

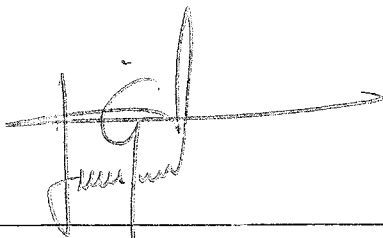
MINUTES OF MEETING
BETWEEN THE JAPANESE PREPARATORY STUDY TEAM AND
THE AUTHORITIES CONCERNED OF
THE GOVERNMENT OF THE REPUBLIC OF EL SALVADOR ON
JAPAN'S TECHNICAL COOPERATION FOR IMPROVEMENT ON
MATHEMATICS TEACHING IN PRIMARY EDUCATION

The Japanese preparatory study team (hereinafter referred to as “the Team”), organized by Japan International Cooperation Agency (hereinafter referred to as “JICA”) and headed by Mr. Masazumi Ogawa, visited the Republic of El Salvador from 18th June to 22nd June 2005 in order to discuss and agree with the Salvadoran authorities concerned (hereafter referred to as “the Salvadoran side”) on the overall project framework of the Japanese Technical Cooperation regarding the Improvement on Mathematics teaching in primary education (hereinafter referred to as “the Project”).

During its stay in the Republic of El Salvador, the Team exchanged views and had a series of discussions with the Salvadoran side regarding Japanese cooperation.

As a result of the discussions, both the Salvadoran side and the Team agreed upon the matters referred to in the document attached hereto.

San Salvador, 21st June, 2005



Mr. Jose Luis Guzman
Vice Minister
Ministry of Education
The Republic of El Salvador



Mr. Masazumi Ogawa
Leader
Preparatory Study Team
Japan International Cooperation Agency
Japan

THE ATTACHED DOCUMENT

1. PARTICIPANTS OF THE MEETING

1.1 The meeting was held between the Salvadoran side, and JICA on 21st June, 2005 in San Salvador. The participants are listed below.

The Salvadoran side

MINED

Mr. Jose Luis Guzman	Viceminister
Ms. Lorena de Varela	National Directorate of Education
Mr. Manuel Menjivar	Manager of Pedagogical Management
Ms. Janeth de Lopez	Manager of Classroom Quality Monitoring
Ms. Margarita Montalvo	Head of Academic Unit
Ms. Graciela de Salgado	Head of Professors' Professional Development
Ms. Dalila Ramirez	Academic Unit (Technician Officer of Mathematics curriculum)
Ms. Silvia Chavez	Teachers' Training Coordinator
Ms. Maria Celina Guardado	Mathematician
Mr. Oscar Lemus	Management Technician of Classroom Quality Monitoring
Ms. Celia Moran	Advisor of COMPRENDO Program

The Japanese side

JICA Preparatory Study Team

Mr. Masazumi Ogawa	Team Leader, Preparatory Study Team, JICA
Ms. Takako Koizumi	Team member (Education Planning), Preparatory Study Team, JICA
Mr. Masahiro Matsumura	Team member (Cooperation Planning), Preparatory Study Team, JICA
Ms. Keiko Shiraishi	Team member (Planning and Coordination), JICA
Mr. Norihiro Nishikata	Adviser on Basic Education in Honduras
Ms. Tamako Ago	Project Coordinator, Regional Project for Improving Teaching Method in Mathematics in Honduras
Mr. Junichi Miura	Assistant Resident Representative, JICA Honduras Office

Embassy of Japan in El Salvador

Mr. Kazuyoshi Shimizu	Second Secretary, Embassy of Japan in El Salvador
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JICA El Salvador Office

Mr. Masayuki Takahashi
Mr. Akira Ichioka
Ms. Shinobu Toyooka

Resident Representative
Project formulation adviser
JOCV Coordinator

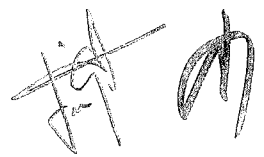
2. BACKGROUND

2.1 Ministry of Education (hereinafter referred to as “MINED”) proposed a new initiative of public policy of long term, ‘National Plan 2021’. This Plan seeks to implement policies and high-priority educational goals with a long term vision. As one of the inputs of designing and planning of this plan, MINED has kept in mind to achieve the MDGs: It’s projected that, by 2015, to achieve universal primary education.

2.2 Regarding primary education, The Program COMPRENDO, one of the ten programs included in the National Plan 2021, is a methodological proposal for improving children’s learning in mathematics and Spanish in elementary schools. There are three areas of activities: A: adaptation and distribution of teaching and learning materials, B: teacher training technical advice and monitoring, and C: evaluation on children’s learning. The basis of COMPRENDO is to revise pedagogical practice and teaching methods of teachers in the classroom in order to improve children’s learning. For that, COMPRENDO focuses on offering a formative proposal, and then generating analysis, discussion and improvement of the teaching practice.

2.3 Among main subjects, the students’ academic achievement in Mathematics at primary level is especially low, and this problem is much worse in higher grades. A study done by JICA also reveals that teachers feel most difficult to teach mathematics among all subjects.

2.4 With all these facts mentioned earlier, the improvement of basic achievement in Mathematics is in the highest priority. Thus, MINED requested Japan technical cooperation as part of its policy for improvement on mathematics teaching, in line with the Program COMPRENDO. The contents of request are elaborating/adopting



teaching manuals, workbooks for the children, and training manual for in-service teachers in Salvadorian context, and training for in-service teachers.

2.5 This Project will be planned and implemented in the framework of JICA's Regional cooperation for improving primary mathematics teaching (hereinafter referred to as "Regional Project"). Based on the successful achievement of the project in Mathematics in Primary level (hereinafter referred to as "PROMETAM"), the Regional Project will share and utilize the experience by conducting trainings in Honduras for personnel from El Salvador and technical exchange visits in order to improve mathematics teaching. These strategies are in line with current Japanese Official Development Assistance policy as it places high priority on strengthening teacher education and supports regional collaboration among countries that share similar cultural and linguistic background.

3. ISSUES THAT WERE DISCUSSED

During the meeting, the Salvadoran side and the Team discussed the following issues, the result of which is summarized as below:


3.1 The consistency with the needs of the government

The Salvadoran side explained that National Plan 2021 is integrated by four strategies, one of which is effectiveness of basic and secondary education. The program COMPRENDO, one of the programs included in the National Plan 2021, is to improve learning of mathematic and language. The both sides confirmed that the Project is consistent with the plan and the program above mentioned.

3.2 The counterparts (C/Ps)

The Salvadoran side will assign seven personnel as counterparts of the Project. Seven personnel consists of: One from respective department of Professors' Professional Development (Unidad de Desarrollo Profesional Docente), Academic Unit (Unidad Academica), and Classroom Quality Monitoring (Gerencia de Seguimiento a la Calidad)(here in after referred as to "G3"). One from each of the four centers of professors' professional development.

The roles of them are:



1. Adaptation of teachers guidebooks and workbooks for the pupils developed by Honduras PROMETAM
2. Development of training manuals
3. Training for G30 with the assistance by Japanese experts
4. Implementation of the activities in the pilot area (G3 and a member of the pilot area)

Notes: If necessary, Ministry of Education will assign additional support for the effective execution of the above mentioned role.

Among these seven, G3 will participate in the activities concerned with the Regional Project.

3.3 The scale of the Project

Both sides agreed that a pilot area will be selected, and monitoring and evaluation of training will be conducted. The Salvadoran side will decide the most convenient area for implementing the pilot project by the time of second preparatory study team is dispatched. Regarding other areas that are not covered by the Project, the Team suggested that JICA will consider to dispatch JOCV in collaboration with the Project.

3.4 Target cycle of basic education

Both sides agreed that the Project will focus on the first cycle (from 1st grade to 3rd grade), as for second cycle (from 4th grade to 6th grade) the Salvadoran side will obtain the data of teachers guidebooks and workbooks for the pupils of the second cycle from the Government of Honduras. After that, JICA will provide necessary technical support for its adaptation.

3.5 Dispatch of experts

Both sides agreed that JICA will dispatch a long term expert in El Salvador, whose Terms of Reference should be further discussed by both sides and submitted by MINED, and short-term experts from Honduras to better respond to the needs of the Salvadoran side.



3.6 Commencement and duration of the Project

The Project will start on April 1st, 2006, with duration of four years.

4. OTHERS

The Team requested the Salvadoran side to submit the plan of operation of COMPRENDO Program.

5. WAY FORWARD

The Salvadoran side and the Team discussed tentative schedule for starting the Project and agreed as follows:

Date	Event	Major issues to be treated
September, 2005 (tentative)	Training for counterparts in Japan	The proposal from MINED will be considered
October, 2005	Training for C/P by JICA expert	Planning of 1 st and 2 nd grade teachers' training to G30
November, 2005	Training for G30 implemented by C/P	Contents of 1 st and 2 nd grades
March, 2006	Official agreement	Measures to be taken by both Governments, administration of the Project

Other schedule apart from the above listed has not been fixed.



MINUTES OF MEETING
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE REPUBLIC OF
EL SALVADOR
ON
TECHNICAL COOPERATION FOR THE PROJECT FOR THE IMPROVEMENT OF
MATHEMATICS TEACHING IN PRIMARY EDUCATION
(COMPRENDO—JICA)

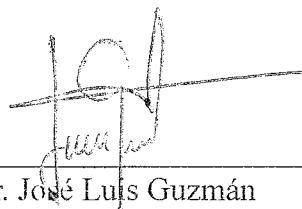
The Second Preparatory Study Team (hereinafter referred to as “the Team”) of Japan International Cooperation Agency (hereinafter referred to as “JICA”) visited the Republic of El Salvador from January 29th to February 2nd 2006 and had a series of discussions with the Salvadoran authorities concerned (hereinafter referred to as “the Salvadoran side”) on desirable measures to be taken by both Japanese and Salvadoran Governments for successful implementation of the Project for the Improvement on Mathematics Teaching in Primary Education (hereinafter referred to as “the Project”).

As a result of the discussions, the Team and the Salvadoran side agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

San Salvador, February 2nd, 2006



Mr. Kazutoshi Onuki
Leader
The Second Preparatory Study Team
Japan International Cooperation Agency
Japan



Mr. José Luis Guzmán
Vice Minister
Ministry of Education
The Republic of El Salvador

ATTENDANT LIST

The discussions between JICA and the Salvadoran side to the project were held in San Salvador

The Salvadoran side

Ministry of Education (MINED)

Mr. José Luis Guzmán	Vice minister
Ms. Lorena de Varela	National Directorate of Education
Mr. Manuel Menjívar	Manager of Pedagogical Management
Ms. Janeth de López	Manager of Classroom Quality Follow-up
Ms. Margarita Montalvo	Head of Academic Unit
Ms. Graciela de Salgado	Head of Professors' Professional Development
Ms. Vilma de Alvarado	Academic Unit (Technical Officer of Mathematics curriculum)
Mr. Silvio Hernán Benavides	Academic Unit (Technical Officer of Mathematics curriculum)
Mr. Gustavo Cerros Urrutia	Academic Unit (Technical Officer of Mathematics curriculum)
Ms. Carlos Alberto Cabrera	Academic Unit (Technical Officer of Mathematics curriculum)
Ms. María Celina Guardado	Mathematician
Mr. Oscar Lemus	Management Technician of Classroom Quality Follow-up
Ms. Dalila Ramírez	Mathematics Technician of Professors' Professional Development Center (CDPD), Central Region
Mr. Abel Rojas Aguirre	Mathematics Technician of Professors' Professional Development Center (CDPD), Western Region
Mr. Carlos López Flores	Mathematics Technician of Professors' Professional Development Center (CDPD), Eastern Region

The Japanese side

JICA Second Preparatory Study Team

Mr. Kazutoshi Onuki	Team Leader
Ms. Shinobu Toyooka	Educational Cooperation
Mr. Motohiro Matsumura	Cooperation Planning
Mr. Norihiro Nishikata	Regional Cooperation (JICA Expert, Chief Advisor for PROMETAM in Honduras)



JICA El Salvador Office

Mr. Masayuki Takahashi

Resident Representative

Mr. Akira Ichioka

Project Formulation Adviser

Ms. María Alvarado de Rivera

Program Coordinator

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ATTACHED DOCUMENT

I. BACKGROUND OF THE PROJECT

In El Salvador, educational reforms have been promoted successfully for the last two decades, as one of the target sectors Salvadoran governments put priority to. Ministry of Education (hereinafter referred to as “MINED”) has carried out policies such as modernization and decentralization of administration, improvement of accessibility to schools by increasing the number of teachers and school infrastructure and the EDUCO program (Spanish abbreviation for “Education with Community Participation”) that has become a model for improving involvement of parents in children’s education in many countries. As a consequence, enrollment rate of primary school has made tremendous improvement from net ratio 78.0% (‘91) to 93.1% (‘04). Also its disparity between urban and rural areas was improved. Yet repetition and dropout rates need further improvement, given that the survival rate to the 6th grade is 65.2% and 169,000 children of school age do not complete primary school.

MINED has recognized importance of the quality and the equity as well as the access, as stated in Education for All and MDGs in order to reduce repetition and drop-outs. On this basis MINED has launched National Plan 2021, which seeks to implement policies and high-priority educational goals with a long term vision. One of the strategies in the Plan is to strengthen effectiveness of basic and middle education and MINED has set up a National Program, COMPRENDO, in order to improve children’s level of Mathematics and Spanish Language in the 1st and the 2nd cycles (from the 1st to the 6th grade) and seeks to revise pedagogical practices and teachers’ teaching methods in the classroom.

Of these two subjects, the students’ academic achievement in mathematics is not at expected level. National Test of Learning Achievement in 2004 indicates that 43% of pupils of the 3rd grade have only acquired basic knowledge of mathematics, obtaining the least achievement among four main subjects. Moreover, a study, which was implemented by JICA in 2004, also shows that teachers in primary education feel that mathematics is the most difficult subject among all subjects to teach.

With all these facts mentioned earlier, MINED has requested technical cooperation to Japan as part of its policy for improvement on mathematics teaching. The contents of request are elaborating/adapting teaching manuals for teachers, textbook/workbook for the students, training manual for in-service teachers in Salvadoran context and follow-up them in the classroom.

This Project will be planned and implemented in the framework of JICA’s Regional Cooperation for improving primary mathematics teaching (hereinafter referred to as “the Regional Project”). Based on the successful achievement of the Project in Mathematics in Primary Education in Honduras (hereinafter referred to as “PROMETAM”, Spanish

abbreviation for the “Project for the Improvement of Teaching Method in Mathematics”), personnel from El Salvador and from the other countries will share and utilize the experience of the “PROMETAM” and the knowledge that each country has already had. For that purpose, various trainings, including technical exchange visits, will be held in El Salvador, Honduras and Japan as the main component of the Regional Project. The Regional Project is in line with current Japanese Official Development Assistance policy, as it places high priority on strengthening teacher education and supports regional collaboration among countries that possess similar cultural and linguistic background.

II. OUTLINE OF THE PROJECT

Both sides agreed on the framework of the Project, which is summarized in first draft of Project Design Matrix (PDM) in Annex 1, and on the schedule of the Project summarized in the first draft of Plan of Operation (PO) in Annex 2. The details will be further discussed and summarized as Record of Discussion (R/D) by the 31st of March 2006.

III. DURATION OF THE PROJECT

The duration of technical cooperation for the Project will be three years, from the 1st of April 2006 to the 31st March 2009.

IV. COUNTERPARTS AND PERSONNEL CONCERNED OF THE PROJECT

The Salvadoran side will assign ten personnel as counterparts of the Project (hereinafter referred to as ‘G10’). G10 will implement technical transfer to 20 personnel (hereinafter referred to as ‘G20’).

1. Members of G10

- One project coordinator (Head of Academic Unit)
- One Mathematics technician from respective department of Professors Professional Development, Academic Unit and Classroom Quality Follow-up (hereinafter referred to as ‘G3’).
- Three Mathematics technicians from Academic Unit (Elaborating teaching material Unit)
- One Mathematics technician from each of the three Centers of Professors’ Professional Development (hereinafter referred to as CDPD).

2. Members of G20

- Mathematics Professors from selected universities with teachers training programs within the framework of the agreements established with MINED.

Details of technical assistance are shown in organization chart in Annex 3 and the list of members above mentioned, are shown in Annex 4.

V. ORGANIZATION OF THE PROJECT

Both sides agreed on the first draft of the Project Design Matrix (PDM) in Annex 1 and

organizational chart of the Project in Annex 3.

VI. TARGET GRADE OF THE PROJECT

The project will target from the 1st to the 6th grade.

VII. TARGET SCHOOLS OF THE PROJECT

1. To validate the teachers' guidebook and students' textbook and workbook
 - Two collaborator schools were selected in the central region.
2. To monitor and evaluate the use of the teachers' guidebook and students' textbook and workbook
 - Five laboratory schools, including the two schools mentioned above, were selected in the central region.
 - MINED will select sub laboratory schools in the Occidental and Oriental region by 17th February 2006 and will inform JICA for the consideration of the expense of the print of those materials mentioned above.

The list of laboratory schools is shown in Annex 4.

VIII. INPUTS

1. Japanese side
 - a. Long term expert (Coordinator/Mathematic Education)
 - b. Short term experts (tentative: Improvement of Teaching Method, Education evaluation)
 - c. Regional training for the core group (G3+1) in Japan and Honduras.
 - d. Technical assistance of PROMETAM in additional trainings for the activities of the project.
 - e. One vehicle
 - f. Printing of teachers' guidebook, students' textbook and workbook and other necessary materials for the laboratory and the sub laboratory schools
 - g. Other necessary equipment.
2. Salvadoran side
 - a. Core Group G10 and G20
 - b. Office space and necessary facilities for the long-term expert
 - c. Driver, insurance, fuel expenses and maintenance expenses of the vehicle and parking space.
 - d. Distribution of the teachers' guidebook, students' textbook and workbook and other necessary materials to the laboratory and the sub laboratory schools.
 - e. Other necessary expenses to implement the project jointly defined.

IX. SCHEDULE BEFORE IMPLEMENTING THE PROJECT

Several activities from January to March 2006 were planned by MINED and the details are

shown in Annex 2.

X. OTHERS

1. JICA will consider the dispatch of Japan Overseas Cooperation Volunteers to support COMPRENDO program.
2. Both sides agreed that G10 from MINED and CDPD will continue performing their activities during the period of the Project.
3. Both sides agreed that the Salvadoran side will be responsible for the expenses for the design and plotting of the teaching materials which will be elaborated.
4. The Salvadoran side will maintain the in-service teachers training system and the follow-up unified strategy with its own funds, in which the Mathematics Professors from selected universities with teachers training programs within the framework of the agreements established with MINED , implement the training during the period of the project.
5. Japanese experts' technical assistance will mainly focus on 5 laboratory schools in the central region.
6. In case of changing/adding members of G10, MINED will inform JICA by the 17th of February 2006.

ANNEX1 Project Design Matrix (PDM)

ANNEX2 Plan of Operation (PO)

ANNEX3 Project Organization Chart

ANNEX4 List of members of G10,G20, laboratory school and Follow-up team



Period: 2006.4. ~ 2009.3.

Direct beneficiary group -Core Group G10

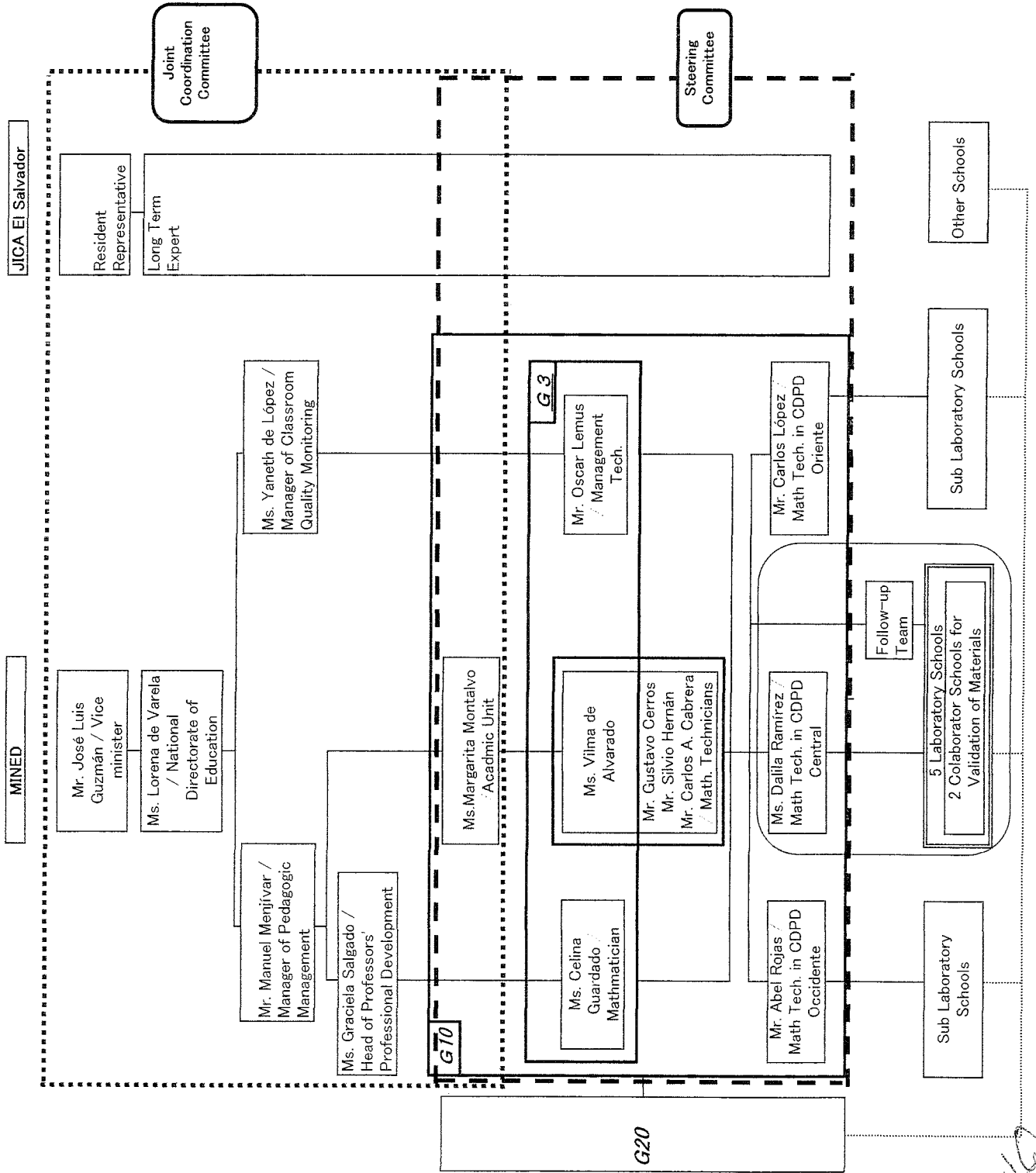
Indirect beneficiary group -G20, Teachers, students, follow-up team (pedagogic advisors, management advisors) of the 5 laboratory schools in the Central Region and of the laboratory and the sub laboratory schools in the Oriental and Occidental Region.

Narrative summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal Mathematics teaching, in primary education, improved.</p>	<ul style="list-style-type: none"> • Results of class development assessment 	<ul style="list-style-type: none"> • Project 	<ul style="list-style-type: none"> • Teachers' training operational processes.
<p>Project Purpose Teachers' guidebooks students' textbook (1st. to 6th. Grade) and students' workbook (1st. to 3rd. Grade) perfected.</p>	<ul style="list-style-type: none"> • Verification by MINED 	<ul style="list-style-type: none"> • MINED 	<ul style="list-style-type: none"> • The main line of educational policy if maintained.
<p>Outputs 1. Competence, of the G10 core group on Mathematicas didactics (Elaboration of guide books, students' textbook - 1st to 6th grade- and workbook -1st to 3rd grade-, evaluation, training, etc), strengthened. 2-1. Version, for the validated guidebook, students' textbook -1st to 6th grade- and workbook -1st to 3rd grade- in the area of Mathematics in primary school, elaborated. 2-2. Validation, of the version "Result 2-1", completed.</p>	<p>1-1. Results from regional trainings and from G10 and G30 trainings. 1-2. Products (Training Manual, tool kits for continuous evaluation) 2. Products (teachers' guidebook, students' textbook -1st to 6th grades- and workbook -1st to 3rd grades-)</p>	<p>1-1. Training Report 1-2. MINED 2. Project</p>	<ul style="list-style-type: none"> • Math curricular guides for the elementary level are maintained.
<p>Activities 1.1. To plan activities 1.2. To participate in trainings (Elaboration of the teachers' guidebook, students' textbook -1st to 6th grade- and workbook -1st. to 3rd-, evaluation, training, etc) organized by the Regional Project 1.3. To share the information and experiences of the Project with the core groups of the other countries involved within the framework of the Regional Project through the communications network. 1.4. To elaborate a training manual from G20 to teachers of the laboratory schools. 1.5 G10 trains G20. 1.6. G10 monitors trainings carried out by G20 for teachers of the laboratory schools 1.7. G10 prepares the tool kit for continuous evaluation 1.8 G10 provides technical assistance to the follow-up team in the area of Mathematics. 1.9. G10 provides technical assistance to teachers and follow-up teams of the 5 laboratory schools in the Central Region and to those in the Occidental and Oriental Regions. 1.10. G10 gives feedback to the strategies of the "Comprendo Program" utilizing the experiences of 1-9 1.11. G10 carries out periodical socializations among members of G10 1.12. To publish the progress of the project, periodically. 2.1 To elaborate the Salvadoran version to validate the Mathematics curricular guide materials (the teachers' guidebook, students' textbook and workbook) from 1st. and 2nd Grades. 2.2. To validate, redesign and plot the Salvadoran version of 1st. and 2nd. Grade. 2.3. To analyse the content of PROMETAM teachers' guidebook, students' textbook and notebooks of 3rd. Grade with the Salvadoran curriculum guide 2.4. To train 3rd. Grade collaborator teachers 2.5. To validate, redesign and plot the Honduran version for 3rd. Grade (in two collaborator schools) 2.6. To print and distribute materials of 1st., 2nd. and 3rd. Grade for the laboratory schools. 2.7. To analyse the content of PROMETAM's teachers' guidebook and workbook for 4th., 5th. and 6th. Grades with the Salvadoran curricular guide. 2.8. To train collaborator teachers of 4th. 5th and 6th Grade. 2.9. To validate, redesign and plot Honduran materials for 4th., 5th. and 6th. Grades (in two school centers) 2.10. To print and distribute materials of 4th., 5th. and 6th. Grades for the laboratory schools.</p>	<p>JAPAN a. Long term expert b. Short term experts c. Regional training for the core group (G3+1) in Japan and Honduras. d. Technical assistance of PROMETAM in additional trainings for the activities of the project. e. One vehicle f. Printing of teachers' guidebook, students' textbook and workbook and other necessary materials for the laboratory and the sublaboratory schools g. Other necessary equipment.</p> <p>Contribution El Salvador a. Core Group G10 and G20 b. Office space and necessary facilities for the long term expert c. Driver, insurance, fuel expenses and maintenance expenses of the vehicle and parking space. d. Distribution of the teachers' guidebook, students' textbook and workbook and other necessary materials to the laboratory and the sub laboratory schools. e. Other necessary expenses to implement the project</p>	<p>Insure the necessary funds to guarantee the activities planned.</p>	<p>Preconditions •MINED should guarantee that the members of G10 and G20 work on the activities of the Project.</p>

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Organization Chart of the Project

ANNEX 3



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*Ministerio de Educación
Dirección Nacional de Educación
Gerencia de Gestión Pedagógica
Jefatura de Desarrollo Profesional Docente*



PROFILE OF EXPERTS INTEGRATING G-10 IN MATHEMATICS
MINISTRY OF EDUCATION

NO	NAME	PROFESIÓN	POSITION	INSTITUTION
1	ROSA MARGARITA MONTALVO DE CASTRO	BA in Literature	Head of the Academic Unit	Ministry of Education
2	VILMA CALDERON SORIANO DE ALVARADO	Teaching in Middle School Specialized in Mathematics. BA in Educational Science	Technician Specialized in Mathematics of the Academic Unit	Ministry of Education
3	OSCAR EDGARDO LEMUS ROMERO	BA in Educational Science	Technician of the Department of Pedagogical Advisory	Ministry of Education
4	MARIA CELINA GUARDADO FLORES	BA in Education, specialized in Mathematics Middle School Professor, specialized in Mathematics Masters Degree Student	Technician of the Professors Professional Development Unit.	Ministry of Education
5	ABEL ROJAS	Middle School Professor, specialized in Mathematics BA in Educational Science Masters Degree student	Technician specialized in Mathematics of Professors Professional Development	Professional Development Center, (CDPD) Western Region, MINED
6	MARIA DALILA RAMÍREZ	Middle School Professor, specialized in Mathematics. BA in Education Masters Degree student.	Technician specialized in Mathematics of Professors Professional Development ..	Professional Development Center, (CDPD) Central Region, MINED

7	CARLOS EDUARDO LÓPEZ	Middle School Professor, Specialized in Mathematics and Physics. BA in Educational Science	Technician specialized in Mathematics of Professors Professional Development	Professional Development Center, (CDPD) Eastern Region, MINED
8	CARLOS ALBERTO CABRERA	BA in Mathematics	Technician specialized in Math of the Academic Unit	Ministry of Education
9	GUSTAVO ANTONIO CERROS	Math Professor	Technician specialized in Math of the Academic Unit.	Ministry of Education
10	SILVIO HERNÁN BENAVIDES	Math Professor BA in Education in Population	Technician specialized in Math of the Academic Unit.	Ministry of Education

LIST OF LABORATORY SCHOOLS IN THE CENTRAL REGION

Registered Number	School's Name	Pedagogical advisor	Follow-up Team	
			Management Advisor	Follow-up Coordinator
11422	CENTRO ESCOLAR REPUBLICA ORIENTAL DEL URUGUAY	Rosa America Zelaya	Vilma Viana de Roque	Ricardo Alfredo Orellana Cruz
11652	CENTRO ESCOLAR GUSTAVO MARROQUIN	Sonia Anabella de Hernández	Angel Ricardo Orellana	Ricardo Alfredo Orellana Cruz
88064	CENTRO ESCOLAR CATOLICO SAN MATEO APOSTOL	Leyla Yesica Quintanilla	Tito Serafin Ramirez	Jesús Ramirez Ortiz
14840	CENTRO ESCOLAR LA CIMA DOS	Diego Guadalupe Jiménez	Aracely Ávila de Hernández	Lucy de Zamora
11393	CENTRO ESCOLAR REPARTO VALLE NUEVO	Alma Dinora Angulo	Walter Oswaldo Paredes	Blanca Margarita Iraheta



*Ministerio de Educación
Dirección Nacional de Educación
Gerencia de Gestión Pedagógica
Jefatura de Desarrollo Profesional Docente*



PROFILE OF EXPERTS INTEGRATING G-20 IN MATHEMATICS

N°	NAME	PROFESIÓN	POSITION	INSTITUCIÓN
1.	ARMANDO GONZALO CALDERÓN	*Industrial Engineer *Professor of Middle Education Specialized in Math and Physics	Full time professor	Institute Specialized in Higher Education, El Espíritu Santo
2.	LICDA RUTH ELIZABETH TOBAR VDA DE CHAMORRO	*BSc in Education *Professor of Middle Education Specialized in Math and Physics	Part-time professor	Institute Specialized in Higher Education, El Espíritu Santo
3.	ALMA EVELIN SANTOS MÉNDEZ	*Professor in Middle Education to teach Math and Physics *BA in Educational Science, with specialization in Math and Physics *Masters Degree in Educational Technology (Estudiando actualmte)	Teaching courses coordinator Subjects taught: Mathematics I, II Professional Practice I, II, III, IV, V Numerical Logical Reasoning.	Francisco Gavidia University
4.	DANILO ANTONIO LEIVA CHACON	Math and Physics Professor BA in Mathematics	Full-time professor	Francisco Gavidia University
5.	SONIA CORDOVA ACEVEDO	Engineer	Full-time professor	University of Sonsonate
6.	FRANKLIN ANTONIO MENA VALLE	Electrical engineer	Full-time professor: Math coordinator, numerical method coordinator	Don Bosco University
7.	SANTOS EDIS MALDONADO	Civil Engineer, BA & MA in Business Administration and Company Consultant	Full-time Professor: Mathematics Coordinator I (CC.EE.)	Don Bosco University
8.	MARIA GUADALUPE MARTÍNEZ ZALDÍVAR.	Math & Science Professor and BA in Philosophy and Educational Science	Part-time professor, teaching the subject of Math curricular guide development to	UNICO

			Teaching Practice Supervisor	professors and BA students.	
9.	ANA YANIRA PÉREZ BARRIENTOS		Teaching Practice Supervisor	Professor	UNICO
10.	ULISES ARQUIMIDES CRUZ LÓPEZ		BA in Education, Specialized in Mathematics	Full-time professor	Pedagogic University of El Salvador
11.	JORGE HUMBERTOCASTELLANOS		BA in Education, Specialized in Mathematics	Full-time professor	Pedagogic University of El Salvador
12.	SILVIA BERMUDEZ		Math Engineer	Professor	UCA
13.	CLAUDIA CUELLER		BA in Science, Math Professor	Professor	UCA
14.	ERNESTO AMÉRICO HIDALGO CASTILLO		BA in Mathematics	Full-time professor	National University of El Salvador, San Salvador
15.	CLAUDIA PATRICIA CORCIO DE BELTRÁN		BA in Mathematics	Full-time professor	National University of El Salvador, San Salvador
16.	ANA MIRIAM DE CHÁVEZ		BA in Mathematics, Masters Degree in Didactics	Full-time professor	National University of El Salvador, San Salvador
17.	JOSÉ ANTONIO HERNÁNDEZ		BA in Mathematics	Full-time professors, Professors Education	National University of El Salvador, San Miguel
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19.	WALTER WILLIAM ARANA		BA in Mathematics	Full-time professor	National University of El Salvador, Santa Ana
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