

Summary of Evaluation Results

1. Outline of the Project	
Country: Republic of Uganda	Project Title: Secondary Science and Mathematics Teachers' Programme (SESEMAT) Phase III
Issue/Sector: Basic education	Cooperation Scheme: Technical Cooperation
Department in Charge: Basic Education Group, Human Development Department	Total Cost (as of the Terminal Evaluation): Approx. 370 million JPY
	Implementing Agency/Organization: Ministry of Education and Sports (MoES)
Period of Cooperation: (R/D) 8th May 2013 August 2013 – August 2017	Supporting Agency/Organization in Japan: Koei Research & Consulting Inc.
	Related Projects: Secondary Science and Mathematics Teachers' Programme (SESEMAT) (2005-2008) SESEMAT National Expansion Plan (2008-2012)
1-1 Background of the Project	
<p>In accordance with the increase the enrolments in secondary education due to the enforcement of the policies of the Universal Primary Education in 1997 and the Universal Secondary Education in 2007 in Uganda, the quality of secondary education has faced challenges. In secondary education in the country, the level of learners' performance for science and mathematics education is quite low as shown in the results of the Uganda Certificate of Education (UCE). The pass rate of science and mathematics is around 40% to 60%, while that of other subjects is more than 80%.</p> <p>The Government of Uganda puts priority on the improvement of science and mathematics education since it links to the development of science and technology and the growth of industries. The Ministry of Education and Sports (MoES) introduced the policy that makes science and mathematics compulsory and implements of in-service education and training (INSET) to secondary science and mathematics teachers.</p> <p>JICA started supporting the Secondary Science and Mathematics Teachers' Programme (SESEMAT), which was a pilot project implemented in the three regions for three years from August 2005 (Phase I). After the Phase I accomplished results such as institutionalization of INSET and strengthening of science and mathematics education, the SESEMAT National Expansion Plan (Phase II) was implemented nationwide from August 2008. The Phase II has successfully expanded the programme in all regions, developed the capacity to manage the programme, and mandated SESEMAT funds to ensure the sustainability.</p> <p>Furthermore, the Phase III started in September 2013 for four years, which has implemented, in addition to INSET as before, the improvement of quality of INSET as well as the SESEMAT Activities Regional Based (SARB) which was introduced as try-out in selected regions in the Phase II.</p>	

1-2 Project Overview

The project aimed at improving the quality of lower secondary science and mathematics lessons through the quality improvement of regular INSET and the implementation of SARB nationwide, thereby improving the attitude of lower secondary science and mathematics learners.

(1) Super Goal

The academic performance of lower secondary science and mathematics learners is improved.

(2) Overall Goal

The attitude of lower secondary science and mathematics learners is improved.

(3) Project Purpose

The quality of lower secondary science and mathematics lessons is improved.

(4) Outputs

1. The quality of regular INSET is improved.
2. SARB initiatives are appropriately implemented nationwide.

(5) Inputs (as of the Terminal Evaluation)

<Japanese side>

Dispatch of experts: 12 short-term

Trainees received: Not arranged under the project

Provision of equipment: UGX 110,659,500 in total (Digital duplicator, Printer, Projector, PC, etc.)

Local cost: UGX 640,957,003 in total

<Ugandan side>

Allocation of C/P: 16

Land and facilities: Necessary facilities for the project (office space, equipment, electricity, etc.)

Local cost: UGX 3,067,815,913 in total

2. Outline of the Evaluation Team

Evaluation Team	<Japanese side>		
	Name	Title	Occupation
	Mr. Atsushi Matachi	Leader	Senior Advisor, JICA
	Mr. Takao Maruyama	Cooperation Planning 1	Deputy Director, Basic Education Team 2, Basic Education Group, Human Development Department, JICA
	Ms. Yumi Sekiguchi	Cooperation Planning 2	Basic Education Team 2, Basic Education Group, Human Development Department, JICA
	Ms. Sawa Hasegawa	Evaluation Analysis	Principal Consultant, Project Management Department, OPMAC Corporation
	<Ugandan side>		
	Name	Occupation	
	Mr. Mulyalya Carthbert	Principal Education Planner, Education Planning and Policy Analysis Department, MoES	

Period of Evaluation: 26 June to 22 July, 2017

Type of Study: Terminal Evaluation

3. Summary of Terminal Evaluation Results

3-1 Progress of the Project

(1) Achievement of Outputs

Achievement level of Output 1 (Partially achieved)

Out of the five indicators set for Output 1 (1-1 Level of understanding of INSET with pre and post evaluation, 1-2 Development of INSET training modules, 1-3 Development of teaching references, 1-4-1 Level of teacher satisfaction with INSET, 1-4-2 Self-evaluation on improvement of teaching ability through INSET), the two indicators 1-1 and 1-2 were achieved and the remaining three indicators were not achieved. It is important to achieve the indicators 1-1 and 1-3 out of the five indicators in achieving Output 1. While it was planned that the practice of INSET at lessons as well as the quality improvement of lessons would be achieved by use of teaching references, the development of teaching references were significantly delayed and part of references were neither completed by project completion nor delivered to teachers.

Achievement level of Output 2 (Partially achieved)

Out of the four indicators set for Output 2 (2-1 Number of regions that sent the SARB regional reports, 2-2 Rate of implementation of school-based SARB among schools nationwide, 2-3-1 Level of teacher satisfaction with SARB, 2-3-2 Self-evaluation on improvement of teaching ability through SARB), the data of indicator 2-2 was not available and the remaining three indicators were not achieved. However, it was confirmed that the concept and implementation method of school-based SARB had been widely recognized among headteachers and teachers after the sensitization workshop. In addition, there are some qualitative examples of good practices of SARB such as customization of the model activity of SARB and implementation of lesson study for other subjects, etc.

(2) Achievement of Project Purpose (Yet to be achieved)

Out of the three indicators set for Project Purpose (Lesson Observation Index, Learner Participation Index, and Results of Learner Performance Assessment), none of indicators were achieved. Observing other results obtained from the baseline and end-line surveys, the definitive improvement in the quality of lower secondary science and mathematics lessons has not been confirmed, which lead to a result that the Project Purpose is not achieved and not expected to be achieved by the end of the project.

3-2 Summary of Evaluation Results

(1) Relevance (High)

- The project is consistent with the priority issue (strengthening of science and mathematics education) addressed in the current national development plan (NDP II) as well as the educational sector development plans (ESSP and SESP) of Uganda.
- The project meets the development needs of Uganda in the capacity development of secondary science and mathematics teachers.
- The project is consistent with the Japan's ODA policy for Uganda in the strengthening of post-primary education.
- The planned project approach and design are appropriate in that the three main components

(Implementation of INSET, Development of teaching references and Promotion of SARB) consist of necessary activities to achieve the Project Purpose.

(2) Effectiveness (Relatively low)

- The Project Purpose is not achieved at the time of terminal evaluation and not expected to be achieved by the end of the project. This is caused by the insufficient achievement of the two Outputs.
- Improvements in teaching and learning practices were observed in some schools where SARB had been actively implemented.

(3) Efficiency (Relatively low)

- While inputs from both the Japanese and Ugandan sides have been provided as planned, the two Outputs have not been produced as planned mainly due to a delay in implementation of some activities, which was caused by delayed timing of input provision as well as challenges in the project management.

(4) Impact (Fair)

- There is a possibility of achievement of Overall Goal if the Project Purpose is achieved in the future since the logical linkage between Overall Goal and Project Purpose is consistent, but its achievement would take more time than originally planned since the Project Purpose has not been achieved yet.
- As the cases of unintended outcomes, it was confirmed that SESEMAT had influenced on the national examination through RT, other projects or programmes had frequently utilized the system of RMC, collaboration among teachers had been promoted through the implementation of school-based SARB, etc.

(5) Sustainability (Fair)

- Policy and institutional aspects: The policy of Government of Uganda on strengthening of science and mathematics education as well as continuous implementation of SESEMAT INSET are likely to be sustained even after project completion.
- Organizational aspect: At the central level, while the SESEMAT National Office is likely to be sustained after project completion, there is a concern in the continuous engagement of NT due to their contract-based employment in SESEMAT. At the regional level, RMC is likely to be kept in every region as the self-reliant organization as long as schools remit to the SESEMAT Fund. While the implementation system of INSET has been already established, the implementation system of school-based SARB is yet to be fully functional in terms of quality improvement, data collection, etc.
- Financial aspect: While both the National and Regional INSETs were implemented during the project period, monitoring activities were not sufficiently implemented due to a shortage of budget and delayed disbursement of budget especially at the central level. At the regional level, some RMCs have a problem in collecting remittances from schools, especially from private schools for the SESEMAT Fund. There is a concern whether or not the printing and delivery cost for teaching references will be secured by the Ugandan side.

- Technical aspect: Major technical problems have not been found for NT, RMC and RT in continuous implementation of INSET, development of remaining teaching references and promotion of school-based SARB in the region after project completion.

3-3 Factors that promoted/inhibited the realization of effects

(1) Promoting factors

- Contribution of assets from Phase I and Phase II

(2) Inhibiting factors

(a) Factors directly related to project management and implementation

- Delay in disbursement and shortage of budget of SESEMAT National Office
- Delay in establishment of the task force
- Delay in assignment of Technical Administrator
- Change in the structure of project implementation

(b) Factors related to policies

- Uncertain perspective of curriculum reform
- Overloaded curriculum
- Shortage and uneven distribution of science and mathematics teachers
- Severe environment for private schools
- Insufficient recognition among headteachers of continuous professional development

3-4 Conclusion

The project aimed for the quality improvement of lower secondary science and mathematics lessons through the Output 1 on the improvement in quality of regular INSET as well as the Output 2 on the dissemination of school-based SARB across the country. With the delay in some activities such as development of teaching references and implementation of school-based SARB, both outputs were partially achieved at the time of terminal evaluation. The Project Purpose has not been achieved yet and the definitive improvement in the quality of lower secondary science and mathematics lessons has not been confirmed during the project period.

Meanwhile, the project has produced some positive effects; it was confirmed that some schools, although their number is not many, had implemented the school-based SARB and produced good practices. As long as the school-based SARB will continue, there is a possibility of improving lower secondary science and mathematics lessons.

3-5 Recommendations

(1) Strengthening the SESEMAT National Office and RMC

(a) Actions to be taken by the end of the project

Responsible organization: Department of Secondary Education (MoES)

- To ensure the disbursement of 2017 budget for the activities to improve the quality of INSET including monitoring at schools;

- To secure the necessary budget for the maintenance of equipment including generators, printers, PCs, maintenance and insurance for vehicles, and internet. Those items have been born by Japanese side during the implementation of project; and
- To clarify the terms of reference of the Technical Administrator.

(b) Actions to be taken within a year after completion of the project

Responsible organization: Department of Secondary Education, SESEMAT National Office, Department of Private Schools & Institutions, Department of Teacher Education

- To institutionalize SESEMAT National Office in the organizational structure of MoES;
 - To define the role of SESEMAT National Office in teacher education policies and educational development plans
 - To secure the budget for SESEMAT National Office from 2018
 - To develop a policy of human resources management and development for SESEMAT National Trainers
- To utilize the Secondary Education Working Group as the body to support SESEMAT after the project period;
- To ensure the compliance of private schools with SESEMAT for remittance of funds, facilitation of teachers to participate in INSET, provision of required facility, recruiting new teachers, etc.;
- To continue training for lectures at NTCs; and
- To organize national workshops to share good practices of RMC on collection and management of SESEMAT Funds.

(2) Completing and circulating Teaching References

(a) Actions to be taken by the end of the project

Responsible organization: SESEMAT National Office and Project Team

- To print and distribute Teaching Reference of S1 to all the SESEMAT regions. To organize a session that explains the contents and the utilization at school and SARB in the next programme of the regular INSET.
- To try out the drafts of Teaching Reference of S2 which have been already developed and to organize a task force meeting for consultation.

(b) Actions to be taken within a year after completion of the project

Responsible organization: SESEMAT National Office

- To conduct monitoring of lessons of teachers who utilize the Teaching Reference of S1 to be distributed to collect data and opinions to be used for revising and developing Teaching References.
- To write the drafts for all the remaining Teaching References of S2, S3 and S4 and to try out them at school, to seek advice from task force, and, based on the comments, to revise them for approval by MoES. MoES asked the Terminal Evaluation Team of the possibility of support by Japanese side to print teaching reference of S2, S3 and S4 after project completion. The Team took note, and

replied that the question is beyond the mandate of the Team.

(3) Expanding and improving continuously SARB

(a) Actions to be taken by the end of the project

Responsible organization: SESEMAT National Office and Project Team

- To create the opportunity to review the achievements and the challenges of SARB, and to share good practices of SARB among the regions by taking advantage of the national lesson study seminar to be organized on July 2017.
- To organize a session that explains the contents and the utilization of Teaching References for SARB in the next programme of regular INSET.

(b) Actions to be taken within a year after completion of the project

Responsible organization: SESEMAT National Office and RMCs

- To establish a system of sharing experiences of SARB both at the national level and at the regional level. To that end, the following actions should be taken:
 - To strengthen model schools for SARB in each region so as to share their experiences with other schools by the initiative of RMCs. National Trainers, RMCs and Regional Trainers should visit schools to promote and monitor SARB; and
 - To create the opportunities to share good practices among the regions by holding a workshop at the national level or by taking advantage of the regular INSET.
- To plan and conduct mop-up training for newly recruited teachers and teaches who have not participated in previous INSET by the initiative of RMC; and
- To develop continuous professional development policy for teachers to institutionalize regular INSET and SARB.

3-6 Lessons Learned

(1) Sampling methods for monitoring lesson observation

In terms of the data collection for the indicators, the Project did not track the same teachers for the lesson observation. Consequently, it was difficult to analyse the degree of improvement of lessons of teachers at the beginning and at the end the project. Appropriate methods of monitoring indicators in PDM should be defined as soon as the Project starts.

Regarding the monitoring of lesson observation, the degree of improvement of lessons depends on the characteristics of teachers such as experience and academic background. Hence, it is important to sample teachers based on experience and academic background.

(2) Clear understanding of the concept of SARB

Difference of understanding about SARB between the Japanese side and the Ugandan side was recognized after the Project started. The Ugandan side understood that SARB was to be conducted at some schools in each region. On the other hand, the Japanese side understood that SARB was to be conducted at all schools in each region.

It was necessary at the beginning of the project period to discuss and define the concept of SARB between the Ugandan side and the Japanese side in the Project Term for the efficient implementation of the project activities. Thus, the concept of major activities of the Project should be clearly defined and agreed at the beginning of the Project.

(3) Strategy for disseminating SARB

The Project developed the concept paper of SARB and successfully conducted the national sensitization seminar in 2015. However, the Project encountered the difficulty in collecting data of SARB from the regions. Because of the insufficient data at the national level, it was difficult to understand the situation on the ground and to take effective measures to promote SARB.

The Project should have elaborated the strategy for disseminating the activity and the procedure for monitoring the activity by implementing the pilot activities, which could have established the procedure for monitoring activities before the expansion of SARB nationwide.

(4) Mutual understanding of the major issues of the Project at the early stage of the project period

Contrary to the expectation of National Trainers, the certificate issued by the Japanese university was not provided for their participation in capacity development workshops organized in Uganda by Japanese short-term experts. The change of the structure of project implementation also brought a delay in decision-making. If there are any changes in the project, in particular, the changes in the working modality of the project from those of the previous phases, it is important to explain to the Ugandan side about the changes and their implications at the stage of the detailed design or, at the early stage of the project period.