

## Summary of Final Evaluation Report

<b>1. Outline of the Project</b>	
<b>Country</b> : Republic of Zambia	<b>Project Title</b> : Strengthening Teachers' Performance and Skills (STEPS) through School-Based Continuing Professional Development Project
<b>Area of Assistance</b> : Basic and Secondary Education	<b>Cooperation Scheme</b> : Technical Cooperation Project
<b>Responsible Agency</b> : Basic Education Team II, Human Development Department, JICA	<b>Budget Expense to date</b> : 4.09 million Japanese Yen
<b>Duration</b>	(R/D): From the 30th of October 2011 through the 31 <sup>st</sup> of December 2015 (for 4 years and 2 months)
	<b>Counterpart Agency</b> : Ministry of Education, Science, Vocational Training and Early Education (MESVTEE), Republic of Zambia
	<b>Cooperation Agencies of Japan</b> : –
<b>Any other related cooperation</b> : –	
<b>1-1 Background Narrative of the Project</b>	
<p>In Zambia, as a result of various efforts for increasing access to the basic education, the Net Enrollment Rate (NER) of the primary education has attained 94%. In the meantime, in terms of the achievement in academic performance, it remains very low, such as the pass rate of the 9<sup>th</sup> Grade 52.7% and of the 12<sup>th</sup> Grade 19.8% in 2009; or the calculation performance of the 6<sup>th</sup> Grade is the lowest among 14 Southern and Eastern African Countries in SACMEQ; Southern and Eastern African Consortium for Monitoring Educational Quality, thereby educational quality improvement is an urgent agenda in Zambia.</p> <p>The Zambian MESVTEE assumed that the quality and the effects of the education system depended on the quality of teachers, thus it was engaged in the establishment of the SPRINT system; School Program of In-service for the Term. Since 2000, the MESVTEE has institutionalized the school-based training program, the training of teachers tended to end with one time group trainings and the effects did not last long time. Accordingly, it was expected to build a continual training system for teachers.</p> <p>Responding to the situation, JICA assisted in development of the Master Plan for School-based Continuing Professional Development (SBCPD) program. In the realization of its activities JICA initiated a technical cooperation for “SMASTE Science SBCPD Project,” which introduced Lesson Study in Central Province, between October 2005 and October 2007, fitted in the existing SPRINT system. Consecutively, the initiative was expanded to Copperbelt Province and to Northwestern Province in the SMASTE SBCPD Project Phase 2 between February 2008 and February 2011. The 2 Phased Project assisted with the activation of school-based training system, the improvement of lessons, and the development of the pass rates.</p> <p>Strengthening Teachers' Performance and Skills (STEPS) through SBCPD Project, which corresponds to the third phase of the SMASTE SBCPD Project, is implemented since November 2011 and expands the practice of Lesson Study to all 10 Provinces. The STEPS Project promotes the Subjective Learning of pupils through the development of Resource Persons, the development of reference materials and the practice of Kyozaï-Kenkyu for enhancing the quality of Lesson Study. The Mid-term Review of the Project conducted in March 2014 acknowledged the improvement of lesson plan in science and mathematics and the quality improvement of science lessons. Furthermore, the expansion of the Lesson</p>	

Study activities to the Districts and to the grades other than the targets of the Project.

## 1-2 Narrative Summary of the Project

(1) **Overall Goal:** Students' learning process in science and mathematics is improved.

**Super Goal:** Quality of science and mathematics education is improved.

(2) **Project Purpose:** Teaching skills are enhanced under School-based Continuing Professional Development (SBCPD).

(3) **Output(s) :**

1. SBCPD is strengthened through Lesson Study.
2. Capacity of resource persons for implementing SBCPD is enhanced.
3. Reference materials for implementing SBCPD are developed.

(4) **Inputs** (As of the time of the Evaluation)

By the Zambian side :

1. Core Personnel for the Project
  - Project Manager: 1 person (Total 3 persons)
  - Project Coordinator : 1 persons (Total 2 persons)
  - Project Administrator : 1 persons (Total 2 persons)
  - Core Technical Team members, In-Service Unit personnel, KK Team members, total 27 persons
  - Education Officers, Education Standard Officer in math and science, Training Coordinators in all 10 Provinces.
2. Finances provided :
  - Expenses for training, workshop and monitoring activities : 1,259 thousand ZMW in the central level, 2,215 thousand ZMW in the Provincial level, and 62,372 thousand ZMW in the District, Zonal and schools levels (Total 65,846 thousand ZMW, or approx. 1 billion JPY) . \*This amount represents 94% of the total implementation cost spent in Zambia.
3. Facilities provided  
Facilities provided for the project activities referenced above.

By the Japanese side :

1. Dispatch of Experts
  - Long-term Experts: 3 Posts for total 5 persons (Chief Advisor/Management of Lesson Study and Science Education; Management of Lesson Study and Math Education; and Project Coordinator/Monitoring of Lesson Study activities.).
  - Short-term Expert: Total 5 persons (on School management/Math Education; Math Lesson Methodology; Math Kyozaï Kenkyu (KK, or Lesson material study); Science Lesson Methodology; Science KK) .
  - Experts from the Third Country (Malaysian) 4 persons : 2 persons on each of Math and Science experts.
  - Local Consultant : SBCPD management Technical Advisor

2. Training Program in Japan : (as of end of June 2015) total 84 persons.
3. Training Program in Kenya 21 persons; in Malaysia 136 persons.  
 Technical Exchange Visits: to Uganda 8 persons, received in Zambia from Namibia 7 persons, Burundi 7 persons, from Malawi 11 persons, and from Senegal 8 persons.  
 Procured Equipment : in central and in the 7 New Provinces valued for 1,967,640 ZMW (equivalent to ¥27,874,900 : vehicles, computers, projectors and video cameras)
4. Local Expense Budget (as of June 2015) : total 3,900,510 ZMW (Approx. ¥64,256,997) \*  
 This amount represents 6% of the total implementation cost spent in Zambia, excluding the cost for training abroad.  
 \*\*in JICA Official Conversion Rate of July 2015: 1ZMW=¥16.474

By both the Zambian and the Japanese sides:

Both sides agreed on co-hosting the 3rd SMASE WECSA International Technical WS in Zambia. The number of participants is shown in Annex 20 of the M/M.

## 2. Outline of Evaluation Study

Members of Evaluation Team	(1) Mr. Atsushi MATACHI, Team Leader, Senior Advisor of Education, JICA (2) Mr. Koji KIDA, Cooperation Planning, Associate Expert, Basic Education Division II, Basic Education Group, Human Development Department, JICA (3) Mr. Akira OSHIMA, Science and Mathematics Education, Associate Expert, Basic Education Division II, Basic Education Group, Human Development Department, JICA (4) Mr. Kenichi TSUNODA, Evaluation Analysis, Consultant, Social Development Unit, Mohri, Architect & Associates, Inc.	
Period of Evaluation Study	From 29 June through 23 July 2015	Type of Evaluation : Final Evaluation

## 3. Evaluation Result

### 3-1 Review of Outputs made and achieved

#### Achievements of Expected Outputs of the Project

<Expected Output 1: SBCPD is strengthened through Lesson Study.>

*Indicator 1-i : % of schools implementing Lesson Study (Minimum target figure: 90% in 3 Mentor Provinces, 50% in 7 New Provinces)<sup>5</sup>*

According to the result of the End-line survey conducted by the Project from mid-February to end of March 2015, the average rate of Lesson Study implementation in the 3 Mentor Provinces was 91% (1,691 schools out of 1,872 schools), which passed the target rate of 90%. In the 7 New Provinces, their average implementation rate was 70% (1,403 schools out of 1,969 schools), which also passed the target rate of 50%.

<sup>5</sup> In terms of the 7 New Provinces, all GRZ and Grant-aided secondary schools (G8-12) in the target Districts are targeted. Regarding the 3 mentor Provinces, all GRZ and Grant-aided secondary schools and all GRZ and Grant-aided primary schools in the target Districts are targeted. The target Districts are 76 out of all 103 Districts.

Indicator 1-ii : Quality of Lesson Study verified through a prepared check list (Minimum target average on current check list: 1.8).

Sampled Lesson Study<sup>6</sup> activities evaluated based on the Lesson Study Observation Instrument (Annex 10 of the MM) developed by the Project at the End-line survey gained 1.83 average rating out of 2.0, which exceeded the target of 1.8.

The interviews conducted by the Study Mission with concerned personnel have revealed that following the 8 Steps strictly of the implementation cycle in a collective manner is important to enhance the quality of Lesson Study:

<**Expected Output 2:** Capacity of resource persons for implementing SBCPD is enhanced.>

Indicator 2-i : Number of resource persons (who participated in JICA training programmes abroad). (Minimum target number: Japan 76, Kenya 12, Malaysia 100 persons).

The number of participants who participated in a training in Japan or in a third country attained the indicated targets.

Indicator 2-ii : Self-evaluation of resource persons on their performance (Target: Positive average figure on Self-evaluation tool).

The Resource Persons<sup>7</sup> who participated in a training abroad evaluated themselves on average 4.52 out of the maximum 5.0.

In addition, there are total 59 Resource Persons who participated in the questionnaire conducted by the Study Team, among which 10 are Core Technical Team members, 41 are Stakeholders, and 8 are Facilitators. They all appreciated more or less the capacity development of each one another.

Indicator 2-iii : Evaluation of resource persons by beneficiaries (who are directly trained by resource persons at workshop and lesson study activity) (Target: Positive average figure on resource person evaluation tool).

The evaluation of Resource Persons by their beneficiaries is rated the average of 4.49 out of 5.0, thus the evaluation of Resource Persons is generally well appreciated.

<**Expected Output 3:** Reference materials for implementing SBCPD are developed.>

Indicator 3-i : Number of developed reference materials (Sills books, Journals, Guidelines, etc.) Minimum Target: Teaching skills book – 1 booklet (15,000 copies), Management skills book – 1 booklet (7,500 copies), Journals – 4 volumes (3,000 copies each), Kyozaï Kenkyu booklet – 1 booklet (7,500 copies).

With regard to the reference materials developed by the Project, all of the reference materials have been printed and under the distribution, while the 4<sup>th</sup> volume of the journal is expected to be published and distributed by the end of the Project.

<sup>6</sup> The target group of the End-line Survey was teachers of science and mathematics at secondary schools (Grade 8-12) and primary school (Grade 1-7) teachers' lessons for science and mathematics in the targeted 76 Districts out of 103 Districts in all 10 Provinces. Total 500 teachers, who had been observed in the Baseline Survey, were observed. Resource Persons who had received training in Japan, Malaysia and Kenya are also included among the 500 teachers.

<sup>7</sup> The definition of Resource Persons varies. In Zambia, it normally refers to those who play important roles, such as Core Technical Team members, Stakeholders or Facilitators, while in the context of this Project, Resource Persons refers to those who have participated in a training abroad. In this report, those who have participated in a training abroad refer to Ex-participants.

Indicator 3-ii : Users' (teachers') evaluation on the developed reference materials (Minimum target average figure on Users' evaluation tool: 3.0).

Users of the developed reference materials, such as Resource Persons and teachers, rated the materials on average 3.86 out of 5.0, which exceeded the target of 3.0.

98% of Resource Persons who responded to the questionnaire distributed by the Study Team expressed their satisfaction with the developed reference materials.

Meanwhile, referring to the responses from teachers in another questionnaire distributed by the Study Team, the fact suggests that the reference materials reached the Provincial, District and Zonal levels, but not sufficiently reached the school level.

### **Achievement of Project Purpose**

**(Project Purpose:** Teaching skills are enhanced under School-based Continuing Professional Development (SBCPD).)

Indicator i : Result of lesson observation (science and mathematics)(demonstration of teaching skills).

For the 3 Mentor Provinces P-3 (1.27 at Baseline to be 1.5 at Endline)

For the 3 Mentor Provinces D-2 (1.15 at Baseline to be 1.3 at Endline)

For the 7 New Provinces P-3 (1.09 at Baseline to be 1.27 at Endline)

For the 7 New Provinces D-2 (1.03 at Baseline to be 1.15 at Endline)

The evaluation result of Lesson Observation during the End-line survey, which evaluates teaching skills of teachers, indicates that the average ratings in both 3 mentor Provinces and 7 New Provinces went beyond the targets from the perspectives of “Lesson Plan prepared considering pupils” and “Lesson Delivery enhancing pupils’ Subjective Learning.”

The Study Team also observed several lessons with the Lesson Observation Instrument (Annex 4 of the M/M) with special attention to D-2: Ability of Enhancing Pupils’ Subjective Learning; and L-2: Quality of Learning (Extent of Subjective Learning).

As a result, the Study Team recognized in all 6 schools visited the following points:

- The teachers tried to attract pupils’ interest in the lesson by asking questions repeatedly;
- The teachers used some kind of teaching materials apart from chalkboard and chalk;
- Some pupils made a presentation in front of the class;
- Through discussions the pupils found answers or better solutions; and
- The time for thinking for the pupils as a group or pair was allocated.

The aspects identified in a few lessons among the 6 schools are:

- Lesson was designed to attract pupils’ interest with introduction;
- The teachers utilized locally available or improvised teaching materials and enhanced pupils’ understanding; and
- The pupils seemed to be interested and involved in the lesson.

Meanwhile, the Study Team observed the following in 5 out of 6 schools visited:

- The lessons did not have questions for enhancing higher order thinking of pupils;
- The pupils did not seem to think deeply in order to answer the given questions or tasks; and

- The pupils did not voluntarily raise their hands nor ask questions to the teacher.

Indicator ii : Self-evaluation of teachers in teaching skills (Target: positive average figure on Self-evaluation tool by teachers).

Teachers their own evaluation presents as high as 4.57 out of 5.0, suggesting the high satisfaction with their own lesson delivery.

Indicator iii : Students' evaluation of teaching L-1 (1.49 at Baseline to be 1.55 at Endline).

Students, who attended the lesson of the teachers who evaluated themselves above, evaluated the teachers at 1.56 out of 2.0, passing the target of 1.55.

### **Achievements of Overall Goal**

(**Overall Goal:** Students' learning process in science and mathematics is improved.)

Indicator i : Result of lesson observation (science and mathematics) (students' activities).

For the 3 Mentor Provinces L2 (1.9 at Baseline to be 2.2 at Endline)

For the 3 Mentor Provinces L-2 (1.16 at Baseline to be 1.4 at Endline)

For the 7 New Provinces P-3 (1.6 at Baseline to be 1.8 at Endline)

For the 7 New Provinces D-2 (1.04 at Baseline to be 1.2 at Endline)

The Overall Goal is the goal that is expected to be achieved three to five years after the project ends. Nevertheless, the 7 New Provinces have already achieved the targets in the Lesson Observation at the End-line Survey in terms of "Extent of Subjective Learning" and "Learning of Pupils in Subjective Learning." In the 3 Mentor Provinces, however, the scores slightly unreach the targets at the moment of the End-line Survey. However, considering the following comments made by teachers at the interview conducted by the Study Team:

- Pupils became more interested in lessons, became more enthusiastic, and more actively participated in lessons than before; and
- The results of examination at each level: School; District; provincial and national, have improved year by year,

the Overall Goal is expected to be achieved in several years.

Indicator ii : Students' perception towards their learning.

For the 3 Mentor Provinces L-2 (1.58 at Baseline to be 1.7 at Endline)

For the 3 Mentor Provinces L-3 (1.48 at Baseline to be 1.6 at Endline)

For the 7 New Provinces L-2 (1.58 at Baseline to be 1.7 at Endline)

For the 7 New Provinces L-3 (1.45 at Baseline to be 1.6 at Endline)

The pupils in both 3 Mentor Provinces and 7 New Provinces, who attended the lesson of the teachers whose lesson was observed, graded themselves a little bit below the target points at this stage in terms of "quality of their learning" and "their operation learning."

### **Achievements of Super Goal**

(**Super Goal:** Quality of science and mathematics education is improved.)

Indicator i : Scores in national assessment(G5 Numeracy, G9 Science & Mathematics).

Indicator ii : Examination pass rate in G9 and G12.

Indicator iii : International comparative study (SACMEO).

As the Super Goal is a long-term goal, it is not evaluated in this Study. In the meantime, according to the report of the Impact Assessment, concerning Grade 12, conducted in May 2015, the following results were shown:

- Pass rate in Science in 2009: 52.94% → in 2013: 62.67% (+9.73)
- Pass rate in Mathematics in 2009: 40.15% → in 2013: 48.72% (+8.57)

### **3-2 Process of Implementation**

The activities planned in the Project Design Matrix (PDM) have been implemented without major problems, while there were some delays in the implementation of the activities due to the deferred disbursement of national budget and the constraints of available human resources (See the details activity by activity in Annex 13 of the M/M).

The Zambian and the Japanese personnel involved in the Project have been consistently conscious about the sustainability of the Project activities since the formulation of the Project. Therefore, most of the Project activities have been implemented by Zambian personnel as their regular work with technical assistance of the Japanese experts, and necessary expenses incurred with the Project activities have been financed with national budget, including the budget allocated to the Provincial, District, Zonal and school levels.

### **3-3 Contributing Factors for the Achievement**

#### Utilizing the existing In-service Training Program

Lesson Study activities were fitted in the School Program of In-service for the Term (SPRINT) and in the implementation of the Continuing Professional Development (CPD) Program of the country. Accordingly, as mentioned above, each of the personnel involved in the Project activities conducted the activities as their regular daily works or tasks with their strong ownership and sense of responsibilities, and most of the activities have been funded by Zambian local budget and been implemented by Zambian personnel without extra inputs from JICA.

#### Effective Cooperation with the JICA Training Programs

The Japanese experts have effectively taken advantage of the training program abroad. In particular, the collaborative assistance from University of Hiroshima, such as hosting the training program for the Zambians and dispatching the short-term experts to Zambia, has been effective and substantially contributed to the human resource development, which made effects in the expansion and the promotion of lesson study activities. North-Western Provincial Education Office organized a Lesson Contest in 2014 and also effectively utilized the training program in Japan and in Malaysia as an award for the winners of the Contest.

### **3-4 Hindering Factors against the Achievement**

#### School Environment causing Time Constraints

The most common challenge in the implementation of lesson study, identified through the interviews

by the Study Team is a difficulty of ensuring the time for implementing Lesson Study. Due to the shortage of school facilities, many schools are delivering double or triple shifted lessons each day. In these circumstances, teachers are encountering the difficulty with managing the time for their continuing career development program.

#### Extreme Difficulties in Far Remote Areas

In Zambia, there are some livelihoods situated in isolated rural areas where providing ordinary education services is extremely difficult. Luapula Province, for example, revealed such challenges at the occasion of End-line survey. In such remote areas, not only implementing lesson study but assigning and posting teachers are major initial challenges.

#### Shortage of support from School Management

As it was repeatedly reported in the past JICA evaluation reports, one of the major factors contributing to the regular practice of lesson study is the leadership and the enabling environment provided by school Head Teacher, Deputy Head Teacher and CPD Coordinator. On the contrary, those schools that cannot receive such supports encounter the challenges in conducting lesson study.

### **3-5 Evaluation by Five Evaluation Criteria**

#### **Relevance : High**

- With concerns of “an extensive use of untrained or unqualified teachers, particularly in the lower and upper basic classes,” “low learning achievements in early grade literacy and numeracy” and “in Science and Mathematics,” and “poor performance in mathematics and science” in the high school level, Zambia’s National Education Policies emphasize on strengthening school-based In-service training programs under the framework of the continuing professional development (CPD) program.
- "Development assistance policy of Japan for Republic of Zambia" addresses that Japan “assists in the quality development of education” in Zambia. The Rolling Plan of the policy also announces that Japan assists with “the capacity development of teachers through the continuous school-based practices.”
- The approach of the STEPS Project, having effectively activated the existing Zambian SPRINT program and the SBCPD program, is valid. The Project also followed existing job description of each personnel and did not give them a lot of extra responsibilities owing to the Project. With the strategy, applied by the Japanese Experts, of respecting the ownership of the Zambians and waiting for their discovery and initiative, the Zambians have accordingly adopted Lesson Study in this context.

#### **Effectiveness : Relatively High**

- Over 90% average on implementation rate of lesson study in the 3 Mentor Provinces was confirmed among total 10 Provinces in the country. Likewise, the 7 New Provinces achieved the target of over 50% implementation rate. Concerning the quality of Lesson Study, the target of the average 1.8 in the ratings by means of the End-line Survey checklist was attained.



- The Study Team found the following effects of Lesson Study in 5 Provinces visited by the Team<sup>8</sup>, namely Copperbelt, North-Western, Central, Luapula and Southern Provinces, as well as at the central Ministry:
  - ✓ Teamwork among the teachers has been formed, as Lesson Study is practiced. They make lesson plans together and monitor the lessons each other;
  - ✓ Teachers became able to identify challenges or issues need to be tackled. Teachers became commit to problem-solving with good facilitation and sharing issues among them
  - ✓ The lessons change from the lecture-styled teacher-centered lesson to the learner-centered lesson;
  - ✓ Pupils became freely express their ideas and opinions. They more voluntarily learn and learn as a team as well; and
  - ✓ Teachers became able to continually develop their career. Student teachers can also have a vision of their career development.
- In addition, the average ratings in both 3 mentor Provinces and 7 New Provinces at the End-line Survey went beyond the targets from the perspectives of “Lesson Plan prepared considering pupils” and “Lesson Delivery enhancing pupils’ Subjective Learning.” The Study Team visited the 5 Provinces also recognized that “Teachers often posed a question to the learners and encouraged their subjective participation.”
- Nevertheless, the Study Team was unable to observe a lesson in which the teacher gave his or her pupils a question for enhancing their higher order thinking, or a class scene of which the pupils seemed thinking deeply in order to answer the given questions or tasks by the teacher, in all 6 schools except 1 school.

**Efficiency : Relatively High**

- In the questionnaire distributed by the Study Team to Resource Persons, 57 (97%) out of 59 respondents marked either “Satisfied” or “Very satisfied” with the number and the timing of the Japanese Experts. In terms of those who attended a training course in Japan or in a third country, all 26 respondents and all 17 respondents respectively expressed their satisfaction. With regard to the equipment as well as the reference materials contributed by JICA, 46 (85%) out of 54 Resource Persons also replied either “Satisfied” or “Very satisfied.”
- While 34 (68%) out of 50 Resource Persons answered “Satisfied” or “Very satisfied with the timing of the release of the Zambian government fund, the Study Team recognized that there were some delay with the disbursement of the budget, which affected the smooth implementation of the Project activities.
- In order to strengthen the capacity of the Resource Persons, including the Facilitators, this Project made the most of the opportunities for trainings abroad which required a plenty of investment compared with training the Resource Persons in-country.

**Impact : High**

- Regarding the prospect of Overall Goal achievement, the 7 New Provinces have already reached the target in “Extent of Subjective Learning” and in “Learning of Pupils in Subjective Learning,” while the evaluations in the 3 Mentor Provinces slightly missed the target. From the viewpoint of

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<sup>8</sup> The 5 Provinces comprises all 3 Mentor Provinces and 2 out of the 7 New Provinces selected based on the location and the history.

pupils in terms of “quality of their learning” and “their operation learning,” both 3 Mentor Provinces and in 7 New Provinces evaluated in the level of almost reaching the target points at this stage. As confirmed at the Achievement of Overall Goal, certain number of respondents agreed that “Students’ learning process in science and mathematics is improved.” Therefore, in conclusion, the day of achieving the Overall Goal is likely to arrive near future.

- Experience of Lesson Study practice in Zambia was widely shared and provided impacts at the International Conferences in Italy, in Indonesia, and in Naruto, Japan. It was a proof of the effective technical transfer from Japan, which had originated the Lesson Study practice among teachers since some decades ago.
- Millions Learning Project implemented by the Brookings Institute has selected the STEPS Project as one of the 10 projects having been studied as Case Studies all over the world.
- The Project implementation contributes to the collaboration with the input of Grant Aid for Poverty Reduction Strategies to the Education Sector Pool Fund, with the Educational Policy Advisor, creating synergy effects among the different schemes of JICA program.
- The Project also provided support for Japanese researchers and accepted JICA interns.
- Certain number of impacts beyond the scope of the Project were also identified as follows:
  - ✓ Lesson Study expanded to the other grades and the subjects other than math and science.
  - ✓ Mufulira College of Education has introduced lesson study in the pre-service level. Student-teachers also experienced lesson study at the school where they were assigned.
  - ✓ Japanese Experts of the Project assisted with revising the syllabi of Grade 1 through Grade 12 in mathematics and science and the syllabi of College of Teachers Education.
  - ✓ The Belgian cooperation agency; VVOB, providing assistance in the capacity development of Early Child Education (ECE) personnel, has been utilizing the reference materials developed through the Project activities, in view of avoiding duplication of works.

#### **Sustainability : Relatively High**

- The school-based CPD Program, driven by Lesson Study, is sustainable, as it has already been institutionalized as a national program in Zambia. From the organizational perspective, all of the governmental officials from the national to provincial and district levels interviewed by the Study Team demonstrated high sense of their professional commitment to the activities supported by the Project.
- With reference to the monitoring system, the Provinces visited by the Study Team showed their confidence with the resource sustainability of the CPD Program activities. The Stakeholders Workshop, one of the functions for monitoring, has already been locally financed.
- In the meantime, the training opportunities abroad which have contributed to strengthening the capacity of and motivating the Facilitators will be drastically reduced after the Project period. A system of updating and upgrading knowledge and skills of the facilitators needs to be in place.
- According to the officials of the MESVTEE, the development of the CPD Program is one of the sectorial top priority agenda, therefore a specific budget line for it has been reserved in the national recurrent budget. Therefore, regular fund allocation for the CPD activities each year is continuously ensured from the central government. Meanwhile, there are some delays in the disbursement of the fund, which may require the JICA side to cover the cost.

### **3-6 Conclusion**

In general, the level of achievement of the Project Purpose as well as the Expected Outputs deserves a high appreciation. The Project has succeeded in enhancing the teaching skills of teachers to a certain extent, through the existing school-based training system, the development and the assistance of Resource Persons, and the developed reference materials, leading to the nation-wide expansion of Lesson Study practice.

Since the Project prioritizes “awareness” or “readiness” of the Zambian, it took time during the course of the Project to clarify what is the expected “teaching skills” in school level. Teachers, however, gradually noticed that the “Good Lesson” means a lesson effectively promoting the Subjective Learning of learners. The Subjective Learning with Learner-centered approach has become the common practice and the objective to be delivered nationwide among Zambian teachers.

### **3-7 Recommendations**

#### 3-7-1. Actions to be taken by the end of the Project

##### **(a) Finishing of production and distribution to beneficiaries of the reference materials**

The distribution of the reference materials to the intended beneficiaries, including the Management Skills Book and the production of the Journal volume 4 need to be completed by the end of the Project.

##### **(b) Identifying the elements of effective Lesson Study**

The Study Team recommends identifying the elements of an effective Lesson Study and including them in the Lesson Study monitoring instrument. Most of the items in the present ‘Monitoring Format on Facilitation of Lesson Study Activities’ are to check whether the necessary steps for Lesson Study have been carried out or not. It is important to understand what kind of Lesson Study enables teachers to learn effectively to deliver a lesson that allows learners to subjectively learn. Therefore, it is essential to reflect some effective qualitative elements in the process of Lesson Study.

#### 3-7-2. Actions to be taken by the MESVTEE of Zambia beyond the Project period

##### **(a) Updating the Master Plan of SBCPD**

The Team recommends revising the Master Plan as well as developing a concrete strategic plan for introducing and disseminating Lesson Study practice in the Districts and the schools which have not introduced Lesson Study yet and for improving the quality of Lesson Study practice nationwide.

##### **(b) Developing measures to understand the thinking process of learners to promote learning**

The Team recommends developing measures to understand the thought process of the learners and incorporating the necessary measures into lesson observations. The lesson observation made by the Study Team revealed that learners were not thinking deeply although teachers attempted to encourage them to think subjectively. As learning takes place in learner’s mind, it is essential to carefully observe learners during each lesson.

##### **(c) Strengthening Pedagogical Content Knowledge (PCK) of teachers**

In some of the lessons observed by the Study Team, the learners were unable to understand the problems given by the teacher, because the basic knowledge and skills of the learners were insufficient. Therefore, it would be necessary for learners to have a certain level of basic knowledge and skills enabling them to think subjectively. In this view, teachers must strengthen their “pedagogical content knowledge (PCK),” including subject content knowledge, for instance, by strengthening Kyozaï-Kenkyu.

**(d) Identifying and promoting schools practicing effective Lesson Study**

It would be beneficial if some schools where an effective Lesson Study is carried out would be identified and promoted so that concerned personnel of other schools can observe good Lesson Study practices at such schools. As Lesson Study is practice, in order to understand what an effective Lesson Study is, it is helpful if you would actually observe effective Lesson Study practices, which cannot be captured by the Lesson Study checklist.

**(e) Improving coordination with officers in other Departments**

In order to improve the quality of Lesson Study, it is important for INSET Unit to collaborate with other Departments, especially, curriculum specialists and Standard Officers who have a mandate to work for improving the quality of education. Therefore, the Team recommends developing a concrete strategy for enhancing collaboration with other departments, i.e. Curriculum Standard Department.

**(f) Increasing the involvement of practicing teachers in national level activities**

It is also important to increase the involvement of practicing teachers in national level activities so that they are able to conduct good lessons in their schools that are to be observed by teachers and other education personnel.

**3-8 Lessons Learned**

**(a) Intra- and Inter-Program collaboration including the utilization of external resources**

This project aimed at producing a synergy effect by combining different modalities of Japan's ODA, namely, a technical cooperation project including dispatching technical advisors, dispatching Educational Policy Advisor, and PRS (Poverty Reduction Strategy) Grant.

Combining a wide range of technical assistances beyond the existing framework of a technical cooperation enabled the Project to develop capacities of the Zambian personnel effectively.

**(b) A good practice of effective utilization of technical cooperation under the strong ownership**

As mentioned above, based on the vision and under the strong ownership of the Zambian government, achievements of cooperation of different cooperating partners have been strengthened continuously and deliberately. Consequently, Lesson Study has been successfully adapted in the Zambian context by taking advantage of the past achievements.

The Team has recognized that this is a good practice of exhibiting the strong ownership of a beneficiary country for tackling challenges in their own country, which is worth sharing.

End of the text.