Country Name

conducted by Uganda Office: October, 2018

Republic of Ugar		Secondary Science and Mathematics Teacher's Project (SESEMAT) ¹							
I. Project Outline		L							
Background	of the property of the propert	Secondary school students' performance in mathematics and science were at a very low level in Uganda. Many of the problems in secondary-level math and science education were resulting from the poor quality of teachers many of whom were taking teacher-centered and theory-centered approaches without sufficient knowledge of the subjects. Also, secondary level teachers were given no opportunities to enhance their teaching skills and knowledge on a continuous basis due to the absence of in-service training designed for them.							
Objectives of the Project	at the s thereby 1. Ov the 2. Pro	the pilot districts.							
Activities of the Project	2. Ma Na cal Im wo (3) Tra pa 3. Inp Japanes 1) Ex 2) Tra Ma 3) Loo tra	 Project Site: Kampala; Tororo District, Butaleja District and Masaka District as the pilot districts Main Activities: (1) Training for secondary math and science teachers in the pilot districts: training for National Trainers (NTs), national training for District Trainers (DTs), district training, etc. on the approach called ALEI-PIEI (Activity/Experiments, Learner-centered, Encouragement, and Improvisation - Plan, Implementation, Evaluation and Improvement); (2) Sensitization for parents and schools in the pilot districts: workshops for head teachers and District Education Officers (DEOs), lesson demonstration competitions, etc.; (3) Institutionalization of the INSET system: establishment of National INSET Centre in Kampala and District Training Centres in the pilot districts, development of pedagogical working documents and an INSET concept paper for secondary math and science teachers, etc. Inputs (to carry out above activities) Japanese Side Uganda Side Experts: 30 persons (Japanese and Kenyan) 1) Staff allocated: 10 persons Trainees received: 66 persons (Japan, Kenya, and 2) Local expenses: lodging and transportation costs of Malaysia) INSET participants, allowances for DTs, facilities Local expenses: project activities, equipment, for National and District INSET Centres, utility, 							
Project Period		2005 - August 2008		Project Cost	(ex-	etcante) 210 million yen, (actual) 202 million yen			
Implementing		y of Education and S	orts (Mo	ES)					

II. Result of the Evaluation

<Constraints on Evaluation>

Cooperation Agency

in Japan

- Alternative Indicator and supplemental information for Project Purpose to assess continuation status of project effects: The measurement of the
 Project Purpose Indicators needs technical knowledge and experience as well as a large size of samples to get reliable figures, which cannot be
 implemented only by JICA Office. Therefore, this ex-post evaluation used the degree of teachers' practicing ALEI-PIEI that they learned from
 INSET as the alternative indicator. Also, the data to show the status of continuation of INSET was used as supplemental information.
- Alternative Indicator for Overall Goal: Since the status of achievement of the Overall Goal Indicators could not be verified, this ex-post evaluation
 used teachers' perception on changes of students' interests in and level of understanding of math and science subjects as an alternative indicator
- < Special Perspectives Considered in the Ex-Post Evaluation >
- Pilot districts: After this project (SESEMAT Phase 1), SESEMAT activities have been conducted not on district basis but regional basis. In the process of dividing regions, Tororo District and Butaleja District were integrated as SESEMAT Tororo Region, and INSET has been conducted as Regional INSET. Therefore, post-project data on Tororo Region includes data on the mentioned two pilot districts. Similarly, Masaka Region's data includes data on Masaka District and Lwengo District, which were integrated to one region. Also, District Trainers (DTs) are called Regional Trainers (RTs) when discussing the post-project situation.

1 Relevance

<Consistency with the Development Policy of Uganda at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Uganda's development policies such as "Poverty Eradication Action Plan" (2004/5-2007/8) which regards the improvement of math and science education at the secondary level as an urgent issue for industrial development, "Education Sector Strategic Plan" (2004-2015) which sets out institutionalized INSET.

<Consistency with the Development Needs of Uganda at the Time of Ex-Ante Evaluation and Project Completion >

The project was consistent with Uganda's development needs for improvement of quality of math and science teachers at the times of both ex-ante evaluation and project completion.

¹ Although the official project title does not include the abbreviation "SESEMAT", we put it as part of the project title for convenience.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan's ODA policy for Uganda as agreed in the economic cooperation policy dialogue in 2006 (which included human resource development focusing on education and training).

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement for the Project Purpose at the time of Project Completion>

The Project Purpose was achieved by the time of project completion. The project carried out training for NTs and cascaded INSET (i.e., National INSET from NTs to DTs in Kampala and Regional INSET from DTs to math and science teachers in the pilot districts) mostly as scheduled. The scores for all three indicators (i.e., indices to measure teaching ability of math and science teachers) obtained in the terminal evaluation almost reached or more than targeted scores as shown in the table below.

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

The project effects have mostly continued by the time of ex-post evaluation, although the quality aspect could not be fully verified by objective means. The continuation of INSET has been on going in the pilot districts while no mop up trainings for those who missed due to limited funds. Since we are looking at two regions, Masaka and Tororo this is evidenced by the data obtained from the survey where in most cases the number of participant's attending INSET at the regions have been increasing. Moreover, both INSET Centres at the regional level (Tororo and Masaka) were operational for Regional INSET, RTs meetings, SARB activities², etc. and the training equipment and facilities developed under this project were found in good condition. The National INSET Centre is fully operational, too, for National INSET, RTs meetings, Sensitization Workshops, etc.

The practice of ALEI-PIEI in the classroom is observed in the pilot districts through inspection/monitoring by NTs and RTs to some extent according to RT's and teachers, hence the ability has been maintained. As for the quality/ level of ability, however, it is difficult to fully evaluate it without the scores of the three Project Purpose Indicators as objective evidence. In a survey of 31 math and science teachers including RTs in the pilot districts, 30 of 31 (96.8%) answered that they practice ALEI-PIEI either always, often, or sometimes. According to RTs and teachers, the reasons for not practicing of ALEI-PIEI frequently are mainly three points: (1) the large volume of curriculum cannot be completed with practice of ALEI-PIEI which usually take much time; (2) time for preparation and practice is insufficient in the environment where there are huge number of students to limited number of teachers; and (3) negative attitude of teachers.

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

The Overall Goal has been partially achieved by the time of ex-post evaluation. The designated indicators could not be verified since the scores of the Achievement Test as well as UCE failure rate do not show consistent tendency through years and cannot represent the status of achievement. Therefore, the judgement was made relying on the qualitative information as follows.

From the perception by RTs and teachers, we can give a positive evaluation that students' performance has been improved since all respondents gave positive comments and supportive evidence on changes of students' interests in and level of understanding of math and science subjects after the teachers attended INSET. Comments that show a connection to INSET include: "Students get practical aspects of the science"; and "Students understand more when the techniques from INSET are used." "Teachers prepare for a lesson well, and such prepared lessons attract students and help them to understand the contents taught in lessons better, especially in a practical way (not as theory)". On the other hand, there were suggestions for improvement such as "There is a need for further training since the interest is not yet there, some students still biased that sciences are very difficult and then INSETs have not yet made a big impact."

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

No negative impacts of the project were observed. For the positive impacts, the INSET introduced by this project was institutionalized nationwide as the SESEMAT Programme, in which all math and science teachers are expected to attend the Regional INSET during school holidays. Also, MoES observes the networking as well as the higher motivation by teachers to use the methodologies on how to conduct the lessons better. These are combined effects of this project as well as "SESEMAT National Expansion Plan" (SESEMAT Phase 2, 2008-2012) and "Secondary Science and Mathematics Teachers' Project Phase III" (SESEMAT Phase 3, 2013-2017).

<Evaluation Result>

In light of the above, through the project, the Project Purpose was achieved by the time of project completion, project effects have been mostly continued, and the Overall Goal has been partially achieved at the time of ex-post evaluation. Therefore, the effectiveness/impact of the project is fair.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results						
(Project Purpose)	1: The Lesson Observation Index	Status of the Achievement: achieved						
To improve teaching	obtained more than 2.3 on the 0-4	(Project Completion) The obtained score was 2.46 as of October 2007.						
ability of Mathematics	scale.	(Ex-post Evaluation) Data is not available.						
and Science teachers	2: The Student Participation Index	Status of the Achievement: achieved						
at secondary level in	(student self-evaluation) obtained	(Project Completion) The obtained score was 1.8 as of October 2007.						
the pilot districts.	more than 2.1 on the 0-4 scale.	(Ex-post Evaluation) Data is not available.						
	3: The Student Participation Index	Status of the Achievement: achieved						
	(observer evaluation) obtained more	(Project Completion) The obtained score was 2.1 as of October 2007.						
	than 1.8 on the 0-4 scale.	(Ex-post Evaluation) Data is not available.						

² SARB stands for "SESEMAT Activities Regional Based," which is introduced and promoted under phase 2 and 3 to enhance SESEMAT approach at school level.

	(Alternative Indicator for Project Purpose)	(Ex-post Evaluation) NTs' observation on teachers' practice of ALEI-PIEI in the classroom: mixed answers with "Yes?" "Yes(Ne" and "Ne" (frequency not most incred)										
	Degree of teachers' practicing the ALEI-PIEI approach. With "Yes," "Yes/No" and "No" (frequency not mentioned). RTs' and teachers observation on teachers' practice of ALEI-PIEI in								EI in the clas	ssroom		
		Yes No									551 00111	
		Tororo Region (17 teachers)				17		0				
		Masaka Region (12		2							
		DT. 1. 1										
		RTs' and teachers' answer to "How often do you practice ALEI-PIEI in the classroom?" Always Often Sometimes Rarely Never										
		Tororo Region (17 teachers)			Always 3			8	6 omeumes	Rarely 0	never 0	
		Masaka Region (14 teachers)			2			6	5		0	
	(Supplemental Information)	(Ex-post Evaluation)										
	Continuation status of INSET.	Number of INSET attendants in Tororo Region										
					2009 2010 2011 2012 2013 2014 2015 2016 21 17 17 16 13 13 13 13							
		National INSET for RTs				17		16	 	13 13	13 13	
		Regional INSET Workshops for h			127 n/a		111 n/a	139 n/a		170 173 n/a 64	179 206 57 36	
		Note: Reasons fo	r decreas	e in Nat	tional	INSET	attendant	s: To	ororo Reg	ion had two	former districts	
		INSET Centres that is Nagongera and Kachonga, and when they were merged to two centres, the number had to be reduced drastically up to when they reached the required level.										
		Number of INSET attendants in Masaka Region										
						2010		012		014 2015		
		National INSET			20 95			20		20 20 134 108	20 20 139 143	
		Regional INSET Workshops for h			n/a			135 75	 	134 108 51 n/a	139 143 60 n/a	
(Overall Goal)	1: Student performance on	(Ex-post Evalu									00 11/4	
To improve secondary	achievement tests set by SESEMAT Mean scores of SESEMAT Assessment Test in Tororo Region (For reference							rence purpose				
student performance	improved in the pilot districts.	only; not used a	as eviden 2013	ce) 2014		2015	2016	Ι 2	2017			
in Mathematics, Physics, Chemistry		Physics	2013	2014		2013	2010		2017			
and Biology in the		Pre-test	19.4	17.0		17.5	18.5		-			
pilot districts.		Post-test 17.0 17.4 - Chemistry										
		Pre-test Post-test	19.0	19.0	_	19.5 20.0	23.7 25.0		-			
		Math	-			20.0	23.0		_			
		Pre-test	18.0	21.3		24.0	26.7		-			
		Post-test - 18.0 Biology			18.5		18.8		-			
		Pre-test 25.3 26.2				30.4	24.3					
		Post-test Note: The SESE	MAT Ass	essmen	_	26.3 was ir	23.1 ntroduced	und	er SESEN	MAT Phase 2	as one of the	
		Note: The SESEMAT Assessment tests was introduced under SESEMAT Phase 2 as one of the SARB activities. But currently in the pilot regions of SESEMAT phase 1, it's only Tororo Region										
		that is implementing the Assessment tests, while Masaka is implementing Lesson Observation, another SARB activity. Though SESEMAT National Centre used to develop Achievement tests										
		under Phase 1 (th Assessment test i										
		implement the tes	st. As for t	he reco	rd fro	m 2008	to 2012, t	he II	NSET Cei	ntre lost it du	ring shifting the	
		location of the Centre. As for the year 2017 and post-test in 2013 and 2014, the tests were not implemented due to the insufficient budget.										
	2: The UCE performance in	(Ex-post Evaluation) The degree of achievement could not be assessed.										
		Failure rate of UCE in the whole country (For reference purpose only; not used as										
	in the pilot districts.	evidence)	2014	201	5	2016	_					
	* LICE, Lloop de Matier -1	Math	34%		1%	39%	5					
	* UCE: Uganda National Examination (O-level)	Physics Chemistry	65% 66%		8% 7%	68% 60%						
		Biology	33%	59	9%	55%	5					
		Note: The exact figures of UCE failure rates require processing whole raw data from Uganda National Examination Board, which is not possible during the period of this ex-post evaluation.										
	(Alternative Indicator for Overall	(Ex-post Evaluation) Status of achievement: partially achieved										
	Goal) Teachers' perception on	RTs', head teachers' and teachers' answer to "Did students' (i) interests in math and										
	changes of students' interests in and	science subjects and (ii) level of understanding of those subjects improve after teachers										
	level of understanding of math and	attended INSET?" Yes, very Yes Yes, to Not much Not							Not at all			
	science subjects after the teachers attended INSET					much	-	3	some		INOLAL ALL	
	attended INDET	(i) Students' inter	rest				2	13	extent	14 2	0	
		(ii) Students' lev		rstandin	ıg		3	10		16 2	0	

Source: Terminal Evaluation Report; JICA documents; questionnaire and interview to NTs, RTs, head teachers and teachers; Uganda National Examination Board, MoES – Secondary department

3 Efficiency

Both the project cost and project period were within the plan (ratio against the plan: 91% and 100%, respectively). Therefore, the efficiency of the project is high.

4 Sustainability

<Policy Aspect>

Though the word INSET is not mentioned in the current policy document, the word SESEMAT and its training (indicating INSET) are mentioned in the "Education and Sports Sector Strategic Plan 2017/18-2019/20" as the opportunity of in-service training for teachers. As a positive prospect, currently, MoES is drafting "Science Policy" with support by SESEMAT National Office, which clearly mentions "upgrading SESEMAT Regional Centres to science resource centres" as a strategy for strengthening the capacity of schools to teach functional science.

<Institutional Aspect>

The organizational structure for INSET is systematically established. At each level (Ministry, SESEMAT National Office at SESEMAT National Centre, SESEMAT Regional Centres / Regional Management Committee (RMC)) in the structure, there are the designated number of staff and roles which are commonly recognized by all the stakeholders. As the evidence of functionality of the structure, the INSETs have been institutionalized nationwide, maintained by this structure, and MoES is even trying to improve it by adding new role such as, "District Focal Officers," which were introduced in 2017 to strengthen the communication between the central and regional levels. MoES is a key player to maintain/ improve the structure as MoES have the power to authorize each role and its responsibilities.

However, according to MoES, NTs and RTs interviewed, there is still need for improvement: the necessity of more number of trainers as well as math and science teachers, a higher level of commitment and functionality of some stakeholders, etc. Also, the fact that SESEMAT office has not been institutionalized in the organizational structure of MoES brings a budgetary issue (see below).

<Technical Aspect>

Almost all respondents answer that all stakeholders have required technical skills which are maintained by the designated trainings. The number of counterparts is also maintained as usually there are replacements of counterparts under this project (Phase 1) who retired or transferred. Ministry officials have obligated trainings in policy formulation, management, coordination, etc., national INSET is annual training for RTs to maintain and improve the skills, and NTs had continuously been trained till 2017 under the successor JICA projects (Phase 2 and 3) even after the end of Phase 1. While the system to train RTs has already been institutionalized as described in "Effectiveness/Impact" above, a training mechanism for NTs, which has relied on the JICA projects³, is required to maintain and improve skills.

<Financial Aspect>

MoES through the Secondary Education department has been budgeting and allocating funds for SESEMAT office. And for FY 2017/2018 a budget of UGX 175 million was allocated for running the SESEMAT office including the budget for national INSET activities, NT's allowances and other expenses. For the regional INSET activities, funds are all collected as SESEMAT Fund from students in each region (e.g., UGX 174 million in Tororo Region and UGX 45 million in Masaka Region in 2017, both increasing from the the previous year). Almost all respondents answer that it is not sufficient. It was a great achievement to establish the mechanism to collect the fund for Regional INSET from each student via schools as SESEMAT Fund involving parents who are paying the UGX 1,000 for the fund; however, the fund has not been fully collected and remitted due to some Head teachers' negative attitude in collection and remittance caused by less understanding/ respecting of SESEMAT.

As for Regional INSET supported by SESEMAT Fund, the enforcement by MoES to Head-teachers/ schools may work for more remittance; however, it is not certain about the budget for National INSET. Even though MoES requests more budget for INSET and the budget be secured, disbursement from the Ministry of Finance is always limited and much less than the budgeted amount, and MoES has difficulties on how to prioritize programs and allocate the limited disbursement to each program including SESEMAT/ INSET. Moreover, the fact that SESEMAT office has not been institutionalized in the organizational structure of MoES makes it difficult for the Ministry to regularly allocate budget for INSET.

<Evaluation Result>

In light of the above, Some challenges have been observed in terms of the institutional, technical and financial aspects of the implementing agency. Therefore, the sustainability of the effectiveness through the project is fair.

5 Summary of the Evaluation

The project achieved the Project Purpose of improving teaching ability of math and science teachers at the secondary level in the pilot districts through INSET. The effects of the project (continued training and practice of the ALEI-PIEI approach) have been partially continued, and the Overall Goal of improving students' performance has been partially achieved by the time of ex-post evaluation. For the sustainability, some problems were found such as future concerns on training for NTs and insufficient budget, while the national INSET system including the funding mechanism in each region has been established.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

<For improvement on the environment for teachers to practice the ALEI-PIEI approach>

The following are recommended to take place in three years (1st for planning, 2nd for implementation and 3rd for monitoring).

(1) <u>Discussion based on the revised curriculum to realistically incorporate ALEI-PIEI Approach</u> (recommended to MoES and National Curriculum Development Centre (NCDC))

Due to the huge volume of the curriculum, some teachers tend not to practice ALEI-PIEI techniques which take time for practice. If

³ Besides the SESEMAT projects, JICA-supported Third Country Training provided in Kenya and Zambia.

MoES insists and promotes attendance of INSET and usage of the techniques learned there, MoES should adjust the environment which teachers can practice ALEI-PIEI through coordination with NCDC on how teachers can manage completion of the syllabus with ALEI-PIEI approach at the policy level. Fortunately with the introduction of the revised lower secondary curriculum, teachers have extra time for two hours for planning and preparation. Therefore, we recommend that MoES and NCDC discuss lesson preparation and implementation based on the revised curriculum together and find out a realistic way to incorporate ALEI-PIEI approach utilizing extra 2 hours, so the teachers will not feel overloaded in implementing this approach.

(2) Enhancing stakeholders involvement in supervision (recommended to NTs, RTs, head teachers and inspectors on teaching, MoES)

Besides, proper supervision and encouragement to teachers by stakeholders (especially MoES officials and DEOs) are more necessary. Negative attitude of teachers can be improved by encouragement and positive evaluation. Monitoring system by NTs and RTs has been established, but officials should be involved more in feedback and coaching of NTs as head teachers and teachers regard officers' perception more important. Monitoring and reporting mechanism among MoES, NTs, and RTs should be strengthened so that teachers can have more opportunity to be recognized in regard to their attitude and commitment to SESEMAT.

(3) <u>Utilization of human resource in schools</u> (recommended to Secondary Education Department and Education Service Commission of MoES, and schools)

Increasing the number of math and science teachers is also needed. Many teachers and RTs mentioned lack of time for preparation for and practice of ALEI-PIEI, especially as teachers teaching in different schools due to lack of teachers. The large number of students cannot be reduced, so MoES and Education Service Commission are required to flexibly think of countermeasures, i.e. not only hiring qualified teachers but also utilizing existing resource i.e. secondary 5th and 6th (S5-6) students and university students who are good at math and science to assist with the tutoring (teacher assistants) to leave enough time with teachers to prepare for the lessons adequately as suggested by RMC in the survey result. With this measure, it is necessary for Secondary Department and Education Service Commission of MoES to cooperate with each other to set qualifications and criteria for selecting the tutors (teacher assistants) and clarify the roles of assistant teachers not to compromise the quality of service.

(4) Review of contents and target of INSET as well as integration of INSET training content to pre-service training (recommended to Secondary Education Department and Teachers and Instructors Education and Training (TIET) Department of MoES and SESEMAT Office)

While all science and mathematics teachers are obligated to attend INSET every year, the whole program is not systematically developed yet. This causes some challenges such as some teachers complaining about lack of diversified training contents and NTs tending to set training theme which is attractive to teachers' interests rather than a theme that will enhance learners-centered approach. To review training contents for a teacher that is relevant to ALEI-PIEI approach, we suggest developing INSET program which offers different training contents / themes that is in accordance with the level of teaching experience of participants.

Besides integration of contents of INSET to pre-service training is important. New teachers gained skill for ALEI-PIEI approach in pre service training can utilize it in classroom and further develop their teaching skills and learner-centered approach during the in-service training to further enhance level of understanding of students.

<For securing funds for INSET>

The following are recommended to take place in two years.

(1) Enforcement of Remittance of SESEMAT Fund (recommended to MoES and head teachers)

The financial resource for Regional INSETs is only SESEMAT Fund. MoES circulated the letter among schools as of September 2017 which enforces all schools to collect and remit SESEMAT Fund; however, in the survey for this ex-post evaluation, respondents answer was, that the enforcement is not sufficient. To ensure enforcement, investigation and clarification on which regions/schools do not work for the fund for what kinds of reasons, and the results may help to have more feasible ways for schools to be convinced and follow the instruction from MoES.

(2) <u>Inclusion of cost management mechanism in the new science policy and institutionalization of SESEMAT office in MoES</u> (recommended to MoES)

Every year, around April, Ministries finalize their budget plan for the next financial year. MoES can utilize the result of this ex-post evaluation of this project (SESEMAT Phase 1) to secure budget, ensure its disbursement and allocate the limited disbursed money to INSET for the FY 2019/2020 hence it should make the system more functional. The fact that INSET have been continuously conducted by the Ugandan government and that teachers have utilized skills from INSET in classrooms proves that the training is worthwhile for Science and Mathematics Education in Uganda. "Science Policy" now being drafted by MoES should reflect these facts and include cost management mechanism and estimation to be officially approved by the Government of Uganda. Moreover, as the organizer and the implementer of SESEMAT activities set in the Science Policy, SESEMAT office should be institutionalized in the organizational arrangement of the Ministry; so that the costs for the necessary activities like INSETs are recognized as those to be supported responsibly by the Ministry and MoES's procedures for releasing the budget can be are—timely and effective. Therefore, MoES should make a clear roadmap on the procedure and timeline to incorporate the SESEMAT office in the Ministry's organizational structure.

Lessons Learned for JICA:

(1) <u>Formulation of clear plan by both the implementing agency and JICA on institutionalization of SESEMAT office within MoES and regular allocation of necessary budget/funds.</u> (Countermeasures)

Under the project, national trainers were hired, and their salary and allowances for SESEMAT activities were also covered by the Ugandan government, and this huge financial input from Uganda has been recognized as a positive commitment from the counterpart. However, the survey for the evaluation shows that when the government has not secured budget and the disbursement delays, it can easily hamper the implementation of the activities. One of the main reasons of this challenge on the budget is caused by the fact that SESEMAT office is not properly institutionalized in MoES and the necessary budget for SESEMAT is not regularly allocated from MoES and yet it's the Ministry's responsibility. At the stage of project formulation, technicalities of how the organization to establish under the project (SESEMAT office, in case of this project) was going to be institutionalized and the cost for implementation plus sustainability of its activities should have been carefully assessed and well planned by JICA as well as the implementing agency (MoES in case of this project),

in order for the counterpart to see whether this approach is realistic within the government budget.

(2) Involvement of stakeholders (Good practice)

The project made sure that all stakeholders such as Parents, NTs, RTs Teachers, Head teachers, etc understand the concept of SESEMAT which made it easier to institutionalize the approach as "SESEMAT program." Adapting "Cascade approach," INSET mechanism was formulated well from the central to regions, and regions to students, and through the introduction of SESEMAT fund, parents have been involved and which gave all stakeholders an opportunity to understand SESEMAT, its value, and the necessity.

(3) <u>Articulation of ALEI-PIEI with the curriculum</u> (Countermeasures)

It is shown that some teachers are not using ALEI-PIEI because it is time consuming while they have a lot of work. Therefore at the beginning of the Project, there should have been a study/review of the curriculum and lesson content/volume of work for teachers and how to formulate the ALEI-PIEI approach to be more realistic to fit the syllabuses into the given time of lessons. Therefore, there should be a trade-off between the time allocated and time consumed without compromising the quality of education being provided.



Some Teachers from Lubongi Army S.S.S⁴ (L.A.S.S.S)



Students in Math class being guided by a fellow student at L.A.S.S.S



Teachers and some RT's at Masaka S.S.S SESEMAT Centre during the Ex-post evaluation of SESEMAT Phase 1



The sign post of Masaka SESEMAT regional office

⁴ S.S.S stands for Senior Secondary School.