

**CONSTRAINTS TO IMPLEMENTATION OF THE SCHOOL
BASED TEACHER DEVELOPMENT (SbTD) PROGRAMME IN
PRIMARY SCHOOLS IN SIAYA DISTRICT, KENYA**

BY

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DECLARATION

This thesis is my original work and has not been presented for a degree or any other award in any other university

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DEDICATION

To my late father, Zachariah Omuga Othieno and my late father – in-law Benedict Ondiek.

My late father, Mzee Zachariah Omuga valued education as a treasure that is put to use at the time of need. He compared education to **meat dried, smoked and preserved well in a traditional pot** he saw during his youthful years. Such smoked meat became valuable during famine when people lacked food. And so is good education which is useful for positive living and job market after years of sacrifice.

My late father – in – law, Mzee Benedict Ondiek, a former student of St. Mary’s School, Yala, used to refer to education as a **“precious change agent”** that he would rather die poor but ensure all his children received. He influenced many people to pursue higher education at his place of work and around his home.

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ABBREVIATIONS AND ACRONYMS

CPE	Certificate of Primary Education	
DEO	District Education Officer	
DQAS	Directorate Quality Assurance and Standards	
GCE	General Certificate of Education	
INSET	In-service Education and Training	
FPE	Free Primary Education	
KCE	Kenya Certificate of Education	
KCPE	Kenya Certificate of Primary Education	
KCSE	Kenya Certificate of Secondary Education	
KIE	Kenya Institute of Education	
KNEC	Kenya National Examinations Council	
MoEST	Ministry of Education Science and Technology	
NARC	National Rainbow Coalition	
QASO	Quality Assurance and Standards Officer	
SbTD	School based Teacher Development	
TAC	Teachers Advisory centre	
TRC	Teachers Resource Centre	
TSC	Teachers Service Commission Ut	Untrained teacher

ABSTRACT

School based Teacher Development Programme (SbTD) is an in-service course for primary school teachers that aims at improving the quality of Primary School Education. In Siaya District SbTD was implemented in 2003 and by the time of this study, 486 out of 2785 teachers had undergone through the training in 8 zones under study out of 22 zones in the district in June,2006. Formative assessment of the programme in Siaya in 2006 revealed that out of 230 SbTD trained teachers assessed, only 86(37.4%) were practising intended SbTD skills in the classrooms. The report indicated that SbTD faced constraints such as inadequate teaching/learning resources/time, lack of support by MoE as well as poor attitude of headteachers. There had not been any study carried out to investigate and document the constraints of SbTD implementation. To this end, the researcher investigated the constraints to implementation of SbTD programme in primary schools in Siaya District. The study had four objectives: First, to identify the level of application of SbTD skills, second, to investigate factors constraining applications of skills, third, to find out whether MoE and Head teachers supported SbTD and fourth to devise strategies for SbTD revitalizations. In order to achieve the above outlined objectives, the researcher used descriptive survey design. From a target population of 486 SbTD trained teachers, a sample size of 80 teachers forming 16.5% of target population was selected for study by purposive and stratified sampling of male and female teachers in upper primary classes. Questionnaires were used with 80 teachers,10 headteachers and 8 TAC Tutors to identify perceptions, attitudes and facts, class observation schedule was used to assess skills in 6 live lessons and interview schedule was used with DEO for data collection. This brought the total respondents to 105. Piloting was carried out to pre-test instruments to establish their validity and reliability. Validity was established through discussion with experts including university supervisors while reliability was established by use of test-retest method and Spearman Brown prophesy formula to compute reliability of instruments. Quantitative data were collected according to research objectives, analyzed and presented in percentages, charts and tables. Qualitative data were examined for accuracy, condensed and presented in form of written narratives. The study found that the level of application of SbTD in schools was high. It was accepted by teachers and education officials as a good method of in-servicing teachers to improve teaching and learning. It enhanced learners' interest and improved academic performances. However; the programme faced a number of constraints which affected its implementation which included lack of clear policy for promotion of trained SbTD teachers, inadequate teaching/ learning resources/time, lack of support by MoE and heavy workload for teachers as well as poor attitude of headteachers towards the programme. The study recommended that, the programme could be revitalized if the Ministry of Education could put in place a clear policy for promotion of teachers on successful completion of the course, provides suitable and adequate teaching/learning resources, train all stakeholders on attitude change and promote reading culture among teachers. TSC should stabilize staffing of teachers in schools and headteachers should be trained on SbTD skills. Stakeholders should be involved to take active part on the programme implementation

CHAPTER ONE:

INTRODUCTION

This chapter presents background to the study, statement of the problem, the purpose of the study, objectives and research questions as well as Significance of the study and limitations of the study. It also outlines the theoretical and conceptual frameworks on which the study was based and definition of terms as used in this study.

1.1 Background to the Study.

The introduction of formal education in the country by missionaries necessitated the supply of qualified teachers to work in formal schools, which were opened. According to Eshiwani (1993), as education was being expanded, the missionaries hurriedly trained their teachers to man schools. Training during colonial days was not unified and there was no common examination. This was because each missionary group in the country tried as much as possible to train teachers to meet her needs. The missionaries dominated the training of teachers up to the eve of independence. As stated in Binns et al., (1952) and William, et al, (1956) respectively (Bogonko, 1992), the training was of low quality and uncoordinated.

Teachers Training before Independence (1963).

At independence, Kenya inherited an education system with underdeveloped teaching profession. It was lacking in both quality and quantity. Generally, there were few teachers and majority of them were untrained. The training colleges enrolled a small number of students and majority of these had very low academic qualifications. This scenario as explained by Eshiwani (1993) has made the government to remain committed to the development of education in the country. With the increase in enrolment both in primary and secondary schools, the government had to embark on in-service training programmes for teachers to make the education system function effectively. A lot had to be done to consolidate several existing training centers. Following the implementations of the recommendations by the Binns and Williams' reports, the number of colleges was reduced from 28 to 17 largely, run by the government. The primary teachers training colleges have since developed in size and enrollment.. Prior to independence, the teaching profession was religiously biased and racially stratified as no college admitted students from different religious groups (different faiths). Distinctions existed in recruitment, training and grading of teachers. In 1962, for example, the teaching force composed of 21,116 African teachers for African schools, 20,685 were assigned to primary schools and 431 to secondary schools. Asian teachers that taught in Asian schools were 2,087, While 614 European teachers taught in European schools while 141 Arabian teachers taught in Arabian institutions. Most African trainees were primary school leavers who received further training. In contrast, European and Asian school teachers were either university graduates or had secondary education. (Eshiwani, 1993).

Pre-service Teacher Education in Kenya has a long history dating back to colonial times. Fraser report (1909) recommended establishment of the Department of Education to formulate, implement and direct education policies, while the Phelps-stroke commission (1924) made a strong appeal to government to the issue of teacher training and inadequacy of supply of teachers (Okech & Asiachi, 1992). The commission also recommended a wider curriculum for teachers trainees to include Mathematics, Geography, Nature Study, Agriculture, Arts crafts, Domestic Science (for Girls) Kiswahili, English and History but it was not until 1935 when this curriculum was approved (Okech & Asiachi, 1992). Between 1935 and 1937, missionaries organized teacher education so that certain mission centres could concentrate on training teachers. So, the following were some of the teacher training centres: Maseno, Embu, Yala, Kabaa, Mathari, Asumbi, Kilimambogo and Mukumu (UNESCO, 1992). In 1939 Githunguri Teachers college started training teachers for Independent schools. After the Second World War, in 1945, there was high demand for education and hence same for teachers leading to mass employment of untrained teachers. The Beecher Report of 1949 recommended that primary school teachers be given a two (2) year In-service training programme to bridge the gap of trained teachers left by few numbers of teachers trained on full time basis. Sifuna (1975) points out that in-service teacher education for primary teachers was carried out in a very large number of small-scattered training centres.

After independence, there was an acute demand for secondary school teachers as a result of increased number of students in “Harambee” secondary schools and government

secondary schools. Due to this, P1 Certificate Teachers then known as T1- teachers were given one year in-service course at Kenyatta College, now Kenyatta University and they qualified as KT1 Teachers equivalent to S1 or Diploma holders. They were then posted to teach in secondary schools to reduce shortages (Bogonko, 1992).

According to Eshiwani (ibid), in 1962, all schools were integrated and unified teaching profession created. Non-citizen teachers in primary schools constituted no more than 40% of the total teaching force in primary schools. But training or replacing of untrained teachers and upgrading the credential of primary school teachers had been more difficult to accomplish. The teaching profession was initially a major reservoir for public and private recruitment to staff positions, which were localized at the time of independence.

Despite all, these challenges, Ministry of Education achieved the national goal of one teacher per forty children in 1972. The proportion of trained teachers also went up.

However, in 1974, the percentage of trained teachers decreased from 78% to 67% due to the employment of more untrained teachers to cope up with increased enrolment and 1976, most of the untrained teachers had completed four or six years of secondary schooling. In terms of geographical area allocation, urban areas had attracted a proportionately larger share of trained teachers, for example, in 1976, ninety nine percent (99%) of primary teachers in Mombasa were trained. On the other hand most districts had at most 70% of their primary school teachers trained, (Eshiwani, 1993). Because of the large number of untrained teachers, they were generally known in the education circles as untrained teachers (UTs). To tackle the problem of UTs, the government reduced the in-service training period from two years to one year (Ministry of Education, 1995). This

would at least help in the quantitative supply of teachers, although at the expense of quality. The implementation of 8-4-4 system of education forced the government to recruit more UTs to about 11,500 primary teachers. Thus, increasing the problem of need for in-servicing teachers to maintain quality of education.

The amalgamation of teachers colleges to 17 and their management by the government has improved the quality of primary school teachers. This is because the colleges are better equipped with resources for learning and for informal activities. (Ministry of Education, 2004). In all the government run colleges, the curriculum is centralized and both academic and professional courses in education lasting two years are being offered. The assessment and certification of student teachers is also centralized through one external examining body, Kenya National Examinations Council. The certification of primary school teachers is in P1- grade level only. There used to be P2 and P3 but these have been phased out. The application for intake to colleges is based on education level of students. Candidates admitted for training at P1 level must have at least four years of secondary education and KCSE/KCE 'O' level pass. They must have passed their 'O' level examinations with at least division III or mean grade of C plain at KCSE.

With the introduction of 8-4-4 system of education, it was even suggested that the training should be extended to three years to enable the prospective teachers to master the 8-4-4 curriculum properly and be awarded Diploma at the end of training. In 2003, when Free Primary Education was introduced the enrollment increased in schools and brought about the need for more teachers. This made it necessary to employ more untrained

teachers to cope up with the increased enrollment. Since independence , the government increased the number of teachers by employing untrained teachers who were later trained through regular two years full time programme or through four years in-service programme which took place during school holidays in April ,August and December. This type of in-service training was started in Kenya in 1967 and continued up to 1990 when the country was able to train adequate number of primary school teachers through regular pre service training.

Regular in-servicing of teachers for quality education

Kenya like many other developing countries continued to face a shortage of trained teachers who could not be cleared by training them in conventional teachers colleges (Bishop 1985). The ministry of education resorted to grading some of these long serving UTs without going for formal training (Directorate of Quality Assurance and Standards magazine, 2004). This coupled with poorly trained teachers and needs in the society required that teachers are trained and regularly in-serviced to keep abreast with changes. Free primary education has also come with new challenges like overcrowded classrooms, inadequate teachers and textbooks, which require that teachers are in-serviced to cope with new challenges.

The realization of need for teachers' continuous training is what led the government of Kenya to establish teachers advisory centers (TACs) in 1971 to offer regular in-service courses, seminars and workshops for teachers in primary schools and teachers resource centers (TRCs) for secondary school teachers which were established with

recommendations of Kamunge Report in 1988. Both TACs and TRCs serve teachers as curriculum resource centers where teachers meet for short and long term in-service courses, workshops and seminars for improvement of curriculum implementation. The Government through the Ministry of Education, Directorate of Quality Assurance & Standards ensures that quality of education provided in the country is kept high through various methods. One such method is by providing teachers with regular in-service courses and seminars. These in-service teacher education programmes are crucial. The teacher is indeed the heart of the matter. You cannot proceed without the full cooperation of teachers and the local authorities in curriculum innovation and implementation. According to Okech & Asiachi (1992), teacher's skills and knowledge matter a great deal in curriculum renewal than do changes in content and methods. It is, therefore, important to in-service teachers before any new changes can be implemented on curriculum.

This is supported by Malusu, (1997:11) who states that:

New social, political and economic factors bring about
Re-evaluation, innovation and change in education.
Within these influences, teachers play a major role in
educational development, whether they approach their
work actively or passively

Hawes, (1979) postulates that if teachers are not made aware of new changes in education, they will be unable to fulfill their expected professional role in the society. This therefore, requires that teachers are constantly in-serviced. Curriculum development and curriculum implementation therefore, require in-service programmes for the teachers. In this respect, Oluoch, (1982) recommends that in-service training should include those

still in training institutions so that they are conversant with the new changes in curriculum.

Many Teachers don't use syllabi either due to ignorance of new changes or due to lack of knowledge and skills in using them (MoEST, Inspectorate magazine, 2004). It is, therefore, imperative that teachers undergo regular in-service training to keep abreast with new changes.

School Based Teacher Development (SbTD) Programme

In 2001, the Ministry of education, therefore came up with a new strategy for in-servicing primary school teachers at school vide school based Teacher Development(SbTD) in-service programme to meet this need in primary schools.SbTD is based on same idea and practice as institutionalized in-service courses in other countries. The course is conducted mainly through modules which guide teachers on recommended methods as they teach. It has been designed by the Ministry of Education and is funded by British Department for International Development (DFID). Its focus is to improve the quality of teaching and learning through in-servicing of teachers. The main aim of the course is to develop teachers who reflect on their teaching and can respond to children's needs and support their learning so that the teachers are able to: Develop ability to reflect on all aspects of teaching and learning, understand central role of talk in learning, understand and believe in the importance of children being actively involved in their own learning, plan for collaborative learning, improve classroom management and classroom skills, identify and give attention to children with special education needs, raise awareness of

gender issues and to address them in their own teaching, develop ability to provide guidance and counselling to their pupils and help implement change in their schools.

The Structure of SbTD Programme

The school based teacher development structure clearly states its management and role played by different officers. The course targets primary school teachers who are willing to improve their own teaching and the quality of learning in primary schools. Three teachers' from every school are selected by subject panels and endorsed by whole staff. Each of these teachers referred to as Key resource teachers (KRT) specialize in Mathematics, Science or English. Their role is to go beyond improving their own teaching skills. They are required to work with their school subject panels to improve teaching in their subject areas. The teachers are selected according to set criteria, which include gender, interest and professionalism among others (MoEST, SbTD core module 2001).

Key resource teachers, lead professional development in their schools through subject panels. It is hoped that it will enable them to become more effective primary school teachers on completion of certificate course which may open chances for further professional growth and development. Initial trainers were recruited from senior education officials and teachers advisory centre tutors who were then trained to be trainers of key resource teachers. The course takes 5 months and it requires teachers to spend about six hours a week either reading through materials or carrying out suggested tasks in their classrooms. Each teacher works through core modules which cover principles of good practice through Mathematics, Science or English module. At school

level, the headteacher is required to provide day-to-day support like provision of resources. Zonal TAC tutors have been assigned responsibility of visiting teachers in schools and holding tutorials. Education officials at the districts and provincial levels monitor programme implementation to ensure that teachers gain most from the course.

The initial course was implemented in three phases. Phase 1 covered Eastern Province in the year 2001, Phase 2 covered Central, Nairobi and Rift Valley provinces in 2002 and the last phase covered Western, Nyanza, North Eastern and Coast provinces in 2003.

The core module provides the foundation of the course covering key principles in primary practice. This module prepares teachers to cover subject specific module for mathematics, science and English. The units in the core module are:-

1. Reflective practice
2. Children's learning
3. Guidance & Counseling
4. Gender issues in learning
5. Communication in the classroom
6. Educating children with special needs
7. Collaborative learning
8. Classroom management

The role of key resource teachers (Ministry of Education pamphlet on SbTD 2004).The issues in the background to this study underscore the need for effective and regular in-service teacher education programmes for curriculum innovations, implementations and evaluation. This background information does not give insights to possible constraining factors and any strategies that may be used to improve SbTD .The study aimed at bridging this gap by investigating constraints to SbTD skills application and suggesting possible solutions to these constraints.

1.2 Statement of the Problem

Standards assessment survey by Quality assurance and standards officers carried out in Siaya District in 2006, showed that a total of four hundred and eighty six (486) teachers were trained on SbTD programme in eight (8) Educational Zones between year 2003 and 2006 and out of these, two hundred and thirty (230) were observed while teaching to determine whether they were applying Sited skills in their classes. Only eighty six (86) out of two hundred and thirty (230) teachers or 37.4% were found to be using relevant SbTD methodologies (Table 1.1), while one hundred and forty four (144) or (62.6%) had abandoned new skills and reverted to old methods of teaching. (DQAS, 2006) teachers cited factors constraining to implementation of SbTD programme such as inadequate teaching/learning resources , lack of MoE support, inadequate time and poor attitude of teachers. However, these constraints had not been established since this programme was relatively new in Kenya. No studies had been carried out elsewhere to identify SbTD constraints and to suggest possible solutions to the constraints in other studies the researcher came across.. To this end, the researcher aimed at bridging the existing gap by investigating factors constraining application of SbTD skills in the classrooms and devising possible revitalization strategies.

Table 1.1 **Assessment of SbTD trained teachers in 8 selected zones in Siaya District**

Teachers Assessed Teachers found applying SbTD skills

Male	100	32	13.91 %
Female	130	54	23.47
Total	230	86	37.4 %

Source: MOE DQAS report 2006

1.3 The purpose of the Study

The general purpose of this study was to investigate factors constraining application of SbTD skills in Siaya district and to devise strategies for revitalization of the programme

1.4 The Objectives of the Study

To achieve the above stated general purpose of study the researcher used the following specific objectives:

1. To identify the level of application of recommended SbTD skills by trained teachers in classrooms.

2. To find out whether SbTD trained teachers faced challenges of inadequate teaching/learning resources, inadequate time, lack of support, lack of knowledge, lack of skills and poor attitudes.
3. To find out whether MoE Senior Education Officials TSC, and headteachers provided support to SbTD trained teachers.
4. To make recommendation for revitalization of SbTD programme in primary schools in Siaya District

1.5 Research Questions

To achieve the above stated objectives the following research questions were formulated to guide the study.

1. To what extent do SbTD trained teachers use SbTD skills in classrooms?
2. What challenges in terms of adequate time, knowledge, skills, right attitudes and teaching/learning resources do SbTD trained teachers experience in teaching?
3. What the nature and appropriateness of support provided by MoE, TSC and head teachers to SbTD trained teachers?
4. What strategies can be taken to enhance SbTD programme and revitalize the application of its recommended skills in all classes in primary schools?

1.6 Significance of the Study

The study may be significant in the following ways:

Ministry of Education, Directorate of Quality Assurance Standards and Kenya Institute of Education (KIE) may find research to provide useful information for the revitalization of the SbTD programme. The findings may help the Ministry of Education in formulation of government policy on management of TACs, appointment of personnel to run them and how to conduct in-service programme for teachers. The study may also be of importance to headteachers and teachers who are directly concerned with curriculum implementation to improve quality of education the sponsors of the programme; the DFID may find the study useful for future reference when funding such programmes.

1.7 Assumptions of the Study

The following assumptions were made on this study: -

- That SbTD in-service programme is organized along the basic principles of in-service teacher education programmes.
- That SbTD programmes contribute towards implementation of curriculum in primary schools. Trained SbTD teachers apply effective teaching methods in their teaching.
- That teachers who attend SbTD meet basic requirements of the in-service education programmes of academic standards, interests and experience.
- That Ministry of Education and Teachers Service Commission support the SbTD programmes and provide the necessary requirements.

1.8 Scope of the study

This study was conducted in March 2008 and covered 8 out of 22 educational zones in Siaya District. It involved 80 out of 486 SbTD trained teachers, 10 out of 124 headteachers, and 8 TAC tutors in the selected zones. It also included one DEO and 6 other teachers observed in live lessons .The study identified the level of application of SbTD skills among the trained teachers and investigated the constraints to the implementation of (SbTD) in-service programmes. Finally, it made recommendations for improvement of SbTD as a form of in-service teacher education programme.

1.9 Limitations

The study had certain limitations, some of which have been identified here as:-

1. It was not possible for the researcher to reach all SbTD trained teachers in Siaya District due to financial constraints and inaccessibility hence the findings were based on responses from a small sample population stated in chapter 3 . This small sample was likely to increase margin of error and affect the findings.
2. Study findings cannot be generalized for all SbTD teachers in- service programme in Kenya, since the -population in schools is not homogeneous.
3. Research instruments for collecting information were only 3 (see chapter three) and this made it impossible to identify all the variables that affect SbTD implementation.

4. Time was a limiting factor since the study was carried out in less than 4 weeks and interview schedule which requires more time could not be used to collect responses from eighty (80) SbTD trained teachers and hence information may not be comprehensive on constraints to SbTD programme

1.10 Theoretical Framework

The study was based on the theory of effective school project established by Halton, (Fullan & Hargreave, 1996). It states that a vision of an ideal school change based on “top down, bottom up” model could empower schools to take charge of their own development without feeling abandoned. The strategic directions of the Halton Board emphasizes the improvement of instructions by focusing on school based planning. This decentralization is supported by increased number of consultants who work closely with schools to meet their expressed in – service needs. A sequential collaborative process used known as Halton’s cyclical growth planning process involves the following stages:-

- Assessment of current stage of the school and student outcomes.
- Identification of priorities and plan of action
- Implementation of the plan
- Reassessment of the outcomes and evaluation of the plan to see whether it has made a positive difference.

Starting with focus on their own strengths, staffs examine the effective school characteristics in relation to particular context of their schools. The needs assessment also takes into account any regional or provincial initiatives that are likely to impact on their schools in near the future.

The ultimate goals of a school are to enhance student achievement and self-concept by developing young people who are motivated, curious and eager to learn. They should become positive citizens in society who feel good about themselves. Following the basic premise that academic achievement and self-concept are promoted in schools where attributes of effectiveness are part of the culture, the school uses the growth planning process as a vehicle to reach its final goals.

Effect of constraining factors on SbTD skills implementation

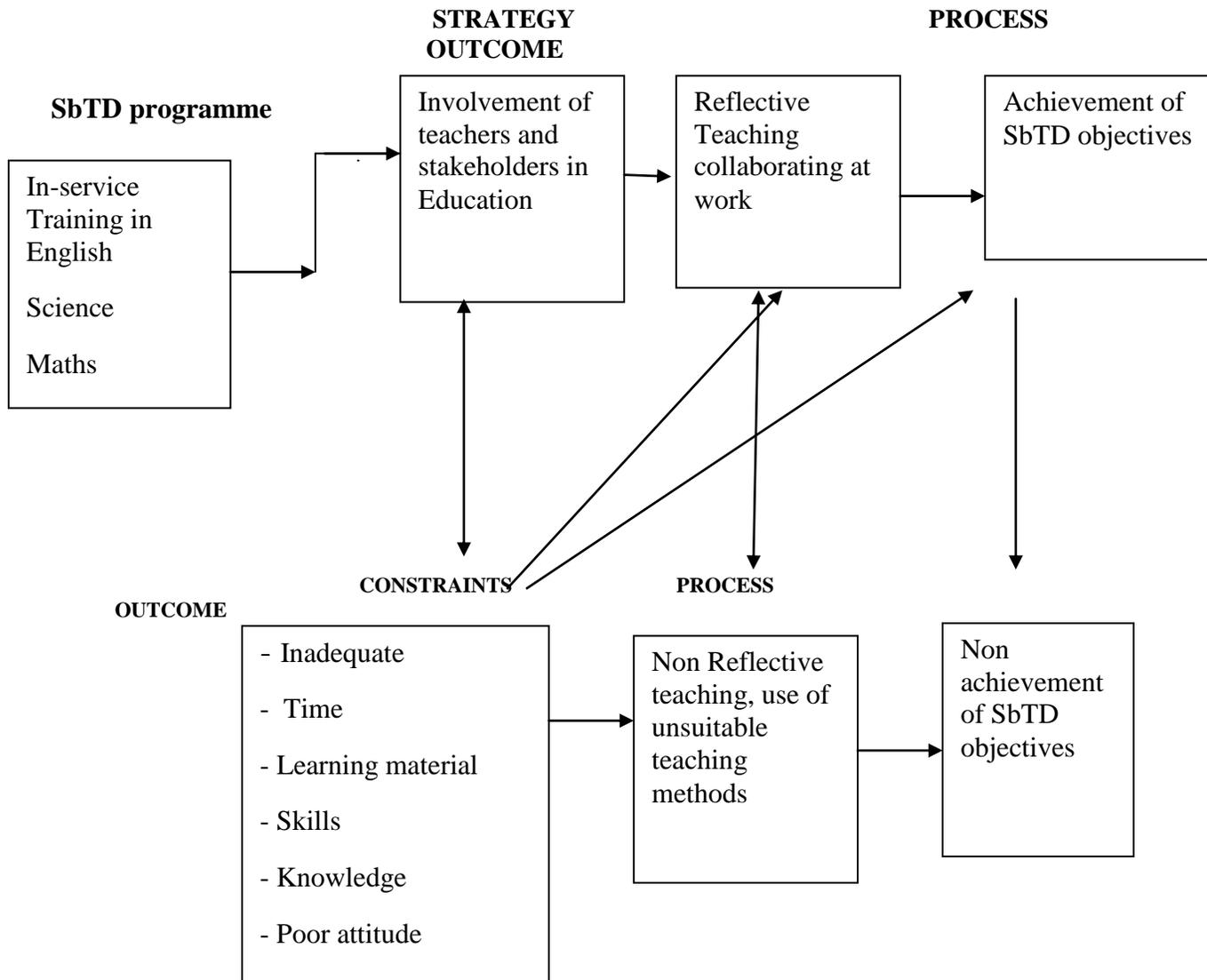


Figure 1.1 Conceptual Framework.

Source: Developed by Researcher (2008)

This conceptual framework tries to explain how constraints influence SbTD programme.

The constraints affect the strategies, process and the final achievement of the objectives.

School based teacher development occurs naturally within the setting of the school

improvement on decision making, growth plan, implementation and evaluation. The setting also produces an on going capacity for change and adoption within the school which enables the staff to process information and environmental pressures while maintaining direction to improvement plan. SbTD plays a central role in development training and support.

The conceptual framework shows how the objectives of SbTD programme aims at improving the teaching skills leading to high students' achievement and self-concept. However, the presences of constraints affect the strategies used, the process and the outcome leading to the non – achievement of SbTD objectives. In the absence of SbTD constraints, teachers collaborate in a meaningful way to develop and implement growth plans. Reflective classroom, research is carried out for professional development activity. This enhances practice as well as refinement and creation of autonomy in professional judgment, students' achievement and positive self-concept. However, constraints affect the implementation and would-be positive effects are turned to be negative effects. This implies that in the presence of factors constraining SbTD skills, the trained teachers avoid the new learnt skills and revert to their unprofessional teaching methodologies.

1.12 Operational Definition of Terms

In this study, the following words/phrases have the meanings attached against them as follows:

Assessment: Refers to both formal and informal evaluation of the programme

Collaboration: Refers to teachers in staff working together and supporting each other.

Constraints: Refers to challenges that restrict or hamper application of skills.

Implementation: Refers to a stage where ideas in school growth plan are put into action

Inset: Refers to in-service education and training carried out to improve employees' performance

Institutionalized based in-service programme: Refers to in-service programme organized within institutions of work like School based Teacher Development

Level of application of skills: Refers to application of skills in terms of percentages the target reached.

Planning: Refers to putting down or assembling ideas in both verbal and written form.

Quality Assurance and Standard Officer: This is an officer who inspects schools and gives advice for improvement.

Reflective teacher: Refers to one who takes time to look back at his/her teaching with an aim of improving delivery.

Resource: Refers to teaching learning materials

School growth plan: Refers to a blue print or written down plan to guide development.

Special Schools: refers to schools where children with disability learn in exclusive atmosphere in boarding schools.

CHAPTER TWO :

REVIEW OF RELATED LITERATURE

2.1 Introduction

The literature has been reviewed under the following sub-headings: Teachers' in-service education at global level, historical development of SbTD as a form of in-service teacher education in Kenya and other countries. The review clearly shows that no study has been carried out to identify the implementation constraints in Kenya which this study focused on in order to recommend strategies for improvement of the programme.

2.2 In-service Teacher Education at Global levels

At international level, there have been numerous studies carried out on teachers

In-service programmes conducted as institutionalized in-service courses which are

similar in nature method and objectives to SbTD. Courses related to SbTD are as follows:

Beauchamp (1997) in his study of in-service education and training in the classroom in the United Kingdom points out that any effective INSET must provide a body of knowledge. He notes in his findings that the objectives of any INSET must match the specific needs of an individual school or teacher, and the specific needs expressed by the teacher must take precedence over more global considerations. Any effective inset according to Beauchamp must actively involve the teacher and the class experiencing the concept or skill being developed. Sabar & Hashabar, (1999) in their study on school-

focused in-service training in Israel concur with Beauchamp as they state that effective INSET must derive its contents directly from the needs and interests of the school and its stakeholders (teachers, principals, parents, students, local authorities) and should be adapted to local conditions. Kountra. (1998) in his study on network and teacher training in Athens suggests that the Quality of Education is strongly linked to training of teachers. Somers and Sikorova (2002) conducted investigation on in-service education of teachers of drama in Czech Republic. They found that intensive, short INSET can make a difference to teachers' practice. While Buzzard & Jarris, (1999) in their study on optimizing INSET approaches in primary science and design in the United Kingdom noted that effective INSET requires long-term support so that teachers can build up their own support network and that it should provide an on-going practice element for teachers in their schools.

Little (1986) in an essay entitled Teacher Development and Educational Policy in Wideen,(1986,1996) postulates that professional development can be judged by the growth in knowledge, skill and judgment that teachers bring to their work in the classroom. By this standard, the test of effective development is whether teachers know more about their subject and their students and to attempt more in teaching them. Second, professional development might be judged by the contributions teachers make to a professional community and is linked to one's collective responsibilities, to one's capacity and propensity to fulfill them. By this standard, the test of effective professional development is whether experienced teachers engage collectively in examining the direction and quality of the educational enterprise beyond the classroom and whether less

experienced teachers are systematically prepared to do so. Finally, individual professional development can be witnessed in the evolution of teachers' careers. This is evidenced when teachers are developed vertically or horizontally. That is, vertical advancement in form of promotion to higher grades and horizontally through increased responsibilities in leadership positions.

Somers & Sikorova (2002) point out that teacher's professional education does not finish at the end of initial training period. They further state that most education systems institute professional development programme to initiate change in areas deemed necessary for improvement or where authority has produced new policies through the use of in-service teacher education. Bolam, (1982) argues that society is changing faster than ever and is making increasingly complex demands upon the schools. It is, therefore, important for teachers to respond positively to these pressures by attending in-service training after the initial teacher education to cope with changes. Watkin, (1973) argues that it is self-deception to believe that initial teacher training given to teachers is enough and points out that in-service teacher education is important to teachers so that they get to know changes and teaching techniques. Changes may also involve attitudes associated with team teaching or open school plan, materials that may be included are in educational and information technology, new books, planned in-service courses, their value and their limitations.

Buzzard & Jarris (1999) in their study on optimizing inset approaches in primary science and design technology in United Kingdom noted that effective inset requires long-term

support so that teachers can build up their own support networks and that it should provide an on-going practice element for teachers in their schools. Thus, a substantial amount of time apportioned is essential. Falvey & Halford (2000) in their study on the role of university in in-service education for teachers in Hongkong viewed inset as an effective way of helping the government to implement teacher education policies developed by education commissions in its various reports. However, Lacey & Porter (1998) focusing on in-service training in United Kingdom in their study on in-service education in learning difficulties and challenging behavior found that in-service teacher education is not a guarantee to change of practice. However, they did not investigate the constraints and possible solutions to improve in-service training. But, they pointed out that it is very important to involve teachers in negotiating their own course as this ensures relevance, which is beneficial to their daily work. Borger & Tillem (1993) also support this, that in-service training appears beneficial when presentations are interactive and when there is a mixture of reflection, experiential learning and problem solving. Miller, (1996) also emphasizes the importance of interaction during in-service. Miller encourages the participants to reflect both on what they are reading and on their own practice. Malcolm, (1997) in his study about the development on in-service education and training in the United Kingdom concurs with Lacey & Porter that the purpose of inset is to meet teachers' needs. The needs might be identified by the teacher or appropriate line manager or the policy maker. The context of in-service may be for personal development or upheaval of imposition of a major reform of the curriculum, of a assessment or of the system itself. Malcolm gives two approaches of in-service as school focused and School-

based. School focused refers to needs of a particular school while school based refers to institutionalized courses. In this case school based or institutionalized courses are the same as SbTD in Kenya.

2.3 In-service Teacher Education in Kenya

The history of teachers' centres in Kenya dates back to 1971 when Kenya Institute of Education science sub-centre was established at Kagumo and Siriba teachers colleges. In 1972, the inspectorate took initiative of establishing teachers' centres run by Teachers Advisory Centres (TAC) ^s tutors and the inspectorate. By 1980, most of the centres were started at district levels and in 1984 TACs were established in each educational zone in Kenya to cater for in-service needs of teachers in the zones (Shiundu & Omulando, 1992) (DQAS Newsletter 2003/2004). This was done so that as many teachers as possible could get involved in curriculum matters as well as improving their professional skills. Bishop , (1985) states that such centres can be the hub and pivot of innovations to be used for production of learning resources, social functions, library services, seminars and workshops.

The idea of teachers centres we have in Kenya springs from complex but identifiable origins in the British educational scene of the 1960s. Increasing sense of "diffuseness" in their role worried many teachers in Britain at that time, hence lack of professional identity. To compensate for this, they wanted facilities to help them acquire hard teaching skills like the use of projectors and how to teach new mathematics. McNair of (1944) proposed the idea of teacher's centres for life-long Teacher In-service Education. He

states that a good definition for teachers centre is a meeting place for at least two people concerned with learning, this view is supported by Shiundu and Omulando, (1992) and Henderson, (1978) also supports this view and makes a reference to James report of 1942 on Teacher Education and Training (Shiundu & Omulando, 1992) .

According to the report, pre-service teacher training is only one aspect of professional teacher education. Beyond that, there is continuous personal education and in-service training (Shiundu & Omulando, 1992). They further state that many teachers who trained years ago, may find problems coping with rapid dissemination of large body of knowledge, use of modern education technology, new roles and changes in curriculum content. They suggest, therefore, that in-service education programmes have to be prepared to enable teachers to cope with the changes placed upon them by the society. Oluoch (1982) postulates that teacher's task is to disseminate a body of knowledge appropriate to the age and capabilities of their pupils and maintain certain fundamental values. To be a facilitator of learning, it requires that the teachers are well-equipped with adequate skills, knowledge and attitudes for their professional work. Hence, there is need for continuous in- service teacher education.

In realization of the need for teachers to get regular in-service education while on employment, the Ministry of Education, Director of Quality Assurance and Standards has established a total of 1052 Teachers Advisory Centres (TAC) throughout Kenya each with a trained teacher to manage it as a TAC tutor in each educational zone. (DQAS

Newsletter, (2003/2004). All the TAC tutors are employed by TSC but supervised by Directorate of Quality Assurance and Standards.

2.4 Institutionalized In-service Teacher Education

This is a form of school based teacher development programme carried out in other countries. The teachers are given in-service courses through modules within their working stations and may also include face to face lectures by their trainers. The constraints of such programmes have not been studied in Kenya. It is imperative to evaluate the effectiveness of any programme initiated to improve curriculum implementation. It has also been internationally recognized that any initiative for change can only be successful when implementers internalize it and own it as their own rather than when it is being imposed on them from outside (Miles, 1984). The first thing in any preparation of teachers for implementation of new curriculum is, therefore, getting them to accept and own the need for change. Oluoch (1982) argues that, teachers should look at the particular curriculum development effort as their own and not as something being imposed from outside. Thus, they have to understand, accept and internalize the philosophy or reasoning behind the new ideas, materials and teaching methodology advocated in the new curriculum. Hawes, (1979) supports this view-point by stating that success in reforms of curriculum depends largely on the extent to which teachers' convictions and willingness are to implement these reforms.

Donough, (1982) argues that most teachers do in-service education because they are supposed to improve some aspect of the curriculum they offer. He adds that these

improvements in the curriculum must be the measure of the success of in-service activity. However, Hopkins (1986) makes distinction that INSET may be intended primarily to meet the wide professional development needs of an individual teacher and may also be intended to meet the needs of a specific system like school or teachers centres that train teachers on new materials. Hopkins gives definition of INSET as continuing education and points out that in-service training must be designed to optimize the available support and finances so as to promote changes in teacher's classroom practice. Cane (1973) suggests that an important question in any organization of an in-service education should be: "Has the teacher had an adequate education in the fundamental discipline in which he/she requires to extend professional knowledge?"

Inset is also seen as an effective mechanism for achieving uniform change across the education system with less risk for diluting intended objectives. Ajie (1981) in his study of in-service teacher education for unqualified primary school teachers in River State Nigeria concurs with Fullan (1991) that in-service education is an integral part of teacher education and development. He also points out that no pre-service teacher education can sufficiently equip any teacher for his life-long teaching career. Ajie recommends that in-service education be provided for all serving teachers as continuous programme providing teachers' education. Kimora (2000) in his study of Teacher Development management system in Uganda argues that there is need to integrate in-service and pre-service training programme so that any educational reform initiatives can be successful.

Sabar & Hashabar (1999) in their study on school-focused in-service training in Israel concurs with Beauchamp that effective inset must derive its contents directly from the needs and interest of the school and its stakeholders (teachers' principles, parents, students, local authorities) and it should be adapted to local condition. Marvin Wideen in Fullan & Hargreave (1996) states that case descriptions of successful school change now appear regularly and teachers not only swear by the programme but argue that it has changed their entire attitude toward teaching. The success in school change can now be examined and be understood. A small but growing body of literature is now existent concerning what constitutes success in a school improvement project (Davis and Thomas 1989, Fullan 1985, Little, 1986 Huberman & Miles 1986). However, Huberman & miles (1986) add that even though we may know what successful school based innovation looks like, delivery of it is another question. This concurs with findings on SbTD programme in Kenya where teachers agreed that the programme is good yet its implementation has faced challenges.

This argument acknowledges the importance of the teacher's role in school change and teacher's own development as an on-going feature of that change. Central to the argument lies teacher development within the context of a school. In the past, teachers were objects to be in-serviced: they were seen as individuals operating without a context. Little (1986) states that the need for effective implementation of school change through school based Teacher Development has brought positive changes like bottom-up reforms, identification of what motivates teachers to engage in teacher development and assisting each other to implement school improvement change.

Somers and Sikorova (2002) conducted investigation on in-service education of teachers of drama in Czech republic. After the study, they found that an intensive, short inset can make a difference to teachers practice and the learning environment in which they are found. Koutra (1998) in his study on network and teacher training in Athens suggests that the quality of education is strongly linked to training of teachers. However, he notes that pre-service training of teachers is no longer enough as teachers are faced with emerging social needs and challenges which make them to respond to the new pedagogical, scientific and technological development.

2.5 School based teacher development (SbTD)

School based teacher development (SbTD) is a programme for in-servicing teachers that provides a body of knowledge in specific school subjects. The content and objectives address the needs of stakeholders (teachers, parents, students and local community around the school). The programme is being implemented in Kenya to improve quality of teaching and learning in primary schools. The related literature review in this study clearly gives the structure, methodology, management and findings of SbTD (see Chapter one). The programme implemented through modules. The technique of training using modules enables the trainees to build their own support network with colleagues and key resource teachers (KRTs). This enables INSET to be more effective and intensive as supported by Beauchamp (1997), Sabar & Hashabar (1999), and Sommer & Sikorova (2002). The programme teachers are able to assist their colleagues in the staff to acquire

relevant skills and knowledge through staff discussions and class demonstrations. However, none of the studies investigated constraints to the programme. This programme is relatively new in Kenya and factors constraining its implementation have not been studied and documented. The researcher bridged the gap by investigating the constraints and recommending the remedial strategies to SbTD.

2.5 Summary

The foregoing literature reviews focus mainly on the importance of in-service teacher education. It also clearly shows how pre-service teacher education inadequately prepares the teachers making the need to provide in-service teacher education inevitable. Teachers also need in-service in order to keep abreast with new knowledge, societal changes and curriculum reforms this is supported by institutional based INSETS studied in other countries as well as suggestions from other researchers. However, the researcher has not come across empirical studies that have been undertaken and documented on institutionalized in-service teacher education in Kenya.

To the best of the researcher's knowledge no empirical studies have been undertaken to document constraints to institutionalized in-service teacher education programme in Kenya. To fill this gap, the researcher investigated level of SbTD skills implementation, factors constraining skill implementation and documented constraints to School-based Teacher Development (SbTD) as an on-going in-service teacher development in Kenya.

CHAPTER THREE :

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter outlines an outline of the research design and methodology that was used in this study as follows:-research design, study locale, target population and sample selection procedure, Research instruments used as well as their piloting, validity and reliability justifications. It also gives data collection, data analysis and presentation of processed data.

3.2 Research Design

Descriptive survey design was used in this study because it was the most suitable method for the type of data collected different types of respondent and descriptive information required. Data collection instruments used were: questionnaires, interviews and classroom observation schedules. Konena, (1992) emphasizes that when detailed description of existing situation intended for justification of current practices is required, survey is important since survey will provide information about variables for instance when data on opinion or attitude of people is being sought. Charles (1988) & Orodho (2003) also supports this view-point and add that qualitative research emphasizes on process is beneficial for educational research to clarify facts. Charles (1988) points out that descriptive research describes situation and condition of the present whose status we want to know. In concurrence with this, the researcher employed descriptive survey

design in the study. Since he required detailed description of existing situation of SbTD and collection of data on opinion and attitude of people involved in SbTD. This is recommended by Orodho, (2005). Document were also analysed for completeness, condensed and presented in written narratives.

3.3 Study Locale

The zones covered in the study were in urban, peri-urban and rural areas which gave a good representative sample for study population. The study was carried out in 8 educational zones out of 22 zones in Siaya District. The district was selected for the study because the researcher had a good knowledge of the district after having worked in the district as inspector of schools for 10 years. This is supported by Bless & Acholla, (1990) who said that a familiar study locale enables the researcher to avoid many challenges of accessibility. The choice of Siaya District was also prompted by a report of standards Assessment by QAS officers in the MoE which indicated that four hundred and eighty six (486) teachers were trained in SbTD skills from 2003 -2006 in the eight (8) Zones. However, out of two hundred and thirty (230) assessed after SbTD skills training only eighty six (86) (37.4%) teachers observed were practicing the skills. The rest 144(67.6%) had reverted to their old methods. It caused concern among stakeholders since a lot of resource had been used to train teachers on SbTD skills yet the outcome was not encouraging

3.4 Target Population and Sample Selection

3.4.1. Target Population

The target population is the total population identified for study. In this study it comprised 486 teachers composed of two hundred and fifty two (252) males and two hundred and thirty four (234) females trained in SbTD, (one hundred and twenty four) 124 headteachers whose schools were participating in SbTD,(eight) 8 TAC tutors in whose zones SbTD was implemented and the DEO as the overall supervisor of the programme in the district.

3.4.2 Study Sample

The Study sample is the focus population selected from the target population for study. In this study, the sample was selected by use of purposive and stratified sampling to come up with manageable study population. It was made of (eighty)80 SbTD trained teachers,(ten)10 head teachers (eight)8 TAC tutors,6 teachers whose lessons were observed and 1 DEO giving total respondents of 115.The selected sample of (eighty)80 teachers (16.5%) of (four hundred and eighty six)486 was adequate for survey study as supported by Gay (1992) who suggests that a sample between 10% and 20% of target population is adequate for survey study. Eighty(80) teachers were selected in study sample since from each of the (ten) zones, ten(10) teachers were selected comprising five (5) male and five(5) female teachers by purposive sampling.

1. Convenient sampling used to select eighty (80) teachers in schools that were accessible
2. Stratified sampling was used to select the same eighty (80) teachers according to where there schools were situated geographically i.e. in urban,peri-urban and rural
3. Purposive sampling was used to ensure both male and female teachers were selected at equal numbers of forty (40) each.

Table: 3.1: Number of SbTD trained teachers in the 8 selected zones

Zone	Male	Female	Total
Sigomre	16	17	33
Nyawara	32	29	61
Bar Ndege	47	35	82
Bar Ogongo	39	29	68
Ulongi	34	33	67
Kowet	44	28	72
Awelo	23	49	72
Mwer	17	14	24
Total	252	234	486

3.4.3 Sample selection/procedure

3.4.4 Source: Developed by Researcher (2008)

The eight (8) zones sampled for study were selected out of 22 educational zones in Siaya District by convenient method of selection based on ease of accessibility. Orodho, (2005) concurs that this method is based on researchers knowledge area of study. From the 8 zones, 80 teachers were sampled for the study ensuring that each zone was represented by 10 teachers using stratified sampling method. Ten headteachers whose schools were participating in SbTD were selected using purposive sampling to ensure that all 8 zones were represented. The 8 TAC tutors included in the study represented each of the eight zones.

3.5 Research Instruments

Orodho (2005) suggests that survey method can use one or more combination of methods for data collection such as observation, interviews and questionnaires. The researcher used three sets of instruments namely observation schedule for classroom lessons with 6 teachers whose lessons were observed, questionnaires for use with SbTD trained teachers, 10 Headteachers and 8 zonal TAC tutors and finally, interview schedule was used to gather information from the DEO to collaborate facts collected from teachers, headteachers and TAC tutors.

3.5.1 Questionnaires

Questionnaires were prepared for use with teachers, headteachers and TAC tutors. They were self made consisting of a both of open-ended and closed response type testing mainly opinions, perceptions and facts. They were administered to teachers involved in the implementation of SbTD to get information relevant to the objectives of this study. Head teachers' questionnaire consisted of 30 items while that of TAC tutors consisted of 20 items. (See appendices i, ii, and iii). The open-ended type questions gave respondents freedom to give more information while closed type facilitated consistency of certain data across respondents (e.g. the YES/NO set response.). TAC tutors and headteachers were involved in the study since they were directly concerned with implementation of the programme.

3.5.2 Piloting of Questionnaires

It was necessary to determine validity of instruments since they had not been used before. This is supported by Gay (2003) who points out that research instruments are tried out to identify un- anticipated problems. During piloting, the instruments were administered to 10 teachers in 3 schools randomly selected outside the main study population but who had trained in SbTD. The sample for piloting comprised 5 male and 5 female SbTD trained teachers teaching in upper primary classes. This was because during enrollment to SbTD in-service course, equal numbers of males and females teachers were admitted

3.5.3 Reliability of Questionnaires

Gay (2003) defines reliability as the degree to which a test consistently measures whatever it is measuring and that reliability is determined by establishing a relationship between the scores of same test administered to a total group at an interval of two weeks apart. Researcher used test-retest method to establish reliability data. Spearman Brown prophesy formula was used to compute the correlation coefficient of two sets of scores as follows:

Step 1 – developed questionnaires administered to identical respondents.

Step 11- completed questionnaires scored manually and scores analyzed.

Step 111- questionnaires administered to same respondents after two weeks.

Step 1V - Second set of scores was also analyzed manually and comparison of two sets done using the formula:

$$\begin{aligned}r_s &= 1 - \frac{6 \sum d^2}{n(n^2 - 1)} \\ &= 1 - \frac{6(4^2)}{10(100-1)} \\ &= 1 - 0.254 \\ &= 0.75\end{aligned}$$

Where r_s is reliability

r_s is correlation between first, second test results

Reliability of instruments was accepted at 0.7 level.

Using Test-retest method; the following steps were employed to determine the reliability of the questionnaires.

- a. Developed questionnaires were given to 10 identical respondents (SbTD trained teachers not included in the sample).
- b. Completed questionnaires were scored and analyzed manually.
- c. The same questionnaires were again given to the same respondents after two weeks and scored manually in the second instance.
- d. The score in (i) and (iii) above were analyzed and correlated using spearman Brown prophesy formula.

Administration and piloting of instruments took a day in each of the three schools. It was conducted in February 2008. This procedure is supported by Orodho (2005) who states that selected sample for pre-test should be similar to actual sample and should be identical to study population. Correlation of two sets of scores was done using spearman Brown prophesy formula.

3.5.4 Validity of Questionnaires

According to Lovell and Lawson (1970), Mugenda and Mugenda (1999), validity is concerned to the extent to which a technique actually measures what it intended to

measure. For the purpose of validity of instruments, discussion with consultants and interviews with the experts in the field of Quality Assurance and Standards in the Ministry of Education and guidance from the University supervisors was sought to indicate content validity of questionnaires.

Orodho (2005) argues that content validity is a fairly strong technique and researchers could make use of it for data gathering procedure such as questionnaires and interview guides. He argues that content validity is a matter of judgment by the surveyor or researcher. Borg and Gal (1974) observe, that this judgment is even better made by a team of experts to ascertain the degree to which a test measures what it purports to measure. This is also supported by Tyler (1949: 53), Alike, (1985) who stated that content validity is a matter of judgment by professionals. This view is supported by Mugenda & Mugenda (1999), Orodho (2003, 2005) and Kombo & Tromp (2006). In agreement with these observations, educational experts in the Ministry of Education and University lecturers were consulted by the researcher so as to determine content validity. Series of validation tests were carried on pilot study to ascertain validity of instrument. The instruments were examined and discussed then modified after consensus was reached between the researcher and supervisors.

3.6 Interview Schedule

Charles (1988) describes interviews as where data are obtained by talking personally with people. The researcher concurred with this view and used this method to get clarification of issues on SbTD from senior officials.

.In agreement with this, the researcher used interview schedule with District Education Official where SbTD in-service programme had been implemented. The schedule consisted of 12 items designed to seek classification on SbTD programme from Senior Education official. This was conducted by the researcher and the interview took up to 40 minutes. District official clarified information on strength, challenges and possible improvement strategies suggested.

The use of interview in survey research is supported by Orodho(2003) who points out that interview is one of the methods used in survey research for collecting data. The schedule of 12 items tested perceptions of implementers and intended beneficiaries of SbTD towards the programme, methods employed and impact of the programme on professional performance of teachers. This instrument was very useful especially in helping parties involved to clarify their views about SbTD otherwise not possible with questionnaire. District education officials are mandated to over-see programme implementation and their inclusion in the study was vital.

3.6.1 Piloting of Interview Schedule

It was necessary to determine validity of interview schedule since this had not been used before. Gay (2003) points out that research plans are tried out to identify unanticipated problems. During piloting, the instruments were administered to 2 zonal Education officials in 2 zones randomly selected outside the main study but where SbTD had been implemented. Administration and piloting of instruments took 40 minutes in each zone. The schedule tested mainly opinions, perceptions and facts of the programme.

3.6.2 Validity of Interview Schedule

According to Lovell and Lawson (1970), validity is concerned to the extent to which a technique actually measures what is intended to measure. For the purpose of validity of interview schedule, discussion with consultants and guidance from the experts in the field of Quality Assurance and Standards in the Ministry of Education and guidance from the University supervisors was sought to indicate content validity of interview schedule. The questionnaire was examined for accuracy and relevance to the objectives so as to establish content validity.

Likert (1932) argues that content validity is a fairly strong technique and researchers could make use of it for data gathering procedure such as questionnaires and interview guides. Content validity is a matter of judgement by the surveyor or researcher.

This is supported by Gay 2003 who observes that this judgement even better made by a team of experts to ascertain the degree to which a test measures what it purports to measure. This view was also supported by Tyler, (1971) & Aiken, (1971) who state that content validity is a matter of judgement by professionals. In agreement with these observations, educational experts in the Ministry of Education and University lecturers were consulted so as to determine content validity. Series of validation tests were carried on pilot study to ascertain suitability for instrument use.

3.6.3 Reliability of Interview Schedule

Gay (2003) defines reliability as the degree to which a test consistently measures whatever it is measuring and that reliability is determined by establishing a relationship between the scores of same test administered to a total group at an interval of two weeks apart. Researcher used test-retest method to collect data from first and second test which were then computed using Spearman Brown prophesy formula to compute the correlation coefficient of two sets of scores as follows:

Step 1 – developed questionnaires administered to identical respondents

Step 11- completed questionnaires scored manually and scores analyzed.

Step 111- questionnaires administered to same respondents after two weeks

Step 1V - Second set of scores was also analyzed manually and comparison of two sets done using the formula

$$r_s = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

Where r_s is reliability

r_s is correlation between first and second test results

3.7 Observation Schedule

Observation schedule was prepared and used to collect data from 6 lessons taught by SbTD teachers. Observation schedule for classroom observation consisted of 15 items to

guide the research on lesson observation. The schedule mainly looked for applications of skills in classroom. To minimize the bias that may occur during observation, the researcher self-trained during piloting stage of the research. He made two preliminary classroom visits in order to familiarize himself with the situation before the actual observation for data collection was done. Precautions were taken not to let the concerned teachers know the observation data in advance. This was to ensure validity and reliability of observation schedule.

3.7.1 Validity of Observation Schedule

According to Lovell & Lawson, (1970) validity is concerned to the extent to which a technique actually measures what is intended to measure. For the purpose of validity of observation schedule discussion with consultants and interviews with the experts in the field of Quality Assurance and Standards in the Ministry of Education and guidance from the University supervisors was sought to indicate content validity of observations schedule. Orodho (2005) argues that content validity is a fairly strong technique and researchers could make use of it for data gathering procedure such as questionnaires and interview guides. He argues that content validity is a matter of judgment by the surveyor or researcher. This view was also supported by Tyler (1971), Aikin (1985) who state that content validity is a matter of judgement by professionals. In agreement with these observations, educational experts in the Ministry of Education and University lecturers

were consulted so as to determine content validity. Series of validation tests were carried on pilot study to ascertain suitability for observation schedule used.

3.8 Data Analysis and presentation

Data were collected and analyzed both quantitatively using frequencies, means and percentages. They were presented in tables' charts and graphs. Qualitative data were collected and examined before condensing and presenting information using descriptive narratives. Bless & Achola (1990) point out that descriptions provide a true picture of setting of events that take place so as to have understanding of the context in which the study is taking place. The description was based on document analysis, field notes from interviews and observations. Data collected from questionnaires were grouped according to the research objectives. Information obtained was categorized according to different research questions. Quantitative data from closed questionnaire items were summarized using frequency distribution, means and percentages. It was presented in tables, since tables enable any desired figures to be located faster and comparison between different categories easier to make. Tables made it possible for patterns within the figures that could not easily to be seen. Quantitative data were analyzed by use of SPSS computer package to compute means, standard deviation. The information collected through interviews and class observations was examined for completeness and relevance in order to ascertain their usefulness, adequacy and credibility in answering the research questions.

Information was presented in form of frequencies, tables percentages and written in descriptive, narratives. All data collected were analyzed and raw scores were converted, (computed) into:-

(i) Frequencies (ii) Percentages (iii) Modes and mean

The computed data were organized according to objectives and presented using frequencies and percentages. The data were interpreted into information according to objectives. Responses from different subjects were compared for conclusion to be drawn and recommendations made.

**CHAPTER FOUR :
DATA PRESENTATION, ANALYSIS AND
INTERPRETATION OF FINDINGS**

4.1 Introduction

This chapter contains data presentation, analysis and interpretation according to research objectives. Data were collected and analyzed both quantitatively by use of percentages, means and frequencies and qualitative data were collected and analyzed then presented using detailed descriptive narratives. Gay (2003) points out that descriptions provide a true picture of setting of events that take place so as to have understanding of the context in which the study is taking place. The description was based on document analysis, field notes from interviews and observations. Data collected from questionnaires was grouped according to the research objectives. Information obtained was categorized according to different research objectives. Quantitative data from closed questionnaire items was summarized using frequency distribution, means and percentages. It was presented in tables, since tables enable any desired figures to be located faster and comparison between different categories easier to make. Tables made it possible for patterns within the figures that could not easily to be seen. Quantitative data were analyzed by use of SPSS computer package. The information collected through interviews and class observations was examined for completeness and relevance in order to ascertain their usefulness, adequacy and credibility in answering the research questions. Information was presented in form of frequencies, tables' percentages and written in descriptive narratives. All data collected were analyzed and raw scores were converted, (computed) into:- (i) Frequencies (ii) Percentages (iii) Modes and mean.

The objectives that guided this study are:

1. To identify level of application of skills among SbTD trained teachers.
2. To investigate factors constraining SbTD skills application and classrooms
3. To find out the nature and appropriateness of support provided to SbTD teachers by head teachers MEO and TAC.
4. To devise strategies for revitalization of SbTD in primary schools in Siaya District.

To achieve the above objectives, the researcher sought to find answers to the following research questions.

1. To what extent do SbTD trained teachers in Siaya District apply SbTD skills in classrooms?
2. What are the nature and appropriateness of teaching/learning resources, availability of time, skills, knowledge and attitude used by SbTD teachers in classrooms?
3. What support is provided to SbTD trained teachers by education officials and head teachers?
4. What strategies can be taken to revitalize SbTD programme in primary schools in Siaya District.

The study used a sample population of 80 out of 486 SbTD trained teachers in 8 out of 22 educational zones in Siaya District. The study was carried out in March 2008 and it also included 10 headteachers whose schools were involved in SbTD programmed, 6 teachers sampled for class observation 10 TAC tutors and 1 District Education Officer whose responses in questionnaires and interview respectively were used to collaborate responses from teachers under study.

Objective 1

To identify level of application of SbTD skills by SbTD trained teachers in classrooms.

The first objective tried to identify the extent to which SbTD skills were applied in classrooms by trained teachers. The researcher analyzed responses from questionnaires and collaborated the findings with the information from class observation schedule.

4.2 Level of application of SbTD skills

4.2.1 Level of understanding SbTD programme

The study established that in the sampled 8 Educational zones, all teachers who enrolled for SbTD training completed their training within one year. The actual in-service course took approximately 5 months. Majority of these teachers 45% (n=36) completed training in 2003 while 37.5% (N=30) completed training in 2006 as reflected in table 4.1.

Analysis of variation of the trained teachers in the zones showed no significant difference in the teachers gender $F = 3.72$, $df = 1$, $P > 0.05$. In all the zones, male and female teachers had undergone SbTD programme. However, a trained male teacher (Mean 51.58%) was slightly more than the female (Mean of 48.15). The total number of teachers who completed the programme in all the 8 zones was 486.

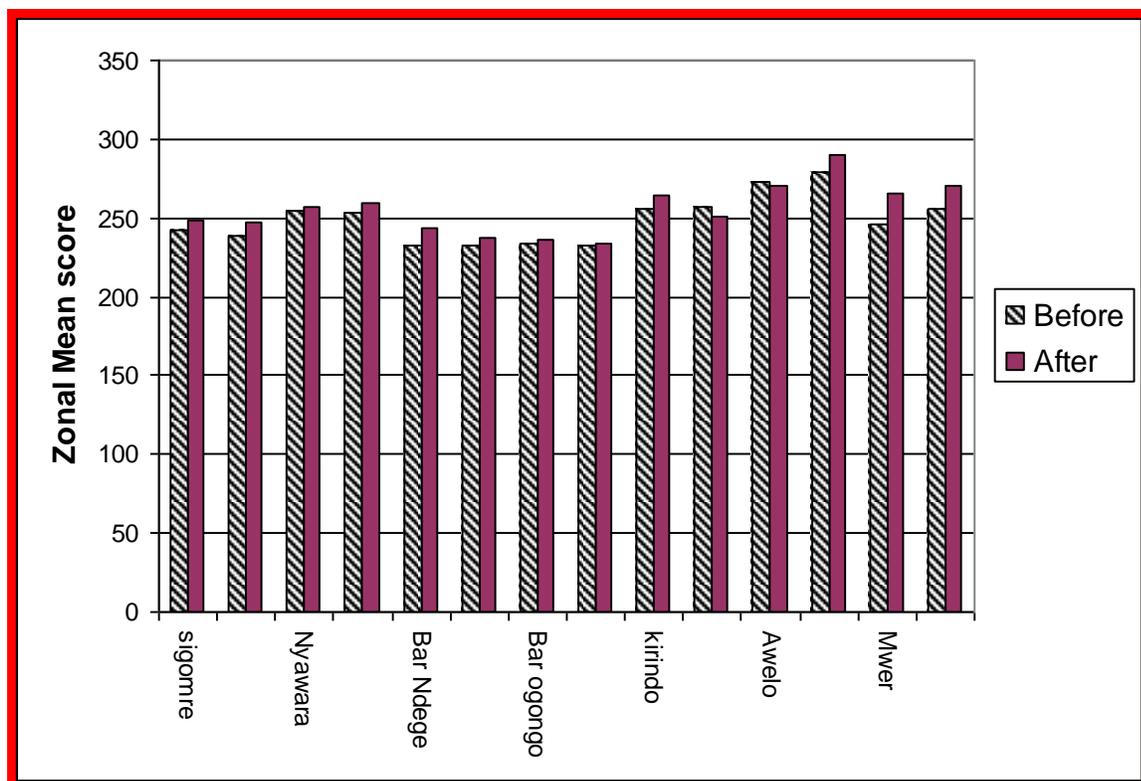


Figure 4.1 zonal mean scores before and after SbTD programme
Source: Developed by researcher (2008)

There was a significant relationship in the mean scores before and after implementation of the programme, $r = 0.904$, $df = 1$, $P < 0.05$. The schools that performed well before SbTD did the same after SbTD. There was very little improvement in mean score after SbTD training. The general discipline of the teachers who had undergone this programme was rated by head teachers as 77.78% good. In this study, it was found that, majority of the SbTD trained teachers were not going on with the methodologies learnt during the training. Some of the teachers ignored record keeping and use of schemes of work once they finished the course. Some KRTs effectively used learning aids during the lesson presentation and improved performance in learning. But most of them did not have

relevant adequate teaching/learning resource. The number of teachers still continuing with the programme was found to have reduced in comparison with the number enrolled. This implies that all those enrolled for the programme completed their training within 6 months as required. However, new enrolment did not take place. This indicated that the programme was grinding to a stop or gradually became unattractive to teachers.

The headteachers' rated performance of the schools after the introduction of SbTD at 70% good and 10% very good. However, there was no significant difference in the schools performance before and after introduction of the programme,

$$\chi^2 = 4.643, df = 1, P > 0.05.$$

The performance contradicted what teachers and headteachers stated as successful programme. The Schools seemed to perform well in the first two years after the teachers completed their training then standards started fluctuating or declining.

Table 4.1 Teachers' year of completion of SbTD programme among sample group.

Year of completion	Frequency	Percentage 100%
2003	36	45
2004	9	11.25
2005	5	6.25
2006	30	37.5
TOTAL	80	100

Source: Developed by researcher (2008)

The researcher, found that 97.5% (n=78) of teachers who joined the in-service course in 2005 completed the course in 2006 where 5 months overlapped time period. There was

strong association of the teachers' year of enrolment and the course completion, chi-square value ($\chi^2=145.047$, $df=1$, $P< 0.05$). The researcher found that because the course took a short period of 5 months, the dropout rate was nil. This means that level of application of SbTD skills was not affected by non-completion of the course.

4.2.2 Application of SbTD skills to improve teaching methods

The main reason for introduction of SbTD programme as an in-service course for primary schools in Kenya was to improve quality of teaching and learning in primary schools. It was hoped that application of SbTD skills in teaching would improve learning and hence academic achievement. The extent to which SbTD skills are applied in classroom teaching could therefore be indicated by improved teaching which resulted in improved learners' performance. The study found out that there was an improved mean score of the subjects taught by SbTD teachers after completion of training as shown in tables 4.2, 4.3 and figures 4.2 respectively.

Table 4.2 Teachers performance after completion of SbTD training

Teachers' performance	Frequency N=80	Percentage
		respondents
Very good	28	35
Good	45	56.2
Fair	7	8.8
Total	80	100

Table 4.2 shows the ratings of SbTD trained teachers by their head teachers in response to item 8.

Source: Developed by researcher (2008)

The findings showed that there was improved examination performance as one of the indicators of improved curriculum delivery. It can be deduced that some teachers who attended SbTD in-service course practised SbTD skills in the classrooms which improved their teaching and hence improved results. But at the same time some SbTD trained teachers did not apply SbTD skills to improve teaching.

Table 4.3 Subject mean before and after SbTD training

Subject	Number of teachers	Mean score before	Mean score after
		SbTD	SbTD
Mathematics	19	48.94	59.46
English	21	48.45	65.20
Science	12	49.62	56.35
Kiswahili	7	50.92	60.19
CRE	2	52.73	66.31
Social Studies	6	53.62	60.72

Source: Developed by researcher (2008)

Table 4.3 shows that subject means improved in all subjects even those not targeted by the programme like Kiswahili, CRE and Social Studies. However, since SbTD training core module deals mainly with improvement of general methods of teaching and proper management of classes, training may have contributed to better teaching in all subjects

which improved performance in the subjects. The figures were analyzed from responses of headteachers for question 10 and teachers questionnaire item number 12.

The improvement in targeted subjects of Mathematics, English and Science was significant. The most improved subject was English with a mean of 65.20 from 48.45 recording 31.4% improvement followed by Mathematics which recorded 21.5% improvement as indicated in table 4.4.

Table 4.4 Subjects Mean Score improvement after SbTD training

Subject	Mean Score % improvement
Mathematics	21.5
English	31.4
Science	13.6
Kiswahili	18.2
CRE	13.58
Social Studies	13.2

Source: Developed by researcher (2008)

The responses from zonal TAC tutors concurred with the findings that SbTD training had positive effect on curriculum delivery. The district Education Officer during an interview supported this view and stated that Quality Assurance and Standards Officers while carrying regular visits to schools had found improved use of teaching/learning materials by SbTD trained teachers. The officers also noted that the teachers were committed to record keeping and use of teaching and learning resources in their classes.

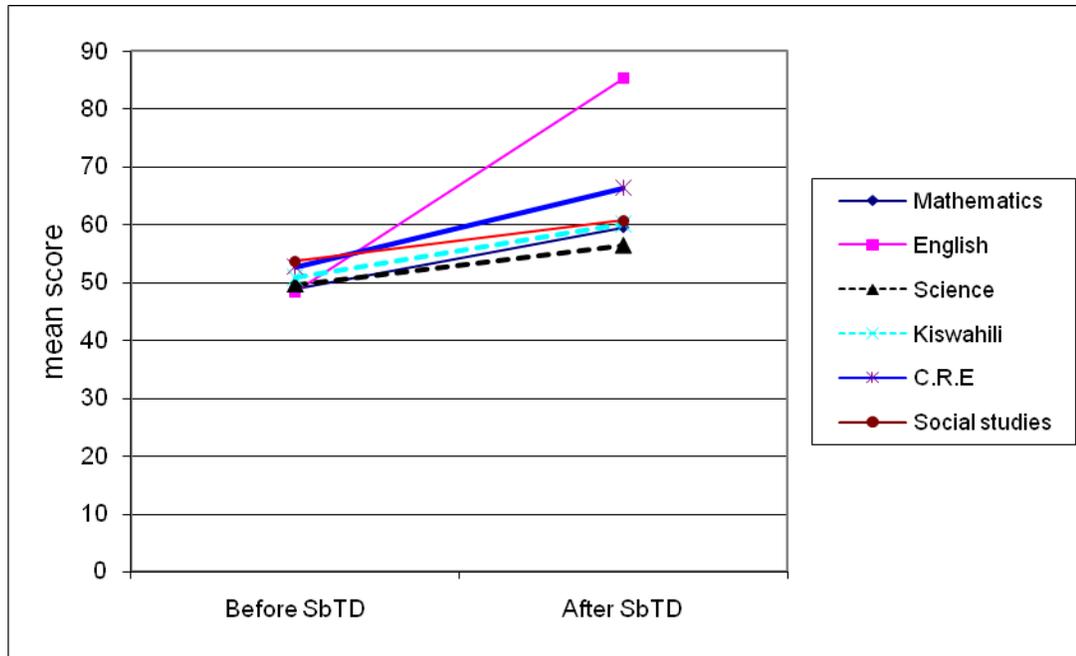


Figure 4.2: Change in mean scores after the SbTD Training

Source : Developed by researcher (2008)

The figure 4.2 shows clearly that SbTD training has positive effect on curriculum implementation. The TAC tutors in responses to questionnaires concurred that the programme has reached their zones and had changed much of the teachers' duties in schools. The figure shows that before SbTD training, the subjects' means were just around 50 and after SbTD there was significant change upwards. The analysis of responses from head teachers' questionnaires show that 70% agreed that SbTD had improved learning in some of their schools as shown in table 4.5.

Mean score of subjects taught by teachers

The headteachers rated performance of the schools after the introduction SbTD at 70% good and 10% very good. However, there was no significant difference in the schools performance before and after introduction of the programme,

$\chi^2 = 4.643$, $df = 1$, $P > 0.05$. This implied that there was no improvement brought by SbTD since the schools' performance before and after introduction of SbTD had little difference.

Table 4.5: Schools' mean scores before and after SbTD programme

	Schools sampled										
	Year	s1	s2	s3	S4	s5	s6	s7	s8	s9	s10
BEFORE	2000	-	348.02	398.85	-	199.66	290.90	256	345.36	315.02	464.15
	2001	241.73	340.37	303.43	-	237.58	223.82	702	92.32	213.24	330.26
AFTER	222002	261.38	352.04	286.04	211.96	275.36	232.6	170	309.76	246.7	335.26
	222003	251.9	327.18	291.04	199.85	256.36	232.00	206	236.63	236.36	320.27
	202004	246.8	345.09	298.25	184.82	235.42	222.42	216	239.14	243.66	328.56
	222005	256.34	335.53	315.58	217.23	269.35	261.58	123	272.45	303.79	340.62

Source: Developed by researcher (2008)

The above table shows the performance of teachers before and after attending SbTD programmed. The performance of subjects improved in the first two years after the attendance of the course after which the performance either stagnated or declined. This suggested that there may have been some constraining factors affecting SbTD skills application.

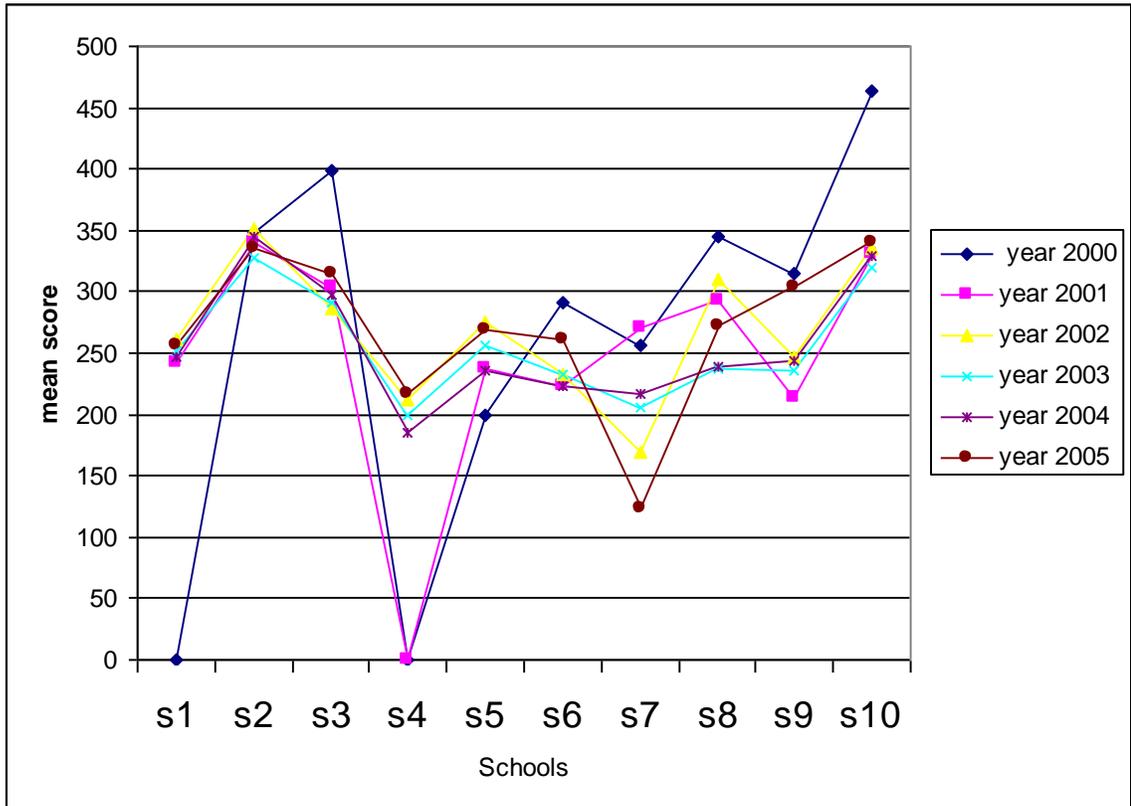


Figure 4.3: Schools mean scores in the successive years

Source: Developed by researcher (2008)

In the recent past, 80% of the headteachers agreed that SbTD had been successful while only 10% had said that it was unsuccessful. Eighty Percent (80.0%) of the headteachers agreed that SbTD programme had not reached its target population. When they compared the performance of those who had undergone SbTD to those who had not, 60.0% of the

headteachers realized it was “good”. Only 10% indicated that the programme had not changed the way teachers taught.

The zonal officers from Siaya District stated that in their zones between 4 and 200 teachers had attended the SbTD programme while, 11.4% (n = 8) of the teachers stated that between 20 and 70 teachers from their zones attended the programme. They concurred that the programme was good and had improved their teaching methods.

Teachers in this study noted that 93.8%, of SbTD programme was good, less than 7% indicated that it was bad and not improving methods of teaching.

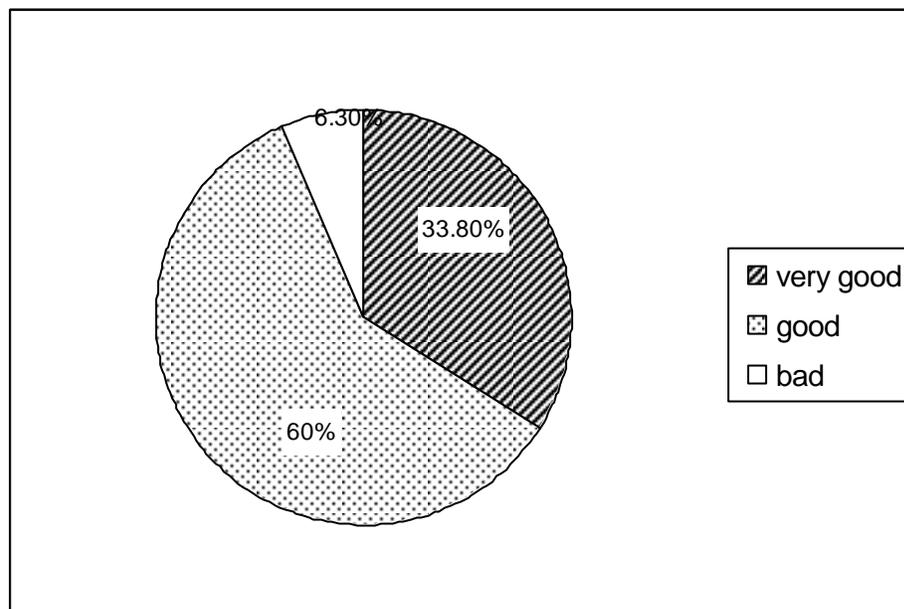


Figure 4.4: Respondents, description of SbTD programme as method of In-service education

Source: Developed by researcher (2008)

4.2.3 Level of understanding of SbTD objectives

In questionnaire items numbers 3 and 11 on understanding of SbTD, analysis of responses from teachers which aimed at finding out whether they understood objectives of SbTD showed that some of the teachers understood the course objectives as in-service training for improvement of teaching/learning but a large percentage (69%) did not understand the objectives of SbTD as shown in table 4.6.

Table 4.6 Level of understanding of SbTD Objectives by teachers

Level of understanding of SbTD objectives	Frequency	Percentage %
Very good	15	18.75
Good	10	12.50
Average	25	31.25
Poor	25	31.25
Very poor	5	6.25
Total	80	100

Source Developed by researcher (2008)

Table 4.6 shows that SbTD trained teachers who did not have good understanding of SbTD objectives as 55 out 80 (68.75%) and only 25 out of 80 (31.25%) had at least good understanding of the objectives. Lack of clear understanding of SbTD objectives could have been caused by poor induction of teachers to implement the programme or it may have been introduced in a hurry without giving teachers time to conceptualize the objectives. SbTD in-service had helped 97.6% of the teachers to be considerate to learners' needs in class. It had changed the teachers' methods of teaching and trained them to be more effective in classroom control and management. It was noted that 90.2% of the teachers found SbTD module self-explanatory and easily understood and 75.6%

concluded that the key resource teachers, KRT, had knowledge and skills, visited and assisted them in their work during training.

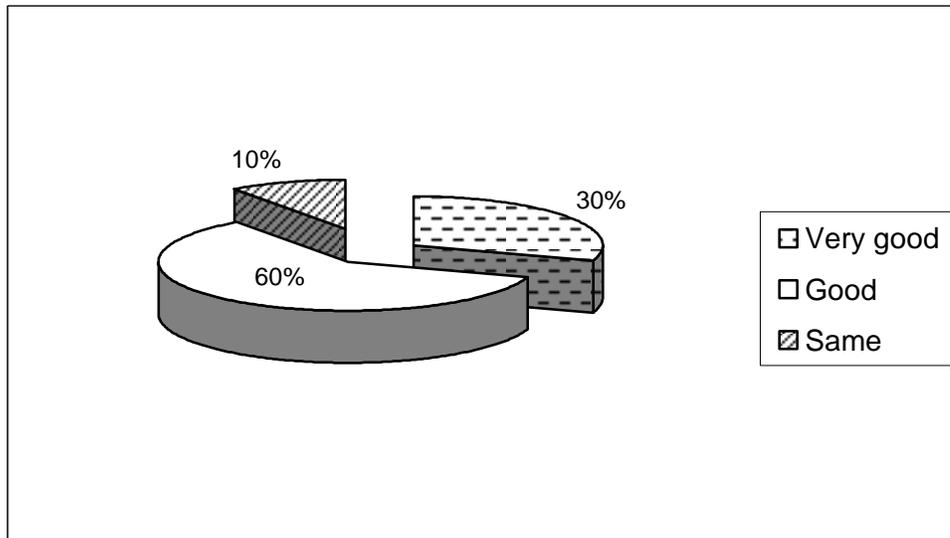


Figure 4.5: Performance of SbTD trained teachers

Developed by researcher(2008)

The DEO stated that there was need, 95.1%, to in-service teachers on how to handle other subjects not included in the SbTD schedule. All teachers in every school should undergo SbTD in-service programme. Self esteem of learners had improved and they were more focused to what they wanted to achieve mainly because of new methods of teaching. It was noted that the programme had encouraged 92.5% teaching staff to employ group teaching technique to improve performance. As a result of SbTD programme, it was noted that the academic performance of learners in schools in the district had improved.

However, most of the teachers only taught well either while undergoing training or under supervision.

Objective 2

The second objective of the study aimed at finding out whether SbTD trained teachers had adequate time, skills and adequate teaching/ learning resources as well as right attitude for implementation of the programme by attempting to answer the following research question.

4.3 Teaching/Learning Resources

4.3.1 Adequacy of Learning Resources

The researcher investigated the nature, availability and adequacy of teaching/learning resources used by teachers on SbTD programmed. Responses from items 15 and 16 of teachers' questionnaires when analyzed revealed that 74 out of 80 (92.5%) identified teaching/learning materials number one need for successful implementation of SbTD while 76 out of 80 (95%) stated that inadequate resources was the most pressing constraint to implementation of SbTD programme. This concurred with headteachers' responses to items 27 and 30 of Head teachers' Questionnaires where 7 out of 10 (70%) indicated that the major constraint to SbTD was inadequate teaching/learning resources and 8 out of 10 (80%) said that strategy number one for improvement of SbTD programmed was provision of adequate teaching/learning materials. The researcher used classroom observation schedule in a few sampled classes to observe live lessons. The main objective was to find out whether SbTD trained teachers used recommended SbTD teaching methods and resources. Much attention was paid to the following areas so as to try to establish whether teaching/learning methods and resources were:

1. Suitable in terms of safety.
2. Appropriate for the lessons taught.
3. Adequate for all learners in class.
4. Improvised or bought.
5. Durable or short-lived.

The study also tried to establish the source of the teaching /learning materials whether they were supplied by the Government or individual teachers. Checklist shown in table 4.7 below was used for the above purpose to get answers for items 5 and 13 of appendix 5.

Table 4.7 Suitability, Appropriateness and Adequacy of Teaching/learning Resources.

	Frequency	Percentage %
1. Suitable and safe for the class	3	50.00
2. Appropriate for the lesson	2	33.33
3. Adequate for all learners	1	16.66
4. Improvised by head teacher	5	83.33
5. Bought by the teacher	3	50.00
6. Supplied by Government	1	16.66

Source: Developed by researcher (2008)

The table shows that 50% of the teaching/learning aids were suitable and safe for use by the learners, but were only 16.66% adequate and were 33.33% appropriate. This means that teaching/ learning resources that the teachers used in the classrooms were 85.34% inadequate and 16.67% adequate. Most of these materials, 83.33% were improvised by the teachers themselves and the government supplied only 16.67%.

The findings show that inadequacy of teaching/learning materials and their inappropriateness was constraining implementation of SbTD programme. The fact that 50% of these materials were not suitable and safe for use by the learners is an indicator that they could not support SbTD implementation appropriately. What the government supplied through Free Primary Education was only 16.66% of the total requirements of teaching /learning resources. The findings concurred with real situation during class observation of live lessons.

4.3.2 Availability of resources and materials

Effective implementation of any programme requires adequate and appropriate human and physical resources. Innovation in education cannot be implemented successfully without availability of resources and materials. In this case resources include personnel in the programme, their qualification and experience. It also includes financial resources, time as a resource and physical facilities like buildings and fields. Materials mainly refer to reprographic materials such as books, audio-visual materials, charts, maps, laboratory equipment, chemicals used in laboratories and paraphernalia used in classrooms are teaching/learning aids to enhance teaching and learning.

Availability of adequate resources, their appropriateness and use dictate the extent to which implementation succeeds. To obtain data on availability and use of adequate and appropriate resources and reprographic materials, teachers were asked about the constraints to SbTD, materials used in classrooms and recommendations for improvements in items 8, and 16 of teachers questionnaires. The responses were analyzed and summarized as shown in tables 4.7 and 4.8

Table 4.8 SbTD constraining factors

Constraints to SbTD	Frequency	%
Inadequate materials resources	78	97.5
Inadequate time	64	80.0
Lack of support from Head teachers	56	70.0
Heavy work load	58	72.5
Poor training	36	45.0

Source: Developed by (2008)

The findings from responses to item 16 of teachers questionnaire showed that inadequate teaching/learning materials was rated 97.5% very severely and severely constraining implementation of SbTD.

4.3.3 Availability of Time

Teachers require adequate time to prepare lessons, teaching/learning materials and carry out research on new changes in curriculum apart from classroom teaching. The teachers on SbTD programme have extra work of in-servicing colleagues as key resource teachers. Given that primary school teachers teach mostly between 38-45 lessons per week as shown in table 4.9, availability of adequate time is essential for successful implementation of the new programme. Analysis of item no. 28 of headteachers questionnaire is shown on table 4.9.

Table 4.9 Mean Deviations of Subject Loads taken by Teachers

Teachers teaching	Before SbTD	After SbTD	% Deviation
	Training	Training	
	Ave. Frequency	Ave. Frequency	
English	38	45	18.4
Mathematics	32	36	12.5
Science	36	42	16.6

Source :Developed by researcher (2008)

The findings in table 4.9 show that teacher's subject workloads per week increased after they had taken SbTD training. This was confirmed by the District Education Officer during interview. The DEO claimed that increase was mainly due to increased role the teachers played in their schools as KRTs. They also took over more lessons in their subject areas from other teachers who had not attended SbTD in-service training. After taking SbTD training, DEO and headteachers regarded these teachers as specialists in their subjects and were asked to concentrate more in their areas. As such they dropped other subjects like Social Studies, Kiswahili and PE and took more lessons in English, Mathematics or Sciences. This made SbTD trained teachers end up with more lessons than before training. The findings show that added workload could be constraining factor to SbTD skills application

4.4 Supports for SbTD Programme

Objective 3:

To find whether education officials and head teachers provided support to SbTD trained teachers.

4.4.1 Education Officials support for SbTD

In order to assess the extent to which SbTD teachers received administrative and material support, teachers were asked in question 10 of teachers questionnaire to rate the support they received from the head teachers. The findings rated support from good to very bad as shown in table 4.10. The findings show that support for headteachers was rated less than 10% good-very good while support from education official was rated less than 3% good-very good.

Table 4.10 Rating of Support from Headteachers and Education Officers

Support from Head teacher	Freq.	%	Support from Education officers	Freq	%
Very good	1	10.25	Very good	00	0
Good	04	5.0	Good	02	2.5
Average	19	23.75	Average	15	18.75
Bad	30	37.5	Bad	34	42.5
Very bad	26	32.5	Very bad	29	36.25
Total	80	100	Total	80	100

Source: Developed by researcher (2008)

During interviews with the District Education Officer, the researcher found that the Government provided funds for instructional materials and general purposes to support Free Primary Education including programmes such as SbTD programme. Instructional materials include textbooks, exercise books, chalk, maps teaching/learning aids while general purpose funds are used to meet other school needs such as payment of postages, telephone services, transport, quality assurance, water bills and subsidies for support staff salaries in special schools. However, the DEO reported that government funding of Free Primary Education (FPE) is overstretched due to high enrolment and may not be adequate

for all programmes in school system. The findings from teachers; headteachers' and TAC Tutors questionnaires also showed that SbTD did not get adequate support from the Government. Table 4.11 shows what the government provides to support Free Primary Education. It is clear that there is no additional funding to take care of SbTD.

Table 4.11 Government support for School Based Teachers Development

Funds provided for	Purpose
Instructional materials	Buying Text books, Exercise books, chalk, learning aids
General purposes	Payment of water bills, electricity bills, postage, telephone, transports internal tests.

4.4.2 Attitude

4.4.3 Teachers and Headteachers Attitude Towards SbTD

Teachers' attitude towards any curriculum change or implementation matters a lot more than the innovation itself. Attitude will determine whether change is accepted or rejected. It is important for any change in school curriculum to be viewed positively by the teachers for it to succeed. To find out attitude teachers had towards SbTD, the researcher analyzed responses from teachers questionnaire item 7 and counter checked with headteachers questionnaire item number 20. The summary of the findings are shown in table 4.12.

Table 4.12 Teachers' and head teachers' attitude towards SbTD

Teachers attitude			Head teachers' attitude		
Degree	Freq	%	Degree	Freq.	%
Positive	42	52.5	Positive	5	50
Lukewarm	21	26.25	Lukewarm	2	20
Negative	17	21.25	Negative	3	30
Total	80	100	Total	10	100

Source: Developed by researcher (2008)

Table 4.12 shows that 52.5% of the teachers viewed SbTD programme positively and 50% of the headteachers also viewed it positively while only 21.25% of teachers and 30% of headteachers viewed the programmed negatively. It also shows that 26.25% and 20% of teachers and head teachers respectively were lukewarm towards SbTD.

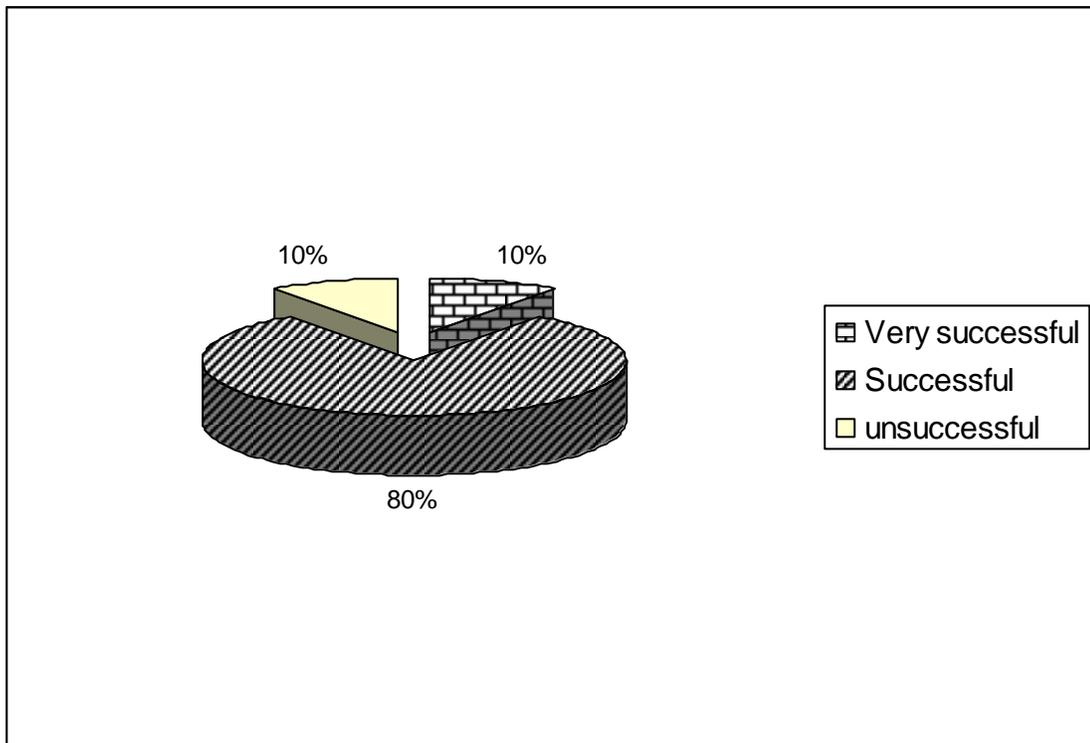


Figure 4.6: Success of SbTD in the recent past in schools

Source: Developed by researcher (2008)

Fifty percent (50%) of the headteachers agreed that, SbTD trained teachers' use adequate, suitable teaching and learning resources in their classes. This had resulted in 60%, realization of pupils' performance in subjects taught by these teachers and 70% of the headteachers agreed that, learners showed more interest in subjects handled by these teachers. When they were teaching, the headteachers realized that SbTD trained teachers provided learners with practical activities which promoted manipulative and mental skills. It was agreed that these trained teachers provide learners with interesting and challenging learning tasks, when they were conducting their duties, the SbTD teachers treated boys and girls equally. Both boys and girls worked in their classes harmoniously after being guided. The children with special needs were given attention and assisted by the teachers. However it was noted that after 2 years since leaving training 60% of SbTD trained teachers had dropped SbTD skills and reverted to their old methods of teaching and stopped giving assistance on professional matters to the fellow colleagues on SbTD. Finding show that this programme was more effective for in-service of teachers to be productive than the conventional out of class in-service programme but lacked support from Ministry of Education which resulted in 50% of SbTD trained teachers not practising the SbTD skills after completing training.

Table 4.13: Head teachers' opinion on the SbTD trained teachers

Headteachers opinion on SbTD trained Teachers	No. of Head teachers agreeing. n =10	Percentage 100%
Use adequate suitable teaching and Learning resources	6	60
Improved performance in subjects taught	7	70
Learners show more interest in subjects handled	7	70
Provide learners with practical activities	7	70
Provide learners with interesting and challenging tasks	6	60
Are more friendly and assists colleagues on professional matters	7	70
Treat both boys and girls equally	7	70
Boys and girls work in their classes harmoniously after being guided	8	80
Children with special needs are given attention and assisted	7	70
The programme is more effective for in servicing teachers to be productive than the conventional out of class in-service	7	70

Source: Developed by researcher (2008)

4.5 Strategies for revitalization of SbTD programme

Objective 4

To make recommendations for revitalization of SbTD programme in primary Schools in Siaya.

Teachers were asked to respond to item number 17 in teachers questionnaire by suggesting what should be done in order of priority to revitalize SbTD programme. The responses were summarized and presented in the table 4.14 below.

Table 4.14 Strategies for revitalization of SbTD programme

	Strategy for revitalization	Frequency	Percentage%
1	Provision of Teaching/learning materials by Government	76	95.0
2	SbTD Programme teachers to get promotion after training	79	98.75
3	Teachers to be given fewer lessons to get time for preparation	71	88.75
4	Head teachers to provide moral and administrative support	68	85.0
5	Lengthen SbTD training	52	65.0
6	Include all subjects in SbTD programme	63	78.75
7	Train all teachers on SbTD skills	59	73.75

Source : Developed by researcher (2008)

4.5.1 Provision of Teaching/learning Resources

The item gave the teachers freedom to express their opinion and what they felt could be done to improve SbTD programme. The findings show that 95% wanted the Government

to provide adequate teaching/learning resources and the reason they gave for this suggestion was that teachers spent much valuable time to improvise the materials or spent their own money to buy the resources for teaching. This was only done while they were undergoing training but abandoned when they completed training. The DEO concurred with this viewpoint during the interview with the researcher.

4.5.2 Promotion of SbTD Trained Teachers

Analysis of teachers, responses from questionnaires show that most teachers, 79 out of 80 (98.75%) sampled for the study were in favors of teachers being promoted after completion of their course, while the DEO argued that teachers had been promised promotion when they enrolled for SbTD in-service training. They said that their training which took 5 months full time combined with practical teaching was more rigorous than Proficiency Teacher Course (PTC) which the ministry uses to promote primary school teachers after only one week of training. He suggested that the certificate awarded on completion of SbTD in service should have known value and adds merit when one applied for promotion.

4.5.3 Reduction of workload for SbTD Programme Teachers.

The findings show that 71 out of 80 (88.75%) of the respondents were in favour of SbTD teachers being given fewer lessons per week so as to get adequate time for preparations and to assist colleagues as they were key resource teachers in their schools. The findings also revealed that SbTD trained teachers either took same number of lessons with non-SbTD teachers in the staff or took more lessons than their colleagues. This finding was counter checked with responses from TAC tutors and headteachers questionnaires which also suggested that teachers did not have adequate time for SbTD skills application in classrooms.

4.5.4 Provision of support to SbTD Teachers

The analysis of responses in table 4.8 on constraining factors and strategies for revitalization of SbTD skills on table 4.14 concur that SbTD programmed teachers were not getting adequate support from their headteachers and education officials. The findings show that 70% of respondents named lack of support as a constraint to SbTD skills implementation while 85% suggested that the headteachers support was necessary in revitalization of SbTD program.

4.5.5 Lengthening Time for SbTD training

Fifty two (52) out of 80 (65%) of the teachers wanted the SbTD in-service programme to take more time from the current 5 months. The argument advanced was that the 5 months was too short for syllabus content to be covered efficiently.

4.5.6 Including all Primary School Subjects in the SbTD Programme

The responses analyzed show that teachers, 78.75% of those sampled for the study wanted SbTD in-service to include all subjects on primary school curriculum while 73.5% wanted all teachers to be trained on SbTD skills. The reasons given were that when all teachers and all subjects are included in SbTD programmed, it would enhance acquisition of skills by all teachers and teachers would support each other effectively. This would in turn promote application of SbTD skills in all schools.

4.5.7 Teachers Attitude Towards SbTD Programme

Table 4.12 summarizes the findings of teachers and head teachers' attitude towards SbTD programmes. The findings show that while 52.5% of teachers and 50% of headteachers were positive towards SbTD programmed, 47.5% of teachers and 50% of headteacher were either lukewarm (ambivalent) or negative towards the programme. Teachers' understanding of SbTD objectives was analyzed as shown in table 4.6 and it was found that 55 out of 80 (68.75%) of the teachers in the study were either average, poor or very poor in understanding objectives of the programme.

CHAPTER FIVE :

DISCUSSIONS, CONCLUSIONS AND RECOMMEDATIONS

5.1 Introduction

This chapter contains discussion of study findings, conclusions drawn from the findings and recommendations made for revitalization of SbTD in-service programme according to study objectives. The purpose of this study was to investigate the factors that constrain application of SbTD skills in classrooms in primary schools in Siaya District. The objectives of this study were to:

- a) Identify the extent to which SbTD trained teachers applied the SbTD skills in classrooms.
- b) Investigate the factors constraining SbTD skills application in classrooms in Siaya District.
- c) Find out whether Ministry of Education Personnel and Headteachers support SbTD programmed.
- d) Recommend strategies for revitalization of SbTD skills application in all classes in primary schools.

To achieve the above objectives, descriptive survey design was used. The study was carried out among SbTD trained teachers in 8 educational zones in Siaya District in the month of March 2008. Questionnaires for headteachers, teachers and TAC tutors were used to collect data on opinions, perceptions and facts while an interview schedule was used to obtain collaborating information from DEO who was supervising the programme. Observation schedule were used to collect data from classroom lessons. The findings

were descriptively analyzed for qualitative data while quantitative data was analyzed by use of SPSS computer package to calculate the means and standard deviations.

5.1.1 Discussion of findings

The research findings in this chapter raised several pertinent issues. These issues are discussed systematically according to research objectives in the following headings:-

5.2 Level of Application of School based Teachers Development (SbTD) Skills

5.2.1 Clarity and Awareness of SbTD Objectives

Many studies done by researchers have noted that implementation of any innovation must be made clear to the stakeholders (Ungadi, 2002). This study found that a large percentage sixty nine (69%) of SbTD trained teachers did not understand clearly the objectives of SbTD as an in-service course. This study found that 93.8% of the teachers were aware of the objectives; however, only 31% of the teachers had clear understanding of these objectives. Simple awareness and understanding are two different things. For a successful implementation of curriculum innovation teachers should not only be aware of the objectives but should clearly understand the intended objectives and own them. The researcher investigated the level of SbTD by finding out the respondents' understanding of programme objectives, the attendance and completion of the in-service programme and the application of skills of the programme in classroom. The study found that between 14 and 200 teachers in each zone in Siaya District had attended the programme, the teachers did not understand thoroughly, the objectives of the programme though 93.8%

of the respondents rated the in-service programme as good. (Figure 4.6). This meant that teachers could not effectively implement SbTD skills if they did not clearly understand the objectives. These findings concur with Skillbeck, (1985) who states that objectives of any curriculum innovation must be well-conceived by all implementers for it to succeed. He further states that clarity of the objectives will determine the use of right learning materials and methodologies. This implies that lack of clarity of SbTD objectives may have hindered selection and use of right teaching/learning materials and methodologies and hence negatively impacting on SbTD skills application. The zonal officers agreed that the programme had reached their zones and changed much of teachers' duties in schools (tables 4.3 and 4.4). However, zonal mean scores two years before and after implementation of SbTD programme in (tables 4.3 and 4.5) showed that there was significant relationship in the mean scores before and after implementation of the programme $r=0.904, df=1, p, 0.05$. This implied that the programme had not made a positive impact on curriculum implementation by improving KCPE performance in the zones. This also confirms that teachers did not clearly understand the objectives of the programme, and had not applied some SbTD skills in their classes to improve pupils' performance. Fullan & Hargreave (1996) notes that clarity of any innovation is important in implementing any innovation. Failure to understand the objectives leads to programme failure.

5.2.2 Involvement and Support by Headteachers and Other Stakeholders

The study revealed that head teachers were not actively involved in the implementation of the programme although they were expected to supervise its implementation; they were neither trained on its skills nor clearly understood its objectives. In the questionnaire as whether SbTD had attained its objectives and made teachers better, only 50% of head teachers responded that SbTD had achieved its objectives (table 4.10). The teachers' responses also showed that support from Headteachers was minimal (table 4.10). This coupled with the fact that they did not know what teachers were doing in classrooms showed they had low understanding of the programme and their attitude towards it was not healthy for sustainability of the programme (table 4.12).

Successful implementation of an innovation does not only involve clarity and awareness of objectives but also depends on focusing and explaining the role and goals of the innovation more explicitly to all stakeholders. The extent to which SbTD objectives may have been clear to trained teachers may not be the same to other stakeholders like headteachers, other staff members and school committee members whose role and support are vital for successful implementation of curriculum. This is supported by Hawes (1979) who states that if teachers are not made aware of new changes in education, they will not be able to fulfill their expected professional roles. This concurs with Bishop (1985) proposition that it is important that all participants are clear of the project to be implemented and its objectives.

5.2.3 Attendance and Completion of SbTD In-service Course

The study found out that between 2003 and 2005 a total of 486 out of 2785 teachers had attended and completed the SbTD in-service programme in the 8 selected Education zones (table 4.1). This attendance and completion represented 17.5% of the teachers in the target zones. This shows that the programmed had not covered all the teachers in the zones. However, attendance rate among the sampled population of 80 teachers shows that in 2003, forty five (45%) attended and completed the course while 37.5% completed the course in 2006 (table 4.1). The study further found that 78 out of 80 (97.5%) of those who enrolled for the course in 2005 completed in 2006. This implied that attendance and completion rate was high. Goodlad (1987) in ecology of school renewal claimed that failure by teachers to attend to all lessons may lead to programme failure. The study findings show that SbTD failure could not have arisen from incomplete attendance of the course by teachers because attendance and completion rate was considerably high.

5.2.4 Application of SbTD Skills

The study found that there was improved examination performance in the subjects taught by SbTD trained teachers. This improved examination performance may be attributed to application of SbTD skills in teaching; however the fact that improvement was short lived after completion of training may imply that it was merely caused by euphoria of introduction of SbTD or that certain constraining factors affected long term application of skills. The study revealed that teachers dropped the application of skills in 2 years after completion of SbTD course.

Classroom observation revealed that only 40 % of trained SbTD teachers applied the skills in class teaching while a whopping 60% did not prepare and use teaching and learning aids, did not prepare their schemes of work, lesson plans and use them consistently. They did not involve learners in practical activities as recommended by SbTD programme. The skills were abstract and were not applied practically in classroom situation. This leads to programme failure as supported by (Huberman & miles, 1986) the level of application of skills was below 50%

5.3 Factors Constraining Application of SbTD Skills

In trying to investigate factors constraining application of SbTD skills by trained teachers in classes, the researcher examined availability of resources and materials for implementation of SbTD programme including time as a resource. He also investigated the attitudes of implementators such as other teachers, headteachers, key resource teachers and education officials.

Teaching/Learning Resources

Teaching and learning can only be effective when resources and material are provided. One of the objectives of successful implementation of SbTD requires the use of adequate and suitable teaching and learning resources and involving the learners in practical activities which of course require adequate teaching and learning resources. This view concurs with Borger and Tillem (1993) who stated that teaching is more beneficial when

presentations are interactive and when there is a mixture of experimental learning. In this case use of inadequate and unsuitable teaching/learning materials leads to poor teaching.

The research revealed that 60% of SbTD trained teachers used adequate teaching learning resources and again 70% provided learners with practical activities in their lessons (table 4.7) The fact that only 60% had adequate teaching and learning materials and 40% did not have them as reported by head teachers shows that many SbTD trained teachers do not prepare and use adequate and suitable teaching and learning resources.

Classroom observation revealed that the situation was worse with only 40% using adequate and suitable teaching learning materials. Most of these teachers said that neither Government nor headteachers provided them with these teaching/learning aids (tables 4.11 and 4.13). They were expected to buy them or improvise them on their own. This they found to be difficult given the large number of pupils in classes due to Free Primary Education. Parents were also reluctant to support teachers to buy teaching/learning materials arguing that primary education was free. Spot check in schools revealed that Government provided textbooks, writing materials and funds for quality assessments but not adequate for various teaching /learning materials for different subjects.

Factors Constraining Application of SbTD Skills

The study noted that 60% of teachers observed in classrooms did not have adequate and suitable teaching/learning aids contrary to requirements of SbTD objectives. The main

reasons for this, the teachers said were; inadequate time for preparation of such materials as well as inadequate time for preparation of daily lessons. While undergoing training teachers were expected to teach, prepare lessons, look for teaching aids, attend tutorials conducted by key resource teachers and do their assignment on SbTD training. Since SbTD training had not been assigned its own time table, the teachers found that they were overwhelmed with a lot of work even on completion of SbTD training. They were required to teach all their lessons improvise teaching/learning aids, assist their colleagues on professional development, and take care of emerging issues in school like taking care of children with special needs in education and ensuring that they were effective teachers in their schools. Cadwell & wood (1998); emphasize the need to update teaching resources and this required adequate time. The failure to provide teachers with adequate time undermined implementation of innovation (Cadwell & wood 1998) lack of adequate time for teachers to prepare well is a major constraint to implementation of SbTD skills.

5.3.1 Teaching /Learning Resources

The study found that majority of the teachers 74 out of 80 (92.5%) had difficulty in obtaining adequate and relevant teaching/learning resources while 95% said that inadequate resources was a major constraining factor in SbTD skills implementation. Classroom observation also showed that less than 18% of the teachers had adequate teaching/learning materials while 33.3% had appropriate teaching/learning materials.

Inadequate and inappropriate teaching/learning materials were used in classes. Such inadequacies of resources constituted barrier to the implementation of SbTD in classrooms. The appropriateness of the materials contributed to poor teaching.

Teaching and learning can only be effective when resources and materials are available, adequate and appropriate. For this reason, Cadwell & Wood (1998) emphasize the need to update teaching resources in order to allow instructional processes even without guidance of teachers.

5.3.2 Teachers Attitudes towards SbTD Training

The study found that 48% of teachers and 50% of headteachers were either lukewarm or negative about SbTD skills (tables 4.12 and 4.13). This may be contributed to their exclusion in SbTD programme training. The study also revealed that many teachers joined the programme hoping to be promoted on completion but were discouraged when they were not promoted. Jones (1988) emphasized that for an in-service training to be effective, the teachers attitude towards it must be positive. This implies that any

innovation in curriculum may not be successful unless it is positively received by the implementers (teachers). The study therefore, concurs with Jones (1988) that SbTD cannot be effective unless teachers' attitude towards it is positive. This concurs with Bolam (1982) who states that it is important for teachers to respond positively for effective curriculum change.

Teachers' attitude is important for effective implementation of an innovation. The findings of this study revealed that majority of SbTD trained teachers had negative attitude towards maximizing their SbTD skills and ability to implement the programme. They argued that the certificate they obtained after training had no value for promotion. The SbTD trained teachers were not given special consideration when teachers were being considered for promotion.

During class observation, the researcher asked teachers what they considered one most important factor that affected SbTD skills implementation and 80% said that it was lack of promotion after training. District education official also concurred with this view and suggested that SbTD attendance certificate obtained after five months of intensive work should automatically add upto 50% of the marks required to promote one to the next grade(tables 4.12,4.13,4.14). The study also revealed that SbTD training does not address the issue of attitude change. Marvin widen in Fullan & Hargreave, (1996) argues that success of innovation programme depends on positive change of attitude by teachers and other implementers. This view is supported by Fullan 1985, Little, 1986 Huberman and Miles, 1986. A hundred (100%) of the teachers who attended SbTD programme

reported that they had been promised promotion at the onset of SbTD training on completion of training.

From the above discussion, it is clear that teachers perceived their training as a step towards upward mobility and failure by the Government to recognize the SbTD certificate affects their attitude towards SbTD skills application and therefore it is a constraint to skills implementation. The fact that head teachers who are supposed to support the programme lacked training and did little or nothing to assist SbTD skills implementation, implies that they did not have suitable skills to support the programme, and this may have affect the attitude towards it. Most head teachers did not understand the magnitude of work done by SbTD trained teachers and they required them to take many lessons per week just like other teacher not involved in SbTD programme. This lack of knowledge coupled with personal attitude often resulted in conflicts between Head teachers and SbTD teachers who demanded less work load.

5.3.3 Government and Headteachers' Support for SbTD Programme

The findings on support for SbTD programmed show that headteachers do not offer adequate support since 69% were found to be offering support ranging from bad to very bad while government officials' support within the same range was 78.75% (tables 4.10 and 4.11). To counter check the findings, the teachers were asked how they obtained teaching/learning resources which should be part of support from Government and headteachers. It was noted that 95% of the teachers improvised their teaching/learning

resources. The study also found that headteachers support for lacking since SbTD trained teachers were given more lessons than their non-SbTD colleagues.

5.3.4 Availability of Time for SbTD skills implementation

Time is an important resource in implementation of any programme. Effective implementation of a curriculum is partly determined by availability of time for adequate preparation of materials and documents, collection and use of suitable learning resources an actual teaching. Teachers implementing SbTD programme do not have adequate time to prepare lessons, collect teaching/learning materials teach in class and carry out in-service training of colleagues in the school. The study revealed that lack of adequate time due increased work load constrained application of SbTD (table 4.9)

5.4 Conclusion

In conclusion, the study found that constraints affected the implementation of the programme and SbTD performed dismally as an in-service course programme. The constraints included:-

- Inadequate teaching/learning resources
- Inadequate time for effective teaching
- Negative attitude of headteachers
- Lack of supervision and follow up
- Lack of support by Ministry of Education

The constraints should be addressed to make SbTD successful.

5.5 Recommendations for Revitalization of SbTD Programme

The researcher came up with eight (8) recommendations for revitalization of SbTD programme as follows:

1. Promotion of Teachers

Teachers who undertake and complete SbTD training should be awarded certificates of known value that would help them to get promotion to next grade. This will motivate SbTD trainees and address their poor attitude and low morale towards implementation of SbTD skills.

2. Extension of Training Period

Teachers should be given adequate time to study all the SbTD documents and understand them before implementation of the programme . Some trainees missed the essential SbTD concepts as they were rushing through the training modules due to limited time. Attitude change component should be included in training manual for SbTD to address implementers' attitude towards the programme.

3. Government Sponsorship

The Government through the Ministry of Education should fully sponsor SbTD programmed so as to enable more teachers to attend the training. Self-sponsorship to the training denied some teachers the opportunity to enrol for training. The sponsorship will motivate teachers to take up the course.

4. Teaching/Learning Materials

The Ministry should provide adequate and appropriate teaching/learning materials. This will enable teachers to concentrate in teaching instead of teaching and looking for these materials or improvising inadequate and unsuitable teaching/learning materials.

5. The Ministry Enhanced Monitoring of SbTD

Internal and external monitoring and supervision of teachers on the programme should be enhanced to stamp out laxity and abandoning of SbTD skills.

6. Regular Meetings of SbTD Teachers

SbTD trained teachers should have group meetings and discussions frequently to give support to each other and solve challenges facing them. Zonal Education officers who monitor the programme should draw up programmes for meetings in their zones.

7. Training of Headteachers

Head teachers should be trained on the programme so as to acquire SbTD skills and develop positive attitude towards the programme. This would make them fully supportive to the programme.

8. Inclusion of all Subjects in SbTD Programme

To promote SbTD skills application in schools all subjects taught in primary schools should be included in the programme.

It is hoped that these recommendation will help teachers, SbTD trainers, TSC Personnel, Directorate of Quality Assurance and Standards as well as Ministry of Education policy makers to improve and facilitate School based Teacher Development (SbTD) programme as a viable alternative approach to in-service teacher training programme.

5.6 Suggestions for Further Research.

This study concentrated on establishing constraints on application of SbTD skills and solutions to these challenges. There is, therefore, need for further studies related to this programme to improve on its effectiveness. The following is suggested for further research.

The role of SbTD programme in implementation of other subjects in school curriculum such as: social studies and Kiswahili.

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APPENDIX 1

QUESTIONNAIRE FOR HEADTEACHERS

The questionnaires were administered to 10 Head teachers whose schools were involved in SbTD training.

Choose the correct answer and tick in the box against each item or give short answers in questions 1 – 14.

1. Have teachers in your school enrolled in SbTD programme?

Yes No

2. When did they enroll if the answer is yes? _____

3. If they have not enrolled, why have they not?

4. How many teachers are there in your school? _____

5. How many of the teachers have completed the SbTD programme?

6. How many are currently on SbTD programme? _____

7. How many have not enrolled for SbTD programme? _____

8. SbTD programme has not reached most of its target population.

SA A DA SDA

KEY:: SA =strongly agree A=agree DA= disagree SDA=strongly disagree

. How would you compare performance of teachers who have undergone SbTD to those who have not?

Very Good Good Fair Poor

Very Poor

10 . Please provide random mean scores of subjects targeted by two of your teachers who have undergone or are undergoing SbTD training programme.

TEACHER	SUBJECT(S)	MEANS CORE
Teacher 1	1	
	2	
Teacher 2		

11. Please provide random mean scores of subjects taught by any of your teachers who have not undergone SbTD.

12. How is performance of your school after and before the introduction of SbTD?

I. Before
Very Good 1 Good 2 Fair 3
Poor 4 Very Poor 5

II. After
Very Good 1 Good 2 Fair 3
Poor 4 Very Poor 5

13. Provide mean scores of your school's performance in KCPE national exams for the past six years

a) 2001

b) 2002

- c) 2003
- d) 2004
- e) 2005
- f) 2006

14. How successful would you say SbTD has been in the resent past?

Very successful successful No difference

Unsuccessful Very unsuccessful

What is your opinion about the following statements? Indicate your response by a tick in appropriate box using the key below for questions 15 – 24

KEY

- 1 – Strongly Agree (SA)
- 2 – Agree(A)
- 3 – Neutral (N)
- 4 – Disagree (D)
- 5 – Strongly Disagree (SD)

		SA	A	N	D	SD
		1	2	3	4	5
15	SbTD trained teachers use adequate, suitable teaching/ learning resources in their classes					
16	Pupils performance in subjects taught by SbTD trained in-service teachers show improvement in learners achievement					
17	Learners show more interest in subjects handled by SbTD trained teachers					
18	Teachers who have undergone SbTD training provide learners with practical activities which promote manipulative and mental skills.					
19	SbTD trained teachers have adequate time to prepare lessons					
20	Teachers who have attended SbTD programmes are more friendly and assist colleagues on professional matters					
21	SbTD graduates treat both boys and girls equally					

22	Both boys and girls work in their classes harmoniously after being guided by SbTD learning methods.					
23	Children with special needs are given attention and assisted by SbTD trained teachers					
24	SbTD in-service programme is more effective for in-servicing teachers to be productive than the conventional out of class in-service programmes.					

Please give your brief answers to questions in number 25 – 30

25. How do you support your teachers on SbTD programmed?

26. What in your opinion are the strengths in meeting the training needs of teachers in your school?

27. What in your opinion are the Constraints in meeting the training needs of teachers in your school?

28. How many lessons per week in English, Maths, and Science are taken by teachers in your school give answer in form of a table in the blank space below.

29. What is the general attitude of the learners towards the subjects taught using SbTD recommended pendagogies?

30. What strategies would you recommend for improvement of SbTD in-service programs?

APPENDIX 2

QUESTIONNAIRE FOR TEACHERS INVOLVED IN SBTD

The questionnaire was administered to 80 SbTD trained teachers.

Please accurately answer the following questions by either ticking the correct box or giving brief answers in the spaces.

1. Have you completed SbTD training programme?

Yes No

2. If your answer in (1) above is yes, when did you complete SbTD objectives?

3. Briefly summarize your understanding of SbTD Objectives?

4. Have you assisted another teacher to join SbTD programme?

Yes No

5. Give reason for your answer in (4) above?

6. When did you enroll into SbTD programme? Tick the right box

2001	2002	2003	2004	2005
<input type="checkbox"/>				

7. Do you enjoy the SbTD programme as a form of In-service Teacher Education?

Yes No

8. If your answer is yes in (7) above, what would you say are

I. Strengths of the programmed in terms of Teaching/Learning resources Time and Skills? _____

II. Constraints to the Programmed in terms of time and Teaching/learning resources

9. How many teachers in your zone do you know that have enrolled for SbTD programme?

10. In your opinion, how would you rate support you get from your Head teachers and Education officials.

VG G A B VB

VG=Very Good G= Good A=Average B=Bad V.B= Very Bad

11. How would you rate your understanding of SbTD programmed?

Very Good Good Same

Poor very poor

12. Please provide randomly, mean score of any two subjects you have been teaching before and after enrolling for SbTD programme.

SUBJECT	MEANS CORE	MEANS CORE
	Before SbTD	After SbTD
I		

II	Before SbTD	After SbTD

13. In your opinion has SbTD programme improved the quality of your delivery?

Yes No

14. Give indicators of your answer above.

15. What would you identify as the training needs of teachers that have not been captured in SbTD programme? _____

16. What are some of the constraints that you have encountered while trying to pursue SbTD programme? _____

17. Identify measures you feel/think should be taken to make SbTD programme more effective than it is currently. Give your list in order of priority in a separate paper and your reason for the same.

In the following numbers 18 – 30, please give your answer by ticking the appropriate box

18. SbTD in-service has helped me more to be considerate to learners needs in class

True False

19. Sometimes learners require extra remedial teaching and there is nothing I can do to help them

Positive Luke warm False

20. Which of the following would you say represent your Head teachers' attitude towards SbTD?

True

False

21. There is no change in my teaching methods before and after completing SbTD in-service programme

True

False

22. The SbTD training modules are self explanatory and are easily understood

True

False

23. The key resources teachers, KRT visited and assisted me in my work during training

True

False

24. The key resources teachers lacked knowledge and skills to assist in-service teachers

True

false

25. There is need to in-service teachers on how to handle other subjects not included in the SbTD schedule

True

False

26. SbTD in-service is a waste of time and resources since it does not improve curriculum implementation

True

False

27. SbTD trained teachers lack adequate time to implement the programmed effectively.

True

False

28. SbTD in-service has improved academic performance of learners in schools in the District

True

False

29. Self esteem of learners have improved and they are more focused to what they want to achieve mainly because of new methods of teaching

True

False

30. SbTD has encouraged teaching staff to employ group teaching techniques to improve performance

True

False

APPENDIX 3

QUESTIONNAIRE FOR ZONAL TEACHERS ADVISORY CENTER TUTORS

The questionnaire was administered to 8 zonal T.A.C. Tutors involved SbTD programme. Please answer the following questions by either putting a tick in appropriate box or by completing the blank spaces provided below

1. Name of Zone _____

2. Total number of teachers in the Zone _____

3. Has SbTD programme, been implemented in your zone?

Yes No

4. If your answer in (3) above is yes, when was it implemented?

5. If SbTD programme has not been implemented successfully in your area, what are the reasons?

6. If SbTD has been implemented in your zone, how many teachers have:

a) Enrolled for the programme

Males _____ Females _____

b) Completed the programme

Males _____ Females _____

c) Are continuing with the programme?

Males _____ Females _____

Please respond to the statement below appropriately

7. SbTD programme has not achieved its objectives

Key: SA – Strongly Agree, A- Agree, D- Disagree, SDA- Strongly disagree

SA A D SDA NONE

8. SbTD programme has changed much of the teachers' duties in schools

SA A D SDA NONE

9. How would you compare the performance of teachers who have enrolled/completed SbTD programme against their previous performance?

Very Good Good Fair
Poor very Poor

10. How successful is the implementation of SbTD in your zone?

Very successful successful fairly successful
Unsuccessful Very unsuccessful

11. What are the
12. Indicators of your observation in (10) above?

13. How relevant is SbTD programme in meeting both training and professional needs of teachers in your zone.

Very relevant Relevant Fairly relevant
Irrelevant Very irrelevant

14. What are the indicators/reasons for your answer above?

15. What in your opinion are:

i) Strengths of SbTD programme?

ii) Constraints to SbTD programme?

16. What constraints have your office experienced/ experiencing in the implementation of SbTD programmed in terms of staffing of schools by TSC and provision of teaching/learning resources?

17. Among male and female teachers, who are more confident in implementing SbTD strategies

Male Female Both

18. Please show your zonal means score at K.C.P.E in the blank spaces for two years before and after implementation of SbTD programme

Before SbTD			After SbTD		
Year	Subject	Mean	Year	Subject	Mean
<input type="text"/>					
Year	Subject	Mean	Year	Subject	Mean
<input type="text"/>					

19. What is the general discipline of teachers who have undergone SbTD in-service as compared to those who have not

Very good Good Average Bad Very bad

19. Comment briefly on adherence to use of schemes of work, lesson plans and teaching aids in class among SbTD trained teachers

20. What measures would you recommend in order to make SbTD more viable than it is currently?

APPENDIX 4

INTERVIEW GUIDE FOR USE WITH DISTRICT EDUCATION OFFICIALS

The question guide was used with District Education Officer in-charge of SbTD programme in the District

This interview guide is to be used by the researcher to get answers from education officers at the district level

1. What is the total number of teachers in your District
2. Has SbTD been implemented in your District?
3. When was it implemented?
4. How many teachers by gender have:
 - i) Enrolled for SbTD programme?
 - ii) Completed SbTD programme?
 - iii) Not-enrolled for SbTD programme?
5. Who is responsible for implementation and dissemination of SbTD programme
6. What is the general attitude of teachers towards the programme? What is the attitude of your field officers about the programme? Why so ?
7. How does the Government support SbTD programmed.
8. What are some of the Strengths of SbTD programme?
9. What are some of the weakness of SbTD programme?
10. Is the programme adequately meeting the training needs of teachers in your district?
11. What are some of the constraints that are experienced in effort to implement SbTD programme in your district?
12. What measures do you think should be taken to make SbTD more viable and reliable?

APPENDIX 5

Classroom observation schedule for use by the researcher in a few sampled classes to observe SbTD trained teachers in classrooms

The observation schedule was used to observe 6 lessons taught by SbTD trained teachers

Part A Name of the teacher _____ Gender _____

Present grade _____ Teaching experience _____

When trained with SbTD programme _____

Subjects taught _____ Classes taught _____

Zone _____ District _____

Part B 1. Which Subject is being taught _____

1. Is the subject schemed and planned? if not what is the reason

2. Does the teacher plan all his/her lessons regularly?
3. What is the teaching load of the teacher?
4. Is the topic chosen suitable?
5. Are there appropriate and adequate teaching/learning resources? Who provides resources?
6. List down the teaching methodologies being used by the teacher?
7. Are all the methods suitable/SbTD skills recommended
8. Are learners actively involved in learning?
9. Does the teacher spread questions to all learners and to both genders in class?
10. What nature were the learners' activities? Did all pupils participate in the activities? Was the lesson activities oriented or not?
11. How did the teacher end his/her lessons
12. Are there learners with special needs in class? If yes, how are they provided for? How did the teacher provide for SNE learners?

13. In your opinion what were the strengths/constraints of the lesson?
14. How could the lesson have been made better?
15. Compare and comment on learners performance in the subject being taught and the previous records being held on continuous assessment of the same learner