

7. モニタリング・評価 (M&E) レポート (プロジェクト作成)

SMASSE PROJECT

MONITORING AND EVALUATION

INFORMATION AND DATA FOR FINAL EVALUATION

OCTOBER 2002

Preface

This document is a compilation of information and data for final evaluation of SMASSE Project, which has been in existence since July 1998, for over 4 years to date. The project was initiated with the goal of upgrading the capability of Kenyan youth in Mathematics and Science. This was to be achieved through construction of an INSET system at both the National and District levels. Through this INSET system, issues that hamper realization of appropriate capability for secondary level students in Mathematics and Science, as established from baseline studies, have been addressed. The project is a joint venture between the Government of Kenya, through MOEST, and Government of Japan, through JICA

The SMASSE project framework for implementation is contained in the Project's Design Matrix (PDM), and constitutes causal links of sequence of events. The first of these events is making of inputs, which would lead to execution of project activities. The attainment in execution of project activities would result in attainment of project outputs, and consequently achievement of project purpose. In the long run, achievement of project purpose would lead to attainment of project goal.

The project has been conducting its own internal monitoring and evaluation for purposes of improving quality of its activities and generating information and data that may be used for evaluation by the stakeholders. A separate document on the internal evaluation tools has been compiled and may form a foundation of monitoring and evaluation in future endeavors. These tools monitor and evaluate the following:

- Change of attitude for teachers,
- Upgrading mastery of content and pedagogical skills,
- Upgrading quality of teaching and learning,
- Determining quality of INSET, and
- Monitoring prudent financial practices

JICA as one of the major stakeholders in the project carried out a mid-term evaluation in November 2000 to establish the progress in realization of the project aims and justify continued support of the project. The evaluation used the 5 DAC criteria of relevance, effectiveness, efficiency, impact and sustainability on which the project was rated very favorably. The evaluating team was presented with a compilation of information and data that greatly assisted in arriving at their judgments of the success of the project. At this time of the project period, JICA wishes to make a final evaluation to establish the extent of achievement of setting up INSET system by the project, and the extent of attainment of project goal.

This document on information and data for final evaluation, October 2002, has been compiled as additional information to supplement what was available in November 2000 for mid-term evaluation. It comprises of data and information on attendance of INSET, lesson innovation indices for National and District trainees, staffing, quality of National and District INSET, printed materials developed, inputs by both the Governments of Kenya and Japan, descriptions of the project orientation using DAC evaluation criteria, and process of project implementation. It is hoped that this document will prove useful to the evaluators in arriving at their considered opinions.

This document is a result of cooperative work of all in the project, the administrators and the academic staff. It was achieved because of the commitment put in by all through making earnest effort in the various tasks that they were assigned. In this regard I on behalf of the project would like to register my sincere thanks to them all. Special thanks go to Prof. Nakayama of Kumamoto University, short-term expert in educational evaluation, who gave relevant expertise in preparation of this document. May I acknowledge widening of our experience in the various aspects of the project, resulting from my work as a member of the project's Monitoring and Evaluation Task Force, as Secretary and finally as Chairman of the task force.

Waititu M. Michael
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Report organizers

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CHAPTER 1

ATTENDANCE OF INSET

Preamble

a) The Cascade System

There are two levels of training; the national INSET and the district INSET. At the national level, the national trainers train the district (key) trainers. At the district level, the district trainers train teachers in their respective districts.

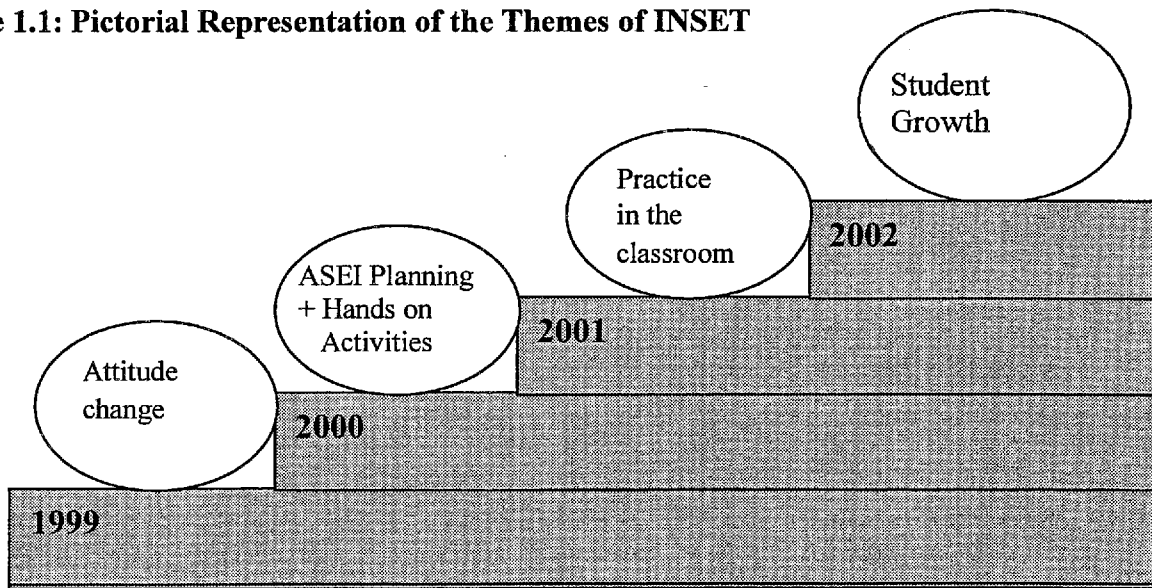
There are 4 cycles for every level and each cycle is designed to take 10 days. The themes of every cycle are as stated below.

b) Themes of INSET

The themes of INSET during the project period are stated below;

Cycle	Year	Theme
1 st	1999	Change of attitude (teachers and stakeholders)
2 nd	2000	Hands on activities and ASEI lesson planning
3 rd	2001	Actualisation: Practice in the classroom
4 th	2002	Student growth and impact transfer

Figure 1.1: Pictorial Representation of the Themes of INSET



Synthesis

With reference to the Project Design Matrix, the following observations were made;

- The INSET at Kenya Science Teachers College (KSTC) was carried out four times.
- 136 teachers participated in at least three INSETs.

c) **Basic Criteria for the Award of a Participation Certificate**

The basic criteria are the same for both the national and district level. The INSET guidelines are:

A. Basic requirements:

- Over 90% attendance during the 10 days of INSET
- Practicing secondary school teacher within the district and with at least six periods per week on the timetable.

B. Participation in INSET

- Active participation in all activities at the national INSET (discussions, hands on activities, peer teaching etc).
- Active participation, in all INSET activities at district level (planning, management, facilitation)
- General conduct

1.1 NATIONAL INSET ATTENDANCE

Table 1.1: Summary of National INSET Attendance per Cycle

District	Cycle 1				Cycle 2				Cycle 3				Cycle 4			
	B	C	M	P	B	C	M	P	B	C	M	P	B	C	M	P
BUTERE.M	5	5	4	5	6	6	6	4	7	5	4	6	4	5	3	4
GUCHA	3	4	3	4	4	4	4	3	4	4	5	4	3	3	4	5
KAJIADO	4	3	4	4	3	3	4	4	3	4	4	4	3	3	2	4
KAKAMEGA	3	4	1	2	4	3	2	1	5	4	4	4	3	6	7	5
KISII	4	4	4	4	4	4	4	4	4	3	4	4	3	3	5	3
LUGARI	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4
MAKUENI	4	3	4	4	4	3	4	4	9	9	9	9	8	9	8	9
MARAGUA	3	4	4	4	3	4	3	4	6	6	6	8	6	6	5	5
MURANG'A	3	3	4	4	4	3	4	4	4	4	5	4	4	5	4	7
TOTALS	33	34	32	35	36	34	35	32	46	43	45	47	38	43	42	46
	134				137				181				169			

Table 1.2: Number of Cycles Attended

Number of participants who attended all 4 cycles	102
Number of participants who attended at least 3 cycles	136
Number of participants who attended at least 2 cycles	186
Number of participants who attended at least 1 cycle	227

1.2 DISTRICT INSET ATTENDANCE

Table 1.3: District INSET Attendance

District	Cycle 1				Cycle 2				Cycle 3			
	B	C	P	M	B	C	P	M	B	C	P	M
BUTERE.M	16	10	13	16	34	21	22	34	45	40	36	44
GUCHA	16	8	14	17	12	8	11	13	19	16	16	32
KAJIADO	19	12	12	22	25	27	14	24	21	25	13	22
KAKAMEGA	15	14	12	16	15	14	12	16	111	59	63	105
KISII	17	21	19	22	13	13	14	19	38	39	23	46
LUGARI	11	8	8	8	22	24	15	30	26	32	20	37
MAKUENI	17	18	15	18	13	16	13	14	120	96	78	124
MARAGUA	9	8	9	7	7	7	7	6	79	78	49	90
MURANG'A	10	8	9	9	10	11	9	11	9	8	8	10
TOTAL	130	107	111	135	151	141	117	167	468	393	306	510
	483				576				1,677*			

* Cluster INSET was merged with the District INSET to make the cascading system more effective.

CHAPTER 2

LESSON INNOVATION INDEX FOR NATIONAL TRAINEES

Preamble:

Lesson innovation index (L.I.I) for INSET participants at KSTC (Also referred to as National INSET trainees or District INSET trainers) is one of the verifiable indicators of the achievement of the Project purpose. The indicator requires that by the end of the project period, over 140 INSET participants at KSTC obtain an overall mean of over 3.0 on the scale of 0 to 4.

Index for attitude was computed from mean values obtained from the Post-INSET questionnaire on the attitude towards teaching objectives and INSET system construction.

Index for quality of teaching was computed from mean values of the Post-INSET questionnaire on attitude towards teaching approaches, work planning and assessment. Mean values from the Content/Pedagogy questionnaire, ASEI/PDSI checklist and Lesson observation instruments provided supplementary information.

Index for quality of learning was computed from mean values of the Post-INSET questionnaire on attitude towards overcoming limitations and conducting practical work, Quality of participation questionnaire and SMASSE achievement tests. In the Figure in this chapter, SMASSE means the district where the SMASSE project is operating and NON-SMASSE means the district where the SMASSE project is not operating.

Synthesis

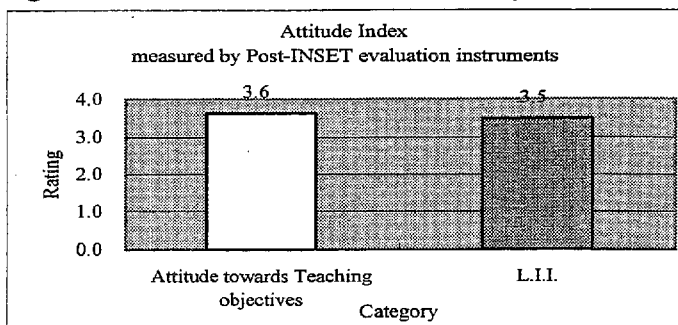
The mean for overall assessment of Lesson Innovation Index was 3.5, an indication that lesson innovation at KSTC has attained. This is confirmed by the means of the defining indices, (Attitude index 3.6; Quality of teaching index 3.4 and Quality of learning index 3.4), all of which have attained.

Supplementary information from actual lesson observation and student achievement tests showed that the sustainability of the attained status needs strengthening. Activities to strengthen impact transfer to the classroom and upgrade the capability of young Kenyans in mathematics and science must be put in place and supported.

2.1 ATTITUDE

Attitude index measured by Post-INSET evaluation instruments scored a mean of 3.6. The desired positive attitude change has attained and should be maintained.

Figure 2.1: Attitude towards Teaching Objectives



2.2 QUALITY OF TEACHING

Quality of teaching index measured by Post-INSET evaluation instruments scored a mean of 3.4. The desired quality has attained according to the trainees' responses; but there is need to confirm this quality at the level of transfer from INSET to the classroom. This is evident from the low mean scores in the lesson observation.

Figure 2.2: Attitude towards promoting Quality of Teaching

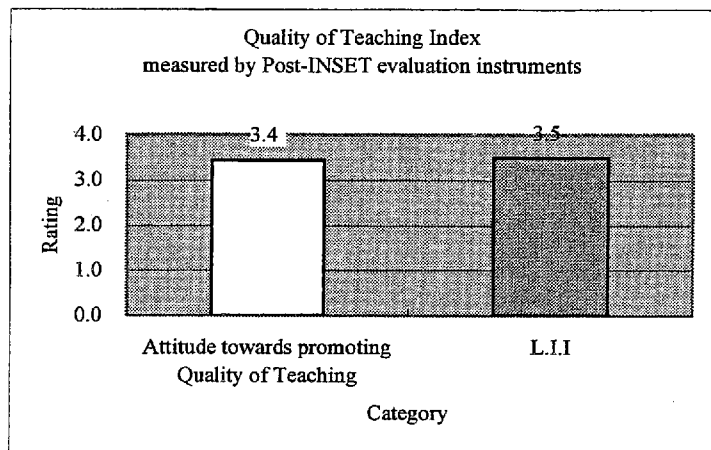
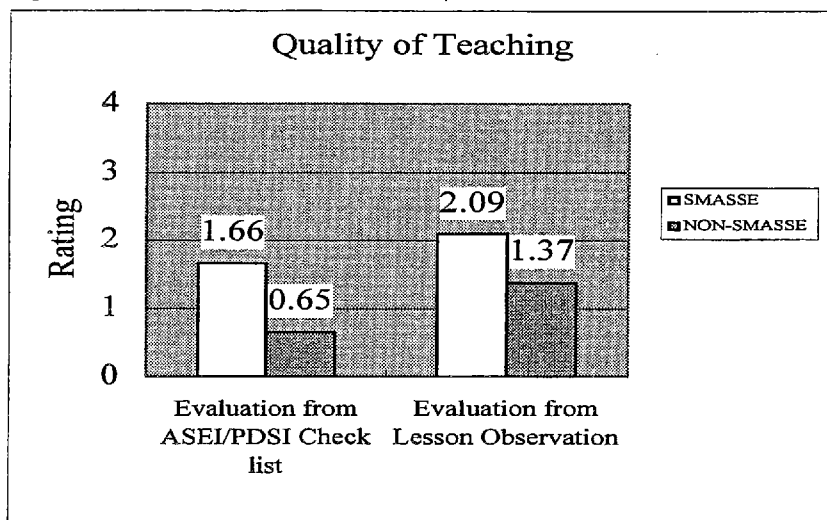


Table 2.1: Subject Mean: Content/Pedagogy evaluation (2001)

	Content mastery	Pedagogical skills
Biology	3.2	3.0
Chemistry	3.5	1.6
Mathematics	3.0	1.7
Physics	2.4	2.9

Figure 2.3: ASEI/PDSI Checklist and Lesson Observation Evaluation



2.3 QUALITY OF LEARNING

Quality of learning index measured by Post-INSET evaluation instruments scored a mean of 3.4. The responses by the trainees show that the standard has attained. This is not seen in the quality of learning at the level of the students. There is need to confirm this quality.

Figure 2.4: Lesson Innovation Index: Attitude towards promoting Quality of Learning

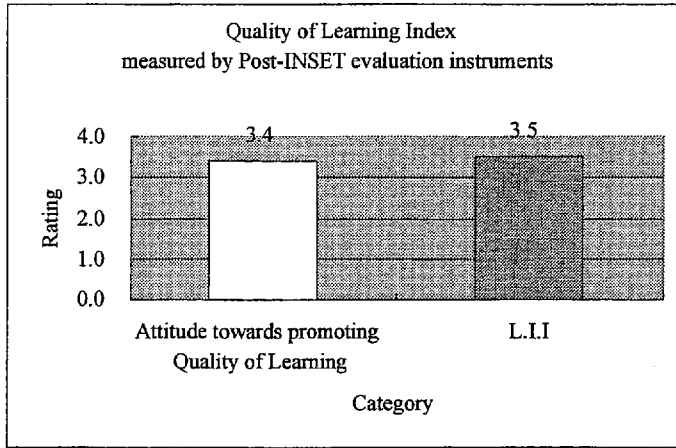


Figure 2.5: Quality of Learning: Level of participation

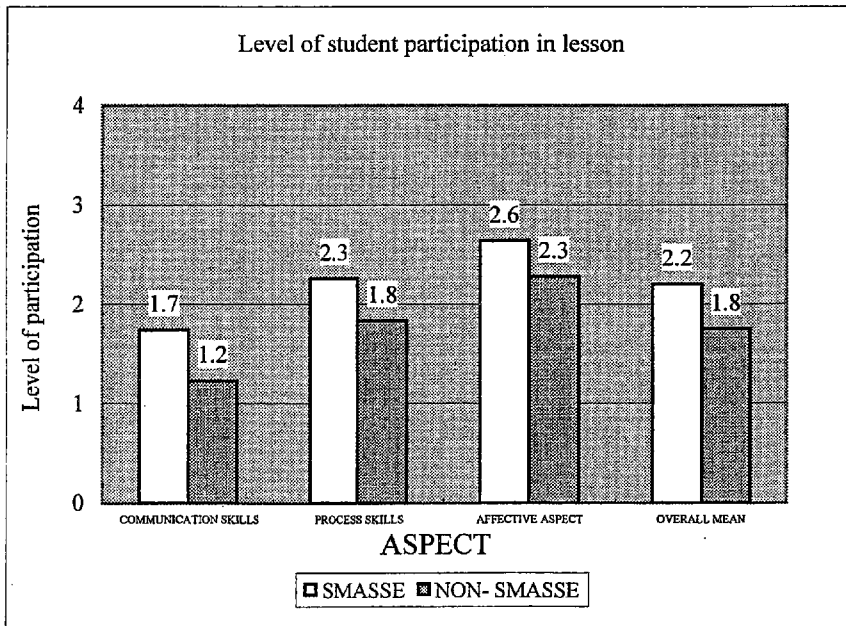


Figure 2.6: Quality of Learning: SMASSE Achievement Test

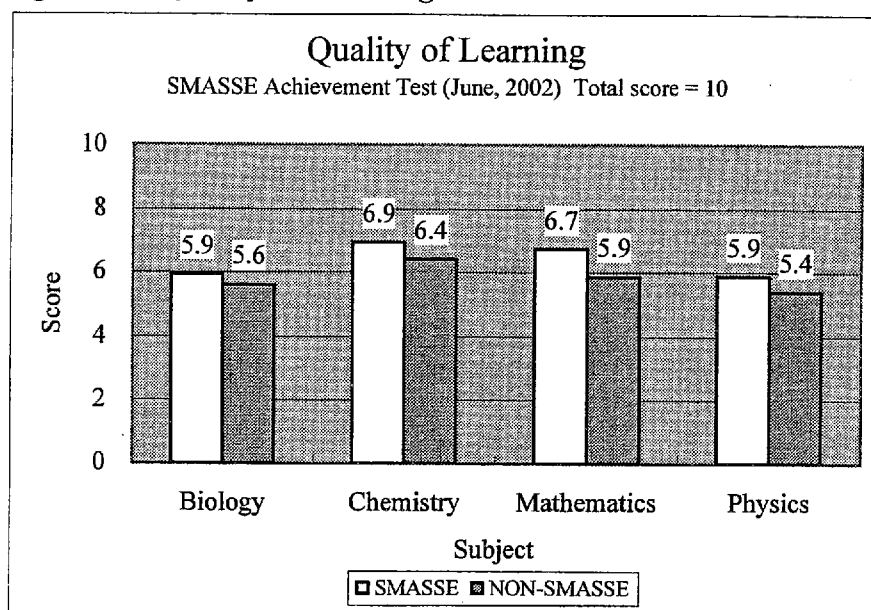


Table 2.2: KCSE score of sample schools used as an indication for the school educational standard (Total score is 12)

	SMASSE	NON-SMASSE
Biology	7.61	5.67
Chemistry	4.63	3.92
Mathematics	3.84	3.32
Physics	5.29	4.69

Figure 2.7: Biology Achievement Test and KCSE 2001 Result

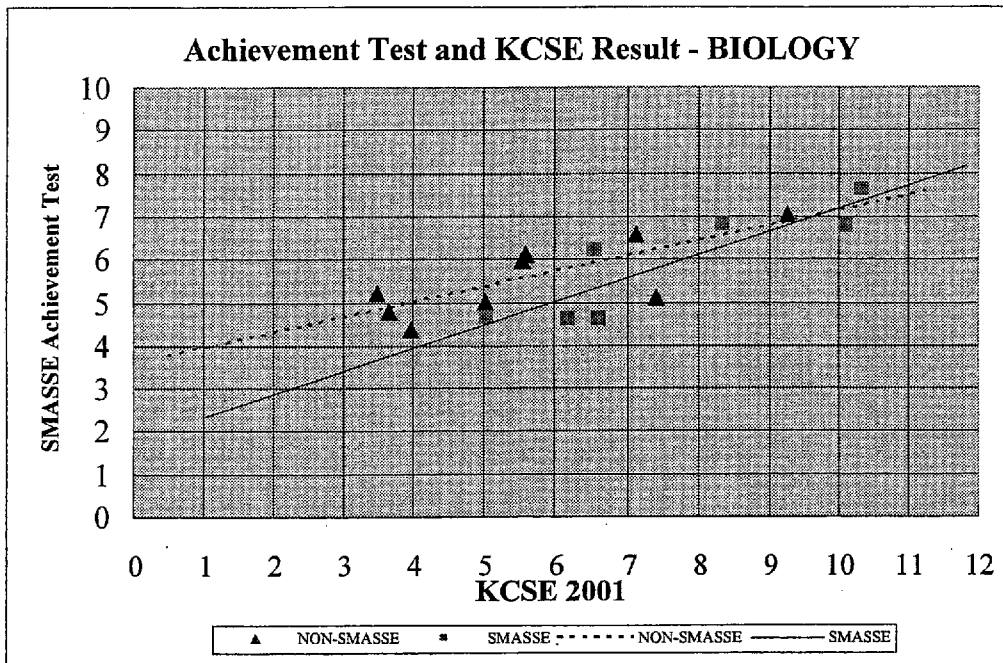


Figure 2.8: Chemistry Achievement Test and 2001 KCSE Result

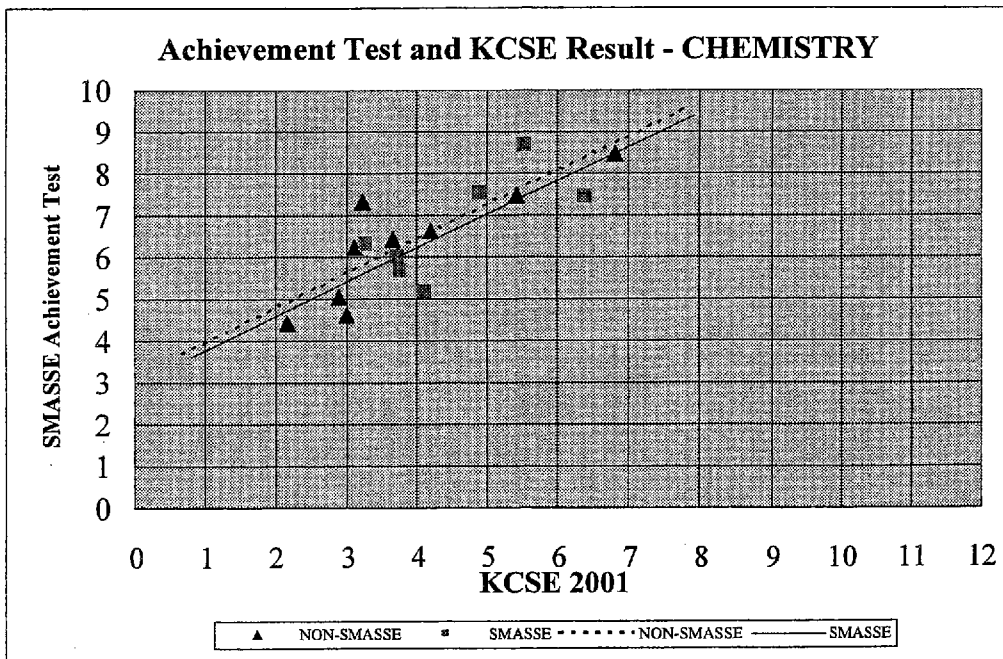


Figure 2.9: Mathematics Achievement Test and 2001 KSCE Result

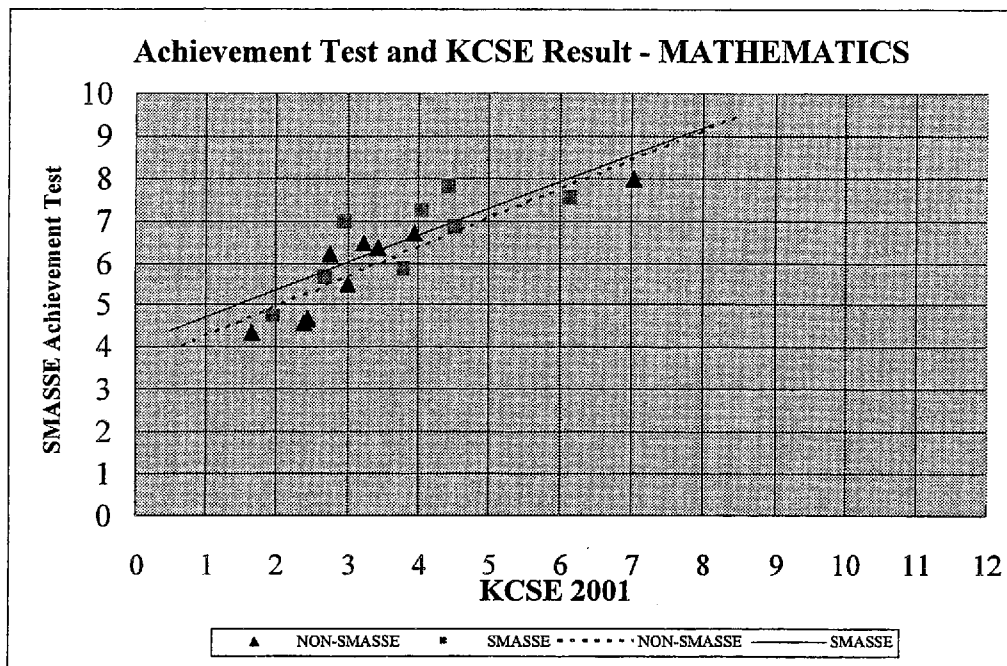
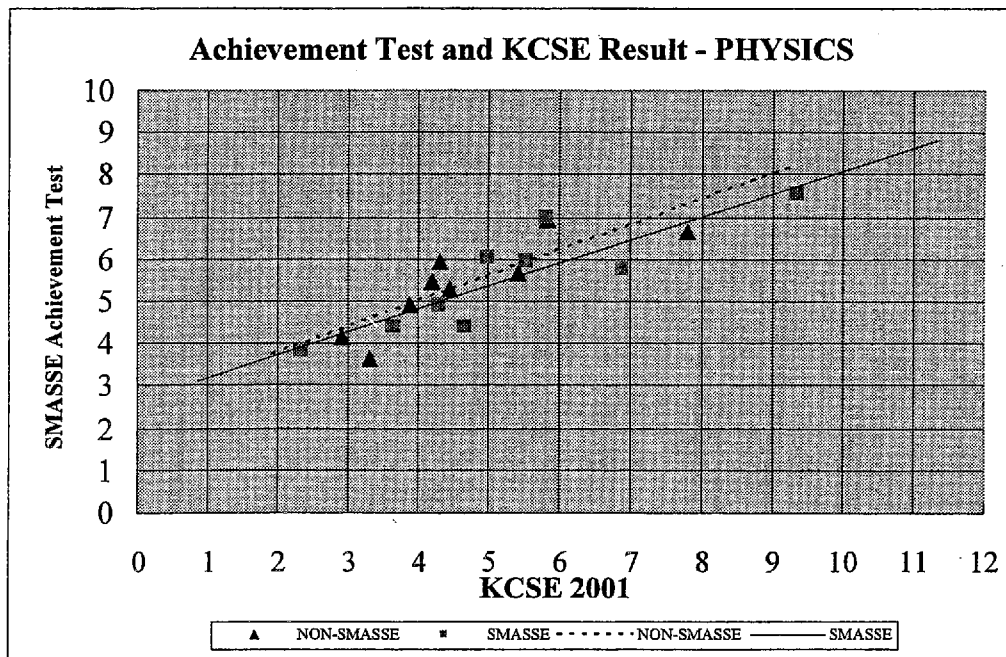


Figure 2.10: Physics Achievement Test and 2001 KSCE Result



CHAPTER 3

LESSON INNOVATION INDEX FOR DISTRICT TRAINEES

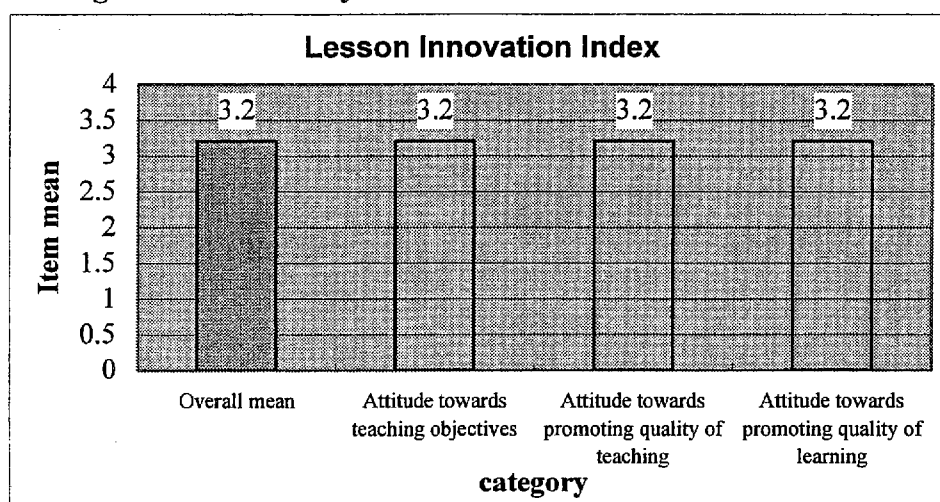
Preamble

The purpose of this analysis is to determine the impact of the District INSET on teachers' attitude. The source of information is the SMASSE Post- INSET questionnaire. After the April 2002, third cycle of the SMASSE INSET, a total of six hundred Post-INSET evaluation questionnaires were posted to Science and Mathematics teachers in the pilot districts in July 2002. The teachers rated their opinion on the impact of INSET in their duties as teachers on a five point Likert- scale opinion continuum ranging from strongly agree (4) to strongly disagree (0). A total of 273 (46%) responses were received and used in this analysis.

The items on the questionnaire were grouped into three categories in accordance with the lesson innovation index indicator 2 for the PDMs' project purpose:

- i) Attitude towards teaching objectives (A)
- ii) Attitude towards promoting quality of teaching (B, C)
- iii) Attitude towards promoting quality of learning (D, E)

Figure 3.1: Summary of Lesson Innovative Index



The overall mean score for the lesson innovation index is 3.2.

The three individual attitude categories (i, ii, iii) all obtained the same mean score of 3.2.

Synthesis

The mean mark for the lesson innovation index for the district trainees (3.2) is over 2.5. This implies that district trainees' lesson innovation index has attained. The mean scores of 3.2 for each of the individual categories have also attained.

CHAPTER 4

STAFF

This chapter gives the number of personnel who have been and are involved in SMASSE Project activities since its inception in 1998. It also shows the organization chart of national INSET staff and spells out roles and responsibilities of personnel at national and district levels.

4.1 NATIONAL INSET STAFF

Synthesis

From the inception of the SMASSE project in July 1998 to date, 34 Kenyan academic personnel have been involved in project activities at KSTC. 7 have since then left the project. The establishment for Kenyan **academic staff is 29**. Currently 27 Kenyan academic staffs are working for the project 2 of whom are on study leave. There are two vacancies for national trainers to be filled in due course. Among the 27 members of staff are:

- 1 Head of SMASSE INSET unit
- 4 Subject Administrators
- 4 Academic Heads
- 18 National Trainers

The administrative personnel who have been involved in the in SMASSE since 1998 are 10. One has since left the project. Among the **9 administrative personnel** are:

- 2 secretaries
- 2 office assistants
- 4 drivers
- 1 Cleaner

The organizational chart and duties and responsibilities of each officer have been enumerated below.

According to PDM a system of training for district trainers in pilot districts in math and science has been established at KSTC. Currently there are over 24 Kenyan academic staff and over 6 administrative personnel working at KSTC.

4.1.1 SMASSE National INSET Staff

a) Kenyan National INSET Academic Staff

1. Mr. Bernard Njuguna, Head of INSET Unit
2. Ms. Miheso O'Connor, Subject Administrator-Mathematics
3. Mr. Obadiah Maganga, Academic Head-Mathematics
4. Ms. Nancy Wambui Nui, Trainer-Mathematics
5. Mr. Kithaka J. Njogu, Trainer-Mathematics
6. Mr. Lukongo Matembo, Trainer-Mathematics
7. Mr. John Githari Muiruri, Trainer-Mathematics
8. Mr. John Owuor Oyuga, Trainer-Mathematics
9. Mr. Michael Waititu, Subject Administrator-Physics
10. Mr. Berege Cherutich Chesire, Academic Head-Physics
11. Mr. Paul Cheruiyot Rutto, Trainer-Physics
12. Mr. George Gitau, Trainer-Physics
13. Mr. Muyanga Mutua, Trainer-Physics
14. Mrs. Serah Njeri Mburu, Trainer-Physics
15. Mrs. Mildred Nyawade Ogutu, Trainer-Physics

16. Mr. Patrick Aluma Kogolla, Subject Administrator-Chemistry
17. Mr. Daniel Mwangi Matiri, Academic Head-Chemistry
18. Mr. Ndelela Masoka, Trainer-Chemistry
19. Mrs. Grace Nyandiwa Orado, Trainer-Chemistry
20. Mrs. Grace Njeri Kuria, Trainer-Chemistry
21. Mr. Benjamin Kilonzo, Trainer-Chemistry
22. Mrs. Peula Jebet Lelei, Subject Administrator-Biology
23. Mrs. Lynette G. Kisaka, Academic Head-Biology
24. Mr. Edmond Makoba Kizito, Trainer-Biology
25. Mr. David M. Arimi, Trainer-Biology
26. Mrs. Mary Kariuki, Trainer-Biology
27. Mr. Kaluli Nengo, Trainer-Biology

b) Kenyan Administrative Personnel at KSTC

1. Ms. Jully Omydour, Secretary
2. Ms. Jane Marete, Secretary
3. Mr. Alfred Mureithi, Office Assistant
4. Ms. Mary Chebochok Chepkemoi, Office Assistant
5. Mr. John Thairu, Driver
6. Mr. John Kinyanjui, Driver
7. Mr. Zakariah Kipkemoi Koskei, Driver
8. Mr. Aggrey Mwalo, Driver
9. Mr. Nickmas Uhuru Nyakundi, Cleaner

c) SMASSE Project National Staff

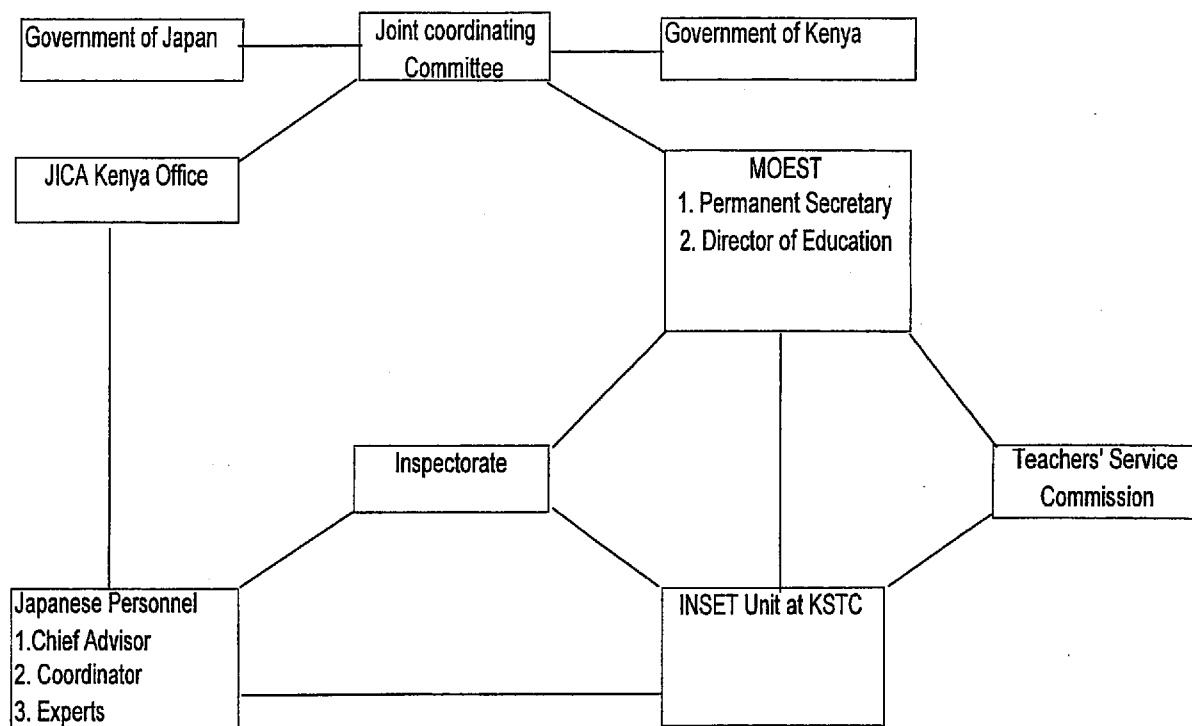
The national staffs include Kenyan academic and administrative personnel at KSTC in addition to MOEST and JICA personnel. To date 67 people have been directly involved in project activities at national level. The table below shows the SMASSE national staff, their designation and the duration that each has worked for the project.

Table 4.1: SMASSE Project National Staff (67 in Total)

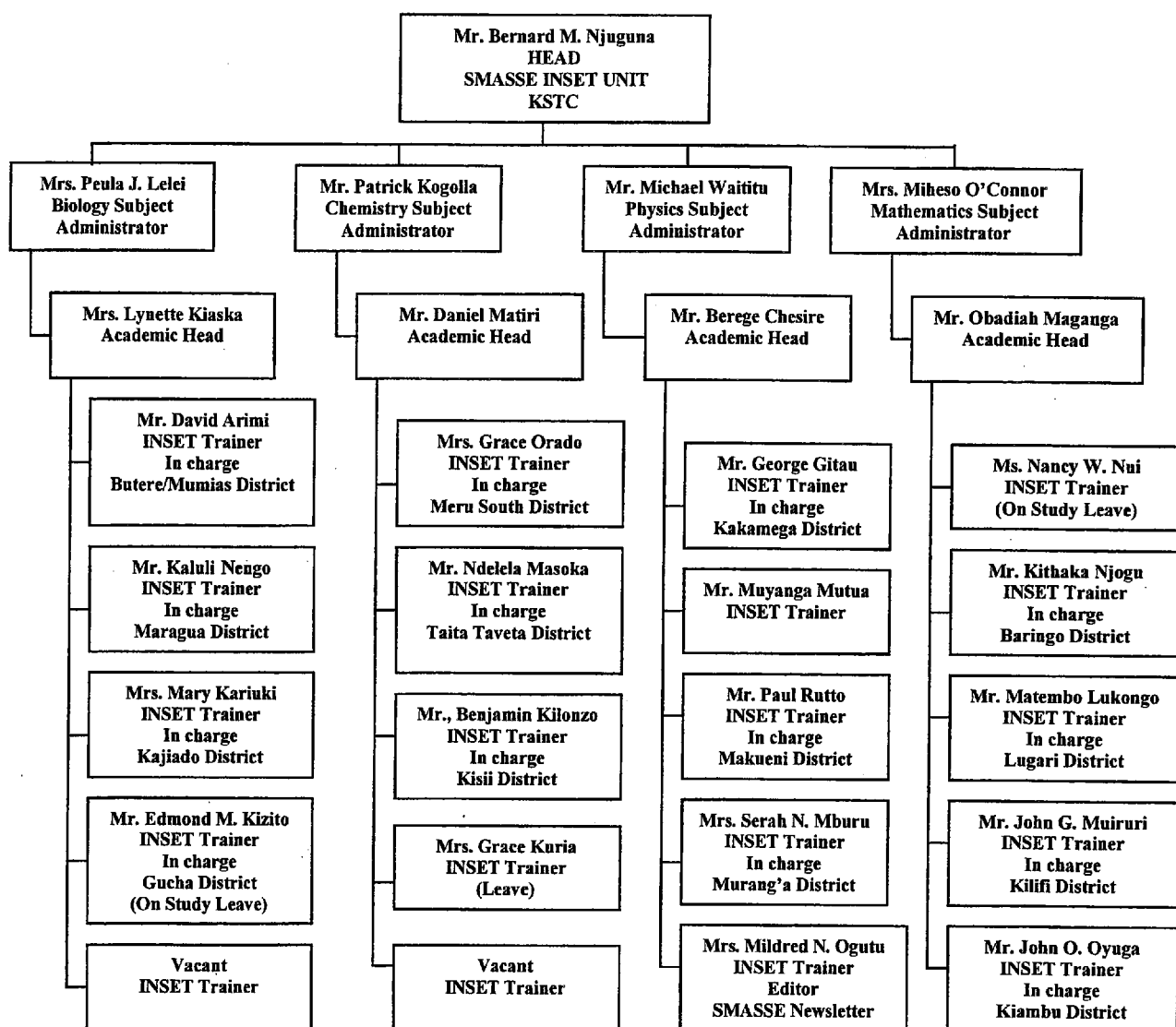
Department	Name	Designation	Duration	
			From	To
Administration (6)	Mr. Enos Oyaya	National Coordinator, SDCIS-MOEST	1998	7 -
	Mr. Patrick Kibui	Principal, KSTC, Project Technical Manager	1998	7 -
	Mr. Takahiko Sugiyama	Chief advisor	1998	7 – 2003 6
	Mr. Bernard M.Njuguna	Head of INSET Unit	1998	7 -
	Mr. Tsutomu Takahashi	Project Coordinator	1998	7 - 2001 7
	Mr. Keiichi Naganuma	Project Coordinator	2001	6 – 2003 6
Mathematics (10)	Mr. Charles Kanja	National trainer	1998	7 – 2000 11
	Mr. Takuya Baba	National trainer	1998	7 – 2000 3
	Ms. M. K. O'Connor Miheso	National trainer	1998	7 -
	Mr. Obadiah Maganga	National trainer	2001	1 -
	Ms. Nancy Wambui Nui	National trainer	2000	5 -
	Mr. Kithaka J. Njogu	National trainer	2001	1 -
	Mr. Lukongo Matembo	National trainer	2001	4 -
	Mr. Tomoki Tokuda	National trainer	2001	10 – 2003 6
	Mr. John Githari Muiruri	National trainer	2002	5
	Mr. John Owuor Oyuga	National trainer	2002	5
Physics (9)	Mr. Sam A. Kisala	National trainer	1998	7 – 2000 8
	Mr. Michael Muchoki Waititu	National trainer	1998	7 -
	Mr. Berege Cherutich Chesire	National trainer	2000	4 -
	Mr. Shigekazu Takemura	National trainer	1999	6 – 2003 6

	Mr. Paul Cheruiyot Rutto	National trainer	2000 7 -
	Mr. George Gitau	National trainer	2001 1 -
	Mr. Muyanga Mutua	National trainer	2001 2 -
	Ms. Serah Njeri Mburu	National trainer	2002 5 -
	Ms. Mildred Nyawade Ogutu	National trainer	2002 8 -
Chemistry (11)	Mr. Justus O. Inyega	National trainer	1998 7 - 2002 8
	Ms. Beth Ndunda Mbithi	National trainer	2000 4 - 2001 5
	Mr. Takeshi Somukawa	National trainer	2000 5 - 2001 9
	Mr. Christopher Chepkwony	National trainer	2001 1 - 2002 3
	Mr. Patrick Aluma Kogolla	National trainer	2002 7 -
	Mr. Daniel Mwangi Matiri	National trainer	2001 1 -
	Mr. Ndelela Masoka	National trainer	2001 1 -
	Ms. Grace Nyandiwa Orado	National trainer	2001 1 -
	Mr. Shinboku Miyakawa	National trainer	2001 1 - 2003 6
	Ms. Grace Njeri Kuria	National trainer	2002 5 -
	Mr. Benjamin Kilonzo	National trainer	2002 8 -
Biology (11)	Ms. Regina W. Ng'ang'a	National trainer	1998 7 - 2002 5
	Mr. Simon Waruru Kinyua	National trainer	1998 7 - 2002 8
	Mr. Hiroyuki Akiyoshi	National trainer	1998 7 - 2000 8
	Mr. Kunito Nehira	National trainer	2000 5 - 2001 9
	Ms. Peula Jebet Lelei	National trainer	2000 8 -
	Ms. Lynette G. Kisaka	National trainer	2001 1 -
	Mr. Edmond Makoba Kizito	National trainer	2000 5 -
	Mr. David M. Arimi	National trainer	2001 1 -
	Ms. Hisako Fukai	National trainer	2001 8 - 2003 6
	Ms. Mary Kariuki	National trainer	2002 7 -
Mr. Kaluli Nengo	National trainer	2002 8 -	
Monitoring and Evaluation (1)	Mr. Hiromasa Hattori	Coordinator	2002 4 - 2003 6
Other Administrative Personnel (11)	Ms. Naomi Wangonya	Secretary, MOEST	1998 10 -
	Ms. Jully Omydour	Secretary	1999 4 -
	Ms. Jane Marete	Secretary	1999 5 -
	Mr. Alfred Mureithi	Office Assistant	2000 12 -
	Ms. Mary C. Chebochok	Office Assistant	2002 5 -
	Mr. John Thairu	Driver	1999 2 -
	Mr. John Kinyanjui	Driver	2000 3 -
	Mr. Zakariah Koskei	Driver	2002 7 -
	Mr. Francis Ng'ang'a	Driver	2000 3 - 2002 6
	Mr. Aggrey Mwalo	Driver	2001 9 -
Mr. Nickmas Uhuru Nyakundi	Cleaner	2002 8 -	
MOEST (4)	Mr. Japheth Kiptoon	Permanent Secretary	2000
	Mr. Benjamin K Sogomo	Secretary, T.S.C.	1998 7 -
	Ms. Naomi Wangai	Director of Education	2001 4 -
	Mr. Daniel Kipkorir Rono	Chief Inspector of Schools	1998 7 -
JICA (4)	Mr. Masaaki Otsuka	Resident Representative	2001 5 -
	Mr. Shinichi Matsuura	Assistant Resident Representative	2001 8 -
	Mr. Samuel Kibe	Education Advisor	1998 7 -
	Ms. Keiko Sano	Assistant Resident Representative	2001 8 -

4.1.2 a) Organisation Chart of SMASSE Project



b) Organisation Chart for National INSET Academic Staff



4.1.3. Duties and Responsibilities of National INSET Academic Staff

The National INSET Centre at KSTC performs the following functions: -

- Selecting District Trainers through interviews
- Selecting District INSET Centres through inspection of school facilities
- Keeping records of all activities that occur in each district
- Developing and reviewing INSET Curricula
- Developing INSET materials and trying out of the same in several schools in the pilot districts
- Developing teaching/learning materials e.g. teachers' guides, laboratory/experimental and management of teaching/learning resources manuals etc.
- Conducting INSET at National level in April and August of each year

- Developing, administering and analyzing monitoring and evaluation instruments
- Monitoring and evaluating effectiveness of INSETs at all levels
- Compiling various reports required by JICA and MOEST and other interested parties
- Promoting Regional Cooperation in Mathematics and Science Education in Eastern, Central and Southern African Countries
- Formulating Project guidelines and policies for all levels
- Coordinating and attending District Planning Committee meetings for implementation and sustainability of the Project
- Acting as a secretariat for SMASSE Project and SMASSE-WECSA Association
- Organizing Stakeholders annual Workshop and sensitizing non SMASSE Head teachers during KSSHA conferences
- Planning, organizing and conducting INSETs for education managers when the need arises
- Publishing SMASSE bi-annual Newsletter
- Carrying out follow-up activities to supplement INSETs
- Improving mathematics and science teaching/learning facilities at the District INSET Centres

a) Head of INSET Unit

Major duty is the general administration of INSET activities at all levels, which include the following responsibilities:

- Link the INSET unit with KSTC, TSC, JICA, MOEST, Pilot Districts, Regional association member countries and other stakeholders
- Member of KSTC Principals' Council
- Secretary to SMASSE National Working Committee
- Implement decisions of National Working Committee
- Formulate project policy guidelines and activities for project implementation
- Prepare and provide project updates to all visitors
- Approve leave of absence for INSET unit personnel
- Custodian of INSET facilities and materials
- Prepare, implement, and control INSET Unit budget
- Co-ordinate activities of INSET Unit Subject Administrators
- Coordinate and attend the start of the year District planning Committee meetings in SMASSE districts (and any other if need arises)
- Coordinate formulation and execution of subject policies at all levels
- Coordinate and approve SMASSE District INSET budgets and Programmes
- Coordinate monitoring and Evaluation Task Force activities
- Chair the INSET Unit Planning Committee meetings, Procurement Committee meetings and staff meetings
- Selection and recruitment of National and District trainers
- Prepare and verify certificates issued to INSET participants at all levels
- Carrying out duties of a National Trainer

b) Subject Administrators

Reporting to the Head of SMASSE INSET Unit

The major duty is administration of subject department, which include the following responsibilities:

- Planning, organizing and coordinating the subject INSET activities at all levels of INSET
- Formulation and execution of subject policy at all levels
- Procurement and maintenance of records of equipment and materials in the subject department
- Coordinating and conducting the monitoring and evaluation of activities in the subject
- Chairing meetings of INSET subject department
- Member of the INSET Unit Planning Committee, Procurement Committee and recruitment panel
- Approving leave for members of the department (less than one day)
- Inducting new personnel (both Kenyan and Japanese) in the subject
- Promoting the subject at all levels (National, District and School)
- In-charge of either Gender issues, Publication, Research and Development or INSET Administration
- Assigning duties to National trainers in the subject
- Carrying out duties of a National Trainer in the subject
- Any other duties assigned by the Head of SMASSE INSET Unit

c) Academic Heads

Reports to the Head of INSET Unit through the Subject Administrator

The major duty is academic matters of the department, which include the following responsibilities:

- Coordinating development, trial out and production of departmental in service training materials
- Coordinating preparation and production of departmental in service training programme
- Coordinating activities for designing/improving INSET curriculum
- Advising on academic matters in the department
- Coordinating requisition of materials for the department INSET
- Coordinating quality assurance of District in service training materials
- Preparing certification lists for participants
- Coordinating the development and production of Experiment Manuals
- Coordinating preparation and production of improvised materials
- Maintaining records of write-ups of all presentations by department staff
- Maintaining records and inventories for the department
- Carrying out duties of a national trainer in the subject
- Any other duties assigned by the head of SMASSE INSET Unit or subject administrator of the relevant department

d) National Trainers

Major duties and responsibilities

- Designing/improving INSET curriculum
- Developing, try out and production of INSET materials
- Identifying and requisitioning resources for development of training materials and for actual INSET
- Developing and producing improvised materials and experimental manuals
- Preparing and implementing INSET programme
- Facilitating INSET sessions
- Carrying out quality assurance on training materials/programmes from district trainers
- Monitoring and evaluating INSET activities at all levels
- Writing articles and news features for the newsletter
- Conducting research and analysing data
- Promoting the subject at all levels
- Promoting gender responsiveness in mathematics and science education
- Any other duties assigned by the Head of INSET Unit, Subject Administrator or Academic head of the relevant department

e) Officer in charge of a Pilot district

This post exists for purposes of cascading and the main duties are:

- Act as a link between the district trainers/ district SMASSE coordinator and the national office
- Liase with district trainers/coordinator on matters pertaining to planning and implementation of INSET at district level
- Coordinate checking of district INSET training materials and programme for quality assurance
- Promote project activities at district level

f) Other Divisions of the National INSET Unit

The INSET Unit also operates through the following divisions: -

Publications

This division is responsible for the publication of SMASSE newsletter and compilation of bulletins.

Members of this division are:

Mrs. Peula Lelei – Chairperson

Mrs. Mildred Ogutu – Editor, SMASSE newsletter

Mr. John O. Oyuga – Assistant Editor, SMASSE newsletter

Mr. Shimboku Miyakawa, Mr. Daniel Matiri, Ms. Miheso O'Connor

Research and Development

This division is responsible for research and development activities, which includes:-

- Development and use of internal monitoring and evaluation instruments
- Writing monitoring and evaluation reports

Members of this division are:

Mr. Michael Waititu - Chairman

Mr. Daniel Matiri - Secretary

Prof. Takemura – Advisor

Mr. Hiromasa Hattori – M & E Coordinator

Mrs. Peula Lelei, Mrs. Lynette Kisaka, Mr. Patrick Kogolla, Mr. Kithaka Njogu

Mr. John Muiruri, Mr. Tomoki Tokuda, Mr. Mutua Muyanga

Public Relations and Welfare

This division is responsible for all PR activities, updating the SMASSE Project homepage and coordination of welfare activities for members of the INSET unit.

Members of this division are:

Ms. Miheso O'Connor - Chairperson

Mr. Mutua Muyanga, Mrs. Grace Orado, Mr. Kithaka Njogu, Mr. Berege Chesire

Mr. George Gitau, Mr. Tomoki Tokuda, Mrs. Hisako Fukai

4.2 OFFICERS WORKING FOR THE PROJECT AT DISTRICT

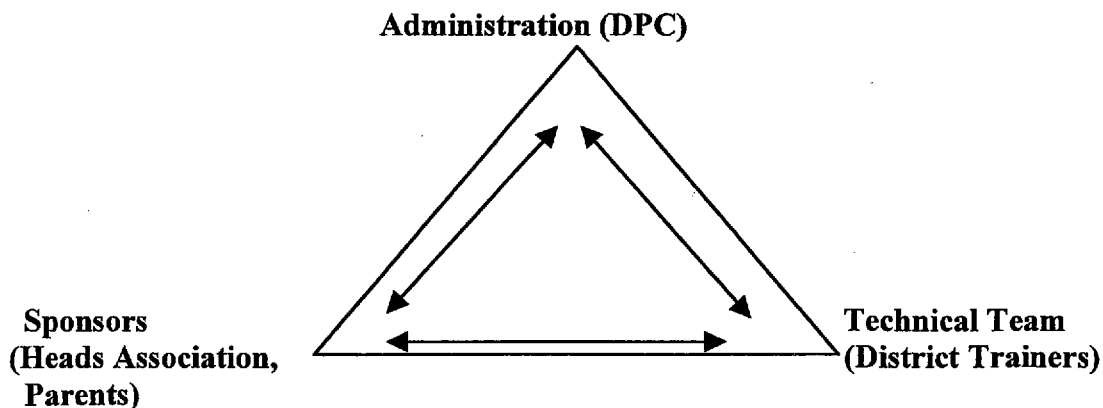
Preamble: INSET System at the District Level

SMASSE Project conducts INSET by cascade system. The first level starts at the national level where the key district trainers are trained. The next level is at the district where the district trainers train all the other mathematics and science teachers in the district. Four cycles of INSET at national and three at district level have been done except for Maragua district. Maragua would conduct the third cycle INSET in April 2003.

For sustainability at district level, key stakeholders work together in harmony to ensure that the benefits of SMASSE INSET finally get to the ultimate beneficiary i.e. the learner.

The way the stakeholders work is summarised in the triangle in Figure 4.1.

Figure 4.1: Project Organization at the District Level



4.2.1 Roles of District Personnel

District Planning Committee (DPC)

The DPC manages INSET affairs at the district level. The members of this committee are: -

- DEO as the Chairman
- Provincial coordinator
- District coordinator, secretary
- Principal, INSET Centre
- District heads representative, [SMASSE District treasurer]
- District Trainers representative

Functions of the district planning committee

- Collects funds for SMASSE project activities in the District
- Prepares a budget for the District INSETs
- Act as the accounting body for the money collected/received and spent in various Project activities in the District
- Sensitise stakeholders in the District on Project activities
- Organise and conduct seminars, workshops, etc. based on Project activities in the districts
- Prepares financial expenditure reports and submit the same to the National office and District Heads Association

Functions of Members of DPC

Provincial Coordinator

- Acts as a link between the District Education Office and the Provincial Director's office in coordinating the SMASSE Project activities in the pilot district within their provinces
- Assists in the solicitation of funds required in sponsoring SMASSE Project activities within the districts in their provinces
- Assists in impact assessment of SMASSE activities in the districts within their provinces
- Attend District Planning Committee meetings

District Education Officer

- Chair District Planning Committee meeting
- Coordinate the selection and invitation of mathematics/science teachers for INSET in their district
- Plan and carry out sensitisation of stakeholders on SMASSE Project activities in their districts
- Spearheads funding of INSET activities at district level (through D.E.B, District Secondary School Heads Association, etc.)
- Liase with the National INSET Unit on monitoring and evaluation of the progress of SMASSE Project activities in their district
- Liase with the National Office, PDE'S Office and other stakeholders on all aspects of SMASSE Project activities in their district
- Is a signatory to the SMASSE bank account

District Coordinator

- Records all deliberations of the District Planning Committee
- Liases with head teachers of District training Centres for INSET activities in the District
- Coordinates the SMASSE Project activities during INSET at the district level
- Monitors and ensures attendance by the teachers during INSETs and keep a record on the same
- Prepares lists of successful teachers attending INSET at various levels in the district for certification
- Liases with the National Office on monitoring and evaluation of progress of SMASSE Project activities in the district
- Coordinates the running of SMASSE INSET Resource Centres used by SMASSE Project in the district
- Keeps close contact with SMASSE Project head office, PDE's office and Head teachers in the Lead schools on the progress of SMASSE project activities in the district
- Compiles INSET reports for onward submission to the National office within one month after conducting INSET and in accordance with INSET report format provided

Principal of District INSET Centre

- Liases with the DEO's Office in their districts in the selection of teachers to attend the INSET at various levels in their districts
- Liases with the District Coordinators in organising the training centres/activities in their schools during INSET
- Guides and counsels teachers during INSET
- Sensitise head teachers through heads association meetings in the district to support, fund and attend INSETs
- Monitors the progress of teachers trained in their centres including those of their own school
- Is the custodian of facilities/equipment and materials supplied to the District INSET Centre
- Manages the welfare of teachers during INSET

Functions of District INSET Centre are: -

- A Centre for In-servicing of Technical/Administrative personnel at District level
- A Resource Centre for District Mathematics and Science Education
- A venue for all District Planning Committee meetings

Heads' Association Representative in the District

- Is the treasurer to the District SMASSE Project fund and perform the duties specified elsewhere in this report
- Takes an active and leading role in sensitising and mobilising other stakeholders on SMASSE Project activities in the district
- Spearheads the collection of funds to run SMASSE Project activities in the district

- Is a member of the District Panel for selection of mathematics/science teachers for INSETs
- Assists in guidance/counseling of teachers during INSET
- Is a member of the District Planning Committee
- Is a signatory to the SMASSE bank account

District Trainers Representative

- Is a member of the District Planning Committee
- Is a signatory to the SMASSE District Bank Account
- Coordinates the work of other trainers in the districts
- Coordinate implementation of INSET activities in the schools in liaison with District coordinator
- Keep records of activities and facilities/equipment and materials provided to the District INSET Centre

District Trainers

- Participate in SMASSE Project activities at the school level as directed by the National Office
- Sensitise mathematics/science teachers on SMASSE at District and especially the school level
- Prepares and produces original INSET curriculum materials for District level
- Cares for the materials provided to INSET Centres

4.2.2 Distribution of Officers working at the District

The number of administrative staff working in each of the 9 pilot districts is summarised in the table below. The data is obtained from attendance list of Stakeholders Workshop held at KSTC in the year 2001 and 2002.

Table 4.2: Officers Working at the Districts

No	Pilot district	No of personnel	
		2001	2002
1	BUTERE-MUMIAS	5	5
2	GUCHA	7	5
3	KAJIADO	6	5
4	KAKAMEGA	5	5
5	KISII CENTRAL	6	5
6	LUGARI	6	5
7	MAKUENI	5	7
8	MARAGUA	8	6
9	MURANGA	8	5
10	Provincial coordinators	5	3
	Total	61	51

Table 4.3: Number of Trainers Working in the District

	District/Year	2000	2001	2002
1	BUTERE-MUMIAS	13	19	14
2	GUCHA	12	15	14
3	KAJIADO	13	13	12
4	KAKAMEGA	10	16	24
5	KISII CENTRAL	14	13	15
6	LUGARI	16	12	15
7	MAKUENI	13	14	34
8	MARAGUA	16	15	24
9	MURANGA	13	16	16
	Total	120	133	168

Table 4.4: Summary of The number of Trainers Working at The Districts Per Year

Year	Number trained at the National INSET.	Year of facilitation	Number working at the District.	Percentage of the working trainers.
1999	134	2000	120	90
2000	137	2001	133	97
2001	181	2002	168	93
2002	169	2003	—	—

Summary

From the above data, it is clear that, over 40 Administrative staffs have been working at the Pilot Districts for the project since 2001. The number of District Trainers working at the Pilot Districts progressively increased year by year. By 2001 there were over 140 of them working at the Pilot Districts.

Table 4.5: List of Participants of 2001 May Workshop

NO	NAME	DESIGNATION	STATION	ADDRESS	TEL. NO.
1	VENIZIA K. NJIHA	HEADS REPRESENTATIVE	MARAGUA	BOX 1500, THIKA	
2	CHRISTOPHER T. ONCHAGA	DISTRICT TRAINERS REP.	KISII	BOX 11, KISII	0381-30972
3	ANTONY ONYAMWARO	DISTRICT EDUCATION OFFICER	KISII	BOX 79, KISII	0381-20440
4	JANE O. RAE	PROVINCIAL COORDINATOR	RIFT VALLEY	BOX 259, NAKURU	037-42955
5	PETER K. KAVULUDI	DISTRICT TRAINERS REP.	LUGARI	PRIVATE BAG, TURBO	
6	DAVID M. NG'ARIKA	PROVINCIAL COORDINATOR	EASTERN	BOX 123, EMBU	
7	SAMUEL N. ISENA	HEADS REPRESENTATIVE	KISII	BOX 48, KISII	
8	ROBERT I.M. CHANZU	DISTRICT EDUCATION OFFICER	BUTERE -MUMIAS	BOX 295, BUTERE	0333-20214
9	RAJAB MWENJE	HEADS REPRESENTATIVE	BUTERE-MUMIAS	BOX 176, MUMIAS	0333-41026
10	MAJANI ALEX TOM	DISTRICT COORDINATOR	BUTERE -MUMIAS	BOX 295, BUTERE	
11	RUTH OTIENO	PRINCIPAL INSET CENTRE	BUTERE-MUMIAS	PRIVATE BAG, BUTERE	0333-20014
12	ABUKO, JUSTUS	DISTRICT TRAINERS REP.	KAKAMEGA	BOX 118, KHAYEGA	
13	MOSES P.K. LUMITI	HEADS REPRESENTATIVE	KAKAMEGA	BOX 1829, KAKAMEGA	
14	S.I. ASHITVA	PRINCIPAL INSET CENTRE	KAKAMEGA	BOX 90, KAKAMEGA	
15	TABITHA I. MASINJILA	DISTRICT COORDINATOR	KAKAMEGA	BOX 39, KAKAMEGA	
16	LIJODI E.B.	DISTRICT EDUCATION OFFICER	KAKAMEGA	BOX 39, KAKAMEGA	
17	LUKE M. ONKOBA	DISTRICT EDUCATION OFFICER	GUCHA	BOX 121, OGEMBO	
18	P.M. MONYENYE	PRINCIPAL INSET CENTRE	KISII	BOX 11, KISII	0381-30972
19	LAGAT K.N.	DISTRICT EDUCATION OFFICER	LUGARI	BOX 305, TURBO	
20	FRED OUMA	DISTRICT COORDINATOR	LUGARI	BOX 305, TURBO	
21	FRED LEO SUNDA	DISTRICT TRAINER REP.	GUCHA	BOX 505, KISII	0381-30434
22	HARRY N. NZOYA	DISTRICT COORDINATOR	MARAGUA	BOX 274, KIGUMO	0157-444473
23	MARY L. MWANGI	HEADS REPRESENTATIVE	KAJIADO	BOX 243, ATHI RIVER	0150-22029
24	JONATHAN M. NYAMAI	DISTRICT COORDINATOR	MAKUENI	BOX 41, MAKUENI	0144-33318
25	TIMOTHY NYARERA	HEADS REPRESENTATIVE	GUCHA	BOX 35, OGEMBO	
26	NASHON OBAMBO	PROVINCIAL COORDINATOR	NYANZA	BOX 575, KISUMU	
27	PETER G. NDUNGU	DISTRICT TRAINERS REP.	MARAGUA	BOX 866, THIKA	
28	LIVINGSTONE WAMBUA	DISTRICT TRAINER REP	MAKUENI	BOX 20, MAKUENI	
29	NJUGUNA KABIRI	PRINCIPAL INSET CENTRE	MARAGUA	BOX 555, THIKA	0157-44020
30	OCHARO J.B.O.	DISTRICT COORDINATOR	GUCHA	BOX 121, OGEMBO	
31	DAVID KILONZI	PRINCIPAL INSET CENTRE	MAKUENI	BOX 20, MAKUENI	0144-33012

32	DANIEL N. KARIUKI	DISTRICT EDUCATION OFFICER	MARAGUA	BOX 274, KIGUMO	0157-444473
33	B.W. NJOROGE	DISTRICT COORDINATOR	MURANG'A	BOX 118, MURANG'A	0156-22991
34	A.W. MUNALA	HEADS REPRESENTATIVE	LUGARI	BOX 52, WEBUYE	
35	MINABO B. HAGGAI	DISTRICT TRAINERS REP.	BUTERE-MUMIAS	PRIVATE BAG, BUTERE	0333-20014
36	HELLEN G. MUGO (MRS)	DEPUTY DISTRICT EDUCATION OFFICER	MURANG'A	BOX 118, MURANG'A	
37	MOGIRE MAGARA	DISTRICT COORDINATOR	KISII	BOX 70, KISII	
38	KAMAU W. GRACE	PRINCIPAL INSET CENTRE	MURANG'A	BOX 66, KAHUHIA	
39	NYAGIA G. REUBEN	HEADS REPRESENTATIVE	MURANG'A	BOX 206, KANGEMA	
40	NJUGUNA G. DANSON	DISTRICT TRAINER REP.	MURANG'A	BOX 225, KANGEMA	
41	WAMBUA JACKSON M.	HEADS REPRESENTATIVE	MAKUENI	BOX 50, KIKIMA	61 MBOONI
42	BENSON MUASYA	DISTRICT COORDINATOR	KAJIADO	BOX 33, KAJIADO	
43	PETER NJUGUNA MUKIRI	DISTRICT TRAINERS REP.	KAJIADO	BOX 36, KAJIADO	
44	CATHERINE KYALO	DEPUTY HEADMISTRESS	KAJIADO	BOX 36, KAJIADO	
45	JOSEPH N. MAGARA	PRINCIPAL INSET CENTRE	GUCHA	BOX 1841, KISII	
46	ROSE M. MUSUNGU	PRINCIPAL INSET CENTRE	LUGARI	BOX 606, WEBUYE	
47	ANDREW N. KOITIEN	DISTRICT EDUCATION OFFICER	KAJIADO	BOX 33, KAJIADO	
48	NJUGUNA	HEADS REPRESENTATIVE	MARAGUA	BOX 88, KANDARA	
49	G M NJOROGE	PRINCIPAL INSET CENTRE	KIAMBU	BOX 284, KIAMBU	
50	KINYUA NYAGA	DISTRICT EDUCATION OFFICER	MERU SOUTH	BOX 113, CHUKA	
51	KENNEDY SAKWA	DISTRICT COORDINATOR	KILIFI	BOX 42, KILIFI	
52	BRIGITTA MUTINDA	PRINCIPAL INSET CENTRE	MAKUENI	BOX, 180 KIBWEZI	
53	JEREMIAH NDIRITU	DISTRICT TRAINERS REP	KIAMBU	BOX 6, NGEWA	
54	MARY ROTICH	TSC REPRESENTATIVE	TSC	PRIVATE BAG, NRB	
55	SIMON KINGI	DISTRICT EDUCATION OFFICER	MURANG'A	BOX 118, MURANG'A	
56	D N KARIUKI	DISTRICT EDUCATION OFFICER	KIAMBU	BOX 9, KIAMBU	
57	AMOS NDUNE	PRINCIPAL INSET CENTRE	KILIFI	BOX 40, MAZERAS	
58	INNOCENT OROKI	DISTRICT COORDINATOR	GUCHA	BOX 121, OGEMBO	
59	ODUORI OBONYO	PROVINCIAL COORDINATOR	WESTERN	BOX 137, KAKAMEGA	
60	A M MWARIA	DISTRICT TRAINERS REP	MURANG'A	BOX 159, KANGEMA	
61	S M MURIITHI	DISTRICT EDUCATION OFFICER	MARAGUA	BOX 274, KIGUMO	
62	J M CHAHILU	PRINCIPAL INSET CENTRE	BARINGO	BOX 50, KABARNET	
63	NGONDO	PRINCIPAL INSET CENTRE	TAITA-TAVETA	BOX 57, MWATATE	
64	GATURU	PROVINCIAL COORDINATOR	CENTRAL	BOX 80, NYERI	
65	PAULINE NJERU	PRINCIPAL INSET	KAJIADO	BOX 36, KAJIADO	

		CENTRE			
66	C M NDEGWA	DISTRICT EDUCATION OFFICER	KILIFI	BOX 42, KILIFI	
67	M L S KIMURON	DISTRICT EDUCATION OFFICER	BARINGO	BOX 6, KABARNET	
68	J M MUSYOKA	PROVINCIAL COORDINATOR	COAST	BOX 9020, MOMBASA	
69	GEORGE OUKO	DISTRICT TRAINERS REP	TAITA-TAVETA	BOX 1011, WUNDANYI	
70	M̄BAKA NJERU	DISTRICT TRAINERS REP	MERU SOUTH	BOX 148, CHUKA	
71	J R MAHEHU	DISTRICT EDUCATION OFFICER	TAITA-TAVETA	BOX 1004, WUNDANYI	
72	JANE GICHUKI	PRINCIPAL INSET CENTRE	MARAGUA	BOX 37, SABASABA	
73	JOHN MONYORWA	PRINCIPAL INSET CENTRE	KISII	BOX 50, KISII	
74	T T NDUGUTI	DISTRICT COORDINATOR	MARAGUA	BOX 274, KIGUMO	
75	FLORENCE THUKU	PROVINCIAL COORDINATOR	RIFT VALLEY	BOX 259, NAKURU	
76	WILSON CHELAGAT	PRINCIPAL INSET CENTRE	BARINGO	BOX 19, KABARNET	
77	J KARIUKI	PRINCIPAL INSET CENTRE	MERU SOUTH	BOX 3, CHUKA	
78	D OMOKE	PRINCIPAL INSET CENTRE	GUCHA	BOX 51, KISII	
79	ALOIS MASHA	PRINCIPAL INSET CENTRE	KILIFI	BOX 198, KALOENI	
80	N MWANGI	PRINCIPAL INSET CENTRE	MURANG'A	BOX 66, KAHUHIA	
81	ALBERT THIRIKA	HEADS REPRESENTATIVE	MERU SOUTH	BOX 12, CHUKA	
82	LILIAN MWALEKWA	PRINCIPAL INSET CENTRE	TAITA-TAVETA	BOX 81, NGAMBWA	
83	ELIUD WANASWA	DISTRICT EDUCATION OFFICER	LUGARI	BOX 305, TURBO	
84	A GITARI NJERU	DISTRICT COORDINATOR	MERU SOUTH	BOX 113, CHUKA	
85	A M KECHULE	DISTRICT COORDINATOR	BARINGO	BOX 6, KABARNET	
86	MBUGUA KABAKI	DISTRICT COORDINATOR	KIAMBU	BOX 9, KIAMBU	
87	KATANA KAPOMBE	DISTRICT TRAINERS REP	KILIFI	BOX 3, KALOENI	

Table 4.6: May, 2002 Workshop Participants

NO	NAME	DESIGNATION	STATION	ADDRESS
1.	JONATHAN M. NYAMAI	DISTRICT COORDINATOR	MAKUENI	BOX 41, MAKUENI
2.	Sr. F. EUGELBERTA	PRINCIPAL INSET CENTRE	MAKUENI	BOX 122, NUNGUNI
3.	DAVID KILONZI	PRINCIPAL INSET CENTRE	MAKUENI	BOX 20, MAKUENI
4.	BRIGITTA MUTINDA	PRINCIPAL INSET CENTRE	MAKUENI	BOX, 180 KIBWEZI
5.	MUTANGILI THOMAS	DISTRICT EDUCATION OFFICER	MAKUENI	BOX 41, MAKUENI
6.	NDUNDA PETER	HEADS REPRESENTATIVE	MAKUENI	84 NUNGUNI
7.	L. WAMBUA	DISTRICT TRAINERS REP	MAKUENI	BOX 20, MAKUENI
8.	ALBERT THIRIKA	HEADS REPRESENTATIVE	MERU SOUTH	BOX 12, CHUKA
9.	S. K. M. RIMBERIA	DISTRICT COORDINATOR	MERU SOUTH	BOX 113, CHUKA
10.	J KARIUKI	PRINCIPAL INSET CENTRE	MERU SOUTH	BOX 3, CHUKA
11.	MBAKA NJERU	DISTRICT TRAINERS REP	MERU SOUTH	BOX 148, CHUKA
12.	F. N. KAMUNDE	DISTRICT EDUCATION OFFICER	MERU SOUTH	BOX 113, CHUKA
13.	DAVID M. NG'ARIKA	PROVINCIAL COORDINATOR	EASTERN	BOX 123, EMBU
14.	RAJAB MWENJE	HEADS REPRESENTATIVE	BUTERE-MUMIAS	BOX 176, MUMIAS
15.	MAJANI ALEX TOM	DISTRICT COORDINATOR	BUTERE -MUMIAS	BOX 295, BUTERE
16.	MINABO B. HAGGAI	DISTRICT TRAINERS REP.	BUTERE-MUMIAS	PRIVATE BAG, BUTERE
17.	OWINO J. O.	DISTRICT EDUCATION OFFICER	BUTERE-MUMIAS	BOX 295, BUTERE
18.	RUTH OTIENO	PRINCIPAL INSET CENTRE	BUTERE-MUMIAS	PRIVATE BAG, BUTERE
19.	ABUKO, JUSTUS	DISTRICT TRAINERS REP.	KAKAMEGA	BOX 118, KHAYEGA
20.	MULUPI K.	HEADS REPRESENTATIVE	KAKAMEGA	BOX 303, MALAVA
21.	S. KHABONGO	PRINCIPAL INSET CENTRE	KAKAMEGA	BOX 90, KAKAMEGA
22.	KUYA I.	DISTRICT COORDINATOR	KAKAMEGA	BOX 39, KAKAMEGA
23.	LIJODI E.B.	DISTRICT EDUCATION OFFICER	KAKAMEGA	BOX 39, KAKAMEGA
24.	ODUORI OBONYO	PROVINCIAL COORDINATOR	WESTERN	BOX 137, KAKAMEGA
25.	PETER K. KAVULUDI	DISTRICT TRAINERS REP.	LUGARI	PRIVATE BAG, TURBO
26.	A.W. MUNALA	HEADS REPRESENTATIVE	LUGARI	BOX 52, WEBUYE
27.	ROSE M. MUSUNGU	PRINCIPAL INSET CENTRE	LUGARI	BOX 606, WEBUYE
28.	ELIUD WANASWA	DISTRICT EDUCATION OFFICER	LUGARI	BOX 305, TURBO
29.	FRED OUMA	DISTRICT COORDINATOR	LUGARI	BOX 305, TURBO
30.	P.M. MONYENYE	PRINCIPAL INSET CENTRE	KISII	BOX 11, KISII
31.	C. ONCHAGA	DISTRICT TRAINERS REP.	KISII	BOX 11, KISII
32.	J. NYAKINA	HEADS REPRESENTATIVE	KISII	520, KISII
33.	MOGIRE MAGARA	DISTRICT EDUCATION OFFICER	KISII	BOX 70, KISII
34.	S.MOGOBA	DISTRICT COORDINATOR	KISII	BOX 70, KISII

35.	G. OKEYO	DISTRICT TRAINERS REP.	GUCHA	24, NYAMARAMBE
36.	TOM NYANDORO	HEADS REPRESENTATIVE	GUCHA	BOX 85, KENYENYA
37.	Sr. WAMBUI	PRINCIPAL INSET CENTRE	GUCHA	BOX 51, KISII
38.	ODONGO C. A.	DISTRICT EDUCATION OFFICER	GUCHA	BOX 121, OGEMBO
39.	INNOCENT ORIOKI	DISTRICT COORDINATOR	GUCHA	BOX 121, OGEMBO
40.	NJUGUNA S.	HEADS REPRESENTATIVE	MARAGUA	BOX 88, KANDARA
41.	PETER G. NDUNGU	DISTRICT TRAINERS REP.	MARAGUA	BOX 866, THIKA
42.	NJANGI PETER	PRINCIPAL INSET CENTRE	MARAGUA	BOX 555, THIKA
43.	S M MURIITHI	DISTRICT EDUCATION OFFICER	MARAGUA	BOX 274, KIGUMO
44.	L. M. NGUGI	PRINCIPAL INSET CENTRE	MARAGUA	BOX 37, SABASABA
45.	TT NDUGUTI	DISTRICT COORDINATOR	MARAGUA	BOX 274, KIGUMO
46.	A M MWARIA	DISTRICT TRAINERS REP	MURANG'A	BOX 159, KANGEMA
47.	SIMON KINGI	DISTRICT EDUCATION OFFICER	MURANG'A	BOX 118, MURANG'A
48.	B.W. NJOROGE	DISTRICT COORDINATOR	MURANG'A	BOX 118, MURANG'A
49.	NYAGIA G. REUBEN	HEADS REPRESENTATIVE	MURANG'A	BOX 206, KANGEMA
50.	N MWANGI	PRINCIPAL INSET CENTRE	MURANG'A	BOX 66, KAHUHIA
51.	JEREMIAH NDIRITU	DISTRICT TRAINERS REP	KIAMBU	BOX 6, NGEWA
52.	D N KARIUKI	DISTRICT EDUCATION OFFICER	KIAMBU	BOX 9, KIAMBU
53.	MBUGUA KABAKI	DISTRICT COORDINATOR	KIAMBU	BOX 9, KIAMBU
54.	INOTI MAINGI	PROVINCIAL COORDINATOR	CENTRAL	BOX 80, NYERI
55.	T. K. GITAU	DISTRICT COORDINATOR	KAJIADO	BOX 33, KAJIADO
56.	PETER NJUGUNA MUKIRI	DISTRICT TRAINERS REP.	KAJIADO	BOX 36, KAJIADO
57.	J. K. MUGAI	HEADS REPRESENTATIVE	KAJIADO	BOX
58.	ANDREW N. KOITEN	DISTRICT EDUCATION OFFICER	KAJIADO	BOX 33, KAJIADO
59.	PAULINE NJERU	PRINCIPAL INSET CENTRE	KAJIADO	BOX 36, KAJIADO
60.	A M KECHULE	DISTRICT COORDINATOR	BARINGO	BOX 6, KABARNET
61.	J M CHAHILU	PRINCIPAL INSET CENTRE	BARINGO	BOX 50, KABARNET
62.	S. KATEMBO	DISTRICT EDUCATION OFFICER	BARINGO	BOX 6, KABARNET
63.	WILSON CHELAGAT	PRINCIPAL INSET CENTRE	BARINGO	BOX 19, KABARNET
64.	S. EMBEYWA	TRAINERS' REPRESENTATIVE	BARINGO	BOX 11, KABARNET
65.	FLORENCE THUKU	PROVINCIAL COORDINATOR	RIFT VALLEY	BOX 259, NAKURU
66.	J. NGONDO	HEADS REPRESENTATIVE	TAITA-TAVETA	BOX 57, MWATATE
67.	GEORGE OUKO	DISTRICT TRAINERS REP	TAITA-TAVETA	BOX 1011, WUNDANYI
68.	D. K. TALIBONG	DISTRICT EDUCATION OFFICER	TAITA-TAVETA	BOX 1004, WUNDANYI
69.	LILIAN MWALEKWA	PRINCIPAL INSET CENTRE	TAITA-TAVETA	BOX 81, NGAMBWA

70.	P. K. GICHIRIRI	DISTRICT COORDINATOR	TAITA-TAVETA	BOX 1004, WUNDANYI
71.	MUTEGI I. C.	DISTRICT COORDINATOR	KILIFI	42, KILIFI
72.	AMOS NDUNE	PRINCIPAL INSET CENTRE	KILIFI	BOX 40, MAZERAS
73.	C M NDEGWA	DISTRICT EDUCATION OFFICER	KILIFI	42, KILIFI
74.	ALOIS MASHA	PRINCIPAL INSET CENTRE	KILIFI	BOX 198, KALOLENI
75.	KATANA KAPOMBE	DISTRICT TRAINERS REP	KILIFI	BOX 3, KALOLENI
76.	RUTH MUTISYA	For PROVINCIAL COORDINATOR	COAST	BOX 20 KWALE
77.	MRS. MARY ROTICH	TSC REPRESENTATIVE	TSC	PRIVATE BAG, NRB
78.	MRS. E. KALOKI	TSC REPRESENTATIVE	TSC	PRIVATE BAG, NRB

CHAPTER 5

QUALITY OF NATIONAL INSET

The quality of national INSET was determined using Quality of INSET Assessment Index and Capacity Building Index for National trainers.

5.1 QUALITY OF INSET ASSESSMENT INDEX

5.1.1 Effect of National INSET on Attitude

The Effect of National INSET was assessed using the Pre- and Post-INSET instrument. The objective of administering the instrument was to determine the teachers' (district trainers) attitude towards teaching of Mathematics and Science before and after the INSET, using the following criteria:

1. Category A: Attitude towards teaching objectives
2. Category B: Attitude towards teaching approach
3. Category C: Attitude towards work planning
4. Category D: Attitude towards overcoming limitations in teaching
5. Category E: Attitude towards conducting practical work
6. Category F: Attitude towards assessment
7. Category G: Attitude towards INSET system construction

National trainers at Kenya Science Teachers' College (KSTC) administered the instruments. Data was collected using a 5-point ranking scale as shown below:

<i>Rank</i>	<i>Score</i>
Excellent	4
Good	3
Average	2
Fair	1
Poor	0

According to the set standards on the evaluation grid, INSET at KSTC will have attained a mean is greater than 3.0 on the 0 – 4 scale by the end of the project period, therefore **attained**.

SUMMARY

Table 5.1: Summary of Overall Mean Scores

YEAR	2001		2002	
	PRE	POST	PRE	POST
Biology	3.1	3.5	3.2	3.6
Chemistry	2.9	3.3	3.0	3.3
Mathematics	2.9	3.5	3.1	3.5
Physics	2.8	3.4	3.1	3.6

Table 5.2: Category Score by Subject

YEAR		2001		2002	
Subject	Category	PRE	POST	PRE	POST
Biology	A	3.0	3.5	3.2	3.6
	B	3.1	3.4	3.3	3.5
	C	2.9	3.4	3.0	3.5
	D	3.0	3.5	3.2	3.6
	E	2.9	3.2	3.0	3.4
	F	3.1	3.6	3.3	3.6
	G	3.6	3.6	3.4	3.8
	Overall	3.1	3.5	3.2	3.6
Chemistry	A	3.0	3.3	3.1	3.3
	B	3.0	3.2	3.1	3.2
	C	2.7	3.2	2.9	3.3
	D	2.9	3.2	2.9	3.2
	E	2.9	3.3	2.9	3.4
	F	2.9	3.3	3.0	3.0
	G	3.1	3.4	3.1	3.5
	Overall	2.9	3.3	3.0	3.3
Maths	A	2.5	3.6	2.7	3.6
	B	3.0	3.6	3.1	3.6
	C	2.9	3.4	3.1	3.4
	D	2.9	3.5	3.0	3.5
	E	2.7	3.3	3.0	3.3
	F	3.1	3.6	3.2	3.6
	G	3.1	3.6	3.3	3.6
	Overall	2.9	3.5	3.1	3.5
Physic	A	2.8	3.5	3.1	3.6
	B	2.9	3.4	3.2	3.5
	C	2.6	3.3	3.0	3.5
	D	2.7	3.4	3.1	3.6
	E	2.8	3.2	3.1	3.4
	F	2.8	3.4	3.2	3.6
	G	3.0	3.7	3.3	3.8
	Overall	2.8	3.4	3.1	3.6

5.1.2 Quality of National INSET Sessions

Preamble

National INSET participants evaluate the quality of INSET sessions they participate in using the Session Evaluation Instrument. The evaluation is based on the following aspect SMASSE Project calls 'Quality Criteria':

- How Motivating the session activities were
- How Interesting the session was
- The extent to which participants were involved in session activities
- How relevant the session activities were made with respect to participants' needs
- How time was managed in the session (The adequacy of time allocated for the session activities.)

The evaluation is based on a 0 – 4 rating scale where: 0 (poor), 1(fair), 2(average), 3(good), 4(excellent).

A National INSET session may be organised along any one or more of the following components SMASSE Project calls 'Organisation Criteria':

- Plenary
- Practical
- Discussion
- Peer Teaching
- Feedback on Peer Teaching

National INSET sessions fall into two categories namely:

- General or Common Sessions where issues that cut across all subjects are discussed.
- Subject Sessions where issues specific to each subject are discussed in subject groups.

Table 5.3: Summary of Overall Session Mean Ratings

CRITERIA	SESSION	Overall Mean Rating	
		2001	2002
Quality Criteria	Common/General Session	3.3	3.4
	Subject Session	3.5	3.5
Organisation Criteria	Common/General Session	3.4	3.4
	Subject Session	3.5	3.5

The quality of 2001 and 2002 INSET sessions with respect to Quality Criteria had mean ratings of 3.3 and 3.4 respectively, and the quality with respect to Organization Criteria had an overall mean of 3.4 for both years. Based on the set standard of mean ≥ 3.0 , the quality of national INSET sessions **attained**.

GENERAL/COMMON SESSIONS

The data presented under this section are the participants' mean rating for the 2001 and 2002 general/common INSET sessions. The data is presented in two sets:

- Ratings for the Quality Criteria
- Ratings for the Organisational Criteria

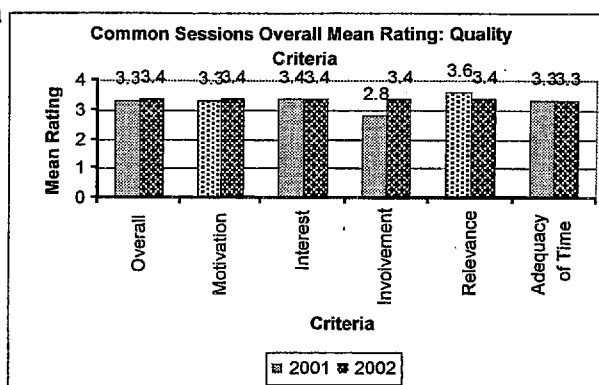
The overall mean ratings for quality criteria of the general INSET sessions for the year 2001 and 2002 are summarised in the table and graph below.

a) Quality Criteria

Table 5.4: Overall Mean Rating: Quality Criteria

Quality Criteria	2001	2002
Overall	3.3	3.4
Motivation	3.3	3.4
Interest	3.4	3.4
Involvement	2.8	3.4
Relevance	3.6	3.4
Adequacy of Time	3.3	3.3

Figure 5.1: Quality Criteria



Based on the set standard of mean ≥ 3.0 the quality of INSET sessions attained in both years.

b) Organisation Criteria of the General Session

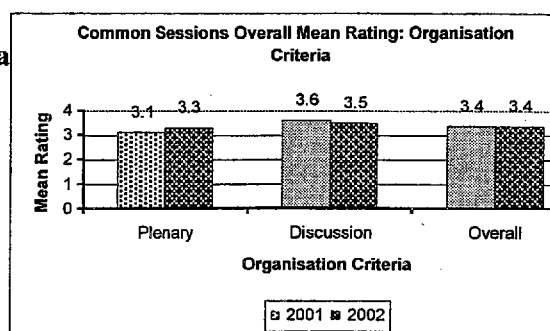
A summary of the overall mean ratings of the quality of 2001 and 2002 general INSET sessions with respect to organisation criteria.

Criteria

Table 5.5: Overall Mean Rating: Organisation Criteria

Organisation Criteria	2001	2002
Plenary	3.1	3.3
Discussion	3.6	3.5
Overall	3.4	3.4

Figure 5.2: Organization



The quality of Plenary and Discussion aspects of general sessions of 2001 and 2002 INSETs was ≥ 3.0 , therefore attained.

SUBJECT SESSIONS

Given below is the summary data on participants' ratings of National INSET Subject sessions. The data is presented in two sets:

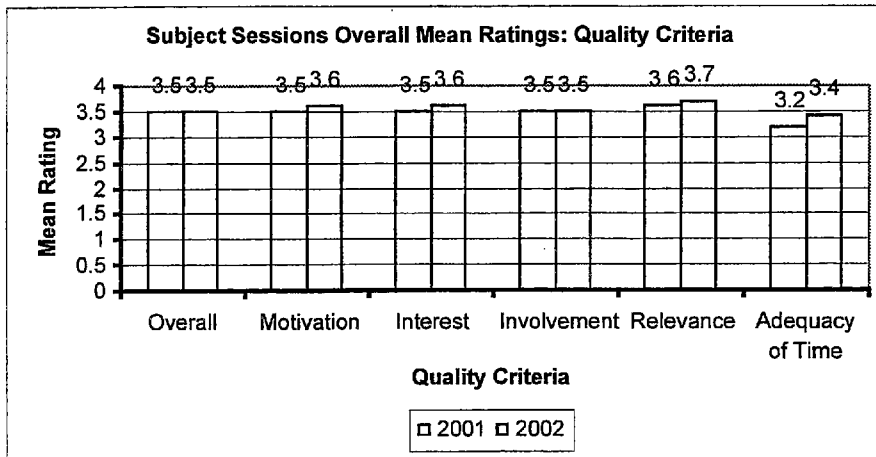
- Ratings for the Quality Criteria
- Ratings for the Organisational Criteria

a) Quality Criteria (Subject Session)

Table 5.6: Overall Subject Mean Rating: Summary for Quality Criteria

QUALITY CRITERIA	OVERALL MEAN RATING	
	2001	2002
Overall	3.5	3.5
Motivation	3.5	3.6
Interest	3.5	3.6
Involvement	3.5	3.5
Relevance	3.6	3.7
Adequacy of Time	3.2	3.4

Figure 5.3: Subject Sessions (Quality Criteria)



b) Organisation Criteria of Subject Session

Table 5.7: Summary for Organisation Criteria

ORGANISATION CRITERIA	OVERALL MEAN RATING	
	2001	2002
Overall	3.5	3.5
Plenary	3.4	3.5
Practical	3.6	3.7
Discussion	3.6	3.6
Peer Teaching*	3.4	3.5
Feedback on Peer Teaching*	3.6	3.5

* Includes actual classroom teaching and feedback on the same

Figure 5.4: Subject Session (Organization Criteria)

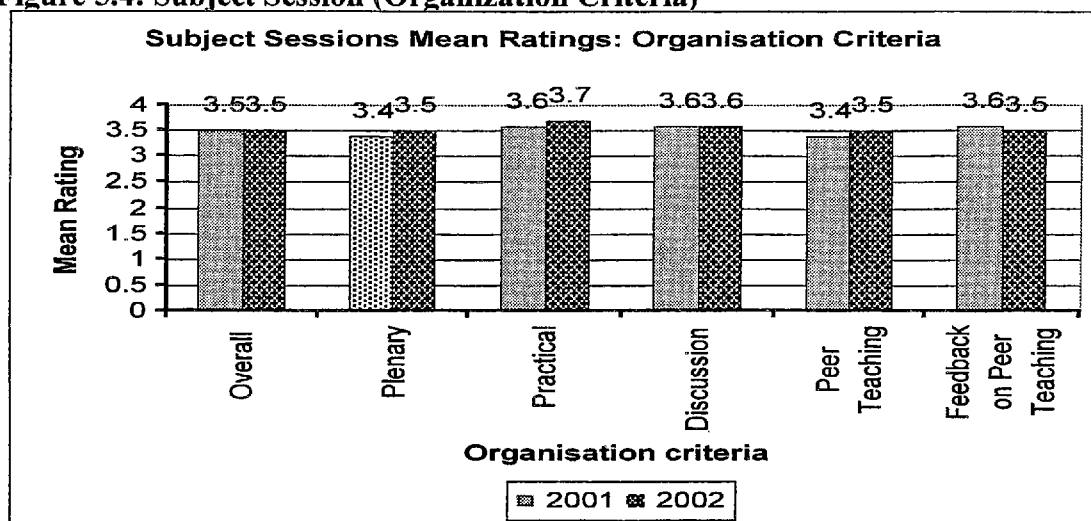


Table 5.8: Individual Overall Subject Mean Rating: Quality and Organisation Criteria

Quality Criteria	Overall Subject Mean Rating							
	(2001)				(2002)			
	Chem.	Bio	Phy.	Math	Chem.	Bio	Phy.	Math
Overall	3.5	3.6	3.4	3.4	3.5	3.6	3.6	3.5
Motivation	3.6	3.6	3.5	3.4	3.5	3.6	3.6	3.5
Interest	3.5	3.6	3.5	3.4	3.5	3.6	3.6	3.5
Involvement	3.5	3.6	3.5	3.5	3.5	3.5	3.6	3.5
Relevance	3.6	3.7	3.5	3.5	3.6	3.7	3.7	3.6
Adequacy of Time	3.3	3.3	3.1	3.1	3.4	3.5	3.3	3.2
Organisation Criteria								
Overall	3.5	3.6	3.4	3.4	3.5	3.6	3.6	3.5
Plenary	3.4	3.4	3.4	3.2	3.4	3.5	3.5	3.4
Practical	3.5	3.6	3.5	3.6	3.5	3.7	3.7	3.7
Discussion	3.5	3.7	3.5	3.5	3.6	3.6	3.6	3.5
Peer Teaching*	3.5	3.5	3.2	3.4	3.5	3.5	3.6	3.4
Feedback on Peer Teaching*	3.7	3.6	-	3.4	3.5	3.6	3.6	3.4

* Includes actual classroom teaching and feedback on the same

From the data presented, the quality aspects of all the individual subject INSET sessions for 2001 and 2002 *attained* with respect to the set standards. The organisation aspects also *attained*.

5.2 CAPACITY BUILDING INDEX FOR NATIONAL TRAINERS

Preamble:

To determine the capacity index of National trainers, quality of INSET instrument (Ability of national trainers to implement INSET) was administered to:

- a) National trainers
- b) National trainees

The instrument had two criteria i.e. Planning with items P₁ to P₈ and Doing/ implementation with items D₁ to D₉. The trainers and trainees were required to rate each item based on a 0 – 4 rating scale where 0- not at all; 1- a little; 2- fairly adequately; 3- adequately; 4- to a great extent.

The planning items were:

- P1- Make appropriate INSET work plans
- P2- Make preparation for appropriate and adequate INSET materials
- P3- Maintain equipment, apparatus and other training materials
- P4- Improvise training materials based on locally available resources.
- P5- Make suitable exposition materials for the INSET
- P6- Produce (print) INSET materials in time.
- P7- Plan to utilize the participatory approach.
- P8- Distribute tasks fairly.

The implementation items were:

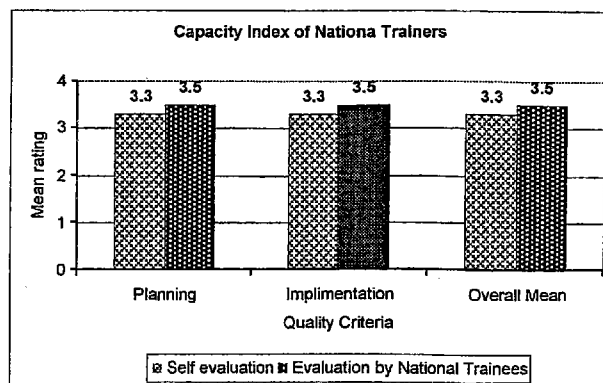
- D1- Implement INSET Work plans accordingly.
- D2- Manage time effectively
- D3- Make appropriate use of improvised teaching aids based on locally available resources
- D4- Make effective and efficient use of INSET materials
- D5- Utilize participatory approach well.
- D6- Facilitate INSET sessions effectively
- D7- Establish and maintain good rapport among trainers, participants and support staff.
- D8- Take registration of participants accordingly.
- D9- Administer INSET evaluation instruments (session, pre-& post, content/pedagogy) accordingly

Summary

Table 5.9: Capacity Index of National Trainers Trainers

	Self Evaluation	Evaluation By National Trainees
Overall Mean	3.3	3.5
Planning	3.3	3.5
Implementation	3.3	3.5

Fig 5.5: Capacity Index of National



The national trainees rated the national trainers better than the national trainers rated themselves in both planning and implementation of INSET activities at National level. This is an indicator that the trainees had faith in the trainers and were satisfied with the way INSET was both planned and implemented at national level.

Despite the difference in the ratings, both self evaluation and evaluation by National trainees have attained according to the set standards of mean score of 3 and above and therefore this standard should be maintained.

Detailed information

Evaluation by National trainees - Planning

P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₇	P ₈	Overall Mean
3.6	3.5	3.4	3.4	3.5	3.5	3.6	3.7	3.5

Evaluation by national trainees – Implementation

D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	Overall Mean
3.5	3.2	3.4	3.6	3.6	3.5	3.6	3.8	3.7	3.5

Self evaluation- Planning

P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₇	P ₈	Overall Mean
3.2	3.3	3	3.3	3.4	3.7	3.5	3.1	3.3

Self evaluation- implementation

D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	Overall Mean
3.3	2.8	3.1	3.3	3.3	3.3	3.3	3.4	3.5	3.3

CHAPTER 6

QUALITY OF DISTRICT INSET

Preamble

The district trainers attend INSET at KSTC to equip themselves with the knowledge and tools to conduct a similar INSET in their districts. This is in accordance with the SMASSE INSET organization, which utilizes cascade approach to disseminate information from the national INSET Unit to the classroom teacher.

Monitoring and Evaluation Task Force team (M/E team) attends the district INSET to observe and evaluate the INSET activities in order to ascertain the fidelity (quality) of the information and skills being passed to the classroom teachers by the district trainers. The results obtained serve as feedback to improve the planning and implementation of future INSET.

6.1 CAPACITY BUILDING INDEX FOR DISTRICT TRAINERS

The capacity building index for district trainers is determined using the following observation instruments developed by the M/E Task Force:

- Quality of INSET Instrument – for evaluating ability of district trainers to implement INSET
- District INSET Checklist No.1 – for evaluating the quality of facilitation
- District INSET Checklist No.2 – for evaluating preparedness and material utilisation

Results obtained from Quality of INSET instrument and District INSET checklist No.1 instruments during 2001 and 2002 District INSET are summarized table below. 2001 data on ability of district trainers was on trial basis. In the tables in this chapter, a dash (-) represents no data available.

Table 6.1: Quantitative Summary

District	INSET Centre(s)	2001	2002	
		Ability of district trainers	Ability of district trainers	Quality of facilitation
Kisii	Kisii High School	2.0	1.3	2.2
Kakamega	Kakamega High School	2.9	1.9	2.0
	Mukumu Girls High School	-	2.0	1.9
Lugari	Bishop Njenga Girls High	2.5	2.0	2.1
Muranga	Kahuhia Girls High School	2.7	3.0	2.3
Maragua	Njiiri High School	2.5	2.3	2.4
	Kamahuha Girls High School	-	2.3	2.5
Makueni	Makueni Boys High School	2.7	1.2	2.4
	Precious Blood Secondary	-	2.0	1.9
	St. Joseph's Girls High	-	1.7	2.0
Kajiado	Moi Girls High School	2.4	1.7	1.8
Butere/Mumias	Butere Girls High school	3.2	-	-
Gucha	Sengera Girls Secondary school	-	-	-
Overall Mean		2.6	2.1	2.1

Synthesis

District trainers' capacity building index evaluated by Monitoring and Evaluation Task Force is less than 3 therefore *not attained*. According to the evaluation grid, the capacity index is expected to be over 3.0. More follow up activities are necessary in order to attain the expected standard.

6.1.1 Ability to Implement District INSET

General ability to implement INSET at the District level was rated using **Quality of INSET Instrument**. The Instrument has four categories P, D, S and I based on the PDSI approach of Plan, Do, See and Improve.

Table 6.2: 2001 Data on Ability of District Trainers

(Key – 0-not at all; 1-a little; 2-fairly adequately; 3-adequately; 4-to a great extent)

Statement	Gucha	Kisii	Kakamega	Butere /Mumias	Lugari	Makueni	Kajiado	Murang'a	Maragua
P1. Make work plans.	-	2.3	3.0	4.0	3.0	4.0	1.5	3.8	3.0
P2. Make requisitions for INSET materials	-	2.5	3.3	3.5	2.0	2.0	2.0	4.0	3.0
P3. Draw up an inventory of materials, equipments and apparatus	-	1.3	3.0	4.0	2.5	2.0	3.0	4.0	3.0
P4. Develop improvised teaching aids based on locally available resources	-	1.0	2.0	-	2.0	-	2.0	3.5	1.5
P5. Develop exposition materials for the INSET in time	-	2.8	3.3	3.0	2.0	3.0	2.5	3.3	2.5
P6. Plan to utilize the participatory approach.	-	2.3	3.0	3.5	3.0	3.0	3.5	3.5	3.0
P7. Identify suitable facilitation personnel among themselves.	-	2.5	3.0	3.0	3.0	2.0	2.5	3.0	2.5
P8. Hold regular meetings to prepare for the INSET	-	-	3.0	3.5	2.0	3.0	2.5	3.5	3.0
P9. Plan annual budget.	-								
D1. Make use of INSET work plans.	-	3.0	3.7	3.5	3.0	3.0	2.0	3.8	2.0
D2. Manage time	-	2.0	3.3	2.5	3.0	2.0	2.0	1.5	1.0
D3. Make use of developed improvised teaching aids (locally available resources)	-	1.0	2.3	-	2.5	-	2.5	3.0	2.5
D4. Use INSET materials	-	2.5	3.5	3.0	2.5	2.0	3.0	3.0	3.0
D5. Utilize participatory approach.	-	2.7	3.3	3.0	3.0	3.0	3.0	3.3	3.0
D6. Facilitate INSET sessions	-	2.3	3.3	2.5	3.0	3.0	2.5	3.3	2.0
D7. Establish and maintain good rapport among trainers, participants / support staff.	-	2.5	3.3	3.0	3.0	3.0	2.0	3.3	2.5
D8. Keep records of:	-	-	2.3	3.0	2.5	3.0	3.0	3.6	3.0
i) INSET materials	-	-	2.3	3.0	2.5	3.0	3.0	3.6	3.0
ii) Register of attendance	-	2.3	3.7	4.0	3.0	3.0	2.0	3.6	2.5
D9. Conduct post- INSET seminar/workshop meetings	-	-	-	3.0	2.0	2.0	2.5	1.8	3.0
D10. Prepare teaching materials	-	-	-	-	-	-	-	-	-
S1. Gather, analyse and interpret feedback on INSET work plans	-	1.3	2.3	2.0	2.5	2.0	2.5	1.0	2.5
S2. Gather, analyse and interpret feedback on time management.	-	1.0	2.5	2.0	2.0	2.0	2.5	1.8	2.5
S3. Gather, analyze and interpret feedback on improvised teaching aids	-	1.3	2.3	-	2.0	-	2.0	1.0	2.0

S4. Gather, analyze and interpret feedback on use of INSET materials.	-	1.3	3.0	3.0	2.0	3.0	2.5	1.0	2.5
S5. Gather, analyze and interpret feedback on utilization of participatory approach.	-	1.3	3.0	4.0	3.0	3.0	3.0	1.0	3.0
S6. Gather, analyze and interpret feedback on get feedback on facilitation of INSET sessions.	-	1.5	3.0	3.0	3.0	3.0	2.5	1.0	2.5
S7. Gather, analyze and interpret feedback on rapport among trainers, participants and support staff.	-	1.3	3.0	3.0	2.5	3.0	2.5	2.5	2.5
S10. Gather, analyze and interpret feedback on records of:	-	1.0	2.7	3.0	2.0	3.0	2.0	2.5	2.0
i) INSET materials	-	1.3	3.3	4.0	2.5	3.0	2.5	3.3	2.5
ii) Register of attendance	-	1.0	2.0	-	2.0	-	2.5	2.3	1.5
S11 Gather, analyze and interpret feedback on post- INSET seminar/workshop	-	-	-	-	-	-	-	-	-
S12. Prepare INSET report.	-	-	-	-	-	-	-	-	-
Average	-	2.0	2.9	3.2	2.5	2.7	2.4	2.7	2.5

Table 6.3: 2002 Data on Ability of District Trainers

Statement	kisii	Kakamega	Lugari	Makueni			Kajiado	Murang'a	Maragua	
P1. Make appropriate work plans.	1.8	3.0	3.0	2.0	2.0	2.3	1.8	3.2	2.0	2.0
P2. Make appropriate requisitions for INSET materials	1.4	3.0	3.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
P3. Draw up an inventory of materials, equipments and apparatus	0.2	2.0	2.0	3.0	0.0	2.0	2.4	3.5	3.4	2.5
P4. Improvise training materials based on locally available resources	1.4	3.0	3.0	1.5	3.0	1.5	2.0	2.2	3.0	1.5
P5. Adapt exposition materials for the INSET (based on national INSET materials)	1.8	2.0	2.0	1.5	3.0	1.5	2.0	2.0	3.2	2.5
P6. Produce INSET materials in time	1.8	1.0	1.0	1.0	3.0	1.0	1.8	1.2	2.6	1.5
P7. Plan to utilize the participatory approach.	2.2	3.0	3.0	2.5	2.0	2.0	2.2	1.6	3.0	3.0
P8. Fairly distribute tasks	1.4	3.0	2.0	3.0	2.0	2.5	2.0	2.2	3.0	3.0
P9. Hold meetings to prepare for INSET	0.2	3.0	3.0	2.0	1.0	1.0	2.6	3.0	2.8	2.0
P10. Hold post-INSET meetings	0.0	3.0	-	1.0	1.0	1.0	1.0	2.0	2.4	1.5
Category Mean Score	1.2	2.6	2.4	2.0	1.9	1.7	2.0	2.2	3.0	2.2
D1. Implement INSET work plans.	1.4	2.0	2.0	2.0	2.0	1.0	2.0	1.8	3.4	2.5
D2. Manage time	0.6	1.0	0.0	1.0	1.0	1.5	2.0	1.4	2.6	2.0
D3. Make use of improvised teaching aids based on locally available resources	1.0	3.0	3.0	1.5	2.0	1.5	1.8	1.8	2.4	2.0
D4. make effective use of INSET materials	1.4	2.0	2.0	2.0	2.0	2.0	2.0	1.8	3.0	2.0
D5. Utilize participatory approach.	2.0	2.0	3.0	2.0	2.0	2.0	2.3	1.4	3.2	3.0
D6. Facilitate INSET sessions	1.6	2.0	2.0	1.5	2.0	2.0	1.2	2.0	3.0	3.0
D7. Establish and maintain good rapport among trainers, participants & support staff.	1.4	2.0	1.0	3.0	2.0	2.0	2.0	1.8	3.4	3.0
D8. Keep records of: i) INSET materials	0.0	2.0	0.0	2.0	0.0	1.0	2.0	3.0	3.0	2.5
ii) Register of attendance	2.4	3.0	1.0	2.5	1.0	3.0	2.0	3.0	3.0	2.0
Category Mean	1.4	2.1	1.6	2.0	1.6	1.8	1.9	2.0	3.0	2.4
S. Gather, analyse and interpret data of feedback on INSET and session work plans	-	1.0	-	0.0	0.0	1.0	-	1.0	-	-
I. Improve on planning, implementation and evaluation of outcomes	-	-	-	-	-	-	-	-	-	-
Average	1.3	1.9	2.0	2.0	1.2	1.7	2.0	1.7	3.0	2.3

6.1.2 Quality of Facilitation

The quality of facilitation was rated using District Checklist No 1. Categories rated include session organization (4 items) and session quality (4 items). Individual district trainers are rated based on the session one is facilitating.

Table 6.4: Quality of Facilitation

District	INSET Centre(s)	Quality of facilitation (scale of 0 – 4)						
		A	B	C	D	E	F	Mean
Kisii	Kisii High School	2.2	2.0	2.4	1.8	2.8	2.0	2.2
	Kakamega High School	1.7	1.4	2.3	1.9	2.0	2.8	2.0
Kakamega	Mukumu Girls High School	1.5	2.1	2.1	1.6	-	-	1.9
Lugari	Bishop Njenga Girls High	1.8	1.8	1.6	2.4	2.1	2.3	2.1
Muranga	Kahuhia Girls High School	2.4	2.2	-	-	-	-	2.3
	Njiiri High School	2.0	2.9	2.1	2.6	2.2	-	2.4
Maragua	Kamahuha Girls High School	2.1	2.9	2.8	-	-	-	2.5
Makueni	Makueni Boys High School	2.4	1.8	2.3	-	-	-	2.1
	Precious Blood Secondary	1.8	2.5	1.4	-	-	-	1.9
	St. Joseph's Girls High	1.4	2.6	1.2	0.8	2.0	2.0	2.0
Kajiado	Moi Girls High School	1.8	1.5	2.3	2.0	1.9	2.0	1.8
Overall Mean								2.1

* A, B, C, D, E and F represent different sessions/facilitators

6.1.3 Other Qualitative Information on Preparedness of INSET Centres

Preparedness of the district with regard to INSET rooms, laboratories, accommodation production of INSET materials and use of materials and equipment provide by the national office. A summary of findings by Monitoring and Evaluation Task Force are given below:

Table 6.5: Qualitative Summary Table

Aspects	General observations
Adequacy/suitability of programme	In most cases the programme were adequate and suitable. However, some were not followed strictly. In some centres some aspects that were not supposed to have been in the programme had been inserted.
Time management	Most sessions started on time. However, time management was not good in some sessions. Some of the sessions took longer than scheduled on the programme; cases of over-planning and under-planning were observed.
Quality of facilitation	The quality of facilitation was relatively fair. However, in a number of cases, some trainers did not guide the participants during discussions.
Level of participation	Generally, the participants were actively involved during the group discussions and in most plenary sessions. The attitude of participants seemed positive; in some cases low morale of participants e.g. reading newspapers while sessions were going on, was noted.

Use of materials and equipment / INSET rooms	In most cases INSET rooms were well prepared and the laboratories were tidy. However, in some cases facilitation materials were being produced during the INSET. In some cases there was a shortage of materials provided by the national office due to the unexpected high turn out.
Modifications on session contents	Some trainers prepared good original materials for sessions not covered during the National INSET and even produced their materials using a computer. However, in some cases, there were no modifications in session content. Trainers used handouts given during national INSET without any modification.
Maintenance of records: attendance lists, requisitions, inventories, minutes of meetings	Generally, the attendance lists were well maintained. Good organization of files was noted in some centres. However records of materials, apparatus and equipment were not well maintained or non-existent in some centres. Financial records and minutes of meetings to prepare for INSET were also not available in some centres.
Use of Session Evaluation Instrument	Generally, session evaluation forms were well maintained by trainers. In some cases participants rated even aspects that were not included in the session e.g. peer teaching, practice
Quality of accommodation/meals	Generally, accommodation was acceptable; meals were of acceptable standards in quality and quantity except in a few cases where the meals were rather monotonous and even no cutlery was provided. In some cases participants opted to commute rather than stay at the centres; so District made arrangement for participants to be transported to the centre every morning and from the centre every evening by bus.

6.2 QUALITY OF DISTRICT INSET ASSESSMENT INDEX

Preamble

The quality of district INSET measured through session evaluation instrument at pilot districts obtain a mean of over 2.5 on a scale of 0 to 4 in the quality of INSET assessment index.

The purpose of this analysis is to determine the quality of District INSET. The result of the quality of INSET is based on the analysis of session evaluation instrument as stated in the evaluation Grid 2(c) on the PDM. The session evaluation forms were administered in every session of all the INSETs during the period 1999-2002. The participants rated the sessions using a five Point Likert scale on a quality continuum from excellent (4) to poor (0). The session evaluation data was analysed with respect to two criteria; Quality criteria and organisational criteria. Each criterion had five sub-criterion; *{Motivation, interest, involvement, relevance and adequacy of time}* and *{Plenary, practical, discussion, peer teaching and feedback on peer teaching}* for session quality criteria and session organisation criteria respectively.

There are fourteen INSET centres, but one centre is newly established and so no INSET has taken place in that centre. A sample of session evaluation data from four of the thirteen (31%) pilot district centres where INSET was conducted was used in this analysis. A mean score for each quality category across all the organisational categories was computed for all sessions. The results are as indicated in table 6.6. The benchmark for the PDMs' attainment is a mean of over 2.5.

Summary

Observation

From table 6.6 the overall mean score for quality of District INSET is 3.3.

In the quality criteria category, the least observed rating of 3.0 was in the category of time management and the highest observed rating was in the category of relevance (3.4). In the organisational category, the plenary and practical sessions were rated at 3.2 this was below the overall mean score of 3.3

Interpretation

The benchmark for attained quality of district INSET is a mean score of over 2.5. The overall mean score of 3.3 indicates that the quality of district INSET has attained with respect to the target score of 2.5 for output 2(C) on the PDM.

Table 6.6: Criteria Means

<i>Qualit</i>	Motivation	Interest	Involvement	Relevance	Time	<i>Organisational Criteria Mean</i>
<i>y.</i>						
<i>Organisation</i>						
Plenary	3.1	3.2	3.2	3.3	3.0	3.2
Practical	3.2	3.2	3.4	3.3	3.0	3.2
Discussion	3.3	3.4	3.4	3.4	3.1	3.3
Peer teaching	3.3	3.3	3.4	3.4	3.0	3.3
Feedback	3.3	3.3	3.4	3.3	3.1	3.3
<i>Quality Criteria Mean</i>	3.2	3.3	3.4	3.3	3.0	3.3

CHAPTER 7

DEVELOPMENT OF PRINTED MATERIALS

Preamble

Printed materials in form of bulletins, teachers training manuals, workshop reports among others have been developed by KSTC and District INSET centres. The national and district trainers have been responsible for developing these printed materials.

7.1 MATERIALS PREPARED AT THE NATIONAL INSET UNIT.

At the KSTC (National INSET centre), National trainers have prepared and printed twenty two (22) titles of materials and disseminated about twenty three thousand, five hundred and fifty (23,550) copies of the same to various target groups. These materials include:

- Training manuals.
- Reports on seminars and workshops held.
- Reports on District INSETS.
- Newsletters and others.

Listed below are the materials that have been prepared, printed and disseminated by National INSET Centre.

Table 7.1: Materials Prepared, Printed and Disseminated by National INSET

No.	TITLE	NO. OF COPIES DISSEMINATED BY OCT. 2002.	TARGET NUMBER.	TARGET GROUP
1.	SMASSE Inaugural seminar report.	200	200	All participants from pilot districts, MOEST, SMASSE staff.
2.	Bulletin- volumes 1 and 2 (parts 1&2)	300	600	SMASSE staff.
3.	Newsletter, 8 issues, twice a year. (Nov.1998-June2002)	4,800	4,800	1 copy of each issue for every school in pilot districts, a complimentary copy to article authors.
4.	The open-ended approach in mathematics Education.	2,000	2,000	Schools in pilot districts.
5.	Towards better teaching and learning of physics.	1,000	2,000	Schools in pilot districts.
6.	Kenya Secondary Schools Heads conferences (June1999, June2000 & June 2001)	600	600	All participants.
7.	SMASSE curriculum Review committee report. (SCRC)	300	300	All participants, stakeholders.
8.	Reports on sensitisation workshops. <ul style="list-style-type: none"> • May 1999 • May 2000 • May 2001 • May 2002 	100 100 100 Under preparation.	100 100 100 100	All participants.
9.	Report on the Malawi/SMASSE joint workshop (JAN.2002).	100	100	All participants, MOEST.
10.	Report on Technical Exchange	100	100	All Participants.

	between INSSTEP and SMASSE (Uganda)(1999).			MOEST.
11.	Report on 1 st and 2 nd Regional conference. (Feb.2001&June2002)	300 copy each.	600	All participants from the regions, Ministry of Ed. In the regions.
12.	Information and data for mid-term evaluation (Nov.2000)	100	100	SMASSE staff, Stakeholders.
13.	Monitoring and Evaluation Tools (2001)	50	50	SMASSE staff.
14.	Report on technical exchange between SMASSE and MSSI (S.A). (May 2001).	100	100	SMASSE staff, MOEST.
15.	Training Manuals: (1 st , 2 nd , 3 rd & 4 th cycles) Biology Chemistry Physics Mathematics General.	12,000	12,000	All participants.
16.	ASEI lesson plans: Biology Chemistry Physics Mathematics			All participants.
17	Monitoring and evaluation reports on national INSETs <ul style="list-style-type: none"> • 1st cycle 1999 • 2nd cycle 2000 • 3rd cycle 2001 • 4th cycle 2002 	50 50 50 50	50 50 50 50	SMASSE staff
18.	Report on inspectors Workshop (2002).	Under preparation.	100	All participants.
19.	District INSET Reports by District Coordinator: <ul style="list-style-type: none"> • 1st cycle • 2nd cycle • 3rd cycle. 	200 200 200	200 200 200	All participants.
20.	Homepage (Http://www smasse.org.)			
21.	District INSET Report by M&E taskforce team (April 2002)	100	100	SMASSE staff, MOEST
22.	Information and data for final evaluation (Oct.2002)	100	100	SMASSE staff, Stakeholders.

Abbreviations

- MSSI - Mpumalanga Secondary Science Initiative
INSSTEP - In-service Secondary Teacher Education Project
MOEST - Ministry of Education, Science and Technology

7.2 MATERIALS PREPARED BY THE DISTRICT INSET CENTRES

The district trainers have undergone intensive training on how to prepare training materials through out their **four cycles of National INSETS**. That has enabled them come up with suitable training materials for their **District INSETS**. The training manuals developed for the INSETS comprise of:

- INSET programmes
- INSET write- ups
- ASEI lesson plans
- Innovative lesson activities

In order to attain and maintain goals set at National Level, the write-ups prepared at the districts go through quality assurance by the national trainers before they are sent back to the trainers to be used for facilitation during district INSETS. Basically, the district trainers have been adapting the national INSET materials. Nevertheless, occasionally they have had to prepare their own original materials on new topics to substitute sessions reserved for the national INSETS.

It is worth to note that during the last National INSET (4th cycle), these trainers not only brought materials for the topics they had been asked to prepare on but also other new topics of their choice under *innovative lesson activities*.

Listed below are the topics districts trainers developed their materials on and brought during last INSET.

	Subject	Write-up	Innovative activities	Overall total
i.	Chemistry	3	8	11
ii.	Mathematics	3	0	3
iii.	Physics	4	16	20
iv.	Biology	5	7	12
	Total	15	31	46

Table 7.2: Material Prepared by District Trainers

CHEMISTRY			
	Topic	Author	District
1	Structure and bonding	1.Juma Muyanda 2.Kyenze Benard D. 3.Caleb K. Olubonjio	Lugari Makueni Kakamega
2	Extraction of Metals	1.Pius M. Omurwa	Kisii Central
3	Radioactivity	1.Murakaru Peter N.	Maragua
Innovative activities			
4	Chromatography	1.Mutie Dorothy	Makueni
5	The PH scale	George M. Mwangi	Murang`a
6	Farady`s Law of electrolysis	Murakaru Peter N.	Maragua
7	Vitamin C in food	Mwangi N.	Maragua
8	Classification of substances	Kyenze B.D.	Makueni
9	Reaction Rates	1.Peter N.Murakaru 2.Kakyema R.	Maragua Makueni
10	Salt preparation by direct synthesis	Kivandi B.M.	Makueni
11	Chemical symbols, formulae and equations scrabble	Mboche P.M.	Maragua

MATHEMATICS			
	Topic	Author	District
1	Compound, mixtures and rates of work	1.Komendah O. G. 2.Karanja C. K. 3.Mwangi P.N. 4.Joseph M.M. 5.Warui M. 6.Echesa P. 7.Maina S.	1. Kisii 2. Kajiado 3. Maragua 4. Murang`a 5. Makueni 6. Lugari 7. Maragua
2	Three Dimensional Geometry	1.Maua M.M. 2.Alice wahome 3.Orora Oscar 4.Ondicho D. A. 5.Evelyn W.Njurai 6.Maua M.M. 7.Gitimu G. 8.Onchaga C. 9.Abuka J.	1. Makueni 2. Maragua 3. Gucha 4. Kisii 5. Maragua 6. Makueni 7. Makueni 8. Kisii 9. Kakamega
3	Loci	1.G. Mudome 2.Inyanga E.F. 3.Kerubo B.M. 4.Njuguna D.B.G. 5.D.Muthoka 6.Olunga S.L.	1. Kakamega 2. Lugari 3. Kisii Central 4. Murang`a 5. Makueni 6. Kakamega
PHYSICS			
	Topic	Author	District
1	Forces and moments	1. W.G. Maina 2. John K. Omurwa 3. Kamunge 4. Wycliffe Mapesa 5. Micheal G. Nganda 6. Karira S. K. 7. Karani Barasa 8. Muthoka Misi 9. Nguma Gregory W. 10. Mugeni Eraka	1. Kajiado 2. Kisii Central 3. Margua 4. B/Mumias 5. Maragua 6. Muranga 7. Lugari 8. Makueni 9. Makueni 10. Gucha
2	Main Electricity	1. Gatimu SN. Kamau 2. Wamwea T. H. 3. Jared Eshuchi 4. Joseph K. Kimilu 5. Silali Jonathan 6. Peter Matoke Osoro	1. Kajiado 2. Muranga 3. Kakamega 4. Makueni 5. Lugari 6. Kisii Central
3	Floating and sinking	1. Kamau Pius M. 2. Nzuki J. Ndunda 3. Muthava Thomas 4. Kiare Muchiri 5. George Ichungwa 6. Wamune Nabukaki 7. Shikono M. A 8. Miheso Alex 9. Wallace Nyakundi Atembo	1. Maragua 2. Makueni 3. Makueni 4. Muranga 5. Kajiado 6. Kakamega 7. Lugari 8. B/Mumias 9. Gucha

4	Particulate nature of matter	1. Maina Evans 2. John Njuguna Karanja 3. Andrew Buluma 4. Maera John 5. Amwere Machanule 6. Mwaniki D. N 7. Juma Mwanja 8. Willington M. Mwikya 9. Mungai G. M.	1. Kakamega 2. Muranga 3. Butere/Mumias 4. Gucha 5. Lugari 6. Kajiado 7. Makueni 8. Makueni 9. Maragua
Innovative activities			
5	Radioactivity	John Njuguna Karanja	Muranga
6	Measurement	W. G. Maina	Kajiado
7	Forces and moments	Karani B. R.	Lugari
8	Balloon competition	Gregory Nguma	Makueni
9	Factor affecting electromagnets	Muthoka Misi	Makueni
10	Refraction of light, Chain reaction Turning forces.	B. Nganda	Makueni
11	Air Pressure, Domain theory And heat transfer in solids	Peter Osoro Bwomeka Makori And John Omurwa	Kisii
12	Submarine	Jared Eshuchi	Kakamega
13	The diving test tube, Venturi meter manometer And Rubber strip wave	Emmanuel Wamune	Kakamega
14	Production of cathode rays using dry cells	Gatimu S. N. Kamau	Kajiado
15	Archimedes principle, Law of floatation	Alex Miheso	B/Mumias
16	Liquid viscosity Plasticine breaking stress Making an ammeter	Juma Mwanja	Makueni
17	Compound pendulum	Maera John	Gucha
18	Diving test tube, Model of diffusion Milk bottle experiment	Maina Evans	Kakamega
19	Newton 2 nd and 3 rd law Nuclear reaction Simple team engine	Willington M. Mwikya	Makueni
20	Correction of long sightedness	Karira S. K.	Muranga

BIOLOGY			
	Topic	Author	District
1	Gaseous exchange	1. Catherine Aura 2. J. M. Mwaura 3. Shadrack N. Nding'a 4. Clives Kadimah 5. Gitonga Margaret N. 6. Kahigi Wilfridah Nafula	1. Kakamega 2. Maragwa 3. Makueni 4. B/Mumias 5. Murang'a 6. Lugari
2	Nutrition in plants and animals	1. Livingstone Wambua 2. Mbuvi J. Wambua 3. Hellen Maina 4. Geoffrey G. Momanyi 5. Wycliffe Okumu M. 6. Elias Otete 7. Kosasia Jackson Amos 8. Mwaria Anthony Mwangi	1. Makueni 2. Makueni 3. Kajiado 4. Kisii Central 5. B/Mumias 6. B.Mumias 7. Kakamega 8. Muranga
3	Growth and development	1. Maranga B.O 2. Patrick N. Waithaka 3. Gatimu Thomas Methu 4. Benjamin Muia 5. Peter Gitau Ndungu 6. Maranga Benjamin O. 7. Enock Amboga 8. Beatrice Waliula 9. Omula Kennedy	1. Gucha 2. Makueni 3. Kajiado 4. Makueni 5. Maragwa 6. Gucha 7. Kisii Central 8. B/Mumias 9. Lugari
4	Chemicals of life	1. Mbai Stephen 2. Sarah N. Kimenye 3. Maina Henry 4. Okeyo Onderi G.G. 5. Job Oira Nyanchoka 6. Mbakaya Hedwig 7. Walufu Erick Okoth 8. Mweresa Collins K.	1. Makueni 2. Makueni 3. Maragua 4. Gucha 5. Kisii Central 6. B/Mumias 7. Kakamega 8. Lugari
5	Transport in living organisms	1. Muema G. N 2. Muli Ron 3. Rosemary Kamanthe 4. Samwel K. Njoroge 5. Zaweria W. Ndambiri 6. Nyagia G. Reuben	1. Makueni 2. Makueni 3. Kajiado 4. Maragua 5. Maragua 6. Murang'a
Innovative activities			
1	Transport/Nutrition		Lugari
2	Nutrition		Makueni
3	Transport		Muranga
4	Transport		Gucha
5	Ecology		B/Mumias
6	Movement		Kisii
7	Genetics		Makueni

7.2.1 Materials Adapted from National INSET Training

Table 7.3

CYCLE ONE				
General	SUBJECT			
	Chemistry	Mathematics	Physics	Biology
<ul style="list-style-type: none"> • Rationale for INSET • Adolescence psychology • Communication skills • Attitude and motivation • General trends in Science Education • ASEI and PDSI methods • Work Planning 	<ul style="list-style-type: none"> • Teaching approaches and methods on • Electrochemistry • Organic chemistry • Structure and bonding • Thermo chemistry • Mole concept 	<ul style="list-style-type: none"> • Form one induction on mathematics • History of mathematics education in Kenya • Text book and syllabus analysis • New trends in mathematics • Socio-cultural aspects of mathematics • Geometry • Introduction to open-ended approach 	<ul style="list-style-type: none"> • Form one induction • Methodology of teaching physics • Pressure • Sound • Circular motion • Waves • Fluid flow 	<ul style="list-style-type: none"> • Resources and facilities and learning Biology • Ecology • Cell Biology • Classification
CYCLE TWO				
<ul style="list-style-type: none"> • Instrumental Design (PDSI II) • Rationale for practical work • Laboratory management 	<ul style="list-style-type: none"> • Laboratory safety • Rationale for project work • Electrochemistry • Mole concept • Organic chemistry • Non-metals • Station work 	<ul style="list-style-type: none"> • Ethno mathematics • Syllabus analysis • Problem posing • Probability and statistics • New trends in the teaching and learning of mathematics • Problem posing & problem solving • Prevention and remediation • Topic centred study 	<ul style="list-style-type: none"> • Current electricity • Magnetic effects of current • Electromagnetic induction • Thin lenses • Heating effects of current • Electrostatics 	<ul style="list-style-type: none"> • Preparation of common lab. Reagents • Reproduction • Stimulus response • Respiration • Excretion and homeostasis • Resources for teaching Biology
CYCLE THREE				
<ul style="list-style-type: none"> • Assessment and evaluation • Instrumental design PDSI • Actualisation of ASEI 	<ul style="list-style-type: none"> • Preparation of ASEI lesson plans • Mole concept • Electrochemistry • Thermo chemistry • Structure and bonding • Organic chemistry • Assessment In Chemistry • Chemistry text books evaluations • Development of chemistry teaching learning materials 	<ul style="list-style-type: none"> • Cluster report • Vectors • Linear programming • Optimization and peer teaching • Probability and statistics • Graphical methods • Navigation • Integers 	<ul style="list-style-type: none"> • Innovative lesson activities • Atom • Photoelectric effect • Text books evaluation • Electromagnetic spectrum • X-rays • Choice of teaching learning materials • Radioactivity • Electronics • Project work and Preparation of students for the science congress • Evaluation and assessment physics 	<ul style="list-style-type: none"> • Resources and facilities for teaching Biology • Preparation of slides • Genetics • Support and movement

CHAPTER 8

INPUTS FROM KENYAN AND JAPANESE GOVERNMENTS

8.1 INPUTS FROM KENYAN SIDE

8.1.1 Building and other Facilities Necessary for the Project

Table 8.1 Buildings and other Facilities Necessary for the Project

<i>No.</i>	Building / Facilities	Venue
1	One Office	Ministry HQ
2	Three Experiment Preparation Rooms	KSTC
3	One Storehouse	KSTC
4	Two Staff Houses	KSTC
5	Water and Electricity Supply	KSTC & Ministry HQ
6	SMASSE Office/Store at District Centres	Listed below
7	Land for new SMASSE Office	KSTC

Table 8.2: List of SMASSE District Centres

<i>No</i>	Venue of Disrict Centre	Disrict	Pilot Districts
1	Kahuhia Girls High School	Murang'a	Pilot Districts
2	*Murang'a High School	Murang'a	Pilot Districts
3	Makueni Boys Sec School	Makueni	Pilot Districts
4	Precious Blood Sec School Kilungu	Makueni	Pilot Districts
5	St. Joseph's Girls Sec Kibwezi	Makueni	Pilot Districts
6	Njiiri High School	Maragua	Pilot Districts
7	Kamahuha Sec School	Maragua	Pilot Districts
8	Kisii High School	Kisii	Pilot Districts
9	Kakamega High School	Kakamega	Pilot Districts
10	Mukumu Girls Sec School	Kakamega	Pilot Districts
11	Butere Girls High School	Butere	Pilot Districts
12	Bishop Njenga Sec School	Lugari	Pilot Districts
13	Sengera Girls Sec School	Gucha	Pilot Districts
14	Moi Isinya Girls Sec School	Kajiado	Pilot Districts

* Newly established

8.1.2 Assignment of Kenyan Personnel
Table 8.3 SMASSE Current Members

as of 30th Sep 2002

1	Mr. Daniel Kiptorir Rono	MoEST	Chief Inspector of Schools, MoEST
2	Mr. Enos O. Oyaya	MoEST	Project Coordinator / DCIS, MoEST
3	Mr. Patrick Kibui	KSTC	Principal, KSTC
4	Mr. Bernard Njuguna	Admin.	Head of SMASSE INSET Unit
5	Ms. M. K. O'connor Miheso	Mathematics	Subject Administrator
6	Mr. Obadiah Maganga	Mathematics	Academic Head, On leave, Training in
7	Ms. Nancy Wambui Nui	Mathematics	On leave, Training in Naruto, Japan
8	Mr. Kithaka J. Njogu	Mathematics	
9	Mr. Lukongo Matembo	Mathematics	
10	Mr. John Githari Muiruri	Mathematics	
11	Mr. John Owour Oyuga	Mathematics	
12	Mr. Michael Muchoki Waititu	Physics	Subject Administrator
13	Mr. Berege Cherutich Chesire	Physics	Academic Head
14	Mr. Paul Cheruiyot Rutto	Physics	
15	Mr. George Gitau	Physics	
16	Mr. Muyanga Mutua	Physics	
17	Ms. Serah Njeri Mburu	Physics	
18	Ms. Mildred Nyawade Achieng'	Physics	
19	Mr. Patrick Aluma Kogolla	Chemistry	Subject Administrator
20	Mr. Daniel Mwangi Matiri	Chemistry	Academic Head
21	Mr. Ndelela Masoka	Chemistry	On leave, Training in Hiroshima, Japan
22	Ms. Grace Nyandiwa Orado	Chemistry	
23	Ms. Grace Njeri Kuria	Chemistry	On leave
24	Mr. Benjamin Kilonzo	Chemistry	
25	Ms. Peula Jebet Lelei	Biology	Subject Administrator
26	Ms. Lynette G. Kisaka	Biology	Academic Head
27	Mr. Edmond Makoba Kizito	Biology	On leave, Training in Naruto, Japan
28	Mr. David M. Arimi	Biology	
29	Ms. Mary Kariuki	Biology	
30	Mr. Kaluli Nengo	Biology	
31	Ms. Jully Omydour	others	Secretary
32	Ms. Naomi Wangonya	others	Secretary, MOEST
33	Ms. Jane K. Marete	others	Secretary
34	Mr. Alfred Muriithi	others	Office Assistant
35	Ms. Mary Chebochok Chepkemoi	others	Office Assistant
36	Mr. John Thairu	others	Driver
37	Mr. John K. Kinyanjui	others	Driver
38	Mr. Aggrey Mwalo	others	Driver
39	Mr. Zakariah Kipkemoi Koske	others	Driver

Table 8.6 Japanese Experts dispatched to SMASSE Project from July 1998, as of 30 Sep 2002

No.	MM	1998												1999												2000												2001												2002												2003					
		7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6						
1	Mr. Sugiyama Takahiko	Chief Advisor	60	■												■												■												■												■															
2	Mr. Takahashi Tsutomu	Project Coordinator	36	■												■												■												■												■															
3	Mr. Naganuma Keiichi	Project Coordinator	24	■												■												■												■												■															
4	Mr. Fujimoto Hideho	Administration Management	0	■												■												■												■												■															
5	Mr. Ishii Shinji	INSET Management	0	■												■												■												■												■															
6	Mr. Hattori Hiromasa	Education Evaluation	15	■												■												■												■												■															
7	Mr. Yoshimori Mamoru	Education Evaluation	2	■												■												■												■												■															
8	Mr. Arai Ikuo	Education Evaluation	0	■												■												■												■												■															
9	Mr. Nakayama Genzo	Education Evaluation	1	■												■												■												■												■															
10	Mr. Nakayama Genzo	Education Evaluation	1	■												■												■												■												■															
11	Mr. Nakayama Genzo	Education Evaluation	1	■												■												■												■												■															
12	Mr. Baba Takuya	Mathematics Education	12	■												■												■												■												■															
13	Mr. Tokuda Tomoki	Mathematics Education	20	■												■												■												■												■															
14	Mr. Baba Takuya	Mathematics Education	1	■												■												■												■												■															
15	Mr. Ueda Atsuzou	Mathematics Education	3	■												■												■												■												■															
16	Mr. Nouda Nobuhiko	Mathematics Education	0	■												■												■												■												■															
17	Mr. Kageyama Sanpei	Mathematics Education	2	■												■												■												■												■															
18	Mr. Usagawa Nobuyuki	Mathematics Education	1	■												■												■												■												■															
19	Mr. Imaoka Mitsunori	Mathematics Education	0	■												■												■												■												■															
20	Mr. Nouda Nobuhiko	Mathematics Education	1	■												■												■												■												■															
21	Mr. Koyama Masataka	Mathematics Education	1	■												■												■												■												■															
22	Mr. Koyama Masataka	Mathematics Education	1	■												■												■												■												■															
23	Mr. Takemura Shigekazu	Physics Education	48	■												■												■												■												■															
24	Mr. Deguchi Takahiko	Physics Education	2	■												■												■												■												■															
25	Mr. Ishida Hiroyuki	Physics Education	2	■												■												■												■												■															
26	Mr. Ishida Hiroyuki	Physics Education	3	■												■												■												■												■															
27	Mr. Tsutaoka Takanori	Physics Education	0	■												■												■												■												■															
28	Mr. Tsutaoka Takanori	Physics Education	1	■												■												■												■												■															
29	Mr. Tsutaoka Takanori	Physics Education	1	■												■												■												■												■															
30	Mr. Somukawa Takeshi	Chemistry Education	24	■												■												■												■												■															
31	Mr. Miyakawa Shinboku	Chemistry Education	23	■												■												■												■												■															
32	Mr. Yoshihara Nobutoshi	Chemistry Education	2	■												■												■												■												■															
33	Mr. Okano Masayoshi	Chemistry Education	1	■												■												■												■												■															
34	Ms. Shirane Fukue	Chemistry Education	0	■												■												■												■												■															
35	Mr. Yanai Hiroyuki	Chemistry Education	2	■												■												■												■												■															
36	Mr. Akiyoshi Hiroyuki	Biology Education	24	■												■												■												■												■															
37	Mr. Nehira Kunito	Biology Education	16	■												■												■												■												■															
38	Ms. Fukai Hisako	Biology Education	22	■												■												■												■												■															
39	Mr. Ishibashi Noboru	Biology Education	1	■												■												■												■												■															
40	Mr. Katayama Nobuyasu	Biology Education	3	■												■												■												■												■															
41	Mr. Torigoe Kenji	Biology Education	0	■												■												■												■												■															
42	Mr. Katayama Nobuyasu	Biology Education	1	■												■												■												■												■															
43	Mr. Ikeda Hideo	Science Education	0	■												■												■												■												■															
44	Mr. Kuya Mitsuo	Science Education	2	■												■												■												■												■															
45	Mr. Ikeda Hideo	Science Education	0	■												■												■												■												■															

Total MM = 361

8.2 INPUTS BY JAPANESE SIDE

8.2.1 Dispatch of Japanese Experts

Table 8.5 List of Japanese Experts Dispatched to SMASSE Project July 1998 - Sept 2002

No.	Name		From	To	FY	MM	
1	Mr. Sugiyama Takahiko	Chief Advisor	7/5/98	6/30/03	1998	59.9	L
2	Mr. Takahashi Tsutomu	Project Coordinator	7/8/98	7/7/01	1998	36.0	L
3	Mr. Akiyoshi Hiroyuki	Biology Education	8/29/98	8/28/00	1998	24.0	L
4	Mr. Yoshihara Nobutoshi	Chemistry Education	8/22/98	10/18/98	1998	1.9	S
5	Mr. Ikeda Hideo	Science Education	8/22/98	9/6/98	1998	0.5	S
6	Mr. Baba Takuya	Mathematics Education	8/26/98	9/26/98	1998	1.0	S
7	Mr. Deguchi Takahiko	Physics Education	8/29/98	10/25/98	1998	1.9	S
8	Mr. Yoshimori Mamoru	Education Evaluation	8/29/98	10/25/98	1998	1.9	S
9	Mr. Baba Takuya	Mathematics Education	4/1/99	3/31/00	1999	12.0	L
10	Mr. Takemura Shigekazu	Physics Education	6/9/99	6/8/03	1999	48.0	L
11	Mr. Somukawa Takeshi	Chemistry Education	9/19/99	9/9/01	1999	23.7	L
12	Mr. Ueda Atsuzou	Mathematics Education	6/7/99	8/25/99	1999	2.6	S
13	Mr. Ishida Hiroyuki	Physics Education	7/1/99	8/31/99	1999	2.0	S
14	Mr. Ishibashi Noboru	Biology Education	7/24/99	8/21/99	1999	0.9	S
15	Mr. Okano Masayoshi	Chemistry Education	8/6/99	9/20/99	1999	1.5	S
16	Mr. Arai Ikuo	Education Evaluation	8/12/99	8/26/99	1999	0.5	S
17	Mr. Nouda Nobuhiko	Mathematics Education	9/29/99	10/3/99	1999	0.1	S
18	Mr. Nehira Kunito	Biology Education	5/25/00	9/30/01	2000	16.2	L
19	Mr. Ishida Hiroyuki	Physics Education	7/1/00	9/23/00	2000	2.8	S
20	Mr. Kageyama Sanpei	Mathematics Education	7/5/00	9/2/00	2000	1.9	S
21	Mr. Katayama Nobuyasu	Biology Education	7/15/00	9/30/00	2000	2.5	S
22	Mr. Usagawa Nobuyuki	Mathematics Education	8/1/00	8/25/00	2000	0.8	S
23	Mr. Nakayama Genzo	Education Evaluation	8/28/00	9/16/00	2000	0.6	S
24	Mr. Ishii Shinji	INSET Management Administration	4/10/01	4/22/01	2000	0.4	S
25	Mr. Fujimoto Hideho	Management	4/10/01	4/22/01	2000	0.4	S
26	Mr. Imaoka Mitsunori	Mathematics Education	4/10/01	4/22/01	2000	0.4	S
27	Mr. Tsutaoka Takanori	Physics Education	4/10/01	4/22/01	2000	0.4	S
28	Ms. Shirane Fukue	Chemistry Education	4/10/01	4/22/01	2000	0.4	S
29	Mr. Torigoe Kenji	Biology Education	4/10/01	4/22/01	2000	0.4	S
30	Mr. Naganuma Keiichi	Project Coordinator	6/26/01	6/30/03	2001	24.1	L
31	Mr. Miyakawa Shinboku	Chemistry Education	8/13/01	6/30/03	2001	22.6	L
32	Ms. Fukai Hisako	Biology Education	8/21/01	6/30/03	2001	22.3	L
33	Mr. Tokuda Tomoki	Mathematics Education	10/20/01	6/30/03	2001	20.3	L
34	Mr. Hattori Hiromasa	Education Evaluation	4/6/02	6/30/03	2001	14.8	L

35	Mr. Yanai Hiroyuki	Chemistry Education	6/1/01	8/4/01	2001	2.1	S
36	Mr. Katayama Nobuyasu	Biology Education	6/2/01	6/29/01	2001	0.9	S
37	Mr. Tsutaoka Takanori	Physics Education	6/25/01	7/29/01	2001	1.1	S
38	Mr. Nouda Nobuhiko	Mathematics Education	7/15/01	8/4/01	2001	0.7	S
39	Mr. Koyama Masataka	Mathematics Education	7/28/01	8/25/01	2001	0.9	S
40	Mr. Nakayama Genzo	Education Evaluation	8/25/01	10/6/01	2001	1.4	S
41	Mr. Kuya Mitsuo	Science Education	1/8/02	3/7/02	2001	1.9	S
42	Mr. Ikeda Hideo	Science Education	4/6/02	4/21/02	2001	0.5	S
43	Mr. Koyama Masataka	Mathematics Education	5/8/02	5/25/02	2002	0.6	S
44	Mr. Tsutaoka Takanori	Physics Education	5/8/02	6/2/02	2002	0.8	S
45	Mr. Nakayama Genzo	Education Evaluation	9/7/02	10/5/02	2002	0.9	S

The Total Number of Japanese Experts = 45 (Long term = 12, Short term = 33)

Total
MM = 361.4

Table 8.5(b): Summary Dispatch of Experts

FSY	Long term	Short term	Total
1998	3	5	8
1999	3	6	9
2000	1	11	12
2001	5	8	13
2002	0	3	3
2003			
Total	12	33	45

Table 8.6 Japanese Experts dispatched to SMASSE Project from July 1998, as of 30 Sep 2002

No.	Name	MM	1998												1999												2000												2001												2002												2003																		
			7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6																			
1	Mr. Sugiyama Takahiko	Chief Advisor	60	█												█												█												█												█												█																	
2	Mr. Takahashi Tsutomu	Project Coordinator	36	█												█												█												█												█												█																	
3	Mr. Naganuma Keiichi	Project Coordinator	24	█												█												█												█												█												█																	
4	Mr. Fujimoto Hideho	Administration Management	0	█												█												█												█												█												█																	
5	Mr. Ishii Shinji	INSET Management	0	█												█												█												█												█												█																	
6	Mr. Hattori Hiromasa	Education Evaluation	15	█												█												█												█												█												█																	
7	Mr. Yoshimori Mamoru	Education Evaluation	2	█												█												█												█												█												█																	
8	Mr. Arai Ikuo	Education Evaluation	0	█												█												█												█												█												█																	
9	Mr. Nakayama Genzo	Education Evaluation	1	█												█												█												█												█												█																	
10	Mr. Nakayama Genzo	Education Evaluation	1	█												█												█												█												█												█																	
11	Mr. Nakayama Genzo	Education Evaluation	1	█												█												█												█												█												█																	
12	Mr. Baba Takuya	Mathematics Education	12	█												█												█												█												█												█																	
13	Mr. Tokuda Tomoki	Mathematics Education	20	█												█												█												█												█												█																	
14	Mr. Baba Takuya	Mathematics Education	1	█												█												█												█												█												█																	
15	Mr. Ueda Atsuzou	Mathematics Education	3	█												█												█												█												█												█																	
16	Mr. Nouda Nobuhiko	Mathematics Education	0	█												█												█												█												█												█																	
17	Mr. Kageyama Sanpei	Mathematics Education	2	█												█												█												█												█												█																	
18	Mr. Usagawa Nobuyuki	Mathematics Education	1	█												█												█												█												█												█																	
19	Mr. Imaoka Mitsunori	Mathematics Education	0	█												█												█												█												█												█																	
20	Mr. Nouda Nobuhiko	Mathematics Education	1	█												█												█												█												█												█																	
21	Mr. Koyama Masataka	Mathematics Education	1	█												█												█												█												█												█																	
22	Mr. Koyama Masataka	Mathematics Education	1	█												█												█												█												█												█																	
23	Mr. Takemura Shigekazu	Physics Education	48	█												█												█												█												█												█												█					
24	Mr. Deguchi Takahiko	Physics Education	2	█												█												█												█												█												█																	
25	Mr. Ishida Hiroyuki	Physics Education	2	█												█												█												█												█												█																	
26	Mr. Ishida Hiroyuki	Physics Education	3	█												█												█												█												█												█																	
27	Mr. Tsutaoka Takanori	Physics Education	0	█												█												█												█												█												█																	
28	Mr. Tsutaoka Takanori	Physics Education	1	█												█												█												█												█												█																	
29	Mr. Tsutaoka Takanori	Physics Education	1	█												█												█												█												█												█																	
30	Mr. Somukawa Takeshi	Chemistry Education	24	█												█												█												█												█												█												█					
31	Mr. Miyakawa Shinboku	Chemistry Education	23	█												█												█												█												█												█												█					
32	Mr. Yoshihara Nobutoshi	Chemistry Education	2	█												█												█												█												█												█												█					
33	Mr. Okano Masayoshi	Chemistry Education	1	█												█												█												█												█												█												█					
34	Ms. Shirane Fukue	Chemistry Education	0	█												█												█												█												█												█												█					
35	Mr. Yanai Hiroyuki	Chemistry Education	2	█												█												█												█												█												█												█					
36	Mr. Akiyoshi Hiroyuki	Biology Education	24	█												█												█												█												█												█												█					
37	Mr. Nehira Kunito	Biology Education	16	█												█												█												█												█												█												█					
38	Ms. Fukai Hisako	Biology Education	22	█												█												█												█												█												█												█					
39	Mr. Ishibashi Noboru	Biology Education	1	█												█												█												█												█												█												█					
40	Mr. Kayatama Nobuyasu	Biology Education	3	█												█												█												█												█												█												█					
41	Mr. Torigoe Kenji	Biology Education	0	█												█												█												█												█												█												█					
42	Mr. Kayatama Nobuyasu	Biology Education	1	█												█												█												█												█												█												█					
43	Mr. Ikeda Hideo	Science Education	0	█												█												█												█												█												█												█					
44	Mr. Kuya Mitsuo	Science Education	2	█												█												█												█												█												█												█					
45	Mr. Ikeda Hideo	Science Education	0	█												█												█												█												█												█												█					

Total MM = 361

8.2.2 Training of Kenyan Counterpart Personnel

Table 8.7: Kenyan Counterpart Trainee from July 1998 to Sept 2002

No.	Name	Subject	Venue	From	To	FY
1	Mr. Patrick Kibui	Education Administration	Hiroshima	1/11/98	1/31/98	1997
2	Mr. Enos Oyaya	Education Administration	Hiroshima	1/11/98	1/31/98	1997
3	Mr. Michael M. Waititu	Physics Education	Hiroshima	8/29/98	11/22/98	1998
4	Mr. Justus. O. Inyega	Chemistry Education	Hiroshima	8/29/98	11/22/98	1998
5	Mr. Simon W. Kinyua	Biology Education	Hiroshima	8/29/98	11/22/98	1998
6	Ms. Marguerite K. Miheso	Mathematics Education	Hiroshima	8/29/98	11/22/98	1998
7	Mr. Sam A. Kisala	Physics Education	Hiroshima	8/30/99	11/21/99	1999
8	Mr. Bernard M. Njuguna	Chemistry Education	Hiroshima	8/30/99	11/21/99	1999
9	Ms. Regina W. Ng'ang'a	Biology Education	Hiroshima	8/30/99	11/21/99	1999
10	Mr. Charles G. Kanja	Mathematics Education	Hiroshima	8/30/99	11/21/99	1999
11	Ms. Mary J. Rotich	Secondary Education Development	Nagoya	11/1/99	12/6/99	1999
12	Ms. Grace Njeri Kuria	Science Education Evaluation (Chemistry)	Hiroshima	1/24/00	3/31/02	1999
13	Ms. Ruth M. Otieno	Administration & Management for Basic Education	Hiroshima	2/14/00	3/19/00	1999
14	Mr. Dismas O. Omoke	Science Education	Hiroshima	9/18/00	11/26/00	2000
15	Mr. Thomas M. Mutava	Science Education	Hiroshima	9/18/00	11/26/00	2000
16	Ms. Rose W. Makomere	Biology Education	Hiroshima	9/18/00	11/26/00	2000
17	Mr. Joseph M. Muniu	Mathematics Education	Hiroshima	9/18/00	11/26/00	2000
18	Ms. Elizabeth I. Karoki	Local Educational Administration	Sapporo	1/22/01	2/26/01	2000
19	Ms. Grace W. Kamau	Education Administration	Hiroshima	2/14/01	3/8/01	2000
20	Mr. Beregge C. Chesire	Physics Education	Hiroshima	9/17/01	11/27/01	2001
21	Mr. Patrick A. Kogolla	Chemistry Education	Hiroshima	9/17/01	11/27/01	2001
22	Mr. Elias Otete Mahero	Biology Education	Hiroshima	9/17/01	11/27/01	2001
23	Ms. Alice N. Wahome	Mathematics Education	Hiroshima	9/17/01	11/27/01	2001
24	Mr. Elishama B. Lichodi	Secondary Education Development	Nagoya	10/15/01	11/19/01	2001
25	Mr. Makoba Kizito	Master in Biology Education	Naruto	11/28/01	3/31/04	2001
26	Ms. Lynett G. Kisaka	Biology Education	UP-NISMED, Philippine	1/7/02	3/15/02	2001
27	Mr. David N. Kariuki	Local Educational Administration	Sapporo	1/21/02	2/25/02	2001

28	Mr. Benjamin K. Sogomo	Education Management & Administration	Hiroshima	2/13/02	3/2/02	2001
29	Mr. Obadiah Maganga	Mathematics Education	Hiroshima	8/19/02	10/31/02	2002
30	Mr. Ndelela M. Masoka	Chemistry Education	Hiroshima	8/19/02	10/31/02	2002
31	Mr. Emmanuel W. Nabukaki	Physics Education	Hiroshima	8/19/02	10/31/02	2002
32	Mr. Patrick N. Waithaka	Biology Education	Hiroshima	8/19/02	10/31/02	2002
33	Ms. Rose M. Musungu	INSET Management	Hiroshima	9/2/02	9/28/02	2002
34	Ms. Nancy W. Nui	Master in Mathematics Education	Naruto	9/25/02	3/21/05	2002
35	Mr. Daniel M. Matiri	Chemistry Education	UP-NISMED, Philippine	1/13/03	3/28/03	2002

Table 8.8 List of Equipment and Condition**1. Over JPY 1,600,000**

as of 30th Sep 2002

FY	Ref. No.	Name of Equipment	Manufacturer	Model Number	Quantity			Utilization condition	Maintenance condition	Remarks
					Supplied	Disposed	Retaining			
1998	10027	4WD Vehicle	TOYOTA	Land Rover Discovery	1	0	1	good	good	
1998	10028	Motor Vehicle	Mitsubishi	Lancer	1	0	1	good	good	
1999	11066	4WD Vehicle	NISSAN	Patrol	1	0	1	good	good	
2001	13005	4WD Vehicle	TOYOTA	Land Cruiser	1	0	1	good	good	
2001	13012	Optical Mark Sheet Reader	DRS	CD 400	1	0	1	good	good	
2001	13013	Building of SMASSE Main Office	Sumitomo Con.		1	0	1	good	good	

Table 8.8 List of Equipment and Condition

2. JPY 100,000 - 1,600,000

as of 30th Sep 2002

FY	Ref. No.	Name of Equipment	Manufacturer	Model Number	Quantity			Utilization condition	Maintenance condition	Remarks
					Supplied	Disposed	Retaining			
1998	10001	Personal Computer	IBM	Aptiva 2138-E48	1	0	1	good	good	
1998	10002	Personal Computer	Apple	Macintosh PowerBook 2400C/240	1	0	1	good	good	
1998	10003	Personal Computer	Compaq	Deskpro Value 5200X 3200CDS	1	0	1	good	good	
1998	10004	Personal Computer	NEC	Lavie NX LW20/4DD	1	0	1	good	good	
1998	10005	Personal Computer	NEC	Lavie NX LW20/32D	1	0	1	good	good	
1998	10006	Personal Computer	IBM	PC 300GL	1	0	1	good	good	
1998	10007-10010	Personal Computer	Compaq	Ep DT 6300A	5	0	5	good	good	
1998	10011	Photocopier	Nashuatec	4651	1	0	1	good	good	
1998	10012	Photocopier	Nashuatec	3715	1	0	1	good	good	
1998	10013	Risograph	RISO	TR 1510	1	0	1	good	good	
1998	10014	Multimedia Projector	NOBO	CTX EzPro585	1	0	1	good	good	
1998	10015-10018	Video Player	Panasonic	NV-HD750	4	0	4	good	good	
1998	10019-10022	TV Monitor	Panasonic	TC-25V100R	4	0	4	good	good	
1998	10023-10024	Electric Generator	HONDA	EB2200	2	0	2	good	good	
1998	10025-10026	Personal Computer	Compaq	Deskpro EP DT 6390	2	0	2	good	good	
1999	11001 -11002	Personal Computer	Compaq	Deskpro EP DT 6400	3	0	3	good	good	
1999	11003	Risograph	RISO	CR 1610	1	0	1	good	good	
1999	11004	Personal Computer	Compaq	Amada 1750 Notebook	1	0	1	good	good	
1999	11005	Video Camera Recorder	SONY	DCR-TRV9	1	0	1	good	good	
1999	11006	Application Software	CambridgeSoft	Chem Office Pro	1	0	1	good	good	
1999	11007	Personal Computer	IBM	Aptiva E Series 243	1	0	1	good	good	
1999	11008	Laser Printer	HP	LasetJet 4000	1	0	1	good	good	
1999	11009	Video Camera Recorder	SONY	DCR-TRVIOE	1	0	1	good	good	
1999	11010	Personal Computer	IBM	Think Pad 390	1	0	1	good	good	
1999	11011	Video Camera Recorder	SONY	DCR-TRV10	1	0	1	good	good	
1999	11012	Binocular Microscope with Camera	LEICA	DMILS	1	0	1	good	good	
1999	11013-11047	Monocular Microscope	LEICA	BF 200	35	0	35	good	good	
1999	11048-11053	Microscope	LEICA	Student Type	6	0	6	good	good	

Table 8.8 List of Equipment and Condition

2. JPY 100,000 - 1,600,000

as of 30th Sep 2002

FY	Ref. No.	Name of Equipment	Manufacturer	Model Number	Quantity			Utilization condition	Maintenance condition	Remarks
					Supplied	Disposed	Retaining			
1999	11054-11057	Video Camera Recorder	SONY	TR 516E	4	0	4	good	good	
1999	11058-11061	Video Player	SONY	ED 60	4	0	4	good	good	
1999	11062 -11065	TV Monitor	SONY	TKVLX 34	4	0	4	good	good	
2000	12001-12005	Video Camera Recorder	SONY	TR 516E	5	0	5	good	good	
2000	12006-12014	Video Player	SONY	ED 60	9	0	9	good	good	
2000	12015-12020	TV Monitor	SONY	KVXF 34	6	0	6	good	good	
2000	12021-12038	Personal Computer	Compaq	PII 600 DeskPro Series	18	0	18	good	good	
2000	12039-12047	Photocopier	Gestetner	5306	9	0	9	good	good	
2000	12048-12082	Personal Computer	Compaq	Deskpro EP III 800	35	0	35	good	good	
2000	12083-12100	Laser Printer	HP	Laserjet 1100	18	0	18	good	good	
2000	12101-12118	PC Software	Microsoft	MS Office 2000 Standard	18	0	18	good	good	
2000	12119-12153	Laser Printer	HP	Laserjet 1100	35	0	35	good	good	
2000	12154-12188	PC Software	Microsoft	MS Office 2000 Standard Academic CD	35	0	35	good	good	
2001	13001	Personal Computer	Apple	Macintosh Powerbook G4	1	0	1	good	good	
2001	13002-13004	Multimedia Projector	EPSON	EMP5350	3	0	3	good	good	
2001	13006-13007	Radio Tranceiver	Kenwood	TK80	2	0	2	good	good	
2001	13008-13009	Digital Photocopier	RICOH	Aficio 1045	2	0	2	good	good	
2001	13010-13011	Collator	Blockmatic	Blockmatic 10	2	0	2	good	good	
2002	14001	Laptop Computer	IBM	ThinkPad R31	1	0	1	good	good	
2002	14002	Colour Laser Printer	EPSON	Aculaser C4000	1	0	1	good	good	
2002	14003-14024	Desktop Computer	Compaq	EVO D300	22	0	22	good	good	
2002	14025-14026	Laptop Computer	Toshiba	Satellite 1800 S274	2	0	2	good	good	
2002	14027-14037	Television	SONY	WEGA XA34	11	0	11	good	good	
2002	14038	Laplop Computer	IBM	ThinkPad R31	1	0	1	good	good	
2002	14039-14053	Copy Printer	Gestetner	5308b	15	0	15	good	good	
2002	14054-14064	Television	SONY	WEGA XA34	11	0	11	good	good	

8.3 INPUTS BY BOTH GOVERNMENTS

8.3.1 Budget Expenditure From Both Sides

Table 8.9: Budget Expenditure (Operational Cost) for SMASSE

	1998	1999	2000	2001	2002*	2003*	Total
GOK	1,500,000	11,957,000	5,500,000	3,500,000	3,500,000	3,500,000	29,457,000
Districts		100,055	8,606,415	12,033,260	8,897,547		29,637,277
JICA	2,880,270	8,004,732	16,122,488	34,988,152	18,516,414		80,512,056
Total	4,380,270	20,061,787	30,228,903	50,521,412	30,913,961		136,106,333
% of Kenyan side	34.2%	60.1%	46.7%	30.7%	40.1%		43.4%

1) 2002* and 2003* : Expected value

2) Budget from JICA in 2001 includes expenditure for SMASSE New Office building (21,570,000)

8.3.2 Budget Expenditure for INSET

Table 8.10: Budget Expenditure (Operational Cost) for INSET

	1999	2000		2001		2002		Total	
	INSET at KSTC	INSET at KSTC	INSET at Districts	INSET at Clusters	INSET at KSTC	INSET at Districts	INSET at KSTC		INSET at Districts
GOK	800,000	450,000	652,500	0	4,650,345	0	4,156,149	0	10,708,994
JICA	2,734,367	1,347,532	9,098,941	1,232,463	10,666,571	1,166,388	4,383,467	1,020,192	31,649,921
Districts	100,055	300,000	4,624,434	3,681,981	0	4,043,738	0	7,859,015	20,609,223
TOTAL	3,634,422	2,097,532	14,375,875	4,914,444	15,316,916	5,210,126	8,539,616	8,879,207	62,968,138
% of Kenyan side	24.8%	35.8%	36.7%	74.9%	30.4%	77.6%	48.7%	88.5%	49.7%

1) Budget from GOK indicates expenditure incurred for INSET alone.

2) Budget from JICA indicates expenditure incurred for provision of equipment

3) Budget from districts is solely collected from schools

4) District INSET in 2002 increase because of closure of clusters in Butere/Mumias, Lugari, Makeni & Kakamega

CHAPTER 9

DAC EVALUATION CRITERIA

9.1 RELEVANCE

9.1.1 Relevance with National Policies

The Overall Goal and Project Purpose are consistent with the national policy of Kenya. Importance of the In-service training for secondary education teachers is stressed in the Master Plan on Education and Training (1997-2010). This has been done through setting up of an INSET Unit at MOEST Headquarters whose objectives include *inter alia* “ formulate a strategic plan and policy for quality development in MOEST, through the design of INSET programmes”. The Mid-Term Expenditure Framework (2000-2003) states that “it is considered essential that teachers’ pedagogical skills and knowledge of content be updated through, among others In-Servicing.....regular and continuous in-servicing of secondary school teachers will be developed”.

1. Furthermore, the report of the Commission of Inquiry into the Education System of Kenya (Totally Integrated Quality Education and Training) recommended regularization of in-service programmes for teachers to improve the pedagogical and management skills.
2. Further commitment by GOK towards In-Service Teacher Development is contained in the Government Action Plan for Implementation of the Poverty Reduction Strategy Paper (PRSP) as part of Human Resource Development (HRD). Strengthening the teaching of mathematics and science will be done by providing identified schools in Arid and Semi-Arid Lands (ASAL) Districts with teaching and learning materials. In addition, improvement of in-service of 248,000 teaching force in schools and colleges and technical institutions through MOEST INSET Unit in collaboration with Teachers Service Commission and donor funded projects such as SMASSE etc
3. GOK through MOEST has granted a creation of new vote head with Ksh.5.5 million for the In-service teacher training which is meant for the SMASSE project in 2000/01 recurrent budget. This continued with Ksh 3.5 million in 2001/02 and 2002/03 recurrent budgets. In addition, MOEST through TSC has strengthened the academic personnel of the SMASSE INSET Unit at KSTC with addition of 16 academic staff. GOK has also assigned 3 Secretaries, 3 Office assistants and 4 drivers to the Project. These are clear signs of GOK's commitment toward policy implementation.
4. Therefore, the overall goal, project purpose, and the results of SMASSE are definitely consistent with the government policy

9.1.2 Relevance with Society

1. The improvement of educational standards at every education sub-sector is a key issue of Kenyan society. This project is aiming at contributing toward achieving the nation wide desire.
2. Both Kenyan government and society are also eager to improve the economic situation particularly through industrialization. Mathematics and science education is a basis of industrialization.
3. Parents through schools and DEB are financially supporting project activities at the districts. Furthermore, the Kenya National Heads Conference of June 2001 resolved that SMASSE goes National. This is also a clear evidence of recognition of the project by the society.
4. Thus, the overall goal, project purpose, and the results of this project are still consistent with the needs of the society.

9.1.3 Relevance with Japanese Policies

1. Enhancing basic education in developing countries is one of the major policies of Japanese Government.
2. Japanese Government also puts high priority on human resource development in developing countries. Particularly Tokyo International Conference for African Development (TICAD II) in 1998 emphasized the important of basic education.
3. The Japanese Government registered capacity development for mathematics and science education for the African region under type-2 partnership initiatives during the Johannesburg 2002 World Summit. SMASSE Kenya was indicated as the Administrative Centre for the network. This is further indication that the project is consistent with Japanese policy on human capacity development.
4. Thus, the overall goal, project purpose, and results of this project are definitely consistent with the Japanese ODA policies.

9.2 EFFECTIVENESS

<p>Project purpose</p> <p>“Quality of Maths and Science education at secondary level is strengthened through In-Service Training (INSET) of teachers in the Pilot Districts”.</p>	<ol style="list-style-type: none"> 1. As illustrated in chapter 2 & 3, quality of maths and science in terms of lesson innovative index and learning attainment has been improving with time. 2. Participation of students in classrooms is also improving. 3. Tendency of results from achievement test is also in good harmony with that of KNEC results, predicting INSET impact will be positively reflecting the KNEC performance with time. 4. INSET attendance both at KSTC and in Districts is constantly higher than as planned. Assuming that INSET will be regularised and continued, it can be seen that the project purpose will be attained in near future. 5. This positive sign of attaining the project purpose can be derived from the fact that three project outputs have been produced successfully. This is mainly due to adequate inputs and effective activities.
<p>Output 1</p> <p>A system of training for the District trainers in Pilot Districts in Maths and Sciences will be established at KSTC.</p>	<ol style="list-style-type: none"> 1. 4 INSET syllabi/curricula were formulated on the basis of baseline study, putting an emphasis on Lesson Innovation in Maths and Science classrooms. 2. Training materials were developed and produced on the basis of SMASSE INSET curricula. 3. 4 INSETs at KSTC were functionally and effectively conducted using those materials. In addition, 2 INSETs at KSTC under In-Country Training Programme were similarly effectively conducted. 4. 4 Stakeholders Workshops were conducted at KSTC for sensitisation on efficient and effective INSET management with special emphasis on self-help effort, ownership and partnership, cost-sharing, and eventual sustainability. 5. The National Staff conducted INSET for inspectors in Pilot Districts. 6. By the end of the Project period, the National Staff will conduct INSET for principals in Pilot Districts. 7. Monitoring and Evaluation Task Force was established to examine the effectiveness of INSET at all levels. 8. The Task Force developed locally adaptable monitoring and evaluation tools. 9. By using monitoring and evaluation tools developed by the Task Force, the evaluation of effectiveness of INSET started in August 2000. 10. The establishment of Kenyan academic staff has increased to 29. 11. In order to accommodate increased number of national staff, SMASSE National INSET Unit at KSTC has acquired a new office building with JICA assistance. With this expansion, laboratory work can be separated from other office work, and interaction among staff can be enhanced, leading to increased efficiency and effectiveness in daily work. 12. As a step of institutionalisation of the INSET system at KSTC, the structure of INSET unit and roles of Kenyan staff at KSTC have been recognised and fully implemented by TSC. 13. Criteria and requirements for district INSET trainer certificate were drawn. 14. INSET trainer’s certificate with five years validity will ensure sustainability of INSET.

<p>Output 2 A system of INSET in Maths and Science will be established in the Pilot Districts.</p>	<ol style="list-style-type: none"> 1. Over 140 District trainers were trained using lesson innovation-oriented programmes and over 45 administrative personnel were trained through 4 sensitisation workshops. 2. District trainers were evaluated using the tools developed by the Task Force. 3. District trainers actively participated in District INSET as facilitators. 4. Capacity of district trainers in planning INSET and developing write-ups for INSET requires further strengthening. 5. SMASSE District INSET Planning Committees (DPC) were in place in all Pilot Districts. 6. Capacity in INSET management by DPCs has been strengthened particularly in Central, Eastern and Western Provinces. From the financial management viewpoint, as indicated during the Mid-term Evaluation in 2000, there still remain some room to make more efforts for the improvement particularly in the area of expenditure control to secure economic viability at district level. 7. DEB was supportive and approved DPC collection of SMASSE fund in all Pilot Districts. 8. As illustrated in chapter 10.5, Collection of SMASSE fund has been improved in most districts.(on average 73% of expected collection) 9. District trainers have also been strengthened in planning, doing, seeing and improving district INSETs. Their teaching methodology based on ASEI lesson plan is highly appreciated by fellow teachers. 10. Currently the recognition of District trainers by MOEST and TSC has been agreed. With such incentives, the INSET system in Districts will be more sustainable. 11. Abolishment of clusters in Makueni, Kisii, Gucha, Kakamega, Murang'a, Maragua, Butere/Mumias, and Lugari Districts increased efficiency of INSET in quality and quantity.
<p>Output 3 Role of KSTC and District INSET centres as resource centres will be strengthened.</p>	<ol style="list-style-type: none"> 1. Necessary equipment was supplied without delay. 2. A number of publications including Home Page were produced and disseminated. 3. The project has acquired a new office block at KSTC. Facilities at the Unit are listed in chapter 8. 4. The Project has established 14 District INSET centres in nine Districts. Each centre has been equipped with teaching and learning equipment and materials in maths and science subjects as listed in chapter 8. 5. In addition, 8 INSET centres with similar function to those in 9 districts were established in In-Country Training Programme districts. 6. Management of the centre is left under the school management headed by the principal. Although the project and principal of each centre have an agreement to ensure an access to facilities at the centre for district trainers, not all centres are keeping this agreement effectively. 7. In Kakamega high school and Kisii high school centres, facilities were either misused or unused respectively. 8. Maintenance of the centre solely depends upon DPC budget and contribution from the school. In most centres, facilities provided by the National Office were properly maintained through self-help effort.

9.3 IMPACT

9.3.1 Attainment of Project Purpose and Overall Goal

A) Positive impact, which was expected

- (1) Over 140 district trainers were trained four times at KSTC INSET by the end of Oct, 2002.
- (2) The Kenyan National INSET trainers have managed SMASSE INSET four times at KSTC and District INSET trainers three times in the pilot districts by the end of the project.
- (3) Capacity building of INSET system establishment has been improved in terms of management by DPC, support of head teachers, training of technical team (trainers' numbers maintained at 4 per subjects), provision of equipment to the training centres etc.
- (4) Direct effect of INSET on attitude toward teaching objective, promoting quality of teaching and quality of learning of INSET participants has been observed.
- (5) Impact of ASEI lesson on students' level of participation in a pilot district has been observed in communications skills, process skills and affective aspect.

B) The extent of attaining of Overall Goal based on KCSE result

At this stage, it is very hard to tell to what extent the achievement of the overall goal could be attributed to the project activities because of small percentage of students who were taught by SMASSE trained teachers compared to total students population.

KCSE examinations expect students to acquire basic knowledge, comprehension, application, analysis, synthesis, evaluation skills and experimental as well as critical high order thinking of "all topics" of each subject in 4 years secondary school.

SMASSE project has a limitation to cover all topics of National Syllabus in subject INSET activities in two weeks every year. However there is a strong demand for improved KCSE results from SMASSE.

C) Unexpected Positive Multiplier Effect

- (1) ASEI/PDSI approach has had a positive impact on skills, knowledge and attitudes in the teaching and learning of mathematics and science. To propagate its outputs, Kenya Secondary School Heads Association and MOEST decided to provide INSET for all mathematics and science teachers throughout the country and strengthen and maintain links with stakeholders in mathematics and science education for developing more activities to actualise ASEI and upgrading the capability of young Kenyans in mathematics and science.
- (2) Stakeholders in SMASSE districts are asking other INSET providers to rationalize funding for these activities the SMASSE way which they think is affordable compare to others.
- (3) At secondary level teachers of other subjects (Languages, Arts and Technical) are asking to be included in the program. In some schools they have formed "SALTS" (Strengthening of Arts, Languages and Technical Subjects).
- (4) The SMASSE hosted regional conference in Feb.2001 and June 2002 at KSTC, Nairobi, which involved 11 and 13 African countries respectively realized that they had common problems and therefore established "SMASSE Africa" to spread ASEI and PDSI as intervention measures, SMASSE Kenya is the secretariat of the "SMASSE Africa".

- (5) SMASSE has been playing a role of a regional centre, such as training personnel from other countries in the region. As of Sept 2002, it has trained personnel from GHANA and MALAWI. The INSET unit has reviewed instruments for conducting baseline studies from SMASSE ZAMBIA and SMASSE MALAWI. SMASSE has signed an agreement with UP-NISMED of the Philippines on further development of INSET type activities.
- (6) SMASSE Project in Kenya hosted regional conferences in 2001 and 2002 at KSTC, Nairobi. During the World Summit for Sustainable Development in Johannesburg in 2002 the Government of Japan registered under type-2 partnership initiative "Network for Capacity Development for Mathematics and Science Education in Africa". SMASSE Kenya was registered as the Administrative Secretariat of the Network of the SMASSE Africa.

D) Negative Unexpected Situations;

- (1) Some of the INSET funds collected in pilot districts were used for unintended purposes. However legal action, against those who misappropriate SMASSE funds, was recommended during a Stakeholders Workshop held in 2001.
- (2) Some district trainees were reluctant to attend INSET during the school holiday due to lack of monetary incentives (allowances). However attendance of INSET was made compulsory through resolutions passed during the 2001 Stakeholders Workshop.

9.4 SUSTAINABILITY

The GOK attaches a lot of interest and importance to the SMASSE Project. In this connection GOK has undertaken the measures listed down to develop a sustainable INSET system for SMASSE. However, two issues arise as was realized during implementation. One such issue is the desire to support the pilot districts to further develop and strengthen sustainability through the self-help effort initiated at district level. The other is the quality of teaching/learning. SMASSE introduced ASEI/PDSI approaches and is proving its worth. Nevertheless, the quantization of this strategy through Monitoring and Evaluation (M&E) instruments needs to be studied further for improvement and harmonization so that it can be incorporated in classroom practices as an approach to good teaching.

9.4.1 Government of Kenya (GOK) Policy

SMASSE Project activities are within the existing GOK policy as contained in various policy documents, namely:-

A) GOK Millennium Development Goals (MDGS)

According to MDGS Paper, the Ministry of Education, Science and Technology (MOEST) has put in place ways and means of meeting the set goals and targets. Key among these targets, which is relevant to sustainability of the Project, is the importance the GOK attaches to Mathematics and science Education. The GOK projects that the country be industrialized by 2020. To attain this target it becomes inevitable that GOK strengthens its Mathematics and science education base by re-sharpening of teachers through regularized INSET system.

B) Recognition of INSET Certificates

The Ministry has laid emphasis on certificates obtained through INSET training. For instance Kenya Education Staff Institute (KESI) INSET certificates are a pre-requisite for promotion of teachers and education officers. Likewise the Ministry recognizes the SMASSE Project certificates as one of the basic requirements for promotion. Besides, the Ministry has put in place an INSET Unit at the Headquarters.

C) Master Plan for Education and Training (MPET)

MPET gives the GOK commitment in sustaining the INSET. To raise relevance and quality in Secondary Education, MPET clearly stipulates that it should do this by evolving appropriate pre-service and in-service training at provincial/district, school, and teacher level. This has been strengthened by the setting of INSET Unit at the Ministry Headquarters to co-ordinate the activities of all Projects with a view to ensuring their sustainability.

D) Signed Documents Regulating the SMASSE Project Activities

Since the inception of SMASSE Project in June 1998 the GOK and the Government of Japan have been meeting annually to deliberate on the future of the Project. Signed Minutes of these meetings show the commitment of the GOK towards the sustainability of the Project as per the appended signed Minutes of the various meetings.

E) Interim Poverty Reduction Strategy (IPRS) Paper for the Period 2000 - 2003

According to IPRS Paper the GOK is committed to decentralizing teaching/school service and management to the district/school levels supported by capacity building. The variable indicators to monitor the implementation of this IPRS strategy is through regularized INSET of teachers to enable them cope with the new curriculum. Such INSET will be a necessary tool for sustaining the Project.

9.4.2: GOK Budget

The GOK commitment in sustaining the Project is contained in Mid-Term Expenditure Framework (MTEF). Provisions for further subsidy funding are reflected in 2002/2003 MTEF. The Ministry Budget estimates for this period have factored in the Project allocation to enhance the sustainability of the Project through increased budget.

The contribution by District Education Board through authorized levy at the district level will contribute immensely towards the sustainability of the Project. However, both the MTEF and DEB levies are not sufficient in running an effective, efficient and successful INSET. This self-help system being established in the SMASSE districts needs time and further subsidy to strengthen through Project extension, which will guarantee long-term sustainability.

9.4.3 Security of SMASSE Project Fund

The management of SMASSE Project funds is stipulated in stakeholders' documents on how to manage the funds. The financial management instrument, which regulates the collection and expending of funds, is also being used. The stakeholders' document allows the authority to Incur the Expenditure (AIE) at various levels through a Minute as follows:-

1) National Level

AIE holders is a committee of the National Working Committee (NWC) composed of the SMASSE Project National Co-ordinator, the Principal KSTC, the Head of SMASSE Unit and Chief Finance Officer KSTC. The expenditure is done through a NWC Minute. The books of account are audited through the GOK audit machinery.

2) District Level

AIE holders at the district are the District Working Committee (DWC). Any expenditure is also done through of a Minute of the committee. KSTC internal auditors and the normal GOK audit system at the district audit the funds.

9.4.4 Staff Distribution and Management

A) National Level

At the National level the establishment is in place. The current establishment is 29 fulltime Kenya counterpart INSET trainers. The National INSET training takes place in April and August and is regularized to last for 10 days during the holidays.

A national training centre has been established at KSTC. The structure at national level training is composed of:-

- NWC
- Head of INSET Unit
- Subject administrator
- Academic Head
- Trainers

B) District Level

At the district level there are **14 established District Training Centres** in the nine **(9) Pilot Districts**. There are **at least 16 district trainers** (four per subject) in each district. The management of INSET is done by the District Planning Committee (DPC) composed of the following:-

- The District Education Officer
- The District Inspector of Schools
- The District Head of INSET
- The Principal of the Training Centre
- Chairperson District Heads Association.

Like the National Level, the District INSETs are regularized in April and August lasting 10 working days. There is being proposed a district structure similar to that at the national level.

C) Addressing Sustainability in the Structure

INSET for inspectors has been put in place with 1st Cycle conducted in July 2002. It is projected that by March 2003, 1st Training Cycle of the Principals of Schools will be started. Other Cycles will follow after the extension.

The Project will target the Pre-Service Diploma Colleges tutors of KSTC and Kagumo College with a view to sustaining the Project motto as well as integrating pre-service and INSETs.

9.4.5 Staff Hiring

This is done through advert in print media by sending an indent to the TSC. Selection for short-listing is done by National INSET Unit in collaboration with TSC. The short-listed applicants are interviewed and are then appointed and deployed to KSTC as national trainers by TSC.

9.4.6 Academic Concerns

Certification has been also put in place. The certificates are dully recognized by the GOK. The doctrines of ASEI/PDSI are propagated as areas of concern in the academic delivery. The quality of teaching/learning depends on the quality of ASEI/PDSI approaches. Therefore, further development of ASEI lessons must be done in order to attain the Project Purpose and Overall Goal. The M&E instruments need to be refine and studied further in their use as dependable instruments to measure the quality of teaching/learning. This can only happen if the Project is extended to the phase two.

CHAPTER 10

PROCESS OF IMPLEMENTATION OF SMASSE PROJECT

This chapter covers issues on the process of implementation for the period from the Mid-term evaluation, Nov. 2000, to date. It focuses on issues raised on Page 8 of the Evaluation Grid.

The issues include

1. Administrative and Academic issues and how they were dealt with,
2. Working of Monitoring and Evaluation Task Force in administration of tools
3. Equipment management at Districts
4. Major events of the Project since inception in 1998
5. Funds collection at the District

10.1 ADMINISTRATIVE AND ACADEMIC ISSUES

10.1.1 Administrative Issues

Category	Issues	How it was dealt with	Result
Management	Necessity to upgrade the planning and management ability for the INSET	Holding planning committee meetings and weekly general meetings	Attained
	Necessity to upgrade the capability of the staffs	Assigning work according to individual ability and facilitating consultation among staff	Attained
	A lot of activities and events consume some time for INSET preparation	Increasing staff	Attained
	Low awareness about SMASSE INSET activities by support groups	Holding stakeholders and inspectors meetings and workshops to sensitise them	Attained
INSET system	Need for improvement to implement the INSET	Reflecting the results of monitoring and evaluation on INSET curriculum & SCRC Report	Attained
	Inefficiency of cluster INSET	Cluster INSET level was abolished and replaced with District INSET through creation of additional centres	Attained
	Low acceptance of importance of INSET among teachers	<ul style="list-style-type: none"> •Through INSET, acceptance that INSET is essential for teachers' professionalism was raised •Stakeholders and inspectors holding meetings with teachers 	Attained
			Attained
The inadequacy of INSET planning in the districts	<ul style="list-style-type: none"> •Giving advise by M & E taskforce •Having a session in the National INSET •District committee planning meetings at the start of each year attended by Head of SMASSE INSET unit and Chief adviser 	Attained Attained Attained	

	The weakness of the INSET management in the district	<ul style="list-style-type: none"> •Having an INSET session on how to organize and facilitate the INSET •Monitoring District INSET by M &E taskforce and giving the guideline •Asking for submission of district INSET report •Holding stakeholders and inspectors meetings •District committee planning meetings at the start of each year attended by Head of SMASSE INSET unit and Chief adviser 	<p>Attained</p> <p>Attained</p> <p>Attained</p> <p>Attained</p> <p>Attained</p>
Financial Management	Ability of the financial management in the district is weak	<ul style="list-style-type: none"> • Having a session on financial management, keeping financial records, during stakeholders meeting •Monitoring and guiding on Bookkeeping at the district by KSTC financial officer •SMASSE head office asked the district to submit the financial report •Development of financial record document which were supplied to districts 	<p>Attained</p> <p>Attained</p> <p>Attained</p> <p>Attained</p>
	Uncertainty on budget from the Kenyan side	<ul style="list-style-type: none"> •Having meetings with MOEST •SMASSE INSET unit budget appears in printed estimate for KSTC under In-service training 	<p>Attained</p> <p>Attained</p>
	Ability for raising money for running INSETs in District is poor	Holding stakeholders sensitisation meeting and workshops	Attained
	Availability of day to day funds to run the INSET unit should be made available from National Working Committee	Availability of petty cash	Not yet Attained
Monitoring and Evaluation	Necessity of monitoring and evaluation system	Monitoring and evaluation taskforce was established	Attained
	The evaluation tools and the method of analyzing data is insufficient	Carrying out developed tools and training on data analyses by the short term expert	Attained
	The evaluation tools were inharmonious by subject	Developing an Internal Evaluation design Matrix (IEDM)	Attained
	It took a lot of time to implement monitoring and evaluation	<ul style="list-style-type: none"> •Format of reporting procedure was made •To train all staff on how to analyse •To simplify the tools 	<p>Attained</p> <p>Not yet Attained</p> <p>Not yet Attained</p>

Others	Working rooms were too small for the increased number of stuffs.	Building a new SMASSE Head office	Attained
	Delay in delivery of equipment	SMASSE Procurement Committee established	Attained
	The procedures on the budget control were inefficient	Requesting the MOEST, JICA headquarters and the JICA Kenya office to make procedures more efficient	Not yet Attained
	The role of JICA training courses should be strengthen	Requesting the JICA headquarters to expand the JICA training courses	Not yet Attained

10.1.2 Academic Issues

Category	Issues	How it was dealt with	Result
INSET preparation	INSET materials were not pre-tested adequately and did not try out	<ul style="list-style-type: none"> •Emphasizing necessity of try out and material preparation through subject meeting •Establishing pre-testing and try out time table (2001,2002) 	Attained
	There was need for early purchase of equipment and devices for use in INSET, and early development of materials	Setting deadlines for preparation and planning and submitting requirement list time table was established	Attained
	There was need to exchange opinions on curriculum among the four subjects	<ul style="list-style-type: none"> •Science group always did this to plan for common sessions during INSET •Having meetings among the subject administrators at planning level 	Attained
	There was need to have post-mortem in departments after INSET	<ul style="list-style-type: none"> •Post-mortem meeting for all SMASSE staffs chaired by National Coordinator after every National and District level INSETs •To have department post-mortem meetings 	Not yet Attained
	Insufficient time to review the content of curriculum prior to INSET.	Setting up of SCRC	Attained
Content of INSET	Necessity of emphasising adequate preparation of ASEI lesson	Having INSET sessions on ASEI lesson plans and accompanying activities	Attaining
	Necessity of modifying INSET curriculum to meet needs of teachers	INSET curriculum modified on bases of Curriculum Review Committee Report and Monitoring and Evaluation Report	Attained
	Some experiments demonstrated during INSET was just a copy from textbooks or experimental manuals used in other countries	Experiments trial out conducted as necessary and improvisations made	Attained
Developing materials	The materials for District INSET submitted by District trainers were just a copy from National INSET	Encouraging and supporting District trainers to develop their own materials through National INSET and Monitoring of District INSET	Attaining
	There is need to develop and accumulate ASEI lesson plans	To let Districts trainers bring examples of ASEI lessons during National INSET	Attained
	Necessity of developing materials, teaching aid and teacher's manual and trying out them	Organizing the publication committee in the National office to develop materials	Attained

10.2 WORKING OF MONITORING AND EVALUATION

10.2.1 National INSETs.

The SMASSE National INSETs for pilot districts are conducted during the month of August. Between Dec 2000 and Sept 2002, two such INSETs have been conducted;

- Aug 2001 and
- Aug 2002.

To assist the national trainers maintain high standards, monitoring and evaluation during the INSET is necessary. The District trainers carry out the evaluation. Attached are copies of the instruments used to carry out the evaluation during National INSETs. They include

Table 10.1: Monitoring and Evaluation Instruments

Instrument	When first used
Pre-INSET evaluation	2001
Session evaluation	2001
Content pedagogy	2001
Post-INSET evaluation	2001
Ability of national trainers	2002

The information collected during the evaluation is processed and then analysed. Post-mortem discussions are then held. Any changes suggested during the discussions are effected during the next INSET.

10.2.2 District INSETs.

After the National INSETs, the District trainers are expected to organise similar INSETs back in their districts in the month of April during the following year. While the district INSETs are going on, members of Monitoring and Evaluation Task force from the National office are sent out to the districts to ensure that acceptable standards are maintained. The instruments used to carry out the assessment are:

Table 10.2: Monitoring & Evaluation Instruments

Instrument	When first used
District checklist No.1 (Quality of sessions)	2000
District Checklist No.2 (Preparedness and materials)	2000
Quality of District INSET (Ability of District trainers to implement INSET)	2001
Financial monitoring and evaluation instrument	2002
Post-INSET Evaluation instrument	2002

The data collected is used to make district reports, which are presented to participants during the ensuing National INSET. Suggestions on how to improve future INSETs are then given. Generally, follow up assessments have indicated that trainers heed to suggestions given.

10.2.3 Quality Of Teaching/Learning.

In the intervening period between INSETs, the monitoring and evaluation focuses on the quality of the teaching-learning process. This involves visiting schools and sitting through lessons (taught by district trainers, wherever possible). The purpose is to assess the ASEI/PDSI content in the lesson and discuss with the teachers later. The quality of participation and quality of learning are also assessed. The instruments used for these purposes are:

Table 10.3: Monitoring & Evaluation Instruments

Instrument	When first used
ASEI/PDSI checklist	2002
Lesson observation instrument	2002
Quality of participation questionnaire	2002
Achievement tests	2002

The data collected using the first two instruments during lessons is discussed between the teacher and the assessor. It is hoped that the teachers plough back new ideas generated during such discussions.

Making comparisons between a SMASSE and non-SMASSE districts has been adopted as the method to assess the quality of participation and the quality of learning. The Quality of participation instrument is the same for all subjects but the achievement tests differ with the subject. A sample data was collected from Makueni (SMASSE) and Machakos (non-SMASSE) districts in June, this year. Using the data as a yardstick, it has been confirmed that quality of participation is substantially higher in SMASSE districts than in non-SMASSE districts. The same scenario was observed between Murang'a (SMASSE) and Kirinyaga (non-SMASSE) districts during the pre-testing of the instruments in March, this year.

The quality of learning index has shown a similar trend as quality of participation (Quality of learning index is not among the verifiable indicators in the PDM.)

In conclusion,

- Teachers in the pilot districts have shown improved lesson innovative index. This has led to higher level of participation by the learners and consequently higher quality of learning.

10.3 EQUIPMENT USE AND MANAGEMENT

Each of the pilot districts was provided with some basic equipment to enable it function as an INSET centre efficiently. The equipment provided includes

- Central Processing Unit
- Computer printer, Back-ups, Computer table and chair
- Copy printer, Toner Cartridge
- Digital video camera
- Overhead projector
- Microscopes
- Force & motion, electricity & magnetism, light & sound study kits
- Television
- Scanner canon

10.3.2 Extent of Use Of Equipment.

Monitoring and evaluation exercise always includes a check on use of equipment. In general equipment provided has been adequately used for the intended purposes. A summary of findings is listed below:

(a) Computer, printer, Back-up

These are properly used in all the centres. However, majority of the trainers were urged to sharpen their skills with the computer. Most of them are still not very competent and therefore take long when preparing write-ups for the INSETs.

(b) Copy printer

In all centres, copy printers are the most useful pieces of equipment. In some districts, they have been made accessible to all schools at a small fee, especially during examinations. Any funds collected are then used for maintenance of the same printer.

(c) Digital Video Camera:

Cameras have been used adequately in most centres. Trainers have been urged to continue using cameras to evaluate their facilitation during INSETs.

(d) Overhead Projector:

Some centres were found not to be utilising the OHP earlier and advised accordingly. At the moment, the OHP's are in proper use.

(e) Television:

Television sets are mostly used for entertainment. However, trainers have been impressed upon to use them for academic purposes as well.

(f) Scanner Canon:

Most trainers have problems using it. However, it is an invaluable piece of equipment in all centres.

(g) Microscopes, Study kits:

Well utilised in all centres

10.4 MAJOR EVENTS OF SMASSE PROEJCT

Table 10.4: List of Major Events of SMASSE Project from July 1998 to Oct. 2002

No.	Date	Event	FY
1	7/1/98	Commencement of the Project	1998
2	11/4/98	First National Coordination Committee Meeting	1998
3	11/27/98	Project Inaugural Seminar at KSTC	1998
4	1/11/99	Technical Exchange with INSSTEP in Uganda	1999
5	4/6/99	Joint Seminar with JOCV	1999
6	4/25/99	2nd National Coordination Committee Meeting	1999
7	4/26/99	First Stakeholders Workshop	1999
8	6/24/99	Technical Exchange with INSSTEP in Uganda	1999
9	7/26/99	Technical Exchange Team from Ghana	1999
10	8/9/99	First National INSET at KSTC	1999
11	12/13/99	Consultation Team headed by Prof. Ikeda	1999
12	12/15/99	First Joint Coordination Committee Meeting	1999
13	2/15/00	SMASSE Regional Collaboration Study Team to 3 Countries	2000
14	3/28/00	Visit by JICA Managing Director, Ms Tanaka	2000
15	4/9/00	First District INSET	2000
16	5/22/00	2nd Stakeholders Workshop	2000
17	5/22/00	3rd National Coordination Committee Meeting	2000
18	8/14/00	2nd National INSET at KSTC	2000
19	8/16/00	Technical Exchange Team from Malawi	2000
20	10/18/00	Signing of R/D for In-Country Training	2000
21	11/26/00	Mid-Term Evaluation of the Project	2000
23	12/8/00	2nd Joint Coordination Committee meeting	2000
24	2/19/01	First Regional Workshop with 12 Countries	2001
25	3/11/01	Technical Exchange with South Africa	2001
26	4/16/01	2nd District INSET	2001
27	4/16/01	First In-Country INSET at KSTC	2001

28	5/28/01	3rd Stakeholders Workshop	2001
29	6/25/01	Joint Seminar with JOCV	2001
30	8/6/01	3rd National INSET at KSTC	2001
31	8/13/01	First In-Country District INSET	2001
32	8/13/01	Technical Exchange Team from Zambia	2001
33	8/13/01	Technical Exchange with Ms. Muto from Malawi	2001
34	9/27/01	Technical Exchange Team from Ghana	2001
35	10/8/01	Visit by JICA Vice-President, Mr. Mesaki	2001
36	1/15/02	Visit by JICA Vice-President, Mr. Mochizuki	2002
37	1/21/02	Malawi-SMASSE Joint Workshop	2002
38	2/25/02	3rd Country Training from Ghana	2002
39	3/2/02	Technical Exchange with UP-NISMED in the Philippines	2002
40	3/27/02	Visit by JICA Malawi	2002
41	4/2/02	2nd In-Country INSET at KSTC	2002
42	4/15/02	3rd District INSET	2002
43	4/18/02	3rd Joint Coordination Committee Meeting	2002
44	5/13/02	4th Stakeholders Workshop	2002
45	5/14/02	Opening of SMASSE Headquarter building	2002
46	6/17/02	2nd Regional Workshop	2002
47	7/8/02	INSET for Inspectors in Nakuru	2002
48	7/23/02	Visit by JICA Managing Director, Mr. Sato	2002
49	8/12/02	2nd and 4th National INSET at KSTC	2002
50	8/12/02	3rd Country Training(Individual) from Malawi	2002
51	8/12/02	Technical Exchange Team from Malawi	2002
52	8/19/02	2nd In-Country District INSET	2002
53	9/10/02	Visit by JICA President	2002
54	10/13/02	Final Evaluation	2002
55	10/22/02	3rd Joint Coordination Committee Meeting	2002
56	10/25/02	SMASSE Internal Workshop	2002

10.5 FUNDS COLLECTION AT THE DISTRICT

Summary

Percentage of funds collection against funds expected has been improved from 40% to 73% in year 2000 and 2002 respectively. The unit cost has decreased over the same period on the other hand.

Table 10.5 Summary of INSET Budget in April 2000

April 2000	Fund expected	Fund collected	Percentage collection	Rate per head	Total expenditure	No. of Participants	Unit cost
Maragua	1,700,000	700,000	41.2%	100	1,237,500	33	37,500
Muranga	1,600,000	1,500,000	93.8%	100	1,347,629	36	37,434
Makueni	1,200,000	510,000	42.5%	100	1,712,865	68	25,189
Kajiado	620,000	481,920	77.7%	100	1,589,873	74	21,485
Kakamega	997,941	363,000	36.4%	100	1,327,246	66	20,110
Lugari	600,000	200,000	33.3%	100	1,341,321	38	35,298
Butere/Mumias	960,000	300,000	31.3%	120	1,161,500	55	21,118
Kisii	2,000,000	220,000	11.0%	100	1,258,500	89	14,140
Gucha	1,900,000	370,000	19.5%	100	1,050,500	55	19,100
Total	11,577,941	4,644,920	40.1%		12,026,934	514	23,399

Table 10.6 Summary of INSET Budget in April 2001

April 2001	Fund expected	Fund collected	Percentage collection	Rate per head	Total expenditure	No. of Participants	Unit cost
Maragua	2,000,000	1,875,800	93.8%	100	446,221	30	14874
Muranga	1,700,000	1,583,300	93.1%	100	300,450	42	7154
Makueni	6,500,000	3,728,650	57.4%	250	688,145	56	12288
Kajiado	600,000	200,000	33.3%	100	536,810	97	5534
Kakamega	2,527,800	1,288,820	51.0%	120	375,452	57	6587
Lugari	1,493,400	824,200	55.2%	200	599,860	107	5606
Butere/Mumias	1,205,640	335,000	27.8%	120	385,000	125	3080
Kisii	2,201,300	959,000	43.6%	100	412,000	72	5722
Gucha	2,000,000	651,000	32.6%	100	299,800	44	6814
Total	20,228,140	11,445,770	44.1%		4,043,738	630	6419

Table 10.7 Summary of INSET Budget in April 2002

April 2002	Fund expected	Fund collected	Percentage collection	Rate per head	Total expenditure	No. of Participants	Unit cost
Maragua	2,000,000	1,249,087	62.5%	100	1,163,687	251	4,636
Muranga	2,000,000	1,801,000	90.1%	100	357,250	40	8,931
Makueni	4,050,000	3,159,260	78.0%	150	2,490,234	443	5,621
Kajiado	600,000	416,376	69.4%	100	363,745	64	5,684
Kakamega	2,500,000	2,314,690	92.6%	100	1,107,000	359	3,084
Lugari	1,000,000	985,100	98.5%	100	618,824	105	5,894
Butere/Mumias	1,000,000	811,720	81.2%	120	726,215	165	4,401
Kisii	2,000,000	904,500	45.2%	100	601,000	146	4,116
Gucha	2,000,000	831,450	41.6%	100	431,060	82	5,257
Total	17,150,000	12,473,183	72.7%		7,859,015	1655	4,749

Table 10.8 The ratio of District INSET Expenditure in 2001

2001	Maragua	Muranga	Makueni	Kajiado	Kakamega	Lugari	Butere/M	Kisii	Gucha	Average	Ideal
Accommodation	93.2	56.8	55.9	79.5	53.3	73.6	67.5	52.9	56.7	65.5	45.0
Facilitation	4.5	30.0	14.5	17.3	27.9	14.3	23.4	25.5	26.7	20.5	15.0
Transport	0.0	9.7	16.8	1.9	11.3	4.3	2.9	5.1	4.1	6.2	10.0
Materials	2.3	1.0	2.4	0.6	6.1	5.1	6.2	0.7	0.5	2.8	15.0
Maintenance	0.0	0.0	1.2	0.0	0.0	0.1	0.0	0.0	10.0	1.3	10.0
Contingency	0.0	2.5	9.2	0.7	1.3	2.6	0.0	15.8	2.0	3.8	5.0
Total	100.0	100.0	100.0	100.0	99.9	100.0	100.0	100.0	100.0	100.0	100.0

Table 10.9 The ratio of District INSET Expenditure in 2002

2002	Maragua	Muranga	Makueni	Kajiado	Kakamega	Lugari	Butere/M	Kisii	Gucha	Average	Ideal
Accommodation	50.4	50.0	71.9	55.0	63.3	72.7	73.6	61.6	54.6	61.5	45.0
Facilitation	28.0	27.2	7.4	25.3	12.8	19.2	13.9	18.6	15.1	18.6	15.0
Transport	21.6	13.4	9.4	11.0	16.0	4.2	2.0	6.5	8.9	10.3	10.0
Materials	0.0	5.6	5.8	8.7	1.3	0.9	8.6	5.0	3.8	4.4	15.0
Maintenance	0.0	0.0	2.0	0.0	0.0	0.8	0.0	0.0	0.0	0.3	10.0
Contingency	0.0	3.8	3.5	0.0	6.6	2.2	1.9	8.3	17.6	4.9	5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0