Trade Department of Vientiane Capital
Socio-Economic and Business Development
Consulting Co., Ltd. (SEB)

REPORT ON PCM WORKSHOP

FOR

"THE PROJECT FOR IMPROVING SCIENCE AND MATHEMATICS TEACHER TRAINING"

FOR DEPARTMENT OF TEACHER TRAINING (DTT) MINISTRY OF EDUCATION

Presented by :

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1. INTRODUCTION

1.1 BACKGROUND TO THE PROJECT

Department of Teacher Training, Ministry of Education (DTT) and Japan International Cooperation Agency (JICA) are planning to start "The Project for Improving Science and Mathematics Teacher Training" (herein under referred to as the Project). The purpose of the Project is "Improving quality of Teacher Training College (TTC) and Teacher Training School (TTS) teachers in science and mathematics". The target group of the Project is TTS/TTC teachers, and those from TAEDC (Teacher Administration Education Development Center) and DTT.

Last September, JICA dispatched a preparatory study team to formulate the Project with DTT. And in consequence the Project framework was agreed as follows:

(1) Training in Japan (TIJ)

TIJ will be implementing annually at NARUTO University of Education in Japan from October to December (2 months). In principle, participants of TIJ are the Teacher Training College (TTC) / Teacher Training School (TTS) teachers, and those from Teacher Development Center (TDC) and the Department of Teacher Training in the Ministry of Education (DTT). Candidates of participants of TIJ will be selected among the participants of annual workshop held on July. In the workshop, performance of the participants will be monitored and candidates of TIJ participants will be decided at the end of the workshop as a result close consultation between JICA experts and the Ministry of Education.

After TIJ, participants of TIJ have obligation to function as instructors in the next year workshop.

(2) Annual Workshop (WS)

WS will be conducted in the Lao P.D.R. around July annually. Several TTC/TTS will be used as the venue of WS. The participants of TIJ, as instructors, teach knowledge obtained in TIJ to other TTC/TTS teachers and those from TDC and DTT. Japanese short-term experts also join the workshop and will give some advice to instructors (TIJ participants) and evaluate their teaching skills.

(3) In-Country Training (ICT)

ICT will be conducted in TTC/TTS annually. Again, the participants of TIJ will be instructors of ICT. Participants of ICT will be those who did not join WS held for the same topics.

1.2 THE INTRODUCTION INTO PCM WORKSHOP

To get the consensus from all stakeholders of this project, the workshop was selected to be a mean of data collecting technique. The workshop began by preparation meeting, at which the consulting team, JICA team leaders, and representatives from Department of Teacher Training involved. The workshop took two days long

The core problem of this workshop was "**Quality of TTC and TTS teachers in science and mathematics are not sufficient for its requirement**". The reasons why this core problem was selected are as follows:

- In the National Poverty Eradication Program (NPEP) in education sector, one of the long-term objectives is stated as "Reach international standards in quality of education at all levels of education".

- In the Project, the target group is set as TTS/TTC teachers, and those from TAEDC and DTT (related to pre-service training).

However, the target group was not involved in the Project formulating process. Hence, it is necessary to provide opportunity for TTC/TTS teachers to participate and discuss together on the problems and needs of teacher training from their viewpoint, in order for promoting their understanding to the project as well as absorbing their opinions and comments to the project design. Thus, JICA and DTT had jointly hold a workshop and an explanatory meeting for this purpose.

1.3 THE OBJECTIVES OF THE WORKSHOP

The main objectives of the workshop were to conduct problem analysis using PCM method in order to identify direct causes and effects of the core problem " **Quality of TTC and TTS teachers in science and mathematics are not sufficient for its requirement**", and complete a problem and objectives trees, which are necessary for the following explanatory meeting.

1.4 THE REPORT OBJECTIVES

This report is composed by Socio-Economic and Business Development Consulting Co., Ltd. (SEB), the firm that gave a service on the workshop facilitation. The purpose of this report is to provide the information on **(1) problem analysis**, **(2) Objective Analysis**, and **(3) Suggestion on changes on tentative Project Design Matrix (PDM) from group discussion from the workshop**. This information will be passed to the owner of the project " hereinafter called Department of Teacher Training, Ministry of Education" and Japan International Cooperation Agency (JICA) - the Funding Agency. The meaningful information from this workshop will support a decision to be taken on changes of tentative PDM and confirmation of the final PDM.

2. GENERAL SITUATION

2.1 THE WORKSHOP COMPONENTS

2.1.1 The Preparation of the workshop

- Meeting with JICA Laos Office and the study team from Japan about the preparation for the workshop.
- Preparing necessary stationeries for the workshop.

2.1.2 The Execution of the workshop

- Giving brief information about PCM workshop to the participants.
- Executing problem analysis
- Completing a problem tree.
- Objectives tree completion
- and means selection

2.1.3 Explanatory Meeting

Finally, when all participants got the consensus on findings found from group discussion, the consulting team presented the final results to the workshop for confirming purpose.

2.2 TRAINERS / FACILITATORS

Mr. Senthong Phothisane, Managing Director of Socio-Economic and Business Development Consulting Co., Ltd., has more than 5 years' experience in several fields of Management, such as Project Management, Marketing Management, Production and Operation Management, Financial Management and others. He was graduated Master of Science (MSc) in Mathematics from Russia and Master of Business Administration (MBA) from Thailand. His work as a consultant includes clients, such as APHEDA/AusAID, IFAD WFP, Lao-Luxembourg Hospital, Lao Red Cross, Lao Women Union, NORAD, Health Unlimited, JICA, Lao Brewery Co., Ltd., UNDP, UNDCP, MAG, Lao National Committee and others. He has a broad range of research works and project feasibility studies.

Dr. Thepsavanh Kitignavong, consultant of Socio-Economic and Business Development Consulting Co., Ltd., has also more than 5 years' experience in several fields of Management, such as Project Management, Marketing Management, Production and Operation Management, Financial Management and others. He was graduated Doctor of Philosophy (Ph.D) in Mathematics from Russia and Master of Business Administration (MBA) from Thailand. He used to conduct many training programmes/workshop for, such as, UNDCP, MCTPC, Lao Water Supply Enterprise (Nam Pa Pa Lao) and others. He has a broad range of researches works, publications, textbooks and project feasibility studies.

2.3 PARTICIPANTS' PROFILE

Participants of the PCM Workshop were :

- Principals of 5 TTC and 3 TTS
- Chief teachers of Science and Mathematics of 5 TTC and 3 TTS
- 2 staffs of TAEDC
- 2 staffs of DTT
- 2 staffs of JICA Laos Office (as observer)
- 3 members of the study team from Japan (as observer)

2.4 WORKSHOP PROGRAMME

After the discussion at meeting, between the consulting team, the representatives from Department of Teacher Training, and team leaders from JICA, the consensus on how to conduct the workshop was reached. The topics to be included at the workshop were clarified, and a timetable was drawn (see appendix 1)

To make sure that the workshop can reach its objectives, after the first hard day but enjoyable of the workshop, the consulting team revised its performances and took some changes on the timetable (see appendix 1)

2.5 WORKSHOP CONDUCTING INSTRUMENTS

Participatory planning always focuses on participation from all workshop participants, to encourage them to participate the consulting team used cards as a main instrument to conduct a group discussion. Following the rules, participants wrote their own ideas on cards and stuck cards on the board. While writing their ideas on cards, they had full freedom to describe (no criticize, no recommendation on each other ideas).

2.6 METHODOLOGIES

As mentioned in the above objectives, to analyse the problem concerned with "Quality of TTC and TTS teachers in science and mathematics" in the workshop used a so called Project Cycle Management (PCM) method. PCM method, which has Project Design Matrix (PDM) at its core, comprises Participatory Planning (PP).

Before a discussion on problem analysis started, facilitators were introducing PCM method to all participants. Through the presentation, facilitators explained the process of PCM (1) Stakeholders analysis, (2) Problem analysis, (3) Objective analysis, (4) Strategies Selection, (5) Project Designed Matrix, and (6) Operational Plan. To emphasize the importance of PCM, Dr.Thepsavanh Kitignavong presented a PCM method background, a development of the PCM, and a list of the organizations' name, which are currently using PCM.

To make the workshop running smoothly as desired,Mr. Sengthong Phothisane introduced (1) Participatory Planning Rules (see appendix 2), (2) Problem Tree analysis Procedure (see appendix 2), (3) Rules for writing Problem Cards (see appendix 2), (4) Objectives Analysis Procedures (see appendix 2).

Having a chance to practice is a one of the good learning methodology for participants, Mr. Sengthong Phothisane took one case study as his teaching method "Case: A Public Bus Corporation" (see appendix 3). After spending some time on a case study, participants were observably absorbed the concept of PCM method.

And finally, a group discussion became implemented. All participants were distributed cards to write. They separately wrote their ideas about direct causes of the core problem on cards and stuck them on a white board. Some of the statements on cards from participants were similar to each other, for these similarity the facilitators took decision to group them first and then placed them in the horizontal line below the core problem.

3. FINDINGS

The participants of the workshop were divided into two groups for group discussing purposes. PCM method seems to be a new method for participants, so on the first day of the workshop the group discussion was run obviously slowly. After spending some time on group discussion, both groups reached their objectives of discussion. The problem trees were drawn as follows:

3.1 FIRST GROUP'S FINDINGS

Direct Causes of the Core Problem perceived by the first group

After a discussion on the propriety of contents of the cards, the following cards were used as Direct Causes :

i. Lack of responsibility from teachers
ii. Less developing teachers
iii. Inexperienced teachers

- Lack of responsibility from teachers

Teachers perceive their work as unchallenging adventure, they leave works behind, and don't even want to develop themselves. As the results there are inertia occurred among teachers of different Teacher Training Institutions. The causes of this problem are as follows :

- Low income
- They are assigned too many jobs
- Inappropriate policy (roles, functions and responsibilities are not clear)

- Less developing teachers

Since their graduates, teachers' knowledge has not been upgraded because of many reasons, such as :

- Lack of training provision
- Lack of sharing experiences among teachers either within or between Teacher Training Institutions
- Less time consuming on studying by themselves
- Inadequacy of teaching materials and equipments
- Inadequacy of supervisions
- Foreign language constraints

- Inexperienced teachers

The other factor influences the quality of science and mathematics teachers perceived by this group is teachers have less experiences. It comes from :

- Lack of sharing experiences among themselves either within or between Institutions
- Low background in science and mathematics
- Foreign language constraints
- Lack of practices
- Lack of readings

3.2 THE SECOND GROUP'S FINDINGS

Direct Causes of the Core Problem perceived by the second group

Participants involved in this group discussion are from higher level of Teacher Training Institutions, and their perceptions on a problem are similar to the first group's findings, such as :

i. Management ineffectiveness
ii. Inadequacy of teaching materials and equipments
iii. Shortage of the richness of the teaching methodologies mix
iv. Deficiency of continuous research and self-development among teachers
v. Low background knowledge of teachers in science and mathematics
vi. Teaching materials and equipments using skills are low

- Management ineffectiveness

In term of ineffectiveness, the participants mean that among institutions job descriptions of teachers currently are not developed. It makes teachers confuse about their roles, functions, and responsibilities. Management team never conducted performance appraisals on teachers' performances, and teachers are not rewarded as they expect. And the group gave opinions on causes of this problem, they are:

- Lack of management skills among high level managers of Teacher Training Institutions
- High level managers don't encourage teachers in improving the quality

- Inadequacy of teaching materials and equipments

Teachers are not encouraged in producing equipments. It comes from :

- Lack of encouragement to support teachers' creativeness
- Inadequacy of budget

- Shortage of the richness of the teaching methodologies mix

Most teachers use the same methods learned from their graduation to teach students. They do not initiate to create new techniques or even do not try to adapt old techniques learned to teach in their classes. This inertia comes from :

- Lack of encouragement to support teachers' creativeness
- Inadequacy of training provisions

- Deficiency of continuous research and self-development among teachers

Most teachers don't know where they are and they don't know how good are their performances, how effective are their teaching equipments, how applicable are their teaching methodologies. The sources of these are :

- Deficiency of information network
- Lack of sharing experiences among teachers within institutions
- Lack of learning experiences with other institutions
- Inadequacy of training provisions
- Foreign language constraints

- Background knowledge of teachers in science and mathematics is low

Some teachers have a good background of science and mathematics, while some are weak in science and mathematics. The direct causes perceived by participants are :

- Lack of supervisions provision from consultants
- Teachers are not motivated to continue learning

- Low skills in teaching materials and equipments usage

The last direct cause of the core problem is low skills in teaching materials and equipments usage. Some teachers teach students unprofessionally in using teaching materials and equipments, it makes students difficult to be absorbed what are being thought. Direct causes of this problem are :

- Lack of demonstration, when teaching materials and equipments were delivered
- Teachers hardly ever use teaching materials and equipments in teaching
- Teachers are not curious in getting information on how to use teaching materials and equipments.

3.3 INTEGRATING RESULTS

As mentioned above that the results of first group and second group discussions, both perceived the root causes of the core problem similarly. Therefore, at the end of the last session of the workshop all participants were encouraged to integrate problem trees into one. Exhibit 1 shows the problem tree obtained from the integration.

3.4 OBJECTIVES ANALYSING RESULTS

To solve the core problem all of direct causes of the core problem and their root causes must be digged up, the participants of the workshop have set up core objective and its direct objectives as shown in Exhibit 2.

3.5 OUTPUTS SELECTION

Not all direct means from the objective tree can be drawn as the outputs. The outputs must be fit with criteria of Project Owner, Funding Agency, and Implementing Agency. Before the selection took into action, the consulting team suggested some criteria to be considered, they were :

- Target group
- Related agencies-sufficient financial resources, manpower, technical capability
- Inputs-cost of Approaches, expert supply
- Needs confirmation
- Policy priority
- Impacts
- Feasibility
- Sustainability

Exhibit 3 shows the results of outputs selection.

Exhibit 1 : Problem tree

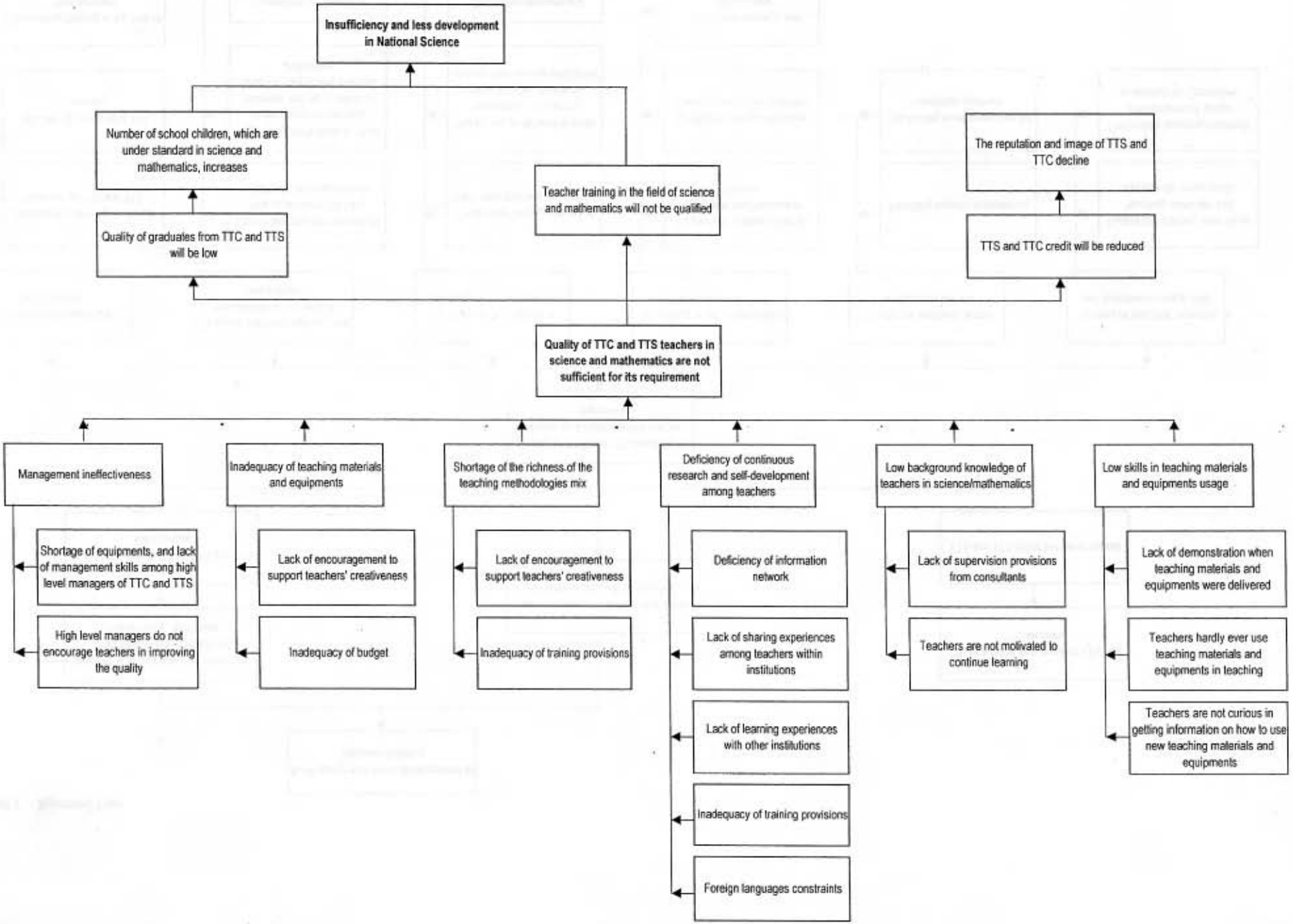


Exhibit 2 : Objectives Tree

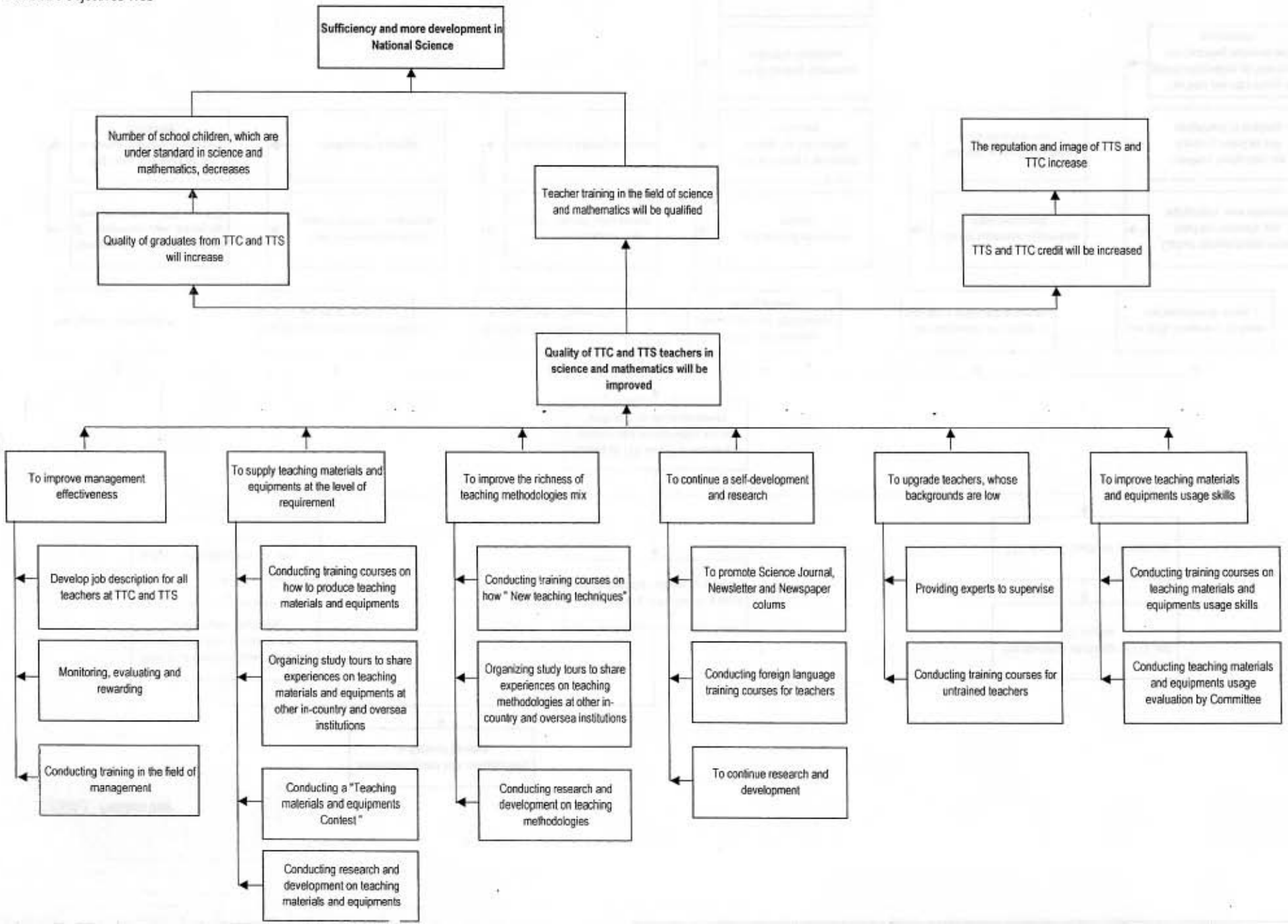
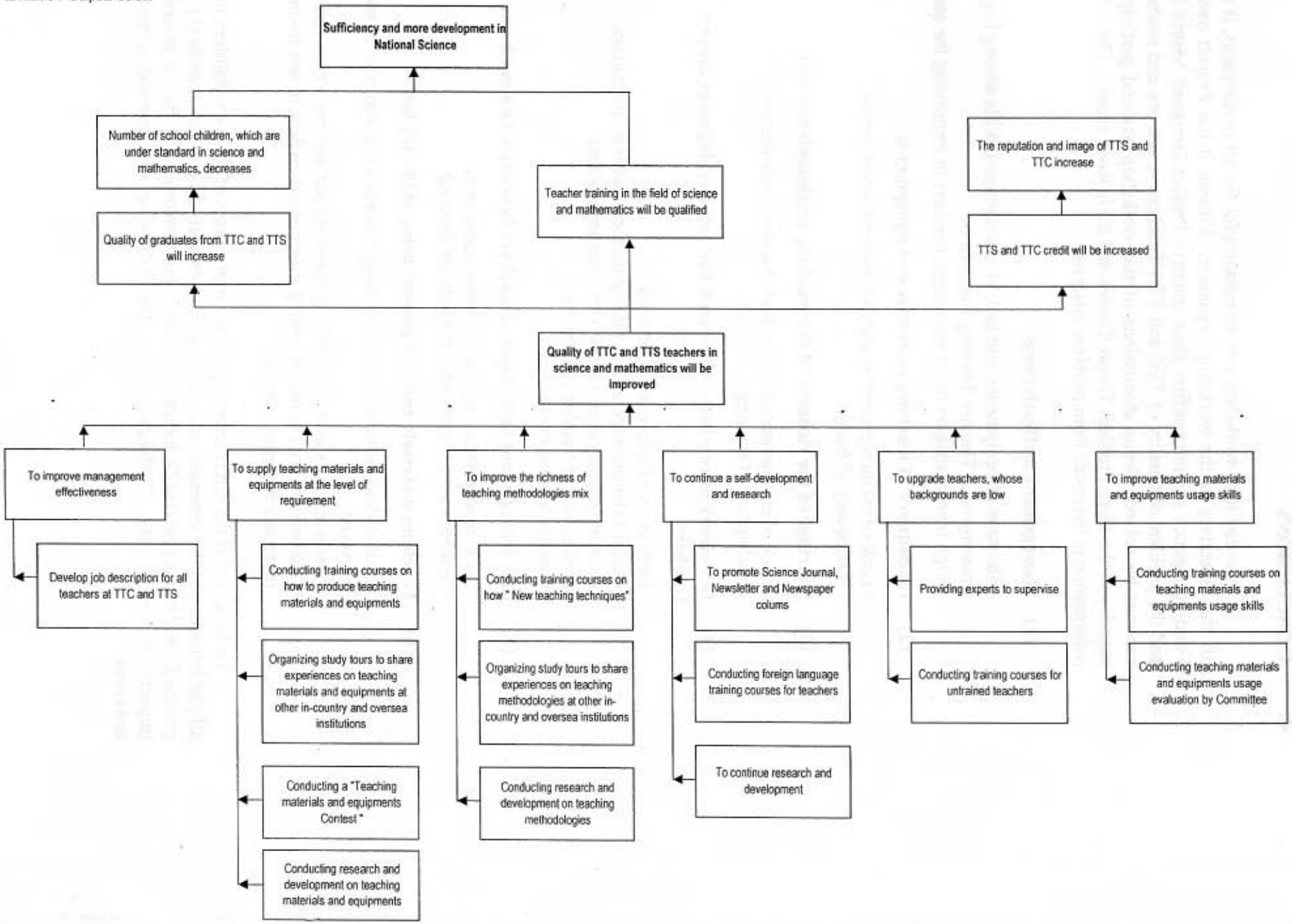


Exhibit 3 : Outputs Select



4. CONCLUSIONS

Two-day long workshop was so meaningful for all participants, it reached all the objectives of the workshop organizer. Without it the Project owner and Funding Agency can not confirm their tentative Project Designed Matrix (PDM), and the problem of Quality of TTC and TTS Teachers in science and mathematics can not be solved. Group discussions of the workshop assisted participants to search out the Core Problem Direct Causes and their Root causes. The following information is the result from problem analysis :

(1) Management ineffectiveness

- Shortage of equipments, and lack of management skills among high level managers of Teacher Training Institutions
- High level managers don't encourage teachers in improving the quality

(2) Inadequacy of teaching materials and equipments

- Lack of encouragement to support teachers' creativeness
- Inadequacy of budget

(3) Shortage of the richness of the teaching methodologies mix

- Lack of encouragement to support teachers' creativeness
- Inadequacy of training provisions

(4) Deficiency of continuous research and self-development among teachers

- Deficiency of information network
- Lack of sharing experiences among teachers within institutions
- Lack of learning experiences with other institutions
- Inadequacy of training provisions
- Foreign language constraints

(5) Low background knowledge of teachers in science and mathematics

- Lack of supervision provisions from consultants
- Teachers are not motivated to continue learning

(6) Teaching materials and equipments using skills are low

- Lack of demonstration, when teaching materials and equipments were delivered
- Teachers hardly ever use teaching materials and equipments in teaching
- Teachers are not curious in getting information on how to use teaching materials and equipments

To bring all of the direct causes and their root causes of the core problem to light, all participants got the consensus on selecting outputs according to the criteria (1) Target group,(2) Related agencies,(3) Inputs, (4) Needs confirmation, (5) Policy priority, (6) Impacts, (7) Feasibility, (8) Sustainability. The following are selected outputs and activities:

(1) To improve the management effectiveness

- Develop job descriptions for all teachers. Teachers must be aware their roles, functions, tasks and responsibilities in improving the quality

(2) To Supply teaching materials and equipments at the level of requirements

- Conducting training courses on "How to produce teaching materials and equipments"
- Organizing study tours to share experiences on teaching materials and equipments production at other in-country and overseas institutions
- Conducting a "Teaching materials and equipment producing contest"
- Conducting research and development on teaching materials and equipments

(3) To improve the richness of the teaching methodologies mix

- Conducting training courses on "New teaching techniques"
- Conducting study tours to share experiences on teaching methodologies at other in-country and overseas institutions
- Conducting research and development on teaching methodologies

(4) To continue a self-development and research

- To promote a science journal, newsletter and newspaper columns
- Conducting foreign language training courses for teachers
- Conducting research and development

(5) To upgrade teachers, whose backgrounds are low

- Providing experts to supervise
- Conducting training courses for untrained teachers

(6) Improving teaching materials and equipments usage skills

- Conducting training courses on teaching materials and equipments usage skills
- Conducting teaching materials and equipments usage evaluation by committee

5. RECOMMENDATION

Despite at the end of workshop Project Owner and Funding Agency reached their objectives, the further workshop should consider about the following points :

- Meeting room size (should be large enough for participatory planning facilitation)
- Enough time for detailed discussion

Socio-Economic and Business Development
Consulting Co., Ltd. (SEB)

Mr. Sengthong PHOTHISANE

APPENDIX 1 : PCM WORKSHOP TIME TABLE

Session	Time	Methodology	Facilitated by
Day 1			
Registration	9:30-10:00		
Opening Ceremony	10:00-10:30		Ms. Sengdeuan Lachanthaboune Head of DTT, MoE
Session 1			
Introduction into workshop, method (PCM) -PCM Participatory Planning Method -Rules of the Participatory Planning Method	10:40-11:00	Presentation by facilitator	Dr. Thepsavanh Kitignavong
Main Steps in Participatory Planning 1. Problems Analysis Procedures 2. Participatory Planning rules 3. Rules of writing Problems Cards 4. Objectives Analysis Procedures	11:00-12:00	Presentation by facilitator	Mr. Sengthong Phothisane
Lunch	12:00-13:00		
Session 2			
Conducting the first workshop session			
1. Introduction into the Core Problem	13:00-13:10	Presentation by facilitator	Mr. Sengthong Phothisane and Dr. Thepsavanh Kitignavong
2. Direct Causes identification	13:10-14:45	Group Discussion	
Coffee Break	14:45-15:00		
3. Sub Direct Causes Identification	15:00-16:00	Group Discussion	
Day 2			
Session 3			
Conducting the second workshop session			
1. Revision	8:30-8:40	Presentation	Mr. Sengthong Phothisane
2. Sub Direct Causes Identification	8:40-9:40	Group Discussion	
3. Presentation	9:40-10:20	Presentation	Representatives from each group
4. Integrating results	10:20-10:30	Group Discussion	Mr. Sengthong Phothisane and Dr. Thepsavanh Kitignavong
Coffee Break	10:30-10:45		
5. Objectives analysis	10:45-11:45	Presentation	Group Member
6. Finalizing the results	11:45-12:00		
Lunch	12:00-13:00		
Revising PDM with JICA team leader	13:00-16:00	Explanatory Meeting	National Consultants and JICA team leader

APPENDIX 2

(1) Participatory Planning Rules

1. Write your own statement on a card.
2. Write only one idea on a card.
3. Make your statement specific.
4. Express your statement in a concise sentence.
5. Stick to the facts and avoid abstractions and generalizations.
6. Make it a rule to write cards before beginning discussions.
7. Do not remove a card from the board before a consensus is obtained.
8. Do not ask who wrote a particular card.

(2) Problems Analysis Procedures

1. Identify a core problem.
2. Write the problems that are direct causes of the Core Problem (Direct Causes) on cards and place them in a horizontal line under the core problem.
3. Discuss the propriety of the contents of the cards, the placement of cards, and whether or not there are additional causes. Them select the cards to use as Direct Causes.
4. Next, determine the direct causes for each of the Direct Causes identified in procedure 3. Write them out on cards and place them in a horizontal line under each Direct Cause. Then, perform a procedure like that described in 3.
5. Repeat these procedures for the next set of direct causes, broadening the tree as you work downward.
6. The space above the core problem is for direct effects of the Core Problem. Write the direct effects of the Core Problem (Direct Effects) on cards and place them in a horizontal line above the core problem.
7. Discuss the propriety of the contents of the cards, the placement of cards, and whether or not there are additional effects. Then select the cards to use as Direct Effects.

8. Next, determine the direct effects for each of the Direct Effects identified in procedure 7. Write them out on cards and place them in a horizontal line over each Direct Effect. Then, perform a procedure like that described in 7 and make a decision on this set of effects. Repeat these procedures for the next set of direct effects, and work your way upward.
9. Confirm that the scope of the core problem is appropriate based on cause and effect relationships among cards, the problems and weaknesses identified in stakeholders Analysis, and the expected project framework. Then, after reviewing rules for writing problem cards and point to keep in mind for analysis, complete the tree by connecting the cards with lines.

(3) Rules for Writing Problem Cards

1. Indicate existing problems
2. Write problems – negative situations
3. Write one problem per card.
4. Describe the problem in a sentence
5. Try to avoid expressions such as " No (solution or resource) is available. " Instead, describe the conditions resulting from the lack or absence of particular solutions or resources.
6. Do not include both the cause and the effect of a problem on one card.

(4) Objectives Analysis Procedures

1. Identify the Core Objective. All objectives cards should bear sentences describing desired situations.
2. Write the potential direct means for the Core Objective (Direct Means) on cards and place them in a horizontal line under the Core Objective.
3. Discuss the propriety of the contents of the cards, the placement of cards, and whether or not there are additional means. Them select the cards to use as Direct Means.

4. Next, determine the potential direct means for each of the Direct Means identified in procedure 3. Write them out on cards and place them in a horizontal line under each Direct Means. Then, perform a procedure like that described in 3 and make a decision on this set of means.
5. Repeat these procedures for the next set of direct means, broadening the tree as you work downward.
6. The space above the Core Objective is for direct objectives of the Core Objective. Write the potential direct objectives of the Core Objective (Direct Objectives) on card and place them in a horizontal line above the Core Objective.
7. Discuss the propriety of the contents of the cards, the placement of cards, and whether or not there are additional objectives. Then select the cards to use as Direct Objectives.
8. Next, determine the direct objectives for each of the Direct Objectives identified in procedure 7. Write them out on cards and place them in a horizontal line over each Direct Objective. Then, perform a procedure like that described in 7 and make a decision on this set of objectives. Repeat these procedures for the next set of direct objectives, and work your way upward.
9. Confirm that the means-ends relationships among cards are appropriate and that there are no means or ends missing from each level. Then, after reviewing points to keep in mind for analysis, complete the tree by connecting the cards with lines.

APPENDIX 3

Case : A Public Bus Corporation

Situation

L City, the capital of Latin American Country A, has one public bus corporation, which owns 90 percent of the buses in the city, and three small private bus companies. Buses are the principal means of transportation for the citizens of L City. Over the past ten years, the number of bus accidents has increased dramatically, becoming the primary cause of traffic congestion. Citizens are very critical of the recent increase in fatal accidents involving the public bus corporation and the high number of its employees (1,550) relative to the poor service provided.

The media often cover problems with bus service and have been critical of the accident-prone public bus corporation. As a result, citizens have turned to the relatively safe private bus companies, and the operations of the public bus corporation have further deteriorated.

The causes of many of the accidents involving the public bus corporation were technical. Buses are old and in disrepair, regular maintenance checks are not performed, repairs are hampered by shortages of spare parts and equipment, and mechanics are poorly trained. Accidents are also caused by the bus drivers' failure to observe traffic laws, typified by excessive speed on poorly maintained roads and disregard of traffic signals.

The public bus corporation, via Country A's Ministry of Transport, has requested the cooperation of the Japanese government in improving the public bus corporation's services.

４．プロジェクト説明会のために調査団が持参した資料

Project for Improving Science and Mathematics Teacher Training

Department of Teacher Training, Ministry of Education

Japan International Cooperation Agency (JICA)

The purpose of the Project

- Quality of TTC and TTS teachers in science and mathematics will be improved.

Target group of the Project

People concerning pre-service teacher training on science and mathematics

- TTC/TTS teachers
- TEADC staff
- DTT staff

Components of the Project

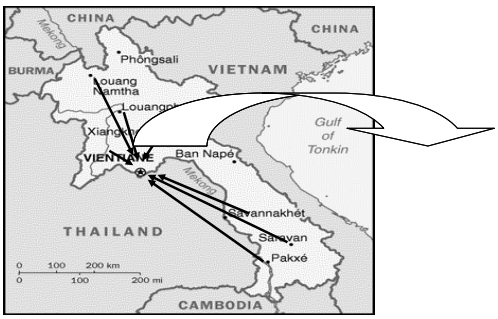
1. Training in Japan (TIJ)
2. Workshop in Laos (WS)
3. In-country Training (ICT)

Outline of the Project-1

Training in Japan (TIJ)

- 2 months training in Japan
- Participants : TTC / TTS teachers, TEADC,DTT (10 people per one year)
- Candidates of participants will be selected among the participants of annual workshop in Laos.
- After TIJ : Participants of TIJ have obligation to function as instructors in the next year workshop.

TIJ

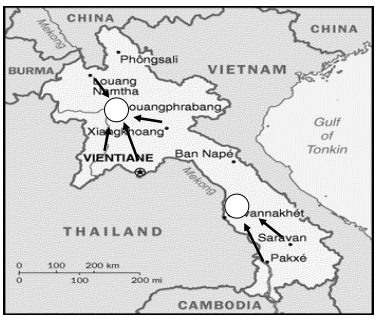


Outline of the Project-2

Workshop in Laos (WS)

- 2 times per one year in July or August (2 places)
- Instructors: Participants of TIJ, Japanese experts
- Participants: TTC / TTS teachers, TEADC,DTT (about 40 people per one WS, 10 people per one subject)

WS



Outline of the Project-3

In-country Training (ICT)

- More than 1 times per one year in each TTC/TTS
- Instructors: Participants of TIJ
- Participants: TTC / TTS teachers, TEADC,DTT (about 10 people per one ICT)

ICT

Contents of TIJ-1

1. To know about Japanese school system, education system, teacher training system
   - ➢ Review the education system in the Laos and specify the problems to be solved.
2. To identify topics difficult for TTC/TTS students and students of primary and lower secondary schools to understand.
   - ➢ Learn Japanese methodology.
   - ➢ Develop teaching guides on the topics.

Contents of TIJ-2

3. To observe real lessons in primary and lower secondary schools in Japan.
   - ➢ Learn Japanese methodology.
   - ➢ Design lessons appropriate in the Laos.
4. To take lectures and practice evaluation skills.

Contents of WS-1

1. To introduce knowledge learned in TIJ
   - Review the education system in the Laos and specify the problems to be solved.
   - Take lectures on the current educational situation in Japan by Japanese experts
2. To identify topics difficult for TTC/TTS students and students of primary and lower secondary schools to understand.
   - Give lectures with use of the developed teaching guides.
   - Discuss for confirmation of the teaching guides.

Contents of WS-2

3. To introduce lessons designed in TIJ.
   - Participants design lessons by themselves.
   - Participants conduct trial lessons in some primary and lower secondary schools, and instructors monitor and evaluate them.
   - Japanese short-term experts evaluate overall activities in WS.
4. Participants of TIJ evaluate the trial lessons conducted by participants.
   - Japanese short-term experts evaluate instructors' evaluation.

Contents of ICT-1

1. To introduce knowledge learned in TIJ
   - Review the education system in the Laos and specify the problems to be solved.
2. To identify topics difficult for TTC/TTS students and students of primary and lower secondary schools to understand.
   - Give lectures with use of the developed teaching guides.

Contents of ICT-2

3. To introduce lessons designed in TIJ.
   - Participants design lessons by themselves.
   - Participants conduct trial lessons in some primary and lower secondary schools, and instructors monitor and evaluate them.
4. Participants of TIJ evaluate the trial lessons conducted by participants.

Outputs of the Project

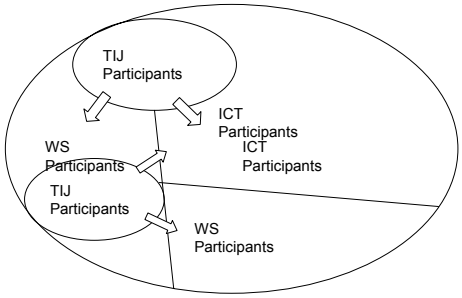
1. TTC/TTS teachers will understand the educational situation of the Laos and be aware of their roles and functions in improving the situation.
2. Teaching guides on science and mathematics used for pre-service training in TTC/TTS are developed and utilized.
3. TTC and TTS teachers will understand qualified lessons in science and mathematics.
4. WS and ICT will be properly implemented and evaluated by the participants of TIJ.

Duration of the Project

- From April 2004 to March 2008 (four years)

Schedule

	Oct	Jan	Apr	Jul	Oct	Jan
TIJ	———				———	
WS				Review meeting – –		
ICT		———	———		– – –	– – –



Monitoring and Evaluation

Monitoring
- Questionnaire
- Review Meeting, etc.

Evaluation (before and after the Project)
- Class observation, etc.

Class observation

December 2003
- Luang Praban, Pakse TTC

March 2004
- Xiengkhouang, Savanaket, Bankeun TTC

Thank you

5．プロジェクト説明会に使用した資料（ラオス語）

ໂຄງການປັບປຸງການຮຽນການສອນວິທະຍາສາດແລະຄະນິດສາດ

ກົມສ້າງຄູ, ກະຊວງສຶກສາ

ອົງການຮ່ວມມືສາກົນຍີ່ປຸ່ນ (JICA)

ຈຸດປະສົງຂອງໂຄງການ

ປັບປຸງຄຸນນະພາບຄູວິທະຍາສາດແລະຄະນິດສາດໃນວິທະຍາໄລຄູແລະໂຮງຮຽນສ້າງຄູ

ກຸ່ມເປົ້າໝາຍຂອງໂຄງການ

ແມ່ນຜູ້ທີ່ກ່ຽວຂ້ອງກັບວຽກງານການກໍ່ສ້າງຄູວິທະຍາສາດແລະຄະນິດສາດ

- ຄູໃນວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ
- ພະນັກງານສູນພັດທະນາຄູແລະຜູ້ບໍລິຫານການສຶກສາ
- ພະນັກງານກົມສ້າງຄູ

ອົງປະກອບຂອງໂຄງການ

1. ຝຶກອົບຮົມທີ່ປະເທດຍີ່ປຸ່ນ (TIJ)
2. ກອງປະຊຸມໃນລະດັບຊາດ (WS)
3. ຝຶກອົບຮົມໃນທ້ອງຖິ່ນ (ICT)

ສ້າງລວມໂດຍຫຍໍ້ກ່ຽວກັບໂຄງການ-1

ຝຶກອົບຮົມທີ່ປະເທດຍີ່ປຸ່ນ (TIJ)

- ຝຶກອົບຮົມທີ່ປະເທດຍີ່ປຸ່ນ2ເດືອນ
- ຜູ້ເຂົ້າຮ່ວມ: ຄູຈາກວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ, ສູນພັດທະນາຄູ-ຜູ້ບໍລິຫານການສຶກສາ, ກົມສ້າງຄູ (10 ຄົນ/ປີ)
- ຜູ້ທີ່ສະໜັກ,ແມ່ນຈະໄດ້ຄັດເລືອກເອົາຜູ້ເຂົ້າຮ່ວມຝຶກອົບຮົມໃນກອງປະຊຸມລະດັບຊາດຢູ່ ລາວ.

- ຫຼັງຈາກກັບມາ: ຜູ້ທີ່ໄດ້ຮັບການຝຶກອົບຮົມຕ້ອງໄດ້ປະຕິບັດໜ້າທີ່ເປັນຜູ້ຊີ້ນຳໃນກອງປະຊຸມສຳຫຼັບປີຕໍ່ໄປ.

ສັງລວມໂດຍຫຍໍ້ກ່ຽວກັບໂຄງການ-2

ກອງປະຊຸມລະດັບຊາດ (WS)

- 2 ຄັ້ງຕໍ່ປີ ໃນລະຫວ່າງເດືອນ ກໍລະກົດ (7) ຫຼື ເດືອນສິງຫາ (8) (2 ບ່ອນ)
- ຜູ້ຊີ້ນຳ: ຜູ້ທີ່ໄດ້ເຂົ້າຮ່ວມການຝຶກອົບຮົມຈາກຍີ່ປຸ່ນແລະຊ່ຽວຊານຍີ່ປຸ່ນ
- ຜູ້ເຂົ້າຮ່ວມ: ຄູຈາກວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ, ສູນພັດທະນາຄູ-ຜູ້ບໍລິຫານການສຶກສາ, ກົມສ້າງຄູ (ປະມານ 40ຄົນ/ກອງປະຊຸມ 1 ຄັ້ງ, 10 ຄົນ/1 ວິຊາ)

ສັງລວມໂດຍຫຍໍ້ກ່ຽວກັບໂຄງການ-3

ກອງປະຊຸມຢູ່ທ້ອງຖິ່ນ (ICT)

- ແຕ່ລະວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ ແມ່ນຈັດຫຼາຍກ່ວາ 1 ຄັ້ງ/ປີ
- ຜູ້ຊີ້ນຳ: ຜູ້ທີ່ໄດ້ເຂົ້າຮ່ວມການຝຶກອົບຮົມຈາກຍີ່ປຸ່ນ
- ຜູ້ເຂົ້າຮ່ວມ: ຄູຈາກວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ, ສູນພັດທະນາຄູ-ຜູ້ບໍລິຫານການສຶກສາ, ແລະກົມສ້າງຄູ (ປະມານ 10 ຄົນ/ກອງປະຊຸມ 1 ຄັ້ງ)

ເນື້ອໃນຂອງການເຝິກອົບຮົມໃນປະເທດຍີ່ປຸ່ນ TIJ-1

1. ເພື່ອໃຫ້ຮູ້ກ່ຽວກັບລະບົບຂອງໂຮງຮຽນ, ລະບົບການສຶກສາ, ລະບົບການເຝິກອົບຮົມຄູໃນປະເທດຍີ່ປຸ່ນ.
- ພິຈາລະນາລະບົບການສຶກສາຂອງລາວ, ເຈາະຈົງບັນຫາທີ່ຈະແກ້ໄຂ.

2. ກຳນົດຫົວຂໍ້ທີ່ນັກຮຽນເຂົ້າໃຈຍາກ (ນັກຮຽນໃນວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ, ນັກຮຽນຊັ້ນປະຖົມແລະມັດທະຍົມຕອນຕົ້ນ).
- ຮຽນຮູ້ແບບແຜນແລະວິທີການຕ່າງຂອງຍີ່ປຸ່ນ.
- ພັດທະນາຄູມືການສອນ

ເນື້ອໃນຂອງການເຝິກອົບຮົມໃນປະເທດຍີ່ປຸ່ນ TIJ-2

3. ເຂົ້າຮ່ວມແລະສັງເກດການສອນຕົວຈິງໃນຫ້ອງຮຽນຂອງຊັ້ນປະຖົມແລະມັດທະຍົມຕອນຕົ້ນຂອງຍີ່ປຸ່ນ

- ຮຽນຮູ້ແບບແຜນແລະວິທີການຕ່າງໆຂອງຍີ່ປຸ່ນ.
- ອອກແບບແລະດັດແປງໃຫ້ແທດເໝາະກັບສະພາບຂອງລາວ

4. ຟັງການບັນຍາຍແລະເຝິກຊ້ອມການປະເມີນຜົນ

ເນື້ອໃນຂອງກອງປະຊຸມ WS-1

1. ເພາະນຳຄວາມຮູ້ທີ່ໄດ້ຮຽນຈາກການເຝິກອົບຮົມທີ່ຍີ່ປຸ່ນ

- ທົບທວນຄືນລະບົບການສຶກສາຢູ່ໃນລາວແລະເຈາະຈົງບັນຫາທີ່ຄວນແກ້ໄຂ
- ບັນຍາຍສະພາບການສຶກສາຂອງປະເທດຍີ່ປຸ່ນໃນປະຈຸບັນໂດຍຊ່ຽວຊານຍີ່ປຸ່ນ

2. ກຳນົດຫົວຂໍ້ທີ່ນັກຮຽນເຂົ້າໃຈຍາກ (ນັກຮຽນໃນວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ, ນັກຮຽນຊັ້ນປະຖົມແລະມັດທະຍົມຕອນຕົ້ນ).

- ໃຫ້ການບັນຍາຍດ້ວຍການນຳໃຊ້ຄູ່ມືການສອນທີ່ໄດ້ປັບປຸງແລ້ວ
- ສົນທະນາແລກປ່ຽນຄວາມຄິດເຫັນກ່ຽວກັບຄູ່ມືການສອນ

ເນື້ອໃນຂອງກອງປະຊຸມ WS-2

3. ເພາະນຳບົດຮຽນທີ່ໄດ້ຮັບການອອກແບບໃນຍີ່ປຸ່ນ

- ຜູ້ເຂົ້າຮ່ວມເຝິກອົບຮົມວາງແຜນການສອນດ້ວຍຕົນເອງ
- ຜູ້ເຂົ້າຮ່ວມເຝິກອົບຮົມທົດລອງເອົາບົດຮຽນໄປປະຕິບັດໃນໂຮງຮຽນຊັ້ນປະຖົມແລະມັດທະຍົມຕົ້ນ, ແລ້ວຕີລາຄາ.
- ຊ່ຽວຊານຍີ່ປຸ່ນ(ໄລຍະສັ້ນ)ປະເມີນຜົນຄູຜູ້ຊີ້ນຳກອງປະຊຸມ.

4. ຜູ້ທີ່ໄດ້ຮັບການຝຶກອົບຮົມຈາກປະເທດຍີ່ປຸ່ນຕີລາຄາບົດຮຽນທີ່ວາງແຜນໂດຍຜູ້ເຂົ້າຮ່ວມເຝິກອົບຮົມ.

- ຊ່ຽວຊານຍີ່ປຸ່ນ(ໄລຍະສັ້ນ)ປະເມີນຜົນການຕີລາຄາຄູຜູ້ຊີ້ນຳຄູໃນກອງປະຊຸມ.

ເນື້ອໃນຂອງການເຝິກອົບຮົມໃນທ້ອງຖິ່ນ ICT-1

1. ແນະນຳຄວາມຮູ້ທີ່ໄດ້ຮຽນຈາກການເຝິກອົບຮົມໃນຍີ່ປຸ່ນ
   - ທົບທວນຄືນລະບົບການສຶກສາຂອງລາວແລະເຈາະຈົງບັນຫາທີ່ຄວນແກ້ໄຂ.

2. ກຳນົດຫົວຂໍ້ທີ່ນັກຮຽນເຂົ້າໃຈຍາກ (ນັກຮຽນໃນວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູ, ນັກຮຽນຊັ້ນປະຖົມແລະມັດທະຍົມຕອນຕົ້ນ).
   - ໃຫ້ການບັນຍາຍດ້ວຍການນຳໃຊ້ຄູ່ມືຄູທີ່ໄດ້ຮັບການປັບປຸງແລ້ວ

ເນື້ອໃນຂອງການເຝິກອົບຮົມໃນທ້ອງຖິ່ນ ICT-2

3. ເນາະນຳບົດຮຽນທີ່ໄດ້ວາງແຜນໃນຍີ່ປຸ່ນ
   - ຜູ້ເຂົ້າຮ່ວມເຝິກອົບຮົມວາງແຜນສອນດ້ວຍຕົວເອງ
   - ຜູ້ເຂົ້າຮ່ວມເຝິກອົບຮົມທົດລອງເອົາບົດຮຽນໄປປະຕິບັດໃນໂຮງຮຽນຊັ້ນປະຖົມແລະມັດທະຍົມຕົ້ນ, ຄູຜູ້ຊີ້ນຳປະເມີນຜົນ.

4. ຄູທີ່ໄດ້ເຂົ້າຮ່ວມການຝຶກອົບຮົມໃນປະເທດຍີ່ປຸ່ນຕີລາຄາບົດຮຽນທົດລອງທີ່ດຳເນີນໂດຍຄູໃນກອງປະຊຸມ.

ຜົນໄດ້ຮັບຂອງໂຄງການ

1. ຄູໃນວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູຈະເຂົ້າໃຈຕື່ມກ່ຽວກັບສະຖານະພາບການສຶກສາຂອງລາວ ແລະ ຮູ້ເຖິງໜ້າທີ່ແລະກິດລະບຽບໃນການປັບປຸງສະພາບການ.

2. ຄຸ່ມືການສອນວິຊາວິທະຍາສາດແລະຄະນິດສາດທີ່ໃຊ້ໃນການຝຶກອົບຮົມໃນວິທະຍາໄລຄູ/ໂຮງຮຽນສ້າງຄູແມ່ນໄດ້ຮັບການປັບປຸງແລະຖືກນຳໃຊ້.

3. ຄູໃນວິທະຍາໄລຄູແລະໂຮງຮຽນສ້າງຄູຈະເຂົ້າໃຈເຖິງຄຸນນະພາບຂອງບົດຮຽນວິຊາວິທະຍາສາດ ແລະຄະນິດສາດ.

4. ກອງປະຊຸມລະດັບຊາດແລະການຝຶກອົບຮົມໃນທ້ອງຖິ່ນຈະຖືກປະຕິບັດແລະຖືກປະເມີນຜົນ ດ້ວຍຄູທີ່ໄດ້ເຂົ້າຮ່ວມການຝຶກອົບຮົມຈາກປະເທດຍີ່ປຸ່ນ.

ໄລຍະຂອງໂຄງການ

- ແຕ່ເດືອນເມສາ(4), 2004 –ເຖິງ ເດືອນມີນາ(3), 2008 (ໄລຍະ 4 ປີ)

ການຕິດຕາມແລະປະເມີນຜົນ

ການຕິດຕາມ

- ແບບສອບຖາມ
- ກອງປະຊຸມທົບທວນຄືນ, ແລະ ອື່ນໆ.

ປະເມີນຜົນ (ກ່ອນແລະຫຼັງໂຄງການ)

- ສັງເກດການຮຽນການສອນ, ແລະ ອື່ນໆ.

ສັງເກດການຮຽນການສອນ

ເດືອນທັນວາ (12), 2003.

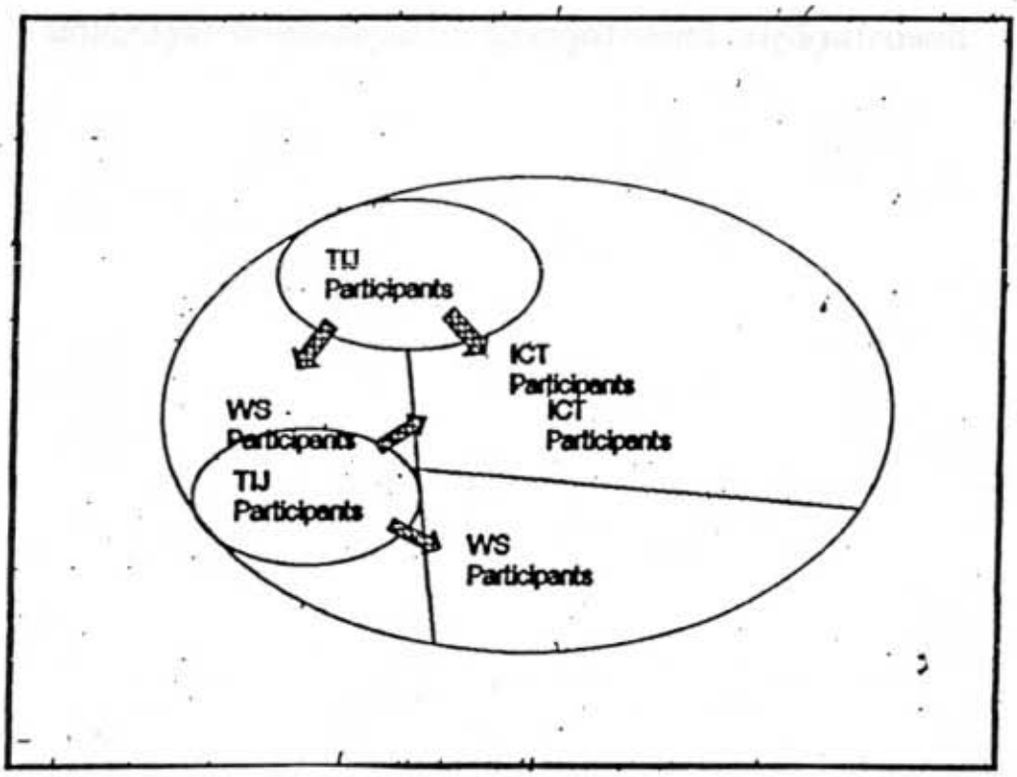
- ວິທະຍາໄລຄູຫຼວງພະບາງ, ວິທະຍາໄລຄູປາກເຊ

ເດືອນມີນາ (3), 2004.

- ວິທະຍາໄລຄູຄັງໄຂ, ວິທະຍາໄລຄູສະຫວັນນະເຂດແລະວິທະຍາໄລຄູບ້ານເກີນ.

Schedule

	Oct	Jan	Apr	Jul	Oct	Jan
TIJ	—				—	
WS				Review meeting — —		
ICT		—	—		— — —	— —



Program of the class observation

Pakse

22-Dec		Name of the teacher	Subject	Title No.	Title	Experience WS
9:00	9:50	Mr. Somzay Boousambath	Chemi	4	The preservation of the environment and the purification	2000, 2001
10:00	10:50	Mr. Keooudon Mahathong	Phy	1	Heat and temperature of object	Not sure, ex-student of Pakse TTC
14:00	14:50	Ms. Vantha Phomvongsa	Chemi	1	The difference of enviropment between developed country and under developing country	2001
15:00	15:50	Mr. Samlane Tabeethong	Phy	3	Property and ability of electric current	None

23-Dec		Name of the teacher	Subject	Title No.	Title	Experience WS
8:00	8:50	Mr. Bounsoiy Khamphoumee	Phy	4	Equilibrium of level and equal arm balance	None
9:00	9:50	Ms. Siamphone Sirapet	Chemi	3	Analize the level of the air pollution and the waste on the water	2003
10:00	10:50	Mr. Bounthong Meinsopa	Phy	2	Characteristic of light	Training in Philippine Now taking a bachelor degree in Thailand
11:00	11:50	Ms. Souliya Simjinda	Chemi	2	Environment around us and quality of water. How to find the contamination of environmental water quantitatively	Not sure, ex-student of Pakse TTC

Program of the class observation

Luang Praban

22-Dec		Name of the teacher	Subject	Title No.	Title	Experience WS
8:30	9:30	Mr. Bounthien	Math	2	Make students understand the subtract of the positive number and negative number	Not sure
9:40	10:25	Mrs. Bounthieng	Bio	1	Vertibrate animals and invertibrate animals	None
10:40	11:30	Mr. Mek	Math	4	Make students understand a Pythagorean Theorem	None
11:15	12:00	Ms. Douangmala	Bio	4	The mechanism of digestion in human being	Not sure
23-Dec		Name of the teacher	Subject	Title No.	Title	Experience WS
8:15	9:05	Mr. Virakith	Math	1	Make students understand a way of finding trapezoid area	None
9:15	10:10	Mrs. Kansone	Bio	2	Relationships between living organism and the environment	2001, 2003
10:20	10:55	Mr. Chitthavong	Math	3	Make students think of a lot of ways about summation of the square interior angle	None
11:00	12:00	Mr. Somchanh	Bio	3	Photosynthesis of the plant	2000

Timetable of Key Trainers Training Program
January - August 2004

	January				February				March					April				May				June					July				August				
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
1 Finalise PD Program		14 & 15																																	
2. Regional Workshops (20 days)																																			
Regional Workshops				26-30th Pakse										1-5th Salavanh		NEW YEAR					3-7th Savannakhet					14-18th Pakse								
3. College Workshops (8 days)																																			
Pakse						•	•				•	•								•	•												•	•	
Salavanh						•	•				•	•								•	•												•	•	
Savannakhet						•	•				•	•								•	•												•	•	
4. Field Trip (2 Days)																																			
Field Trip at each site												•																							
5. Action Research (30 days)																																			
Action Research Meetings (3 days)					•								•								•														
Action Research in Schools						XXXXXX														XXXXXX															
Action Research in College						XXXXXXX														XXXXXXXX															
6. Staff Training (30 days)																																			
Pakse																																			
Salavanh																																			
Savannakhet																																			