

Country Name	<b>Strengthening Teachers' Performance and Skills (STEPS) through School-Based Continuing Professional Development Project</b>
Republic of Zambia	

**I. Project Outline**

Background	<p>In Zambia, the net enrollment rate reached 94% by the government's efforts towards the expansion of access to basic education. On the other hand, there were some challenges to be tackled in the quality of education with the low completion rate (52.7% at the 9th grade and 19.8% at the 12th grade in 2009) and the low learning attainment (the lowest rank in mathematics at the 6th grade among the 14 participating countries in the southeast part of African). Considering that the quality of education could be attributed to the quality of teachers, the Government of Zambia attempted to establish an in-service teacher training framework known as School Program of In-Service Training for a Term (SPRINT). However, many of the trainings were held in a group setting on an ad hoc basis. Even after being institutionalized in 2000, the system lost substance due to the lack of clear training contents.</p>				
Objectives of the Project	<p>Through workshops on introduction of Lesson Study for Provincial Educational Support Team (PEST) and District Educational Support Team (DEST), implementation of Lesson Study in schools and its monitoring, provision of technical supports on Lesson Study to school stakeholders from resource persons trained by the project, and preparation of related materials to Lesson Study, the project aimed at enhancing teachers' teaching skills in mathematics and science under School-based Continuing Professional Development (SBCPD), thereby contributing to the improvement of students' learning process in science and mathematics.</p> <ol style="list-style-type: none"> <li>Overall Goal: Students' learning process in science and mathematics is improved.</li> <li>Project Purpose: Teaching skills are enhanced under School-based Continuing Professional Development.</li> </ol>				
Activities of the Project	<ol style="list-style-type: none"> <li>Project Site: the whole of Zambia (76 districts in 10 provinces)</li> <li>Main Activities: 1) Provision of workshops on introduction of Lesson Study for PESTs and DESTs, 2) Implementation of Lesson Study in schools and its monitoring, 3) Provision of technical supports on Lesson Study to school stakeholders from resource persons trained by the project, 4) Preparation of related materials to Lesson Study including a Teaching Skills book, etc.</li> <li>Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Japanese Side</p> <ol style="list-style-type: none"> <li>Experts: 14 persons</li> <li>Trainees Received in Japan: 84 persons</li> <li>Trainees Received in the Third Country: 21 persons (Kenya) and 136 persons (Malaysia)</li> <li>Technical exchange with the Third Country: 8 persons (dispatched to Uganda), 7 persons (from Namibia), 7 persons (from Burundi), 11 persons (from Malawi), and 8 persons (from Senegal)</li> <li>Equipment: vehicle, PC, projector, camera, etc.</li> <li>Local expenses: cost for project activities including the hiring of local consultant</li> </ol> </td> <td style="width: 50%; vertical-align: top;"> <p>Zambian Side</p> <ol style="list-style-type: none"> <li>Staff Allocated: 45 persons</li> <li>Land and facilities: office spaces for Japanese experts in the Curriculum Development Center and the National Science Center</li> <li>Local expenses: costs for trainings, workshops and monitoring activities</li> </ol> </td> </tr> </table> </li> </ol>			<p>Japanese Side</p> <ol style="list-style-type: none"> <li>Experts: 14 persons</li> <li>Trainees Received in Japan: 84 persons</li> <li>Trainees Received in the Third Country: 21 persons (Kenya) and 136 persons (Malaysia)</li> <li>Technical exchange with the Third Country: 8 persons (dispatched to Uganda), 7 persons (from Namibia), 7 persons (from Burundi), 11 persons (from Malawi), and 8 persons (from Senegal)</li> <li>Equipment: vehicle, PC, projector, camera, etc.</li> <li>Local expenses: cost for project activities including the hiring of local consultant</li> </ol>	<p>Zambian Side</p> <ol style="list-style-type: none"> <li>Staff Allocated: 45 persons</li> <li>Land and facilities: office spaces for Japanese experts in the Curriculum Development Center and the National Science Center</li> <li>Local expenses: costs for trainings, workshops and monitoring activities</li> </ol>
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Project Period	October 2011 – December 2015	Project Cost	(ex-ante) 420 million yen, (actual) 404 million yen		
Implementing Agency	Ministry of General Education (MoGE) (Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) was reformed to MoGE in 2015)				
Cooperation Agency in Japan	-				

**II. Result of the Evaluation**

1 Relevance
<p>&lt;Consistency with the Development Policy of Zambia at the Time of Ex-Ante Evaluation and Project Completion&gt;</p> <p>The project was consistent with Zambia's development policies of "The Sixth National Development Plan" (2011-2015) focusing on improvement of the quality of education, particularly at a school level such as teacher continuing professional development, and "National Implementation Framework III" (2011-2015) raising "Upgrade teachers' qualifications to meet the minimum required standards through in-service training" as one of the priority strategies at the time of ex-ante evaluation and at the time of project completion.</p> <p>&lt;Consistency with the Development Needs of Zambia at the Time of Ex-Ante Evaluation and Project Completion &gt;</p> <p>The project was consistent with Zambia's development needs of activation of an in-service teacher training system established for the improvement of the quality of education.</p> <p>&lt;Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation&gt;</p> <p>The project was consistent with "The Country Assistance Policy for Zambia" (2004) setting "human resource development and establishment of institution for self-sustained development" as one of the five priority areas.</p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the relevance of the project is high.</p>
2 Effectiveness/Impact
<p>&lt;Status of Achievement of the Project Purpose at the time of Project Completion&gt;</p> <p>The Project Purpose was achieved by the time of project completion. By introducing and implementing Lesson Study in schools in the</p>

target districts in each province through the project, even though the degree varied among the provinces, SBCPD was strengthened. As a result, teachers' teaching skills in science and mathematics were confirmed to be enhanced from perspectives of the project team, teachers themselves, and students (Indicator 1, 2, and 3).

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have been continued since the project completion. According to Provincial Education Officers, teachers and students, in all the provinces, teachers' teaching skills enhanced by the project have sustained or further improved. Specifically, teachers have been able to prepare their lessons incorporating the concept of subjective learning and to utilize teaching materials like flip charts and manila papers other than chalkboards. The reasons for the sustainability or improvement are as follows: 1) the hierarchical system from a national level to a school level established by the project for the management and implementation of SBCPD through the School Program of In-service Training for the Term (SPRINT) framework has continued to be functional and 2) through the system, stakeholder meetings/workshops to transfer the knowledge and skills of SBCPD up to teachers have been held on a regularly basis.

Due to the above reasons, overall, most of the schools in the target districts in all the provinces have continuously practiced Lesson Study. Furthermore, in 5 out of 6 provinces with available data, the number of the schools adopting Lesson Study has dramatically increased for the period from 2015 to 2019: 582 to 911 in Central province, 71 to 168 in Northern province, 317 to 595 in Eastern province, 197 to 640 in Luapula province, 160 to 276 in Western province. In Southern province, the number of the schools increased from 332 in 2015 to 375 in 2016 but dropped to 321 in 2019. The reasons for the decrease are as follows: 1) there have been some teachers who have thought that Lesson Study introduced by the project is the same as another donor-supported intervention and is likely to phase out soon, 2) school leadership and management for a continuous practice of the Lesson Study have been poor, 3) the budget allocated from MoGE to schools has been limited, and 4) the monitoring system from a national level to a school level is not functioning as it used to be during the project implementation period. In light of the above, the number of schools newly practicing Lesson Study in the non-target districts after the project has significantly expanded. However, it was confirmed that there is still a certain number of schools which do not adopt Lesson Study.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been achieved at the time of ex-post evaluation. According to the District Education Board Secretary's Office, it was confirmed through lesson observation that the students' L2 (Extent of subjective learning) and L-2 (Learning of pupils (subjective learning) have been improved in all of the provinces (Indicator 1). For example, students have opportunities to think about solutions to tasks given on their own during classes. Also, students are at times encouraged to work in pairs or groups for peer-to-peer learning. Additionally, the District Education Board Secretary's Office reported that the students' L-2 (Quality of learning) and L-3 (Operational learning) have sustained or further improved in all of the provinces. For instance, learners have become able to finish their tasks within the time given and to use teaching materials like worksheets.

<Other Impacts at the time of Ex-post Evaluation>

No other positive or negative impacts of the project were observed at the time of ex-post evaluation.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results																																
(Project Purpose) Teaching skills are enhanced under School-based Continuing Professional Development.	1. Result of lesson observation (science and mathematics) (demonstration of teaching skills) <ul style="list-style-type: none"> <li>➤ For the 3 mentor provinces P-3 (1.27 at Baseline to be 1.5 at End-line)</li> <li>➤ For the 3 mentor provinces D-2 (1.15 at Baseline to be 1.3 at End-line)</li> <li>➤ For the 7 new provinces P-3 (1.09 at Baseline to be 1.27 at End-line)</li> <li>➤ For the 7 new provinces D-2 (1.03 at Baseline to be 1.15 at End-line)</li> </ul>	Status of the Achievement: Achieved (Continued) (Project Completion) <ul style="list-style-type: none"> <li>• As a result of evaluating teachers' teaching skills through lesson observation in science and mathematics by the project team, the average rating in both of the 3 mentor provinces and the 7 new provinces went beyond each of the targets.</li> </ul> [Result of science and mathematics lesson observation evaluating teachers' teaching skills] <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Item</th> <th>Baseline</th> <th>Target</th> <th>End-line</th> </tr> </thead> <tbody> <tr> <td>For the 3 mentor provinces: P-3<sup>1</sup></td> <td>1.27</td> <td>1.50</td> <td>1.50</td> </tr> <tr> <td>For the 3 mentor provinces: D-2<sup>2</sup></td> <td>1.15</td> <td>1.30</td> <td>1.39</td> </tr> <tr> <td>For the 7 new provinces: P-3</td> <td>1.09</td> <td>1.27</td> <td>1.49</td> </tr> <tr> <td>For the 7 new provinces: D-2</td> <td>1.03</td> <td>1.15</td> <td>1.39</td> </tr> </tbody> </table> Note 1: Lesson plan considering pupils Note 2: Lesson enhancing pupils' Subjective Learning  (Ex-post Evaluation) <ul style="list-style-type: none"> <li>• According to Provincial Education Officers, through their monitoring of classes, 9 out of 10 provinces have seen that teachers' teaching skills have been sustained. Even in the remaining province, teachers' teaching skills is considered to have improved.</li> </ul> [Status of the quality of teachers' teaching skills in each province] <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Province</th> <th>Status of the quality of teachers' teaching skills</th> </tr> </thead> <tbody> <tr> <td>Central</td> <td>Improved</td> </tr> <tr> <td>Northwestern</td> <td>Sustained</td> </tr> <tr> <td>Copperbelt</td> <td>Sustained</td> </tr> <tr> <td>Northern</td> <td>Sustained</td> </tr> <tr> <td>Eastern</td> <td>Sustained</td> </tr> </tbody> </table>	Item	Baseline	Target	End-line	For the 3 mentor provinces: P-3 <sup>1</sup>	1.27	1.50	1.50	For the 3 mentor provinces: D-2 <sup>2</sup>	1.15	1.30	1.39	For the 7 new provinces: P-3	1.09	1.27	1.49	For the 7 new provinces: D-2	1.03	1.15	1.39	Province	Status of the quality of teachers' teaching skills	Central	Improved	Northwestern	Sustained	Copperbelt	Sustained	Northern	Sustained	Eastern	Sustained
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	2. Self-evaluation of teachers in teaching skills (Target: positive average figure on self-evaluation tool by teachers)	Status of the Achievement: Achieved (Unverified) (Project Completion) <ul style="list-style-type: none"> <li>As a result of the self-evaluation of teachers' teaching skills at the end-line, they rated 4.57 against 4.05 at the baseline (a 0.52 increase), reaching the target.</li> </ul> (Ex-post Evaluation) <ul style="list-style-type: none"> <li>The indicator was unverified. However, even though the coverage of the field survey was quite limited, according to the teachers in the schools (20 schools) visited in the field survey, teachers' teaching skills have been improving.</li> </ul>	
	3. Students' evaluation of teaching L-1 (1.49 at Baseline to be 1.55 at End-line)	Status of the Achievement: Achieved (Unverified) (Project Completion) <ul style="list-style-type: none"> <li>As a result of the students' evaluation of teachers' teaching L-1 at the end-line, the students rated 1.56 on average, exceeding the target of 1.55.</li> </ul> (Ex-post Evaluation) <ul style="list-style-type: none"> <li>The indicator was unverified. However, even though the coverage of the field survey was quite limited, according to the students in the schools (20 schools) visited in the field survey, teachers' teaching skills have been improving.</li> </ul>	
(Overall Goal) Students' learning process in science and mathematics is improved.	1. Result of lesson observation (science and mathematics) (students' activities)	(Ex-post Evaluation) Achieved <ul style="list-style-type: none"> <li>Extent of subjective learning (L2): the students' L2 improved through the project have been sustained in all of the provinces.</li> <li>Learning of pupils (subjective learning) (L-2): the students' L-2 improved through the project have been sustained in all of the provinces.</li> </ul>	
	2. Students' perception towards their learning	(Ex-post Evaluation) Achieved <ul style="list-style-type: none"> <li>Learning of pupils (quality of learning) (L-2): they have improved L-2 in Central province and Northwestern province while sustained in other provinces.</li> <li>Operational learning (L-3): they have sustained the level of their learning by being given tasks during classes and become able to use teaching materials.</li> </ul>	

Source : Terminal Evaluation Report, Interview and questionnaire to MoGE, Provincial Education Offices (10 provinces), District Education Board Secretary's Office, teachers, and students

### 3 Efficiency

The project cost and period were within the plan (ratio against the plan: 96% and 100%, respectively). The outputs were produced as planned. Therefore, the efficiency of the project is high.

### 4 Sustainability

#### <Policy Aspect>

"The Seventh National Development Plan" (2017-2021) focuses on the needs of the provision of quality education at all levels, especially at primary and secondary levels, for the development of literacy and numeracy skills in learners. The "Zambia's Vision 2030" (2006-2030) emphasizes the development of the quality of human capital including investing in quality education and skills development. As the project aimed at enhancing teachers' teaching skills to improve students' learning process in science and mathematics, it has been backed up by those national policies.

#### <Institutional Aspect>

The organizational reform from MESVTEE to MoGE was put in practice in 2015. Apart from it, there have not been any other changes in the institutions to promote SBCPD containing Lesson Study introduced by the project.

#### [National level]

MoGE has taken responsibilities for the formulation of educational policies including SBCPD. MoGE has 76 officers, and according to them, as they fulfill the responsibilities without any major problems, the number of the officers has been sufficient.

Teacher Education Section which is under MoGE has monitored the implementation status of activities pertinent to SBCPD by assembling groups of officers from national, provincial, district, zone, and school levels. The Department itself has 152 officers, and according to them, as they organize meetings without any major problems, the number of the officers is sufficient.

National Science Center has played a pivotal role in upgrading teachers' knowledge and skills by designing, developing, and producing the teaching and learning aids including SBCPD. 178 staff members have been deployed there, according to the center, the number of the staff members is sufficient as they perform their role without any major problems.

#### [Provincial level]

Provincial Education Office and Provincial Resource Centers have been in charge of the management and implementation of SBCPD at a provincial level. According to them, they carry out their activities without any major problems with the current number of the staff (1 staff for each Provincial Education Office and 2-3 staff for each Provincial Resource Centers)

#### [District level]

District Education Board Secretary's Offices and District Resource Centers have taken responsibilities for the management and implementation of SBCPD at a district level. 15 and 107 staff members are allocated to District Education Board Secretary's Office and

District Resources Center, respectively, and according to them, they do not have any major problems with the numbers. Thus, the staff members allocated are sufficient.

[Zone level]

Zone Resource Centre has played a role in managing and implementing SBCPD at a zone level. 612 officials are allocated there, and according to the center, as they perform their roles without any major problems, the number of their staff is adequate.

[School level]

Primary and secondary schools have been in charge of the management and implementation of SBCPD at a school level. 3 officials (SBCPD coordinators and subject facilitators) are allocated to each school, and according to the schools, as they carry out their activities without any major problems, the number of the officials is sufficient.

<Technical Aspect>

[SBCPD]

The key officials/staff belonging to the above-mentioned organizations have sustained the knowledge and skills on SBCPD at a sufficient level. In order to sustain such knowledge and skills, MoGE, Teacher Education Unit, and National Science Center hold capacity building meetings at least once a year, and additionally, some staff of Teacher Education Unit and National Science Center have received trainings in the third country spearheaded by the Center in collaboration with JICA. Also, at the Provincial Education Offices, Provincial Resource Centers, District Education Board Secretary's Offices, District Resource Centers, and Zone Resource Centers, stakeholder workshops have been held in accordance with SPRINT framework at least once per term, which contributes to enhancing the sustainability of the officials/staff's knowledge and skills. Furthermore, at a school level, teacher group meetings are held once per term.

Since the project completion, the number of resource persons who have been able to provide technical support for teachers through in-service training has increased (200 in 2015, 211 in 2016, 246 in 2017 and 265 in 2018) due to JICA's trainings, and the resource persons have sustained the knowledge and skills to provide technical supports related to SBCPD including the Lesson Study to schools through capacity building meetings at provincial, district and zone levels as well as subjective group/association meetings and support visits at a school level.

[Materials]

All of the materials developed by the project (Teaching Skills Book, Management Skills Book, etc.) have continued to be utilized as reference materials for teacher trainings and lesson study activities.

<Financial Aspect>

Data on specific budget lines for SBCPD was not available. However, MoGE has a budget line for educational policies/programs. Also, taking into account that SBCPD has been widespread since the project

Budget of MoGE

(Unit: Kwacha)

2015	2016	2017	2018	2019 (Plan)	2020 (Plan)
9,433.33	9,143,215,926	10,641.93	9,509,894,033	10,199,454,090	10,102,990,227

completion and the structure for SBCPD has remained at the time of ex-post evaluation, it is considered that a certain amount of budget has been allocated to manage and implement SBCPD since the project completion. According to MoGE, this trend is expected to be continued. According to the District Education Board Secretary's Office, at a school level, the allocated budget from MoGE is limited.

<Evaluation Result>

In light of the above, there has been some problems in the financial aspect. Hence, sustainability of the effects through the project is fair.

### 5 Summary of the Evaluation

The project achieved the Project Purpose aiming at enhancing teaching skills under SBCPD and achieved the Overall Goal aiming at improving the students' learning process in science and mathematics. As for sustainability, though the budget allocated from MoGE to schools for SBCPD is limited, the number of staff drafted into the organizations at each level is sufficient and whose level of technical skills has been sustained.

Considering all of the above points, this project is evaluated to be highly satisfactory.

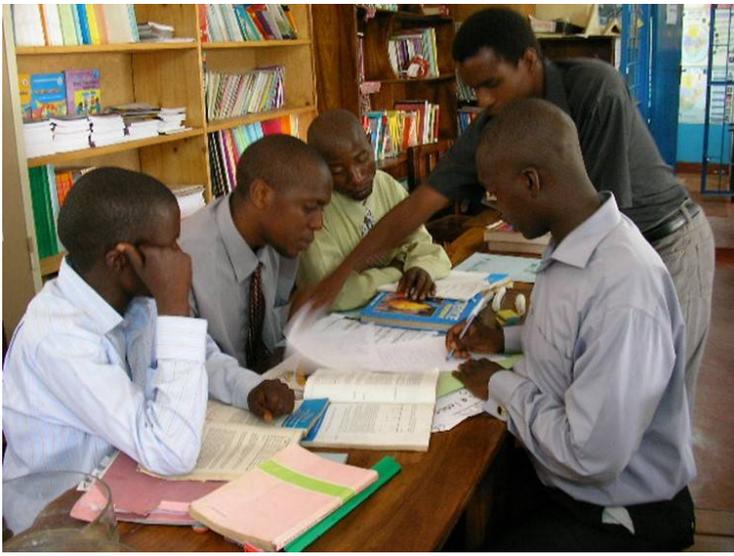
## III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- The project introduced Lesson Study to schools in 76 districts in 10 provinces, and even after the project, it was confirmed that the Lesson Study has been continuously practiced by the target schools and disseminated to the non-target schools. However, because of the implementation of the Lesson Study is not effectively and fully monitored by relative organizations at all levels and is not adequately budgeted, for the dissemination rate varies, depending on provinces and a type of school. In order to further enhance the project impact, it is recommended that relative organizations at all levels should fully recognize and fulfill their responsibilities given, the linkages between the organizations, especially from a national level to a provincial level, be strengthened, and insufficient amount of budget for each organization be complemented with financial support from other donors.

Lessons Learned for JICA:

- The project focused on introducing Lesson Study in Zambia through the existing "SPRINT" framework. As a result, the Lesson Study has been widely disseminated and promoted teamwork among teachers and peer-to-peer learning among learners has improved. Even at the time of ex-post evaluation, Teachers are confident to share ideas; discuss areas where they need to improve or seek guidance on the best way of handling particular topics or learners. Therefore, in order to maximize and sustain project effects, it is better to consider how a project can be integrated into an existing system/framework at the stage of project formulation/planning. In addition, it is desirable to understand the contents of support from other donors in the same field/sector to enhance coordination.



Peer-to-peer learning practice of teachers (Plan)



Lesson demonstration (Do)