

## Summary Paper of the Final Evaluation

<b>1. Outline of the Project</b>	
Country : Papua New Guinea	Project Title: “the Project for Enhancing Quality In Teaching Through TV Program”
Field: Education	Cooperation Scheme : Technical Cooperation
Department in charge: Basic Education Division I, Basic Education Group, Human Development Department	Cooperation Budget (As of August 2008) : 555,075 (thousand yen)
Cooperation Period: (R/D signed) 6 <sup>th</sup> July, 2005 (Amendment R/D signed) 22 <sup>nd</sup> December, 2006 3 Years and 3 months (2005.8.28~2008.12.22)	Counterparts : Department of Education, Curriculum Development Division, National Education Media Center, Department of Education of East Sepik Province, Department of Education of Autonomous Region of Bougainville
	Japanese Side : JICA (Outsourced company; IC NET Limited)
<b>1-1 Background and outline of the project</b>	
<p>The Independent State of Papua New Guinea is mostly covered by the remote areas such as mountainous or isolated islands areas. In those remote areas, especially, the quality and quantity of education is distinctly lacked because of the difficulty of the access to the areas. The Government has recognized the necessity of improving the situation, and in 1993 the Department of Education began working on educational reforms. Then, in 1994 the Department has instituted the “Education Development Plan 1995-2004”, which had its emphasis on the provision of the opportunities of taking nine years of basic education to all children. Therefore the Department has worked for the dissemination of the high-qualified education especially in remote areas.</p> <p>With this background described above, the Department of Education has been using radio and TV materials as important teaching methods to compensate for qualitative and quantitative shortcomings in basic educational fields in remote areas. Then, from 2002-2004, the Department of Education, JICA and Sony Cooperation have been working as development partners to run the “Distance Education by Live Broadcasting Project” to try out the effective approach of distance education such as utilizing the TV programs.</p> <p>Along this line, the Government of Papua New Guinea and the Government of Japan agreed in July 2005 to implement “the Project for Enhancing Quality In Teaching Through TV Program”. This project can be recognized as one of the trial approaches in terms of utilizing TV lessons. The Project started on 28 August 2005 and its initial project period was two years and seven months. However, in 2006 the extension of the project period was recommended by the project consultation study and the amendment of the project was agreed by both sides to complete the project on 30 November 2008.</p>	

<b>1-2 Contents of Cooperation</b>			
<b>(1) Overall Goal:</b> Quality of classroom teaching is improved in the primary schools of the project provinces through distance education utilizing TV program.			
<b>(2) Project Purpose:</b> Quality of classroom teaching is improved in the project schools through the appropriate use/application/ introduction and regular delivery of distance education utilizing TV program.			
<b>(3) Outputs of the Project</b> 1. TV-lessons of high quality for students are regularly broadcasted 2. Teaching methods of teachers in charge of the TV- lesson class in the project schools is improved 3. Environment for regularly receiving the TV-lessons and teacher-training programs is enhanced 4. Feasibility of expanding distance education utilizing TV Program is examined			
<b>(4) Input</b> (as of the evaluation conducted)			
Japanese Side :		Cost for the Equipment Provided by JICA : Total 34,145 (thousand YEN)	
Japanese experts : 13 Areas (Leader, Education Planning, Education TV Program Production1-2, Science Education, Science Experimentation, Mathematics Education, Monitoring/ Evaluation1-2, Pedagogy, Distance Education, School Management) Total 103.85M/M			
C/P Training : 5 personnel, Total2.67M/M			
<b>2. Outline of the Final Evaluation Team</b>			
Members	Team Leader	Mr Atsushi Matachi	Senior Advisor (Education), JICA
	Cooperation Planning 1	Mr Takahiro Yokota	Officer, Papua New Guinea Office, JICA
	Cooperation Planning 2	Ms Sumiko Nakamura	Officer, Human Development Department, JICA HQ
	Evaluation Analysis	Dr Takeshi Sekiya	Chief Executive Officer, Crystal Intelligence Inc.
Evaluation Period	6 – 30 August, 2008		Type of Evaluation: Final Evaluation
<b>3. Outline of the evaluation</b>			
<b>3-1 Achievements of the Project</b>			
<b>[Output 1]</b> TV-lessons of high quality for students are regularly broadcasted. The Team judges that Output 1 has been almost achieved based on the following facts:			
<ul style="list-style-type: none"> <li>- The Project produced Grade 8 TV programs (208) as planned and revised half of them. The Project is currently producing Grade 7 TV programs (133 as of 11 August 2008) as scheduled.</li> <li>- Model teachers can deliver lessons as planned controlling the progress and timing, although their subject content knowledge is not yet enough as expected.</li> <li>- The staffs of TV program production have learnt new methods of production.</li> <li>- Guidelines for four committees have been developed for the systematization of each task.</li> </ul>			

**[Output 2]** Teaching methods of teachers in charge of the TV-lesson class in the project schools is improved.

The Team judges that Output 2 has been almost achieved based on the following facts:

- “TV Teacher’s Handbook” and “TV Student’s Worksheet” is developed, and these materials have contributed to the teaching and learning in receiving schools. However, these materials have not reached to the receiving schools before TV broadcast.
- Hint & Tips programs for utilization TV lesson and DEPI program as teachers INSET are also produced, although the not so many teachers have watched the programs due to its timetable.
- The provincial and regional monitoring members can develop the monitoring plans. Some standard officers advised teachers how to facilitate TV lessons.
- Base-line and end-line surveys by the monitoring members have been conducted as planned and the reports of the surveys have been summarized promptly to feedback the data to school principals.

**[Output 3]** Environment for regularly receiving the TV-lessons and teacher-training programs is enhanced.

The Team judges that Output 3 has been achieved based on the following facts:

- Provision of TV receiving equipment was generally completed as planned.
- Service teams in the provinces can address minor problems and adjustments.
- Some BOMs implement fund-raising activities, and supply tables and chairs for TV rooms, security cost or activity, and so on.
- “Maintenance Handbook” was developed to improve maintenance capacity in the school level.
- Service teams in the provinces have been organized and they can address minor problems and adjustments.

**[Output 4]** Feasibility of expanding distance education utilizing TV Program is examined.

The Team judges that Output 4 has been partially achieved based on the following facts:

- Report on DEPI was already submitted, and the feasibility study is being conducted as scheduled.

**[Project Purpose]** Quality of classroom teaching is improved in the project schools through the appropriate use/application/ introduction and regular delivery of distance education utilizing TV program.

The Team concludes that the Project Purpose will be attained in the remaining period based on the following facts:

- The number of receiving school students has increased year by year: 2 885 in 2006 (Grade 8), 2 817 in 2007 (Grade 8); and 5 492 in 2008 (Grade 7 and 8).
- The number of teachers also has increased year by year: 202 in 2006 and 2008 (Grade 8); and 404 in 2008 (Grade 7).
- From lesson observations, the Team has confirmed that the receiving teachers had some capacities such as teaching strategy, class management, questioning technique to facilitate students to think along OBE concept, and the students learn in group by themselves.
- From the data of base-line and end-line surveys, the tendency is observed that the achievements of receiving students in the examination are better than those of non-receiving students.

**[Overall Goal]** Quality of classroom teaching is improved in the primary schools of the project provinces through distance education utilizing TV program.

The Team concludes that the Overall Goal is expected to be achieved in the future based on the following facts:

- The number of the awareness schools that bought TV equipment by themselves is 70 in total, which is the over-expected number.
- According to the interviews with teachers of the awareness schools, positive changes are observed in teaching methods and students' learning attitudes.
- Both ARB and ESP planned to expand TV lesson programs to the whole region and province respectively.

**[Super Goal]** Quality of classroom teaching is improved in the primary schools in the country through distance education utilizing TV program.

Although the Team has concluded that the results of the project contribute to the Super Goal, it requires more efforts to achieve the Super Goal based on the following facts:

- As of 11 August 2008, the number of schools utilizing TV lessons is 287 in total covering 17.3% of the primary schools in PNG (1 651).
- The estimated number of students who receive the TV lesson in the country is increasing as follows 4 565 in 2006; 9 309 in 2007; and 19 695 in 2008.
- The number of teachers who receive the TV lessons in the country is increasing as follows 310 in 2006; 618 in 2007; and 1 348 in 2008.
- DOE developed the draft of TV lesson Policy, Sustainable Plan, and Action Plan, and started to prepare the expansion of the Project nationwide.

### **3-2 Summary of the evaluation results**

#### **(1) Relevance:High**

The evaluation team concludes that the relevance is High, based on the following facts:

- Due to the educational reform in 1993, primary school teachers, who had taught from Gr 1 to Gr 6, had to teach Gr 7 and Gr 8, and have faced difficulty, especially, in mathematics and science.
- On the other hand there are many mountainous and island areas in PNG, it is difficult to organize face-to-face training.
- The importance of basic education and distance education is specified in the policies of GoPNG.

The GoPNG and GoJ mutually agreed in the political dialogue in 2004 and 2006 that education was one of Japan's priority areas for technical cooperation to PNG.

#### **(2) Effectiveness : High**

The evaluation team concludes that the effectiveness is High, based on the following facts:

- TV lessons can directly reach the target group, namely, students unlike other modes such as through training teachers.
- "Teacher's Handbook" is essential materials for TV lesson preparation, and "Student's Worksheet" is very effective to study through TV lessons.
- The receiving teachers can acquire the new subject knowledge and new method of teaching through TV lessons.
- From the data of base-line and end-line survey, the tendency is observed that receiving students results in the examination are better than those of non-receiving students.

**(3) Efficiency : Overall High but partially not high**

The evaluation team concludes that the efficiency is Overall High but partially not high, based on the following facts:

- Overall outputs initially planned have been almost achieved by the Project, even with the limited duration and inputs.
- However, in terms of individual activities, there was some loss caused by the delay of budget disbursement from DOE, distribution of textbooks, C/P transfers and so on.

**(4) Impact : Very High**

The evaluation team concludes that the impact is Very high, based on the following facts:

- Expansion of utilizing TV lessons in ESP and ARB has been promoted. In addition, TV project expansion plan has been documented and already approved by the provincial and regional governments.
- In the awareness province of East New Britain, 63 schools started TV lessons by themselves. That shows almost 70 % of the primary schools in the province utilize TV lessons.
- There are some influences on receiving teachers, students and schools such as improvement of gender consideration, attendance rate and collaborative relationship with community.

**(5) Sustainability : Medium**

The evaluation team concludes that sustainability is Medium, based on the following facts:

- At the Senior Education Officers' Conference, it was declared that EQUITYV project would be expanded throughout the nation. However, the execution depends on the budget allocation by GoPNG.
- On top of DOE the above, unexpected outcomes have been seen such as increasing attendance rate, gender consideration, partnership between communities and schools, and the others.

**3-3 Contributing factors**

**(1) Implementation Planning**

- Project approach
  - Through TV lessons, remote schools can take quality lessons conducted in Port Moresby.
  - TV lessons can approach both teachers and students simultaneously.
  - Utilizing TV as new media made a big impact on the communities.

**3-4 Preventing factors**

**(1) Implementation Planning**

- Project design
  - This project consists of various components such as TV programs, "Teacher's handbook" and "Student's worksheet", awareness TV programs, maintenance training and the others.
  - The Team felt that original project duration of two years and seven months was too short to complete all the components. In addition, the capacities of model teachers were not enough at the expected level, which made the project to increase unexpected activities in order to improve the capacity of model teachers to the required level.
  - In the first half of the project period, NEMC staff was overloaded. It was mitigated in 2007 according to the recommendations which were given by the mid-term evaluation team:
  - At the beginning of the Project, there were 3 coordination committees and 8 working committees. However, for the purpose of efficiency, the working committees were merged into 5 in September 2006.
  - As the previous acting manager of NEMC did not agree with the concept of the Project, the

project activities sometimes were not implemented smoothly, which affected the efficiency of the project.

## **(2) Implementation Process**

- Problem in the implementation
  - Budget disbursement from DOE delayed in 2006 and 2007. Particularly in 2007, all activities in the pilot provinces and region were postponed until October.
  - In 2006, the Project distributed student's worksheet to all receiving school students. However, increasing awareness schools provoked shortage of print budget, and since 2007 the Project could not deliver student's worksheet to each student.
  - EMTV transmit antenna pole built in ARB fell down in 11 August 2007.
- In the first half of the project period, NEMC staff was overloaded. It was mitigated in 2007 by the following measures:
  - Project period was extended;
  - Model teachers improved their subject knowledge and teaching skills;
  - Activity processes become more efficient; and
  - Collaboration between TV production team and model teachers enhanced the productivity.
- At the beginning of the Project, there were 3 coordination committees and 8 working committees. However, for the purpose of efficiency, the working committees were merged into 5 in September 2006.

## **3-5 Conclusion**

It is confirmed that necessary activities have been implemented and almost all the outputs have been achieved as planned. These achievements contribute to achieving the Project Purpose and the Overall Goal. It is concluded that the Project Purpose is expected to be achieved by the end of the project period.

## **3-6 Recommendations**

Based on the results of the evaluation, the Team has made the recommendations below.

### **[Recommendations for addressing the challenges identified from observations and interviews]**

#### **(1) For improving the quality of TV lessons**

##### **a) Provide longer time enough for students to copy and do activities**

TV lessons should provide longer time enough for students to copy answers for problems and summaries of lessons.

##### **b) Make Hint & Tips more relevant to daily lessons**

In order to refer practically, the Team suggests making Hint & Tips more relevant to daily teaching of receiving teachers so that receiving teachers to feel the merit of watching Hint & Tips, which directly contribute to his/her daily teaching.

It is also important to identify more adequate time of televising Hint & Tips, for instance, by avoiding the time between mathematics and science of the same grade.

##### **c) Use more materials for experiments that are locally available**

One of the merits that most of the students have in watching TV lessons is that they can see science apparatus such as beakers, flasks, test tubes, etc., which are not available in rural areas. While this merit should be maintained, the Team suggests including more experiments that can be conducted at the receiving schools with materials locally available in the rural areas.

## **(2) Improve the distribution of teacher's handbooks and student worksheets**

It is necessary to identify the problems for the delay and to take necessary measures as soon as possible. In the medium or long term, it will be more effective to send handbooks and worksheets for the whole year at the same time before the beginning of the year.

## **(3) Strengthen the monitoring system**

Establish a mechanism of analyzing the data collected from daily monitoring activities and of giving the feedback of the results to receiving schools. Monitoring committee members need to be trained for basic analysis skills.

It is necessary in the future to develop measures to monitor the quality of TV lessons by students and teachers in receiving schools.

## **(4) Compile TV lessons into DVD**

The Team is aware that the NEMC has already developed DVDs of TV lessons, as compiling TV lessons into DVDs is important to enhance the flexible use of TV lessons as mentioned later. So the Team would like to emphasize the importance of pursuing this approach.

### **[Recommendations from medium term perspective (3-5 years)]**

#### **(1) For improving the quality of TV lessons**

- a) It is necessary to establish a team of model teachers and subject specialists so that the team can make sure the quality of TV lessons even without the assistance from the experts.
- b) The status of model teachers should be upgraded so that model teachers can be recruited from all over the country who have strong subject content knowledge and teaching techniques. In order to attract such highly qualified people, the status of the model teachers needs to be upgraded, for instance, to a college lecturer level including staff housing at Port Moresby.

#### **(2) For the nationwide expansion of EQUITY TV**

- a) For the nationwide expansion of the EQUITY TV Project, it is necessary to strengthen the capacity of DOE including NEMC. In particular, it will be essential to increase the number of members of the committees that support the provinces and region some of the members should be full-time.
- b) The Team would like to point out the necessity of special support to schools in rural areas. The Team has observed that, for the nationwide expansion, purchasing a satellite TV signal receiving equipment where there is no transmitter, and purchasing and maintaining a generator where electricity is not available, seemed to be two major challenges. Moreover, the situation is worse in rural schools. The more rural the schools are, the more likely to happen these problems are.

### **[Recommendations from the long term perspective (5-10 years)]**

#### **(1) Ensure the flexibility of receiving schools**

In the long term, receiving teachers can decide whether they use TV lessons or not depending on topics, or they can be given more freedom in planning their schedule without following the schedule of TV lessons if they want, for instance, by having DVDs.

#### **(2) Develop program for receiving teachers to improve the capacity of teaching**

In order to improve the quality of education in PNG in the long term, receiving teachers learn more in-depth knowledge of subject contents and some background knowledge about teaching

strategies. Thus, it needs to be considered to add the function to teacher's guidebook as the teacher training

### **(3) Form network of TV receiving schools**

As mentioned in 3-5 (3), a few monitor schools get together regularly in one of the monitor schools so that they discuss how to improve the quality of TV lessons and share their problems and challenges. Standards officers may need to take an initiative to organizing such a meeting. This can be an opportunities of in-service training for receiving teachers. In addition, useful comments and suggestions can be sent to NEMC so that those comments can be reflected and televised when useful for other teachers.

### **3-6 Lesson learnt**

#### **1. Project Design**

Concerning the variety of project components, another approach can be considered such as that focusing the activities year by year; making the guidebooks at the first year, making lesson plans at the second year, and making TV programs and broadcasting at the third year. Or another option is to lengthen the project period itself.

#### **Grades for which TV lessons are developed**

The Team feels that it might have been more effective to introduce TV lessons from lower grades to higher grades. First, it was easier for model teachers to upgrade their knowledge from lower to higher grades. Second, the quality of TV lessons produced later should be better. Hence, the Team thinks that it would have been more efficient if TV lessons had been developed from lower grade, in the case of EQUITY, from Gr. 7.

### **3-7 Future Direction**

#### **1. JICA cooperation strategy in Education sector**

It is necessary to clarify how the educational cooperation by using the media is mentioned in the strategies and policies written by GoPNG. Then, taking into account that former outcomes of the JICA's cooperation, the future direction of the cooperation strategy in the education sector should be decided.

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