

## The Summary of Terminal Evaluation

1. Outline of the Project	
Country : The Republic of Indonesia	Project Title : Strengthening In-service Teacher Training of Mathematics and Science Education at Junior and Secondary Level
Issue/Sector : Basic Education	Cooperation scheme : Technical Cooperation
Division in charge : JICA Indonesia Office	Total cost (at the time of evaluation study) : <u>315,158 (x 1,000) yen</u>
Period of Cooperation	May 1, 2006 – October 30, 2008 (Two and a half years)
	Partner Country's Implementing Organization : Directorate General of Quality Improvement of Education and Education Personnel (DGQITEP) of Ministry of National Education (MONE) and District Education Office in three target districts
	Supporting Organization in Japan : N/A
Related Cooperation : N/A	
<p>1-1 Background of the Project</p> <p>The Government of Indonesia has set the target to achieve nine-year compulsory education by 2008 with its focus on improvement of school enrollment ratio, quality improvement in education, and strengthening school management. The “Medium-term Development Strategy (MONE RENSTRA) 2005-2009” puts emphasis on three major themes, i.e., (1) expansion of educational opportunities, (2) quality improvement in education, and (3) enhancement of the educational administration. In particular, the Project is placed as the assistance for the “(2) quality improvement in education”.</p> <p>In terms of quality improvement in education, MONE and JICA have been executing Technical Cooperation Project for Development of Science and Mathematics Teaching for Primary and Secondary Education in Indonesia (IMSTEP) since 1998 to improve the pre-service teacher training at undergraduate education of faculty of mathematics and science education (FPMIPA) in the Indonesia University of Education (UPI), the National University of Yogyakarta (UNY) and the National University of Malang (UM). Through IMSTEP, syllabuses of pre-service teacher training were wholly revised, and materials such as textbook, experiment teaching guidebook, and equipment manual were developed. After IMSTEP, Follow-up cooperation was implemented for two years from 2003, to improve the quality of education through encouraging effective collaboration between university and school, and improving teachers' teaching ability.</p> <p>Meanwhile, in-service training for teachers have been facing problem that trainings at Subject-based In-Service Teacher Training (MGMP) were not organized effectively for skill-up of teachers at districts level due to chaotic condition brought by decentralization.</p> <p>In this situation, this project is aiming at revitalization of MGMP through collaboration with three partner universities mentioned above and making use of outcomes gained through IMSTEP and its Follow-up cooperation. Concretely, cooperation activities in terms of both educational administration and schools will be carried out, such as reorganiz MGMP at district level into MGMP at <i>wilayah</i> level and introduce Lesson Study as new approach to establish new MGMP model.</p> <p>1-2 Project Overview</p> <p>(1) Overall Goal</p> <p>1) The model of in-service teacher training (MGMP) applying Lesson Study is disseminated in the target provinces as a form of continuing teacher's professional development.</p>	

- 2) The level of student learning ability in mathematics and science is improved in the target districts.
- (2) Project Purpose  
The model of MGMP (*wilayah*) activities<sup>1</sup> applying Lesson Study for quality improvement of mathematics and science teachers is developed in the target districts.
- (3) Outputs
- 1) Education officers in the central government and target districts recognize the effectiveness of the MGMP (*wilayah*) activities and take necessary financial and administrative measures to sustain them.
  - 2) Effective MGMP (*wilayah*) activities are regularly conducted in the target districts.
    - 2-1) MGMP facilitators are trained in the target districts.
    - 2-2) Principals of the target schools recognize the effectiveness of the MGMP (*wilayah*) activities and take necessary measures.
    - 2-3) Mathematics and science teachers improve the practical teaching competency through the MGMP (*wilayah*) activities applying Lesson Study.
  - 3) The mechanism of the MGMP activities applying Lesson Study is developed.
  - 4) Under the SISTTEMS Bantul Emergency Program, TPKs and schools propose their own plans and conduct activities to rebuild and improve junior secondary education using SISTTEMS block grant.
- (4) Inputs
- Japanese side:
- Japanese expert (Total: 64.86 M/M)
  - Counterpart training in Japan (46 persons)
  - Equipment (Video Camera, Microphone of Handycam Video Camera, Projector, Computer, Printer, etc.) (93,944 thousand yen)
  - Operational expenses (mainly disbursed for the training purposes)
- Indonesian side:
- Personnel assignment (Project Director, Project Manager, Counterpart personnel from the DGQITEP and District Education Office, Resource persons from each partner university, i.e., UPI, UNY, and UM)
  - Provision of the project offices
  - Local costs (Expenses necessary for the MGMP (*wilayah*) activities, transportations, etc.) (86,018 thousand yen)

2. Evaluation Team		
Members of Evaluation Team	Mr. Hiroyuki KATAYAMA (Leader: Deputy Resident Representative, JICA Indonesia Office) Dr. Keiko MIZUNO (Basic Education: Senior Advisor (Education), Human Resource Department, JICA) Mr. Naoki NIHEI (Comparative Analysis: Staff, Basic Education Division 1, Human Development Department, JICA) Mr. Jotaro TATEYAMA (Cooperation Planning: Assistant Resident Representative, JICA Indonesia Office) Mr. Takaaki HIRAKAWA (Evaluation Analysis: Consultant, Social Development Department, INTEM Consulting, Inc.)	
Period of Evaluation	May 12, 2008 – May 29, 2008	Type of Evaluation : Terminal Evaluation

<sup>1</sup> “MGMP (*wilayah*) activities” means “in-service teacher training through MGMP at the level of *wilayah*” while “MGMP” usually is used as “subject based teacher groups.”

### 3. Results of Evaluation

#### 3-1 Project Performance

##### Overall Goal (1):

- It is considered that the target values have not been achieved yet at this moment. Thus, it is necessary to confirm how many districts in the target provinces conduct the MGMP activities applying the Lesson Study in the near future according to the target values.

##### Overall Goal (2):

- The rankings of the target districts within the provinces are shown as follows.  
Sumedang: 9 in 2005/06 → 7 in 2006/07 out of 25 districts in West Java  
Bantul: 2 in 2005/06 → 2 in 2006/07 out of 5 districts in Yogyakarta  
Pasuruan: 9 in 2005/06 → 7 in 2006/07 out of 38 districts in East Java

##### Project Purpose:

- The MGMP (*wilayah*) activities applying the Lesson Study from the perspectives of the (1) contents, (2) methods, and (3) arrangements were highly appreciated by teachers, and the mean composite score increased from 8.61 to 9.46 for the target group.
- The usefulness of the MGMP (*wilayah*) activities from the aspects of the (1) subject-matter knowledge, (2) teaching skills, and (3) exchanging ideas with other teachers is also appreciated by teachers at a certain level, and the mean composite scores have increased from “12.97” to “13.32” for the target group.

##### Output 1:

- The involvement of the District Education Office was very strong because they participated in all training courses and workshops.
- The District Education Office made a statement that they will continue the Lesson Study even after the SISTTEMS finishes in October 2008.

##### Output 2:

- Each *wilayah* conducts the MGMP activities in mathematics on Wednesdays/Thursdays and science on Saturdays, both biweekly.
- More than 85% of MGMP facilitators attended the Facilitator Training except for the 3rd facilitator training in Bantul District.
- The rate of principals who know the content of MGMP (*wilayah*) activities has increased from 69.0% to 95.2% out of 84 principals in the target group. Also, the rate of principals who have been involved in the MGMP (*wilayah*) activities has increased from 42.9% to 89.3% in the target group.
- Principals in the three target districts came to adjust the school timetable for teachers attending the MGMP (*wilayah*) activities.  
Adjustment of the school timetable by the principals (**Yes**: responded by the principals): **98.4%**  
Adjustment of the school timetable by the principals (**Yes**: responded by the teachers): **97.8%**
- Principals in the three target districts came to provide the transportation allowances for teachers attending the MGMP (*wilayah*) activities.  
Transportation allowances provided for teachers (**Yes**: responded by the principals): **97.9%**  
Transportation allowances provided for teachers (**Yes**: responded by the teachers): **95.1%**
- The rate of teachers who attended MGMP (*wilayah*) activities has increased from 43.2% to 87.6% for the target group. In addition, the rate has increased from 48.9% to 90.2% for the science teachers in the target districts while it has increased from 37.7% to 85.2% for the math teachers.
- 69.5% of MGMP-MIPA teachers in the target districts conducted open classes and reflections at least once.

**Output 3:**

- The development of two guidelines has been in progress as scheduled by the Japanese expert team. In the “Guideline for MGMP with Lesson Study”, the process of the Plan-Do-See is explained according to the experiences and outcomes accumulated by the MGMP (*wilayah*) activities with the Lesson Study. Also, the roles and responsibilities of related institutions as well as related issues to be considered are described in the Guideline.
- In terms of the “Guidelines for Monitoring and Evaluation of MGMP with Lesson Study,” the guidelines for the monitoring and evaluation of the Lesson Study have been prepared by each partner university. JICA Expert Team will set up the appropriate indicators and prepare the Guidelines in consultation with the university sides after reviewing those guidelines prepared by the partner universities.

**Output 4:**

- A total of three (3) billion rupiah was disbursed to 106 schools and 15 Sub-district Education Committees (*TPK: Tim Pendidikan Kecamatan*) on 25th September, 2006. Block grant was smoothly disbursed for the planned activities, such as renovation of schools and facilities, construction of emergency classes, procurement of textbooks, activities related to traumatic counseling, etc. The activities were smoothly promoted in general. Although there were some delays of completion, all activities were completed by the end of March, 2007.

**3-2 Summary of Evaluation Results****(1) Relevance**

For the following reasons, the Project is judged to be of high relevance.

Consistency with the Development Strategy in the educational sector

The direction of the Project is in line with the “Medium-term Development Strategy (MONE RENSTRA) 2005-2009” established by the Ministry of National Education (MONE). The Development Strategy by the MONE puts emphasis on three major themes, i.e., (1) expansion of educational opportunities, (2) quality improvement in education, and (3) enhancement of the educational administration. In particular, the Project is placed as the assistance for the “(2) quality improvement in education” through the capacity development of teachers and teaching staff.

Consistency with Japan’s foreign aid policy

The project concept is consistent with the content of the Country Assistance Program for Indonesia (November, 2004) prepared by the Ministry of Foreign Affairs of Japan. The Program places “Assistance to create a Democratic and Equitable Society” as one of three priority areas. In the priority area, the “Education” as described in the “Poverty Reduction” is emphasized so as to raise the school attendance rate, improve the skills of teachers, and reform the methods of educational operation under the system of the nine-year mandatory education.

The direction of the Project corresponds with the Basic Education for Growth Initiative (BEGIN: June, 2002) announced by the Japanese government. One of three priority areas is to assist in improving the quality of education.

There are eight programs in the JICA’s country implementation plan of Indonesia (December, 2006), and this Project is positioned in the “assistance program for civil minimum and MDGs.”

**(2) Effectiveness**

For the following reasons, the effectiveness of the Project is judged to be high.

### Achievement of the Project Purpose

It could be said that the model of MGMP (*wilayah*) activities applying the Lesson Study has gradually been developed in the target districts. There are several reasons to support the conclusions. Firstly, the MGMP (*wilayah*) activities applying the Lesson Study from the perspectives of the (1) contents, (2) methods, and (3) arrangements were highly appreciated by teachers, and the target value was achieved. Secondly, the usefulness of the MGMP (*wilayah*) activities from the aspects of the (1) subject-matter knowledge, (2) teaching skills, and (3) exchanging ideas with other teachers is also appreciated by teachers at a certain level although the target value has not been achieved yet. However, it is expected that the target value will be achieved by the end of the Project if the Project continues the MGMP (*wilayah*) activities with its efforts.

- Effectiveness of the MGMP (*wilayah*) activities

The MGMP (*wilayah*) activities are very effective because of (1) the distance and (2) the number of math and science teachers within the *wilayah*. In terms of the distance, the distance among the schools within the jurisdiction of the *wilayah* is much closer in comparison with the distance within the jurisdiction of the district. Also, the number of math and science teachers in the *wilayah* is appropriate so as to focus on the MGMP activities applying the Lesson Study. Therefore, the MGMP (*wilayah*) is a very effective mechanism to ensure that all the teachers have equal access to the training opportunities, and this leads to continuous professional development of teachers.

- Effectiveness of the Lesson Study for the improvement of the student learning ability

The Lesson Study is very effective because teachers became able to overcome their weaknesses by getting some feedbacks from the observers attending their open classes during the reflection. The Lesson Study contributes to continuous professional development of teachers. This method is very different from other methods since the Lesson Study is not individual but collaborative works among teachers. The Lesson Study encourages all the teachers to join in its process.

Through the Lesson Study, teachers became aware of the weak students who did not participate in the learning process. Although teachers did not try to understand why the students were not able to understand in the past, they have presently changed their attitudes so as to understand why the students were not able to understand.

### **(3) Efficiency**

The Inputs of the Project were efficiently transferred to the Activities and the Outputs.

#### Achievement of the Outputs

- School management training

The School Management Training for school principals is intended to raise their awareness about better school management and higher education quality. The Lesson Study will never be sustained without principals' understandings, initiatives, and supports. It came to be realized in the second year that many principals had never attended the Lesson Study and had little ideas how the Lesson Study was conducted in practice. Consequently, extra training sessions were implemented in February and March 2008, and principals observed an open class and joined its reflection in a smaller group. It is expected that principals understand the effects of the Lesson Study through first-hand experiences and consider the math and science teachers to be able to attend the MGMP (*wilayah*) activities from the perspectives of the travel allowance and the adjustment of the school timetable for those teachers.

- MGMP (*wilayah*) activities applying the Lesson Study

The math and science teachers were able to improve the practical teaching competency by obtaining new knowledge from the resource persons of the universities and other teachers through the Lesson Study. One of the most significant changes of the MGMP-MIPA teachers is that they are not afraid of being supervised by the principal, having mistakes, and asking other teachers when they do not know. Thus, teachers are able to share problems with other teachers so as to solve the problems by standing together with their colleagues. Also, teachers recently came together and tried to prepare more creative teaching kits according to the school circumstances so as to make lessons more effective for students.

Teachers used to teach their subjects only in the one-sided approach, and not creative in the class. They presently focus on how students learn and how teachers support students. Teachers try to find the best methods for the students through the mutual dialogues. Thus, the ways of thinking of teachers have gradually been changing through the Project. Consequently, teachers' observations have been getting sharper to analyze students' behaviors.

In this way, teachers have motivations, eagerness, and high spirits to teach students. Importantly, the changes in the consciousness of teachers have gradually shown up.

#### Relationship between the Inputs and the Activities

- Assignment of the Japanese experts

Overall, Japanese experts were appropriately assigned in the Project along with the personnel plan prepared by the Project. However, the total man-month of Japanese experts was not sufficient because they must have gone around 24 home-base schools and several pilot schools for the ESLS (involvement of 320 schools in 67 sub-districts of three target districts) in order to observe the Lesson Study and advise resource persons of the partner universities and teachers *on site*.

- Counterpart training in Japan

Training courses in Japan were very useful for the participants because they were able to learn the concepts and advanced skills of the Lesson Study. The candidates of the counterpart trainings were selected in thorough consultation with the Indonesian side. The trainees were composed of the DGQITEP (1 person), the District Education Office (3), the partner universities (3), and principals and teachers from each district (6).

It could be said that the training courses were so meaningful for the participants to learn actual "Lesson Study" conducted in primary and junior high schools in Japan.

#### **(4) Impact**

The following impact is recognizable from the implementation of the Project.

#### Prospects for the achievement of the Overall Goal

- Dissemination of the MGMP (*wilayah*) activities applying the Lesson Study

There are several perspectives to disseminate the MGMP (*wilayah*) activities applying the Lesson Study in the following ways:

- MGMP forums have been held for neighboring districts in order to introduce how to develop the Lesson Study. Supervisors of the District Education Office, principals, and core teachers have participated in the MGMP forums. After the MGMP forums, it seems that the participants intend to conduct the Lesson Study. For example, the District Education Office in Kulon Progo had the interests of the Lesson Study producing good impacts in Bantul through the MGMP forum hosted by the Project. As the District Education Office recognized the importance of the

Lesson Study through the MGMP forum, they submitted the proposal of the Lesson Study in order to get the block grant for the improvement of the teachers' competencies from the DGQITEP. After the approval of the proposal by the DGQITEP, the District Education Office obtained Rp. 70 million to conduct the training & seminar of the Lesson Study for the teachers of primary and secondary schools by the school supervisors and LPMP instructors. In this way, the MGMP forums contribute to the dissemination of the Lesson Study in the neighboring districts.

- The portfolio assessment which measures teachers' four competencies (pedagogy, professional, personal and social) is composed of 10 of which 8 items are related to characteristics of Lesson Study. The teachers' salaries become twice if they complete those items in the portfolio assessment, especially in rural areas it becomes tripled. If teachers participate in a training course, they get the certificate of the training which is a part of one item. If teachers participate in the Lesson Study, they obtain the certificate of the Lesson Study which is also a part of one item in the portfolio assessment. Thus, it is expected that teachers' motivations for participating in the Lesson Study will be growing nationwide.
- The UPI has the vision to set up the Indonesia Center for the Lesson Study in order to (1) conduct research and development of the Lesson Study, (2) develop the standards and quality assurance of the Lesson Study, (3) provide publications and disseminate the Lesson Study, etc. Although the conception was conveyed to the DGHE through the rector of the UPI, it has not been decided yet. If the Center is set up in the UPI, it might become an excellent institute for the Lesson Study.

- Improvement of student learning ability in mathematics and science

Students had classes through the one-sided approach and just memorized the formula. Also, only several students performed well and got better achievements comparing with other students before the commencement of the Project. However, students currently deepen their understanding of the math and science subjects through the group discussions, and many students have become more active than before. At this moment, they try to understand the process of how to derive formulas. It is significant improvements for students.

The ways of thinking and teaching of teachers have gradually been changing through the Lesson Study. Teachers step the process from concrete/easy cases to abstract/complicated cases when they teach their subjects to students. Thus, students easily catch up the lessons right now in comparison with the previous style of lessons. The process of the Lesson Study is appropriate for the students. Therefore, the student learning ability in math and science will be improved.

### **(5) Sustainability**

The prospects of the project sustainability will be good if human and financial resources are properly secured by the authorities concerned.

#### Organizational sustainability

- Future prospects of the personnel assignment

After the termination of the Project, supervisors (*pengawas*) belonging to the District Education Office are expected to replace the resource persons of partner universities as advisors of MGMP (*wilayah*) activities applying the Lesson Study. However, the principals and teachers worried about the talents and capacities of the supervisors as advisors of the MGMP (*wilayah*) activities. In the reflection time, especially, the supervisors might not be able to provide appropriate comments for model teachers as did the resource persons of the partner university.

The number of MGMP facilitators (core teachers) is not enough to disseminate the Lesson

Study to other areas in Indonesia. Thus, if many schools in other district try to conduct the Lesson Study in the future, the number of competent teachers for disseminating the Lesson Study will be insufficient. As a result, the unauthentic Lesson Study with the misconception would be spread to and taught in those schools.

- Collaboration with the LPMP

Although the LPMP understands the concept of the Lesson Study, they do not have enough understanding of the practicality of the Lesson Study. Thus, it is necessary for LPMP instructors to participate in the Lesson Study in schools more frequently and to learn the Lesson Study at the partner universities as instructors of the Lesson Study. However, the LPMP instructors (*widyaiswara*) need the formal letters from the District Education Office/schools or permissions of their superiors to attend the Lesson Study. Therefore, it might be necessary to consult with the LPMP heads so as to be able to attend the Lesson Study in the future without any hesitations.

Budgetary measures for the MGMP (*wilayah*) activities applying the Lesson Study

- Financial situations of the District Education Office in the target districts

As shown in the below Table, it is recognized that the District Education Office in the target districts make efforts to secure the budget for their routine activities. The budgets of the District Education Office in Bantul and Pasuruan have increased since the fiscal year of 2006. However, the budget in Sumedang has gradually decrease Education Office small amount because the overall budget of the district government has decreased by 30%. In consideration of such a severe situation, the District Education Office in Sumedang has tried to secure the budget for the Project as much as possible. Therefore, it is expected that the District Education Office in the target districts will continue the SISTTEMS activities from the perspective of their efforts for securing the budgets and strong involvement in the Lesson Study.

Table: Local Government Budget (APBD) for MGMP (*wilayah*) activities in the target districts (FY 2006-2008)

Unit: (x 1,000) Rp.

	FY 2006	FY 2007	FY 2008	<b>Total</b>
Sumedang District	115,000	111,000 (-4.3%)	110,500 (-0.5%)	<b>335,500</b>
Bantul District	60,000	67,500 (12.5%)	100,000 (48.1%)	<b>227,500</b>
Pasuruan District	75,000	90,000 (20.0%)	199,000 (121.1%)	<b>364,000</b>

Source: Data extracted and compiled by the Project Team

Note 1) The percentages in parentheses represent the changes of the budgets in comparison with the previous years.

Note 2) FY2008 is the budget estimated by each Education Office.

Note 3) The Fiscal Year for the Indonesian government starts from 1st January to 31st December.

- Budgetary measures for the MGMP (*wilayah*) activities

The expense for the MGMP (*wilayah*) activities applying the Lesson Study is supposed to be distributed from the DGQITEP to the District Education Office, and ultimately to schools.

The District Education Office allocates the budget for the MGMP (*wilayah*) activities through the Local Government Budget (APBD). The District Education Office sets the criteria of the school operational budget in which the component of the Lesson Study is incorporated. Thus, the schools need to incorporate the component of the Lesson Study in the school operational budget in order to get approvals from the District Education Office. Therefore, there are prospects that the



schools will secure the budgets for the MGMP (*wilayah*) activities applying the Lesson Study through the school operational budget and others in the future.

After the termination of the Project, the schools are supposed to secure the budget for the ESLS, including refreshments, teaching kits, transportation, etc. If the District Education Office is not able to provide the funds for the ESLS, the school committees composed of students' parents and the school operational budget will be the main financial resources.

In terms of the partner universities, unfortunately, the financial supports from the DGHE to those universities have been stopped since January, 2008. This negatively influenced the MGMP (*wilayah*) activities applying the Lesson Study. However, the DGQITEP provides partner universities with block grants of 1 billion rupiah for the dissemination of Lesson Study through the LPMP in the target provinces (Yogyakarta, West Java, and East Java).

### 3-3 Factors promoting project progress

#### (1) Factors concerning to Planning

- An earthquake hit Yogyakarta and Central Java provinces and left devastating damages to the area on 27th May, 2006. JICA proposed to adjust the content of the Project and introduce a temporary emergency operation (the Bantul Emergency Program: Output 4) from September 2006 to March 2007. The emergency operation was designed applying the approach developed by the Regional Education Development and Improvement Program (REDIP) in which the proposal-type activity funds were provided, so the Project was efficiently able to complete the activities for the emergency operation by flexibly adapting the modifications.
- The MONE has highly appreciated the Lesson Study, *per se*, and recognized that the dissemination of the effective lesson study is very important on site in terms of the quality improvement in education. Thus, the project design was modified to implement the entire school lesson study (ESLS) by selecting two pilot schools in each target district after the Project Consultation Study. Consequently, the pilot schools have several positive impacts through the ESLS. Firstly, every teacher in school opens the class, so they are able to share their experiences and knowledge with other teachers who have joined different types of trainings until now. Secondly, they have more confidences to have lessons because they have changed their weak points according to the comments of other teachers. Thirdly, if only math and science teachers carry out the Lesson Study, they might tend to discuss the subject matters, *per se*. However, if teachers in charge of various subjects participate in the Lesson Study, they might be able to focus on the Lesson Study on the basis of the students' learning more easily than the specific subjects only. Lastly, the trusts between the schools and the neighboring communities have been established as a positive impact. Many visitors and educators came and visited those pilot schools, so neighboring communities had great concerns for the schools and gave good reputations.

#### (2) Factors concerning to the Implementation Process

Trusting and cooperative relationships with the resource persons of the partner universities had already been established through the former Project, "Indonesia Mathematics and Science Teacher Education Project: IMSTEP". They went around the target schools and observed the Lesson Study on behalf of the Japanese experts because the experts were not able to attend the Lesson Study all the time. Despite of insufficient budgets from the DGHE, the partner universities have continuously dispatched the resource persons to the target schools (more than 80 lecturers from the UPI, around 40 lecturers from the UM, and around 30 lecturers from the UNY). This is the most valuable resources of the IMSTEP. Without the assistance of the partner universities, the project activities would not have been successful.

### 3-4 Factors inhibiting project progress

#### (1) Factors concerning to Planning

- As the consistency between each objective of the Project (Overall Goal, Project Purpose, and Outputs) and the target values of *the* indicators was weak, the target values in the indicators did not necessarily imply the achievements of the each objective in the Project. For example, although the indicator 1-1 means that at least one officer (from the DGQITEP, Provincial Education Office, District Education Office) is supposed to attend *each* training and workshop, it would be misjudged that the objective is not achieved as a conclusion for the simple reason that an officer was not able to attend a training or workshop only once. In addition, although the indicator 1-2-2 means that the budgets of the target District Education Office for the MGMP activities have increased at least by five percent, it would also be very difficult to judge that necessary financial and administrative measures were not taken as a conclusion for the simple reason that the budget did not increase by “five percent.” Therefore, even if the target values of the indicators were not achieved in this Project, it is partially difficult to conclude that each objective was not accomplished.
- As mentioned above, despite of that the partner universities undertake the important roles in this Project, any words related to the partner universities are not described in the “narrative summary” of the PDM (only in the Important Assumption and the Inputs). From the perspectives of the project design, therefore, the collaboration with the partner universities should have been written in the Outputs and Activities of the Project.

#### (2) Factors concerning to the Implementation Process

- There are a large number of schools as targets (more than 300 schools) comparing with the limited budget from the DGHE. Thus, it is almost voluntary works for the resource persons of the university. Further, as many resource persons of the university are dispatched to the schools for the Lesson Study, their supportive and voluntary works affect the time allocation of their own lectures in the university.
- There are several teachers who are not able to attend the MGMP (*wilayah*) activities from the following reasons: (1) lacks of the school budget for dispatching teachers (the attendance rate of private schools is lower than public schools); (2) lacks of the confidence of math and science subjects by several teachers whose original subjects are not math and science; and (3) far distance in some cases. Also, some teachers are not able to attend the MGMP (*wilayah*) activities because their schools do not have the sufficient number of teachers for all the subjects.

### 3-5 Conclusions

Through the terminal evaluation, it is confirmed that the planned output of the project has been mostly generated. Activities, Output, and Project Purpose defined in the PDM have been mostly achieved. It is confirmed by Indonesian stakeholders such as MONE, Provincial and District Education Office, and teachers that the reorganization of MGMP at wilayah level with the application of Lesson Study is an effective means of improving quality of teaching and relationship between students and teachers or schools. Strong commitment by the related organizations has made firm financial and administrative measures for MGMP at wilayah level and Lesson Study. However, the number of university lectures and district school teachers who can make precise reflection with real understanding of Lesson Study is still limited, and further development of core personnel as key to sustainability is needed.

Lesson Study has attracted wider attention from diverse stakeholders of multi-level including

MONE, Provincial and District Education Office, partner universities, schools and their surrounding communities. It is reasonable to conclude that all the District Education Office in collaboration with DGQITEP have taken the necessary financial and administrative measures based on their strong commitment to implement and disseminate the MGMP (wilayah) applying Lesson Study.

The Evaluation Team reaffirmed the role being played by the partner universities for maintaining the certain level of quality of Lesson Study in methodological and technical aspects. It is a common practice in Indonesia that teachers without proper academic and professional background in MIPA subjects are assigned to teach such subjects. In this situation, facilitation and monitoring of MGMP by the partner universities in each cycle of Lesson study has contributed not only to the establishment of PDS cycle of Lesson Study but also to the enhancement of the participating teachers' subject knowledge and skills. In this regard, specific strategies for assuring the effective collaboration between the education administration, especially MONE, and the universities shall be needed for establishing Lesson Study in project target site and disseminating nationwide.

### 3-6 Recommendations

- (1) It is recommended that Japanese Expert Team in collaboration with partner universities should seek for opportunities to socialize the Program to wider audience from different directorates of DGQITEP in the form of individual meetings in addition to DGHE and DGPSEM. By doing so, coordination with different stakeholders at central level shall be facilitated for concrete follow-up actions or possible forms of collaboration to address the challenges facing by the Program. In this respect, DGQITEP in collaboration with the Expert Team, should prepare a briefing note before July 2008 on several options for follow-up actions, with summary of background information including overall management structure, and functions of each directorate, and tools/budget which can be utilized for capacity strengthening of the key human resources so that some necessary coordination can be started with the support of the Expert Team before the end of the cooperation period.
- (2) It is recommended to strengthen collaboration among the partner universities, the Provincial/District Education Offices, and LPMP as well as to strengthen financial accountability and transparency.
- (3) It is recommended that the provincial as well as district education offices should take initiative to further strengthen and expand institutional collaboration with the university beyond Science and Math faculty when planning to disseminate Lesson Study to the non MIPA subject areas.
- (4) It is strongly recommended that future targeted schools and districts shall be exposed to on site Indonesian good practices in MGMP (wilayah) or ESLS in target districts. This process shall facilitate them to understand in practice how to implement good Lesson Study at MGMP (wilayah) or individual school level. In this regard, it is highly expected that the MGMP (wilayah) with the application of Lesson Study in the target districts shall be continuously strengthened as a form of sustainable and effective teachers' professional development and thus successful dissemination to the other districts in the target provinces shall follow, referring to the current target districts as "Lesson Study Laboratory" of t MGMP (wilayah).

### 3-7 Lessons Learned

- (1) The Program designed the teacher training programs at cluster system (MGMP (wilayah)) in order for all the teachers to participate in every session by ensuring accessibility. By setting up clusters (MGMP (wilayah)) within proper accessible distances, teachers were able to attend the training sessions and improve their practical teaching skills regularly and continuously. Also, it is remarkably noted that all the schools (including MONE and MORA schools in the condition that MORA private schools which can join on voluntarily will) in the target districts are provided with equal opportunities for teachers to participate in continuous professional development.
- (2) Not only establishing clusters in the region but assigning roles and responsibility to one of the schools within one cluster is very effective approach for maintaining sustainability. By assigning special roles and responsibility to a core resource school (base camp school in the case of this project) within a cluster, the core resource school plays important roles for administration and monitoring the surrounding schools within a cluster. The core school can be a resource center for teaching skill development /improvement and forming networks among the same subject teachers.
- (3) Collaboration between administration and academic institution is important factors to enhance education quality. This kind of collaboration leads to bridging between academism (theory) and actual teaching experience (practice) in the manner that academic institutions can be benefited in terms of academic research, fruitful pre-service training for students and social service. On the other hands, administration can overcome the issues of limitation of academic input for subject matters by academic institutions.
- (4) In the Program, each activity was clearly related with each other to achieve program purpose. Every training and workshop is in the sequential manner to make synergy among each activity. Also it is essential aspect that the Program incorporated related stakeholders in each project activity to form the better relationship among stakeholders in a multi-layer manner (local administrators, supervisors, principals, facilitators and teachers).
- (5) It was observed that target district governments have set up local education policy which includes the implementation and dissemination of the Program activities by utilizing the existing financial resources for ensuring sustainability. It is also confirmed that district governments promoted school principals to incorporate opportunity for teachers to participate in MGMP (wilayah) regularly in the school development plan and to secure necessary budget for that. In case schools have enough school operational funds by national/local government, school development plan could be highly important measure for continuation of the Program activities.