES UNDER OSEC**

1. CENTER FOR STUDENTS AND CO-CURRICULAR AFFAIRS
2. EDUCATION TECHNOLOGY UNIT
3. TASK FORCE ENGINEERING ASSESSMENT AND MONITORING



## Reference 6. List of Philippine Interviewees

### <CPMT>

Dr. Orfelina O. Tuy                      Director, National Educators Academy of the Philippines  
Ms. Zaida Talosig-Azcueta              Chief, Staff Development Division, Human Resource Development Division  
Ms. Elsie C. Esmer                        Senior Education Program Specialist, Staff Development Division, Bureau of  
Secondary Education

### <Region V>

#### RPMT

Dr. Alice Q. Engay                        Assistant Regional Director  
Dr. Lourdes Santiago                    Chief, Elementary Education Division  
Ms. Amy V. Deniega                     Chief, Secondary Education Division  
Ms. Nueve G Carrascal                 Education Supervisor II for Elementary Mathematics  
Ms. Celerina B. Donor                 Education Supervisor II for Secondary Mathematics  
Ms. Leticia B. Bustamante             Education Supervisor II for Secondary Science

#### DPMT (Division of Legaspi City)

Dr. Alice Terry                            Schools Division Superintendent  
Assistant Schools Division Superintendent  
Ms. Imelda R. Caunca                 Education Supervisor I for Science

#### DPMT (Albay City)

Dr. Sancit                                 Education Supervisor I for Mathematics

#### Marcial O. Ranola Memorial School (Secondary School)

Mr. Osias S. Monforte                 School Head

### <Region VI>

#### RPMT

Dr. Jesus L. Nieves                      Assistant Regional Director  
Mr. Toribio M. Berano                 Education Supervisor II for Secondary Science  
Dr. Lourdes N. Morano                 Director, Regional Science Teaching Center, West Visayas State University

#### DPMT (Division of Iloilo)

Dr. Ernola Pahunao                     Assistant Schools Division Superintendent  
Ms. Corazon Espino                     Education Supervisor I for Elementary Science  
Dr. Nenita S. Penuela                 Education Supervisor I for Elementary Mathematics  
Ms. Corazon C. Alarcon                Division Coordinator for Elementary Science  
Ms. Rose Eden T. Calaor               Education Supervisor I for Secondary Science  
Ms. Hemosisima L. Altilero            Education Supervisor I for Secondary Mathematics

### <Region VII>

#### RPMT

Dr. Carolino B. Mordeno                Regional Director  
Dr. Gloria E. Pinili                     Assistant Regional Director  
Dr. Gumersinda A. Sasam              Assistant Chief, Elementary Education Division  
Dr. Marcial P. Degamo                 Chief, Secondary Education Division  
Ms. Josefina S. Samson                Education Supervisor II for Secondary Mathematics

#### DPMT (Division of Talisay City)

Dr. Elsa A. Suralta                     Schools Division Superintendent

Tanke National High School

Mr. Jeditho Dela Cuesta      Teacher in Charge and SBTP Trainer for Secondary Physics

<Region XI>

RPMT

Ms. Corazon P. Escalera      Education Supervisor II for Elementary Mathematics

DPMT (Division of Davao City)

Dr. Gloria P. Labor      Schools Division Superintendent

<NEDA>

Mr. Napoleon B. Imperial      Chief Development Specialist, Social Development Staff

<PNVSCA>

Mr. Joselito C. De Vera      Executive Director

Ms. Fe Turingan Nadado      Program Officer