**THE EFFECTIVENESS OF SCHOOL-BASED IN-SERVICE TRAINING FOR PRIMARY SCHOOL TEACHERS IN ENHANCING TEACHER PROFESSIONAL DEVELOPMENT: A CASE STUDY OF BAGAMOYO DISTRICT IN TANZANIA**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN ADMINISTRATION, PLANNING AND POLICY STUDIES OF THE OPEN UNIVERSITY OF TANZANIA**

**2014**

# CERTIFICATION

The undersigned certifies that he had read and hereby recommends for acceptance by the Open University of Tanzania a dissertation titled: *“****The Effectiveness of School-Based In-Service Training for Primary School Teachers (INSET-PST) in Enhancing Teacher Professional Development: A Case study of Bagamoyo District”*** in partial fulfillment of the requirements for the degree of Master of Education in Administration, Planning and Policy Studies of Open University of Tanzania.

………………………

Dr. Andrew Binde

(Supervisor)

………………………..…….

Date

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# DECLARATION

I, **Tassilo Benno Millinga,** hereby declare that this dissertation is my own orginal work and that is has not been presented and will not be presented to any university or any institution of learning for a similar or any other award.

………………………………………

Signature

………………………………………

Date

# DEDICATION

This dissertation is dedicated to my beloved wife Alice Romwald Nkwera and my children Sabina, Irene and Denis. Their devotion, encouragement and deep understanding on the importance of education have made my long time dream to become a reality.

#

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# ABSTRACT

This study was conducted to find out the effectiveness of school-based inservice training for primary school teachers in enhancing Teacher Professional Development (TPD) in Bagamoyo District of Tanzania. The study used both qualitative and quantitative approaches which involved the use of questionnaires, in-depth interviews, focussed group discussions, class observation and documentary analysis. The study involved a total of 81 respondents including 75 teachers, 05 head teachers and 01 District education officer. Five primary schools out of 21 were sampled. The findings of the study have revealed that teachers were motivated by several factors to participate in professional development activities and these led by need to improve knowledge and possibility of sharing and exchanging views with others (M = 3.22 & M = 3.12 respectively) as significant for many teachers to participate in professional development activities. Regarding teacher-pupils interaction this was found significant in some factors like *‘Making effective use of chalk/blackboard* (Mean=4.0);  *Arranges classroom to facilitate learning* (Mean = 4.0) and *Encouraging pupils to ask questions* (Mean =4.0)which unlike others, encouraged much interaction between teacher and pupils hence improvement in learning. Furthermore significant difference was observed for teachers who attended school-based inservice training (M= 29.9, SD = 5.5), and their counterpart who did not attend inservice training (M= 20.2, SD=7.4); t (48) = 3.61, *p* = .001 (two tailed) in reporting improvement in teaching/ learning methodology implicating the signifance of inservice training to teachers. The study recommended that workshops, seminars and short courses should be promoted and linked to teachers’ professional development.

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# LIST OF ABBREVIATIONS AND ACRONYMS

CPD Continuous Professional Development

DED District Executive Director

DEO District Education Officer

ESDP Education Sector Development Programme

ETP Education Training Policy

ICT Information and Communications Technology

INSET In service Training

ITE Initial Teacher Education

LCDs Least Developed Countries

MoEC Ministry of Education and Culture

MoEVT Ministry of Education and Vocational Training

MWAKEM *Mafunzo ya Walimu Kazini Elimu ya Msingi*

MTUU *Mpango wa Tanzania na Unicef-Unesco wa kuendeleza Elimu ya Msingi Tanzania*

NGOs Non-Governmental Organizations

OECD Organisation for Economic Cooperation and Development

OUT Open University of Tanzania

PCK Pedagogical Content Knowledge

PD Professional Development

PMO-RALG Prime Minister’s Office-Regional Administration and Local Government

PRESET Pre-Service Training

PST Primary School Teacher

SPSS Statistical Package for Social Sciences

TDMS Teacher Development and Management Strategy

TPD Teacher Professional Development

UNICEF United Nations Children’s International Education Fund

URT United Republic of Tanzania

USA United States of America

#

# CHAPTER ONE

## **1.0 BACKGROUND AND STUDY OVERVIEW**

# 1.1 Introduction

The intention of this study was to investigate the effectiveness of school-based in-service training (INSET) for primary school teachers (PST) in enhancing teacher professional development (TPD) in Bagamoyo District. This chapter focuses on the background and statement of the problem, objectives, research questions as well as significance of the study. It also contained operational definition of the key terms, scope and delimitation of the study.

# 1.2 Background to the Problem

Professional development for primary school teachers is an area of concern among teachers, teacher education-related Non-Governmental Organizations (NGOs), educational planners as well as policy makers (MoEVT, 2008; Craig, 1998). The school-based INSET implemented by seven Local Government Authorities in 2009 in Tanzania was expected to address the shortcomings related to Teachers’ Professional Development (TPD). These shortcomings included teachers’ lack of continuous professional development opportunities, pedagogical ability to promote teaching and learning and the inability to improvise and use teaching and learning aids in lesson presentation. TPD is an area that provokes debates in terms of means and strategies. It has been reported that professional development, whether within or outside Tanzania, is an area of concern among teachers (Anangisye, 2008; Komba, 2008; MoEVT, 2008; Craig, 1998; Ishumi, 1998).

The issue of TPD and the need to establish strategies to support teachers in career growth is not unique to Tanzania. Rather, it is a global issue. Research shows thatglobally, some governments, voluntary agencies, NGOs and individuals commit a significant amount of resources towards teacher professional development (Anganisye, 2008). It may be logical to argue that teachers’ professional development starts before and after qualification from a teacher education institution. This argument is supported by research done by Craig, (1998) and Ishumi (1988).

Countries like Netherlands, Singapore and Sweden require at least 100 hours of teacher professional development for every teacher per year. This is in addition to the regularly scheduled time for common planning and other teacher collaborations (Barber & Mourshed, 2007). It is possible to argue that the emphasis on professional development opportunities requires significant investment on the part of ministries of education.

Futhermore, studies from other countries on teacher development indicate that more than 85 percent of the schools in Belgium, Denmark, Finland, Hungary, Ireland, Norway, Sweden, and Switzerland provide time for professional development as part of teachers’ average work day or week (OECD, 2004). It is for this reason that when time for professional development is built into the teachers’ schedules, their learning activities can be ongoing and sustained and can focus on a particular issue or problem over time (Koda, 2008; Kaponda, 2007).

Similary, Cohen *et al.* (1996) and Fullan (1992) acknowledge the fact that teachers begin their career growth well before the point of entry to the teacher education programme because of the prior knowledge and experience accumulated. Indeed, it is broadly accepted that teachers’ professional development is a continuous process and goes beyond the post-graduation period.

Professionalism in whatever area of specialization is a product of education and re-education as in the case of the school-based INSET (Osaki, 2007; Hoyle, 1980; Johnson, 1972). Teachers, who engage in professional development, share a common purpose of enhancing their ability to add value in the work they do. This is to say, the heart of professional development is the individual's interest in lifelong learning and in increasing one’s skills and knowledge. These have their roots in both formal and informal learning experiences throughout one's career from pre- service teacher education to retirement (Fullan, 1992). In some other continents like USA, awell designed professional development program is still relatively rare, and few of the nation’s teachers have access to regular opportunities for intensive learning (Darling-Hammond, 2009).

Teachers, at whatever level and irrespective of their geographical location, are lifelong learners (Kitta, 2004). He further argues that TPD contributes to pupils’ academic performance, and that professional development occurs in the context of lifelong learning with experience over a long period of time. Kitta further maintains that TPD contributes to teachers’ knowledge growth and the beliefs about positive attitudes towards teaching and learning.

In Tanzania, the INSET-PST implemented in seven local government authorities was expected to address the shortcomings related to TPD. These shortcomings included: teachers’ lack of continuous professional development opportunities, pedagogical ability to promote teaching and learning, and inability to improvise and use teaching and learning aids in lesson presentation to mention only a few (Hardman, 2010). TPD is an area that provokes debates in -terms of means and strategies. It has been reported that professional development whether within or outside Tanzania is an area of concern among teachers (Anangisye, 2008; Komba, 2008; MoEVT, 2008; Craig, 1998; Ishumi, 1988).

The quality of professional development programme for teachers, particularly in the context of school-based INSET, intends to address deficiencies related to improving their teaching methodologies, enhancing teachers’ knowledge in some subjects like Mathematics and English in order to make a difference to the learning experiences of pupils. As argued elsewhere, this kind of initiative is critical in improving and sustaining the quality of teaching/learning which in turn can raise pupils’ academic performance in the schools (Koda, 2008; Smith, 2007; Verspoor, 2003; Ackers, 2001; Craig, 1998; Rogers, 1961).

Similarly, a baseline study on classroom processes in the primary schools in Tanzania that was conducted in 2009 by MoEVT in collaboration with UNICEF found that, classroom pedagogy was often made up of rote learning and memorization rather than the acquisition of skills and the development of understanding in terms of higher order cognitive abilities (Hardman, 2010). This situation leads to poor learning outcomes, grade repetition and pupil dropping out of school.

On the basis of the objectives of school-based INSET-PST, this initiative focuses on capacity development for teachers in Mathematics, English and Pedagogy. Studies reviewing similar initiatives had been the ‘O-A’ level syllabi revision, commonly known as upgrading for teachers, and conducting seminars and workshops on areas of common interest. This was the reason for shifting from paper qualification to the meaningfull teacher professional development. This view is supported by Baynit (2011) who suggests that since most of the Mathematics teachers are not up to date, the government should establish in-service courses for Mathematics teachers so as to enhance their knowledge and skills.

The down side of TPD is an issue worth pursuing. Studies on teacher quality show that weaknesses in teachers pedagogical content knowledge (PCK) and classroom practice undermine effective pupil learning and achievement (Marwa, 2009; Mirambo, 2007; Mbwambo, 2005). It is widely assumed that initial teacher education (ITE) and continuing professional development (CPD) make a difference to teachers’ pedagogic knowledge and skills, which in turn is reflected in enhanced pupil learning outcomes (Liliane, 2007).

Studies on improving teaching methodologies in primary schools in different parts of the world have shown that teachers often rely on a single method made up of teacher and chalk talk in promoting the transmission of knowledge (Hardman, 2010; Anangisye, 2008). Such interaction often takes the form of lengthy recitations comprising of teacher explanation and questions and brief answers often chorused by the whole class or by individual pupils. TPD initiatives are not free from other challenges which are the traditional and popular workshops, training of trainees, guest speakers and the top-down seminars. All these have therefore provided neither the content nor opportunities which teachers may view as essential for their professional growth (Mirambo, 2007; Mbwambo, 2005).

The intention of INSET programmes is to develop teachers so as to equip them with appropriate and relevant new knowledge and skills that are expected to enable them to cope with development changes in general and curricular changes in particular (Chediel, Sekwao & Kirumba, 2000). Some of these in-service training programmes include those which involved teachers in the primary education sector. For example, between the years 2000 and 2011 several different in-service courses had been conducted throughout the country by MoEVT in collaboration with UNICEF and other international organizations.

In Tanzania, several INSET programmes have been initiated in order to improve teaching methodologies among teachers, primarily using master teachers, teacher educators and school inspectors. Among the major professional development initiations include the Tanzania UNICEF-UNESCO Primary Education Reform Programme (MoEVT, 2001 & MOEC, 1976) famously known in Swahili language as *Mpango wa Tanzania na UNICEF-UNESCO wa kuendeleza Elimu ya Msingi Tanzania* (MTUU). The latest programme is the school-based INSET-PST famous in Swahili language as Mafunzo ya Walimu Kazini Elimu ya Msingi (MWAKEM) whose objectives are to improve the quality of teachers, that is, ensuring CPD for individual teachers and establishing collegiality for a group of teachers (MoEVT, 2010). This is done for individual teachers so as to improve their competencies (knowledge, skills and attitude) in the instructional planning skills, teaching methodology and delivery of the subject matter as well as classroom organization and management. It is also done in groups so as to encourage collaboration and cooperation among them, inspire teachers to engage in collaborative activities, improve on the quality of their lessons in their daily teaching, and to establish collegiality among teachers (MoEVT, 2010). It has been reported that prior to this initiative one had to work hard to see these qualities among primary school teachers.

Moreover, the main objectives of the school-based approach to TPD are to ensure systematic in-service training and professional growth of primary school teachers. The ultimate aim is to enhance knowledge of the primary school teachers, as well as to facilitate their upgrading. The programme is implemented by the Ministry of Education and Vocational Training (MoEVT) in seven districts i.e. Bagamoyo, Temeke, Magu, Hai, Makete, Siha and Mtwara Rural. It is mainly funded by the UNICEF. In this study, Bagamoyo is of particular interest because of the low level of pupils’ performance in literacy and numeracy and it is one of the districts which have been implementing the school-based INSET model (MoEVT, 2008). In addition, teachers in rural and remote communities in Bagamoyo are subjected to a variety of difficult school environments of the fisherman and pastorist-communities. All of these may have an influence on teacher professional developmental growth.

Reports indicate that in-service education for primary school teachers at school level has been operating at three levels, which include the management of schools (heads and senior teachers), the upgrading of under qualified teachers, and the opportunity for all teachers to undergo continuing professional development to regularly upgrade their knowledge and skills. More specifically, the programmes include a three month-course for professional development of primary school teachers in Mathematics, Language and Science; a one-year agricultural science course for primary school teachers; and a one year Domestic science certificate course for female teachers. Similar courses included: a three-month programme for the professional development of tutors in teachers’ colleges; one and a half year course for pre-primary education teachers; and a one and a half year special needs education certificate course (MoEVT, 2008).

These programmes could not be sustained because they were too dependent on donor funds and for other factors related to sustainability. The school-based approach to TPD is the latest programme which uses project schools as centers (school clusters). Previous projects used teachers’ colleges as centers as well as Teachers Resource Centers (TRCs). However, despite the contributions made through the implementation of these initiatives, learning outcomes by children has remained low (Hardman, 2011; Meena, 2009; Koda, 2008; Kaponda, 2007).

# 1.3 Statement of the Problem

In view of what has been discussed in the background and evaluation reports (follow up reports) of the school-based INSET-PST, positive results have been recorded. For example, the programme has created communities of motivated and practicing teachers in English, Mathematics and Pedagogy at the school level as well as at the level of the classroom interaction had been enhanced significantly (MoEVT, 2010; MoEVT, 2008).

Despite these achievements, reports and reactions of the beneficiaries in the same programme indicate their concerns not only about the teaching and learning strategies but also on the approach used which is time consuming in the light of cut-throat examination competition. In addition to these challenges, there are issues built around the readiness of teachers to participate, questions on personal gain, irregular attendance and teacher support from the management and its overall contribution to professional growth and upgrading. As if this is not enough, the programme also does not involve non -Mathematics and English teachers let alone the content and the top down nature of the INSET-PST during the design or professional development.

The school-based INSET though site-based in appearance, carries many features of standard professional development projects. Like many other projects of this nature, the most common approach in the TPD has been the top-down. sometimes referred to as the standardized-approach. One of the most common problems of this approach is its tendency to group teachers and see their professional needs as common ‘one size fits all (Hardman, 2008).

In the case of Tanzania, this has been the practice, though attempts have been made to look for site-based teacher development. The downside views indicate that there still remains unanswered questions on the effectiveness of such programmes. In this case, the school-based INSET effectiveness in enhancing teaching and learning should be looked upon. Even more challenging is the expectation for this to happen in a district with diverse TPD needs like Bagamoyo. The district has extreme cases of classroom size from overcrowded to small and multigrade like classes, leave alone children’s background as fishermen as well as pastoralists and peasants (MoEVT, 2010). Therefore the present study provided an opportunity to reflect more on the unanswered questions about TPD. Therefore, there was a need to find out the extent to which school-based in-Service training for primary school teachers enhances TPD, specifically in Bagamoyo District.

# 1.4 Purpose and Objectives of the Study

The purpose of this study was to find out the effectiveness of the school-based in-service training for primary school teachers in Bagamoyo district. Within the broad aim, were the following specific objectives:

1. To identify factors motivating teachers to participate in professional development activities offered to them;
2. To assess the extent to which the INSET-PST has influenced classroom interaction among teachers and pupils.
3. To investigate the extent to which the school-based INSET-PST has influenced the teachers’ teaching and learning strategies/skills.

# 1.5 Research Questions

On the basis of the statement of the problem and objectives, the research questions which guided this study were:

1. What factors motivate primary school teachers to participate in professional development activities?
2. To what extent has INSET-PSTinfluenced classroom interaction among teachers and pupils and thus improved teaching and learning?
3. What specific training strategies/skills were obtained during school-based INSET-PST in order to promote TPD?

# 1.6 Significance of the Study

The results of this study have practical relevance. First, the findings of study will provide a deep understanding of the appropriate teaching and learning methods, challenges and means of enhancing TPD. This can be extended to an understanding of other similar situations on teacher development. Secondly, the findings will inform other stakeholders, for example educational policy makers and INSET providers so that they can design relevant PRESET and INSET programmes. Finally, the results of this study are expected to shed light to community members on teachers’ implemented activities in the TPD programmes in attempting to support children’s learning.

# 1.7 Delimitation of the Study

This study was conducted in Coast Region, specifically in Bagamoyo District. The study confined itself to primary school teachers in some selected primary schools. In addition, the study focused only on identifying the effectiveness of school-based in-service training for primary school teachers in enhancing teacher professional development.

# 1.8 Limitation of the Study

Limitation of the study are those factors on conditions beyond the control of the researcher which hinder one from obtaining the required data and may place restrictions on the conclusions of the study (Kombo & Tomp, 2006). The study was limited by factors such as some respondents particular headteachers were not ready to express their true feelings, experiences and opinion.

The researcher on other hand experienced difficulties in assessing important documents especially from headteachers who were reluctants to release the Starndard Seven National Examination Results and data on teachers who absconded from INSERT-PSP programme. The researcher however, tried to overcome this by assuring that the information would solely be used from academic purposes.

# 1.9 Definitions of Key Terms

**Professional Development:** This term is defined differently by various scholars. However, there are the common concepts or understanding of that among Professionals. The term is defined as knowledge attained by a person for both personal development and career advancement. Professional development encompasses all types of facilitated learning opportunities, ranging from college degrees to formal coursework, conferences and informal learning opportunities situated in practice (Speck & Knipe, 2005). In this study, the term Teacher professional Development refers to the body of systematic activities that are conducted in order to prepare teachers for their job, including initial training, induction courses, in-service training, and continuous professional development within school settings. It is also a form of continuous on-the-job training located in school settings.

**In-service training:** Inservice trainingis a programme aiming to equip teachers already in the teaching profession with more expertise and knowledge in both the subject content and teaching methodology parts.

# CHAPTER TWO

# 2.0 REVIEW OF LITERATURE

# 2.1 Introduction

This chapter presents a review of related literature that illuminates and positions the current study on the effectiveness of school-based in-service training for primary school teachers in enhancing teacher professional development. The discussion is built around the following themes: Making sense of TP and INSET based on the empirical/related studies in order to get more information on what others say on the concept of TPD. In addition, the theoretical framework and conceptual framework of the study are also discussed in this chapter which give the direction of this study. Lastly, there is a summary of the chapter.

# 2.2 Review of Related Literature

# 2.2.1 The Concept of Professional Development and its Implementation in Tanzania

The word professionalism is defined differently by different scholars. Osaki (2007) argues that the term ‘‘*profession’’* is now commonly used to describe various occupations in our society. Kelly (1995) maintains that, the word “*profession”* originates from the Latin word profession which originally meant a declaration or a vow usually related to religious beliefs. In the 16th century, the term profession was expanded to denote occupations of university educated persons, especially of high social standing including lawyers, doctors and church ministries or theologians generally called ‘‘learned professionals’’ (Freidson, 1986).

In Japan the term “sensei” is often used to describe learned and respected professionals only and in their tradition this refers to teachers and professors, doctors and respected civil servants. There is a tendency of the learned professionals to address each other as doctor, professor and learned brother. Hoyle (1980) defined a profession as an occupation that has a crucial function in society and in which the exercise of that function require knowledge and skills, and is bound by a code of ethics.

In Tanzania, there are a number of key documents which only give signals of what a profession in education means. They tend to focus on what is to be done than what actually happens about professionalism. The first is the Education Sector Development Plan (ESDP) 2008-2017 with some considerations for primary school teachers who over the years, have often been subjected to ever changing demands and requirements for up-grading but less so for improving their professional skills. In this case, upgrading is taken for granted as professional development.

The second key document related to TPD is the Teacher Development and Management Strategy (TDMS) 2008-2013. The TDMS has gone through a number of stages and represents the main strategic document that will take teacher education forward in five years (2008-2013). In respect to INSET, the strategic goal is to “provide regular in-service teacher training courses to teachers’ professional needs”. The focus is on child learning needs, improving the learning environment, preparing well-trained and competent teachers and head teachers, instructional materials, achieving effective school management and community participation.

The challenges that are posed in these key areas are considered to be the major constraints to developing adequate and competent teachers in the provision of better services and increased performance. The overall goal of TDMS is:

*“To have and sustain adequate numbers of competent teachers and tutors to effectively support the pre-primary, primary, secondary, adult and non-formal education, as well as teachers”(page 3).*

In the same observation, teacher professional development is vital since through it teachers will be able to acquire new skills and improve teaching methodologies hence raising pupils’ performance. The INSET-PST was born out of TDMS. Its objective is to improve the quality of primary school, teachers’ education and training. Therefore, INSET is seen as an important step in the government’s efforts to provide quality basic education for all, and to have and sustain adequate numbers of competent teachers.

A baseline study conducted by MoEVT found that primary teaching was largely made up of teacher-led rote, recitation and exposition. INSET was found to be often uncoordinated, ad-hoc and of varying quality. The government therefore decided to concentrate its efforts on developing a quality, sustainable, cost-effective INSET system for primary school teachers (MoEVT, 2008).

In 2009, the MoEVT established the INSET-PST which included a monitoring and evaluation framework for implementation of the strategy which was established following a highly consultative process involving ministries, departments and agencies, development partners and civil society organizations. Supported by UNICEF, in 2011 the MoEVT and the Prime Minister’s Office-Regional Administrative and Local Government (PMO-RALG) began piloting the new school-based INSET model commonly known in Kiswahili language as *Mafunzo ya Walimu Kazini Elimu ya Msingi* *(MWAKEM)* in seven districts (Bagamoyo, Hai, Siha, Makete, Magu, Mtwara Rural and Temeke), to implementthe INSET strategy nationally. Teachers’ modules were developed in three key areas: Mathematics, English and pedagogy. To date 2,052 primary school teachers from 121 schools across the seven districts have participated in the pilot programme (MoEVT, 2010).

The 2009 INSET strategy recognizes that the quality of an education system depends, to a large extent, on the quality of its teachers, as they are the key source of knowledge and skills. International research into classroom processes recognizes that managing the quality of teacher-pupil interaction is one of the most important factors in improving the quality of teaching and learning, particularly in a context where learning resources and teacher training are limited. Such research argues that it is possible to pinpoint universals in teaching and learning, such as teacher-pupil interaction in whole class, group based and one-to-one teaching and learning situations. These must be attended to so as to improve the quality of education. Helping teachers to transform classroom talk into a purposeful and productive dialogue, through a pedagogy and curriculum which is relevant to the lives and the linguistic profile of the community from which the pupils come, is therefore seen as being fundamental to improving primary education in Tanzania (Hardman, 2011).

Since the school-based INSET-PST is in its fifth year of implementation at the time of this study, it makes sense to look at its achievements in terms of capacity development and professional growth of teachers (growth in understanding and performance) in the schools. The INSET-PST, like other promising strategies, covers several levels of interest as revealed by the following quotation:

*“……the management of schools (heads, senior teachers, etc),[b] the upgrading of the most poorly qualified teachers,and [c] the opportunity for all teachers to undergo continuing professional development to regularly upgrade their skills”(Towse et al., 2002, p. 650).*

The school-based TPD programme in question has been designed to focus more on the third level (not in terms of importance). From the outside, the TPD –related programme is seen to be promising. However, it may be necessary to raise relevant questions regarding the programme. This is because at times stakeholders have mixed ideas and sometimes they have a contradictory understanding of the programme. What are the driving forces or triggers for the TPD programme?

For example, how is the programme linked to the school time table in terms of learning time? What are the benefits apart from knowledge gain? Will this contribute to promotion? What about other disciplines? These and other many questions have been raised by the programme beneficiaries. It is important to note that though the recipient of TPD is the teacher, the ultimate beneficiary is the pupil.

# 2.2.2 Models of School-Based TPD

There are a number of models that have been developed and implemented in different countries to promote and support TPD from the beginning of their career until they retire. These models are grouped into two. The first group of these models requires and implies certain organizational or inter-institutional partnership in order to be effective. The second group is those that can be implemented on a smaller scale at the school or classroom levels. Many of these in the second group have been identified as techniques or promising strategies rather than models of professional development (Carroll, 1963).

According to Hooker (2008), there are three main models ofTPD (also known as “in-service” or “teacher education”). Such models are the standardized TPD, the self-direct and the elite –based. Despite their differences in approach, all focus on the instruction provided toteachers so as to promote their development in a certain area.Thusaccording to Hooker (2008), TPD can be divided into three broadcategories (models) which include:Standardized TPD, Site-based TPD and Self-directed TPD.

The standardized TPDis the most centralized approach, best used to disseminate information and skills among large teacher populations. Standardized TPD typically represents a centralized approach, involving workshops, training sessions and in many cases the cascade model of scaled delivery. Standardized, training-based approaches generally focus on the exploration of new concepts and the demonstration and modeling of skills. When employed in accordance with best practices standardized approaches can effectively expose teachers to new ideas, new ways of doing things and new colleagues. They disseminate knowledge and instructional methods to teachers throughout a country or region and visibly demonstrate the commitment of a nation or vendor or project to a particular course of action.

The self-directed approach to TPD is independent learning, sometimes initiated at the learner’s discretion, using available resources that may include computers and the Internet. In self-directed TPD, teachers are involved in initiating and designing their own professional development and would share materials and ideas as well as discuss challenges and solutions.

The site-based or school-based TPD approach involves intensive learning by groups of teachers in a school or region, promoting profound and long-term changes in instructional methods. Site- based TPD often takes place in schools, resource centers or teachers’ colleges. Teachers work with local facilitators or master subject teachers to engage in more gradual processes of learning, building mastery of pedagogy, content and technology skills. Site based TPD often focuses on the specific, situational problems that individual teachers encounter as they try to implement new techniques in their classroom practices.

Site-based models tend to bring people together, address local issues and needs over a period of time, encourage individual initiative and collaborative approaches to problem solving. It also allows more flexible, sustained and intensive TPD, and provides ongoing opportunities for professional learning among a single set of teachers. Depending on the particular instructional needs, site-based TPD may assume a variety of approaches, some of which are explained from the next paragraph. These approaches may be used individually or together and may be part of both formal PD and follow-up assistance (Proctor, 1994).

**The** **Observational/Assessment** is first model of school based TPD: In this model, the master teacher in a school or a specialist working district-wide observes teachers in their classrooms, assesses their instructional practices and provides structured feedback. The strengths of this model are that the observer gains new knowledge and also the teacher being observed receives structured feedback. However, the model has some limitations which include adding to the teachers’ time burden and also teachers may identify needs or problems that cannot be addressed by the local facilitator.

**The Open lesson** is the second TPD model: With this model, teachers create lessons and invite their colleagues (and in some cases, parents and teachers from other schools) to observe the lessons and provide feedback in a post-observation session. The advantages of this model are that it builds on-site expertise; teaching becomes a public versus private activity. The disadvantage is that it requires at least some relatively skilled teachers to serve as models. Participants may not understand how best to benefit from lessons and an open lesson model can reinforce mediocre practices.

**The Lesson Study model**. This model involves teachers who collaboratively plan, develop, or improve a lesson; test the lesson in the field; observe it; make changes; and collect data so as to see the impact of the lesson on pupil learning. The strengths of this model are that it does focus on pupil learning, helps to build communities of learning and practice and also it is collaborative since teachers learn and practice. On other hand, this model has some limitations which include that it is time and labor intensive, demands a certain level of expertise in curriculum interactions, content, instruction and assessment be available in schools and also it involves multiple alterations of a lesson before it attains high quality.

**The Study Group Model**. The model involves teachers who collaborate, as a single large group or in smaller teams, to solve a common problem or create and implement a plan to attain a common goal. The strengths of this model is that it can bring a sense of school-based learning and collaborative to learning, goal oriented and it builds on what teachers already informally do. The limitations of this model are that, it is time consuming, may be difficult to coordinate, implement as well as sustain.

**Inquiry/Action research model.** This is the fifth model used by teachers who form teams based upon a common interest of helping pupils with reading difficulties or even addressing the needs of female pupils. They selectan issue, investigateand research it, planpossible actions to remedy it, take action*,* observeand document the results, reflect on outcomes, and createan action plan to address the issue. The advantages of this model is that it helps teachers become more thoughtful practitioners, empowers teachers to take action, search for questions and solve problems and also it helps teachers begin to create, gather and use data to make empirical decision about instruction. The disadvantages of this model is that teachers should only address problems or questions within their area of influence and also it can be complex and demand higher level of teacher skill and competences.

**A case study model.** This is the sixth model of school-based TDP. This is done by teams of teachers who examine the components of classroom instruction and apply what has been learned to their own classrooms. This approach uses print, the Internet, and/or video to observe classroom episodes. The advantage of this model is that video examples can be created locally with handheld video camera or mobile phone. On other hand the disadvantage of this is that it needs skilled facilitators.

**The Mentoring model:** Mentoring is also a model which is done in order to promote an individual’s awareness and refinement of his or her own PD by providing and recommending structured opportunities for reflection and observation. Mentoring involves sharing implicit and explicit forms of knowledge. It requires mentors to continuously assess what is appropriate to say based on a developmental assessment of those mentored. Mentoring can be structured as a one-to–one approach, or as many-to many approach in which several mentors and less-experienced teachers work together as a team.

Mentors are usually selected because of their experience and ability, not necessarily because they can articulate knowledge. How do mentors balance between providing specific practical knowledge and a good grounding in theoretical understanding to protégées or supervisees? This compelling assumption and question is at the core of not only the teaching profession but also other professional endeavors such as counseling, medicine and law (Carroll, 1963).

In Tanzania, this strategy is used where some teachers are selected to teach their fellow teachers some topics which are difficult. Also in their clusters teachers are involved in discussion. In the year 2005, Tanzania adopted a competence-based curriculum hence teachers were required to be equipped with new knowledge and on how to prepare academic documents such as lesson plans, schemes of work and subject logbooks based on the competence-based curriculum. In the cluster training for teachers measures are undertaken to disseminate the information to teachers by education officers and mentors. The main challenge of this strategy is that the willingness of newly recruited staff to be mentored may not be common to all, sometimes it becomes reduced to private consultation and an individual novice staff member has to take the initiative which is rarely arranged by institutions. Therefore**,** mentoring involves working closely with teachers so that they become able to reflect upon and improve their teaching practices, making them more learner-centered.

In view of the aforesaid school-based models, this study focused on the site-based TPD model since it meets the interventions and scope explained in the previous paragraph, that is, in-service teacher education for primary school teachers under INSET-PST. It also represents what is going on as TPD in Tanzania.

Many studies appear to emphasize site-based TPD programmes as it is directly linked to change and innovation at the classroom and school level (Garet, 2001). Various studies suggest that site-based TPD is more effective when delivered *“in connection with a school development plan”* (ibid). The tendency in site-based TPD is to support the establishment of teacher communities as communities of practice in order to foster the development of the new learning culture desired (Proctor, 1994). The focus is on aiding the project participants to not only implement new approaches but to unlearn the beliefs, values, assumptions and culture underlying their practice.

Apart from its importance, the site-based model has some challenges which include: time and labour intensive requiring locally-based TPD facilitators, skilled instruction, content, curriculum, assessment and technology–as well as in mentoring teachers to find solutions in low-resource environments appropriate to their needs and contexts. Also the establishment and maintenance of a network of facilitators to meet the needs of large-scale TPD programmes would be a challenge for any educational system. The problem is made even more difficult in the poor education systems of the Least developed countries (LDCs), where the challenge is magnified (Gaible & Burns, 2005).

One of the main challenges facing Tanzania, however, is the improvement of its primary education system. Research by Verspoor (2003) suggests that in developing countries, the influence of the school on pupil learning is more important than the effect of home and other external factors compared with the situation in developed countries. Current trend pedagogical practices suggest the need for powerful school-based PD programmes as many teachers are unprepared or under prepared to teach and thus developmentally handicapped at the pre-service phase.

Intervening at the school level and classroom level is seen as being crucial in raising the quality of primary education in Sub-Saharan Africa as ultimately educational quality is obtained through pedagogical processes in the classroom: through the knowledge, skills, dispositions and commitments of the teachers in whose care pupils are entrusted (Verspoor, 2003; Craig, 1998).

Managing the quality of classroom interaction is therefore seen as the single most important factor in improving the quality of teaching and learning, particularly in contexts where learning resources and teacher education are limited (Hooker, 2009). For this reason, investigating the quality of classroom pedagogical processes in Tanzanian primary schools based on school-based TPD has been the central focus of this study.

Therefore, from the school-based model it can be said that for CPD at the school level/cluster, there will have to be supported by teacher educators, ward coordinators and school inspectors who serve as mentors and school teachers who serve as facilitators. It would also necessitate the creation of a career long professional framework for teachers to provide quality markers against which to judge the effectiveness of pre-service and in-service training providers.

# 2.2.3 The Driving Motivation of Teachers to take Part in TPD programme

What are the driving motivations of teachers to take part in professional development? This is a question that needs to be responded. According to Binde (2012), two forces appear to motivate teachers towards professional development activities. These include personal inspiration/motivation and organizational demand (a school, university, college). Personal motivation for PD can be associated with a number of motives: First, the need for personal capacity development in order to cope up with the demand of knowledge and skills required to teach certain topics (Mbwambo, 2005).

This refers to growing in understanding, purposefully building on that which is currently known. The second motive is related to personal needs for career growth. Third, often teachers are driven by the need for promotion in institutions where promotion is based on certain criteria for example attending an INSET programme. Fourthly, at system level, it is a common experience that institutions encourage PD as an opportunity to cope up with innovations and to avoid reacting to educational events-preparedness, constantly acting on and shaping the teaching and learning environment in our institutions of higher learning.

There are also cases of organizational demands for PD in case of promotions. Organizations such as Universities normally have their demands-defined standards. Such institutions use professional development as a criterion for promotion and PD if correctly done this supports quality enhancement (assurance) and can thus make a difference.

Teacher’s motivation stands as the most important single factor in terms of inspiring teachers to participate in TPD. Teacher’s intrinsic drive towards self improvement cannot be matched with any amount of pressure from the organizational demands. For effective TPD, the teacher is expected to perceive it positively and show a high readiness level. The teacher is expected to see and accept the need to grow professionally and this in turn inspires him/her to attain new knowledge, skills, attitudes, values and dispositions. It is further argued that within such dispositions there is pride, self -esteem, team spirit, commitment, drive, adventure, creativity and vision. All these attributes have to be owned by the teacher (Mosha, 2006).

A school management with motivating culture (referring to school-based development model) encourages teachers to engage in PD programs at the school or elsewhere. A motivated teacher learns from others and is more likely to attend various PD activities. Motivation can be intrinsic or extrinsic which drives the teacher towards self improvement. Collegiality within the school is part of the school culture. If teachers cooperate, there is room for them to learn from each other (Galabawa, 2001). The role of the school management is to encourage this culture to prevail in the school and between the schools. This is one of the indicators of the presence of a responsible school management in the school. Planning, that is, the setting of goals and objectives with activities to be done at the specified time is one of the main roles of the school management.

To involve all teachers in the school during the planning processes should be part of the school culture. Effective participation leads to a feeling of ownership and easy implementation (Galabawa, 2001). Meaningful improvement in the education system requires pressure from below, support from above, and continuous negotiations among those at different levels of the system. The PD issue, therefore, should be regularly discussed by teachers because they know what they need most. Administrators and supervisors should be guiding, supporting, monitoring the implementation, and evaluating the work done. Effective communication among the key players is very crucial (Mosha, 2006).

# 2.3 Theoretical Framework

# 2.3.1 The Constructivist Theory

The constructivist theory originated from the theories of Piaget (1972) and later by Bruner (1974) and Vygotsky (1980) who developed it further. The theory places the learner at the centre of the teaching and learning process. The theory established the principle that pupils learn from experience and have to carry out the task and the role of the educator is to provide pupils with opportunities and support to promote learning (Gelsert & Furtell, 2000). The theory shows that learners construct their versions of reality from their direct experience. Also the construction of knowledge happens best when the learner has meaningful problems to solve and has already mastered the necessary strategies for solving them.

In similar vein, Kim (2005) and Maslow (1962) contend that teachers should not begin by concentrating on the vast amount of information that they want children to acquire. However, learners should be subjected in the process of growth in understanding or adding value to that they have already known. Interest and experience are important ingredients of constructivist theory.

This theory relates to the present study in that, teachers at all levels and primary teachers in particular are lifelong learners since they need to be equipped with knowledge and skills that are expected to enable them throughout their teaching profession. It is also believed that teachers will do best in their profession because they have already mastered the necessary strategies for solving different professional related and unrelated issues.

# 2.3.2 Facilitation Theory

The facilitation theory is mostly connected to Huitt (2001) who developed and shaped the theory. The basic premise of this theory is that learning will occur by the educator acting as a facilitator, that is by establishing an atmosphere in which learners feel comfortable to consider new ideas and not threatened by external factors. The theory argues that facilitative teachers are more able to listen to learners, especially to their feelings and are apt to accept feedback, both positive and negative and to use it as constructive insight into themselves and their behavior.

On the other hand, learners are encouraged to take responsibility for their own learning, provide much of the inputs for the learning which occurs through their insights and experiences. In short, the entire process of professional activities empowers teachers to make appropriate pedagogical decisions which are the underlying principle of the facilitation theory.

This theory is relevant to the school-based INSET for primary school teachers since facilitators in this model are mentors. Mentors are teachers who are selected because of their experience and ability to guide their colleagues on some topics which are challenging. Also in school clusters, teachers are involved in discussion. Therefore, in school clusters mentoring involves making rapport closely with teachers so that they become able to reflect upon and improve their teaching practices, making them more learner-centered.

# 2.4 The Conceptual Framework for the Study

The aim of this section is to develop an integrated conceptual model to investigate factors which enhance school-based INSET. In view of what have been discussed to this point it sounds logical to think and propose an alternative view of INSET to the convectional certified upgrading. A system of teacher development closer to the school and school cluster level is thought to be the core of improving teaching and learning and the main system of PD.

It is seen that the natural place for improving teachers’ knowledge and skills is the classroom and the school and not less authentic venues where traditional teacher training takes place (MoEVT, 2008). School-based and whole school development model are critical to the effectiveness of the reforms and an immediate priority for INSET. The interaction between the teacher education system and the in-school development programme takes place largely at the school cluster or ward level and thus there will be a need to strengthen school clusters within the ward management framework. Figure 1 presents the conceptual model of the study.

Figure 2.1: Conceptual Model

Source: Researcher own model

The conceptual framework for this study as given in Figure 2.1, has three general variables, namely independent, mediating and outcome variables. The framework provides the shape of the entire current study. The independent variable is the INSET which shows that teacher upgrading should take place so as to make teachers up-to date in both the subject matter and methodological parts. There is the mediating variable which is the teachers’ participation in in-service training where teachers are expected to engage in the programme in order to be able to learn the specific knowledge, skills and competences expected to have in their profession.

Similarly, there are two outcome variables: TPD where a teacher is expected to continually engage in the programme so as to be able to cope with educational changes, and pupils’ learning which means that after the teacher has undergone the training and acquired the specific subject content and its methodology thus expects to see the increase in pupils’ performance as a result of the teacher’s training. A quality teacher is one who has a positive effect on pupil learning and development through a combination of content mastery, command of a broad set of pedagogic skills, and communications/interpersonal skills. Quality teachers are life-long learners in their subject areas, teach with commitment, and are reflective upon their teaching practice.

They transfer knowledge of their subject matter and the learning process through good communication, diagnostic skills, understanding of different learning styles and cultural influences, knowledge about child development, and the ability to marshal a broad array of techniques to meet pupil needs. They set high expectations and support pupils in achieving them. They establish an environment conducive to learning, and leverage available resources outside as well as inside the classroom. Lastly, the arrows show the interrelationships that exist among the variables.

# 2.5  The Knowledge Gap

The review has shown that several studies have been conducted on TPD inside and outside Tanzania. For instance there are studies done on Teachers Professional Development in Tanzania (Komba & Anangisye, 2008; Mosha, 2006; Verspoor, 2003; Craig 1998) which focused on the perceptions and practices of TPD and also developing quality teachers. Furthermore, little is seen in the form of assessing teacher-pupils’ interactions during the lessons and their level of performance as a result of TPD. This study intended to fill this gap. This study was also expected to come up with basic primary information on the influence of school-basedINSET-PST.

# 2.6 Organisation of the Report

Chapter three deals with the research methodology, containing an approach to the study research design, study area, targeted population of the study, sample and sampling technique, data collection methods and validation of collection tools. Chapter four contains the presentation of the research findings, the analysis, and discussion of the findings. The summary of research findings, practical application, conclusion and recommendations are provided in chapter five.

# CHAPTER THREE

# 3.0 RESEARCH METHODOLOGY

# 3.1 Introduction

This chapter discusses the methodology that was used in the study. It covers the research design (qualitative and quantitative) and procedures that were employed in collecting the data for the study. It gives an explanation on the research approach, area of study, the target population, sample of the study, sampling techniques, data collection methods, analysis, validity and reliability of as well as ethical considerations.

# 3.2 Research Design

A research design is a plan indicating the systematic arrangement and strategies of how the study is being conducted in order to answer the research questions. The case study design was employed to obtain the necessary and required qualitative and quantitative data. Specifically, this approach was chosen because the study was basically qualitative which needs an in-depth investigation of variables (Kothari, 2004). Through the use of this design, the researcher easily obtained specific information on the effectiveness of school-based INSET-PST in enhancing TPD in the selected area of study.

For the purpose of this study, Bagamoyo district was used as a case for data collection and analysis so as to describe the effectiveness of school-based INSET-PST in enhancing TPD in detailed. Only a small selected sample size from the context of the geographical setting of the study area was used. The case study design was selected because it suited for collecting information in an in-depth manner. In order to fully address the complexity of the research questions, a multi-method research design using both qualitative and quantitative methods was used. This allowed methodological triangulation to achieve greater validity and reliability.

The research instruments were closely related to each other so as to ensure a fully integrated research design with a central focus on the influence of the school-based INSET-PST in enhancing TPD. They were also designed to be comprehensive, manageable and as low inference as possible to compare pedagogical practices in Tanzanian primary schools.

# 3.3 Selection of the Study Area

The study was conducted in Bagamoyo District in Coastal Region because of the low level of pupils’ performance in literacy and numeracy. Bagamoyo is one of the districts which have been implementing the school-based INSET model (MoEVT, 2008). This study was conducted in government schools due to the fact that the schools are co-educational and are in one of the districts implementing the INSET-PST.

In addition, TPD programmes are implemented in the district, including TDMS. Specifically, the district is among the seven districts in the country supported by UNICEF through the school-based INSET-PST programme. As explained earlier, the district has extreme cases of both overcrowded and small multgrade classes. Further the children’s parents’ are fishermen, pastoralists and peasants.

# 3.4 Target Population of the Study

A research population is referred to as a group of people with one or more characteristics in common on which a research study is focused. The target population is usually a group about which a researcher is interested in gaining information and drawing conclusion (Kothari, 2004). The population of this study included the School-based TPD, District Education Officer (DEO), head teachers and ordinary teachers. The research participants were expected to provide data on the information regarding the effectiveness of school-based INSET for primary school teachers (PST) in enhancing TPD in the selected area.

# 3.5 Sample and Sampling Techniques

# 3.5.1 Sample Size

A sample is a small proportion of the population which is selected for observation, interviewing, and completion of questionnaires. Patton (2001) holds that sample size must be selected to fit the purpose of the study, available resources, type of instruments, questions to be asked and constraints being faced. A sample was selected to represent the population since it is not easy to study the whole population. The study involved five schools. The total sample of the study had 81respondents who included 75 ordinary teachers, 05 head teachers and District Education Officer. Teachers were intentionally involved because they directly facilitate the process of teaching and learning. They are directly affected by a number of teachers in their working stations so it is important to get their views on the problem in question. For that reason, stratified sampling was used to get male and female teachers among a sample of 15 teachers from each sampled school.

# 3.5.2 Sampling Procedures

A sampling procedure refers to the process of selecting a number of individuals or objects from a population such that the selected group contains elements that are representative of the characteristics found in the entire group (Kothari, 2004). In this study, two sampling techniques were employed, namely purposive and stratified sampling. The former sampling was employed because the sampled subjects were considered to have rich and reliable information on the effectiveness of the TPD programme in enhancing teaching and learning. The technique was used to select the District Educational Officer (DEO) and 05 head teachers.

On the other hand,stratified/random sampling was used to select teachers. The sampling is a probability sampling technique where the researcher divides the entire population into different subgroups or strata, and then randomly selects the final subjects proportionally from the different [strata](http://en.wikipedia.org/wiki/Social_stratification). The first group those teachers (50 teachers) who filled questionaires and who were grouped into attended and not attended INSET-PST. The second group were those teachers (25 teachers) who participated in focus group discussion, and also who were grouped into attended and not attended INSET-PST.

# 3.6 Data Collection Techniques

A method of data collection refers to the procedure which the researcher uses to obtain research data from the research participants (Kothari, 2004). The choice of the techniques used in this study was dictated by the tasks and key questions for which data and answers are gathered by a particular instrument. This study employed both qualitative and quantitative data collection techniques. The use of various techniques for data collection (triangulation) helped to cross check the authenticity of the collected data, maximizes validity and reliability of the data as well as avoiding bias (Keya, 1989; Cohen *et al.,* 2000). In this study the following data collection techniques were used to both primary and secondary data were collected.

# 3.6.1 Primary Data

Primary data were collected through questionnaires, interviews, observationsand focus group discussions.

# 3.6.1.1 Questionnaires

A questionnaire is an instrument containing a number of questions in which respondents have to complete by themselves either by ticking in boxes or writing their opinions (Cohen et al., 2000). One of the advantages of questionnaires among others, is that it reduces costs and time of data collection and yet provides useful information (Descombe, 2007; Best & Khan, 2006; Kothari 2004).

In this study, open and close ended questionnaires were used to enrich the information collected by focus group discussion as well as interviews. This technique was used to collect information from a sample of 50 teachers. The questionnaires were administered in all 5 selected sampled schools on different days in Bagamoyo district. The researcher supervised the respondents as they were responding to the questionnaires at each sampled school (See Appendix 1).

# 3.6.1.2 Interview Guides

An interview is a data collection technique that involves data collection through direct verbal interaction between the interviewer and interviewees. It is an interchange of views between two or more people on a topic of mutual interest (Cohen, 2000; Best & Kahn, 2006). The method is deemed important as it provides immediate feedback, allowing the interviewer to follow-up by asking probing questions, thus obtaining more in-depth data of great clarity (Best & Kahn, 1986).

Semi-structured interviews were conducted with head teachers of sampled primary schools to obtain their opinions on INSET programme in order to understand their attitudes, perceptions and beliefs with regard to teaching and learning and to qualitatively measure the effectiveness of the school-based INSET for primary schools in enhancing TPD. The interviews guide were thus done to 5 Head teachers, and District education officer.

Both structured and unstructured questions were used. The aim was to allow flexibility in questioning and responding that made them free to provide in-depth information about the school-based TPD in the district. In this study the technique involved face to face interaction between individuals leading to self-report*.* Responses from the interviewees were recorded and analyzed (See Appendices 2 and 3).

# 3.6.1.3 Focus Group Discussions

Focus group discussions were used in collecting data for this study. This technique resembles the interview technique for it involves face- to- face discussion but it differs from interviewing in that the focus group consists of a group of people discussing together (Saburi, 2002; Bryman, 2004). The method was selected because it can be used to produce a lot of information quickly and is good for the identification and exploration of beliefs, ideas or opinions in the community (Kombo & Tromp, 2006). The method was used to assess how the programme has been implemented. In this study the method was useful because it allowed for teachers in each primary school to share their thoughts with each other. Focused group discussion was conducted to 25 teachers, each school sampled 5 teachers (See Appendix 4).

# 3.6.1.4 Observation

This study adopted non participant observation to collect information within the school environment. Observation involves collecting data by seeing, hearing, tasting and smelling things (Enon, 1998). Observational data are essential since they enable the researcher to enter and understand the situation that is being described (Cohen *et al.*, 2000; Patton, 2002).

In this study, observation was conducted to collect data for classroom interaction by using systematic observation checklists where the researcher observed the classroom interaction, behavior pattern and school environment. Classroom observation was done for 2 teachers in each school so as to assess how the teaching and learning process was performed in the class. The subjects observed included Mathematics, English, Kiswahili, Work Skills, Civics and Science.

The purpose of classroom lesson observation was to gather detailed information of how the whole process of teaching and learning was being conducted by personal observation. The focus was to determine the ability of the teachers to transform their knowledge (subject matter) in the form that can be understood by the learners, that is, the ability of teachers to provide activities that give ample opportunities for pupils to construct their own knowledge (See appendix 5).

# 3.6.2 Secondary Source of Data

These are sources that do not bear a direct physical relationship to the issue under study as they provide data that can not be presented as original. A secondary data could, therefore be one in which an indivual is describing an event that occurred when she/he was not truly present, as it is based on second-hand information (Cohen *et. al.,* 2000). The data obtained included those materials available to the researcher without editing but with interpretation to the explore their message. Such documents included, time table, daily routine, academic documents, textbook, modules for training and school management records.

# 3.7 Validity and Reliability of Instruements

In this study, in order to address issues of validity and reliability, several measures were taken. Validity is the extent to which findings of the study make sense, or represent an authentic portrait of what the study is looking at (Miles & Huberman, 1994). The researcher ensured the study validity through the use of multiple data collection techniques (triangulation method). Triangulation helps to crosscheck the authenticity of data gathered and maximizes validity by counterchecking any contradictory information (Keya *et al.,* 1989). On other hand, reliability refers to whether the process of the study is consistent or stable overtime and across researchers (Miles & Huberman, 1994). To ensure the study reliability, the research instruments were prepared and edited to crosscheck ambiguous words and sentences. They were then piloted to ensure internal consistence.

# 3.8 Data Analysis Procedures

Kothari (2004) defines data analysis as a process that implies editing, coding, classifying and tabulation of collected data. In this study, both qualitative and quantitative research approaches to data analysis were employed. The data were coded and entered in the computer ready for analysis through the use of the Statistical Package for Social Sciences (SPSS) version 17 programme. Qualitative methods of data analysis were used to analyze the data obtained from interview responses through content analysis.

Quantitative data analysis was used to analyze data from structured questionnaires where an independent-sample t-test was conducted to compare the reporting on the improvement of teaching/learning methodology for teachers who attended school – based INSET-PST and those who did not do so. After all the procedures were in place, the data analysis was done through the use of SPSS. The results obtained were finally presented in narration, figures and tabular forms.

# 3.9 Ethical Considerations

Ethics pertain to moral principles, and the guiding conduct which is held by a group or even a profession. In this study, ethical issues were addressed by getting research clearance from the Director of Research, Publications and Post Graduate Studies the Open University of Tanzania (See appendix 6). The clearance helped the researcher to obtain permission from the District Executive Director (DED). The clearance helped the researcher to obtain permission from the District Executive Director (DED). The researcher then worked with the Bagamoyo DEO, head teachers and teachers of the five selected primary schools (Nia Njema, Kuzuiani, Mwambao, Mwanamakuka and Majengo) to familiarize himself to them (See Appendix no. 07). The purpose of the study was also clearly explained to the officials and respondents in order to get their consent before even asking them to respond to the questions. All the information and other identities of the subjects were treated confidential and no information was exposed to any other source without the consent of the respondents.

# 3.10 Summary of Chapter Three

This chapter presented the technical procedures that were employed in undertaking the study. It included the research design, targeted population of the study, sample and sampling technique,data collection methods and validation of collection tools. The chapter also outlined the data analysis plan and ethical consideration of the study.

# CHAPTER FOUR

# 4.0 DATA PRESENTATION AND DISCUSSION OF FINDINGS

# 4.1 Introduction

This chapter presents contains information on data presentation analysis and discussion of research findings. The aim of the research was to investigate the effectiveness of school-based INSET-PST in enhancing PD. The findings are dealt with the light of research objectives were firstly, to identify factors motivating teachers to participate in professional development activities, secondly, assess the extent to which the INSET-PST has influenced classroom interaction among teachers and pupils and thirdly, investigate the extent to which the school-based INSET-PST has improved teachers’ teaching and learning strategies/skills. The data were collected in five primary schools in Bagamoyo District. These schools were Nia Njema, Kuzuiani, Mwambao, Mwanamakuka and Majengo. The tools used for collecting data were questionaires, guided interviews and observation checklist. The major data analaysis tool was Statistical Package of Social Science (SPSS). The analysis involved creating simple summary of statistics tables that show frequency and percentage of oocurances. The t-test wa also used to determine the improvement of teaching methodologies to those teachers who attended and not attended INSET-PST programme.

# 4.2  Teachers’ Background Information

The teachers’ background information was considered in order to have an overview of the respondents’ characteristics, academic qualifications and teaching experience. There were a total of 81 respondents who were involved in the study. Among them 31 were males while 60 were females. The majority of the teachers (seventh seven) had a level of certificate in education, three (3) teachers had diploma in Education and one was degree holder. All the teachers were professionally qualified. Besides the qualifications, an inquiry of the teachers’ experience in teaching was also made. The teaching experience of 8 teachers were between 2 and 6 years, 60 teachers were between 7 and 13 years, while thirteen(13) teachers had an experience beyond thirteen years.

# 4.3 Factors Motivating Teachers’ Participation in Professional Development Activities

The first research question sought to investigate factors which generally motivated primary school teachers to participate in various types of PD activities. Respondents were exposed to a five point scale indicating several factors and were asked to indicate the extent to which each of the proposed factors motivated them to participate in the school-based INSET activities that were offered through seminars, workshops and upgrading courses.

Responses ranged from ‘*Not at all’* motivated to ‘*Extremely well*’ motivated decision which were rated 1 to 5. Table 4.1 shows the results on the factors which motivate teachers to participate in PD activities. Data in Table 4.1 indicates that teachers were motivated by different factors to varying degrees between slightly and extremely well. Two main factors led in motivating very much or extremely well teachers to participate in the school-based INSET-PST training and other training programs. These were to improve knowledge and possibility of sharing and exchangeing views with others (M = 3.22 & M = 3.12 respectively).

Table 4.1: Factors Motivating Teachers Participation in Professional Development Activities

| **Aspect** | **Responses (number = 50)** |  |
| --- | --- | --- |
| **Not at all** | **Slightly** | **Much** | **Very much** | **Extremely well** |
| ***f*** |  ***f*** | ***f*** | ***f*** | ***f*** | ***M*** | ***Decision*** |
| Possibility of salary increment | 40 (80%) | 2(4%) | 4 (8%) | 3(6%) | 1(2%) | **1.46** | Not at all |
| Possibility of promotion | 36 (72%) | 5(10%) | 2 (4%) | 7(14%) | - | **1.60** | Slightly |
| To improve knowledge | 8 (16%) | 2(4%) | 17(34%) | 17(34) | 6(12%) | **3.22** |  Much |
| Possibility of getting substance allowances | 39 (78%) | 2(4%) | 4 (8%) | 5(10%) | - | **1.50** |  Slightly |
| Possibility of exchanging views with other teachers | 9 (18%) | 4(8%) | 15(30%) | 16(32%) | 6(12%) | **3.12** |  Much |
| Possibility of travelling to other places | 34 (68%) | 3(6%) | 6(12%) | 6(12%) | 1(2%) | **1.74** |  Slightly |
| Possibility of getting a break from teaching in the classroom | 32 (64%) | 6(12%) | 3(6%) | 7(14%) | 2(4%) | **1.82** | Slightly |

**Key:** *f= frequency, %= Percentages, M=Mean*

**Source:** Field data, 2013

For these factors, most responses were skewed between much and extremely well motivated. In real numbers, the proportions of the responses were 40(80 percent) for knowledge improvement and 37(74 percent) for possibility of changing views with other teachers. The least supported factor ( of which 40(80%) not at all and 2(4%) slightly of respondents) indicated that it was not salary increament which attracted teachers to attend school-based INSET-PST training and other training (M =1.46).

This view/factor when reflected further means that it is not the need for money or any material reason which motivates teachers to participate in professional development seminars or workshops. Rather, teachers needed to improve their knowledge and exchange views with other teachers. These factors are related to intrinsic motivation for teacher performance. This was justified by one of the head teachers when interviwed who said that:

*‘This programme has motivated us to gain new skills and*

*knowledge and therefore makes us to be competent in subject matter*

*and pedagogical methodologies’ (Respondent No. A2, April, 2013).*

Similar results were reported by Mbwambo (2005) and Lehman (2005) who found that teachers who participated in professional development activities relied to a greater extent on interactive activities than those who do not in such activities. Also Femke *et al.* (2009) found that psychological factors like teachers' sense of self-efficacy and internalization of school goals into personal goals than the current factors had strong effects on teachers' participation in the professional development learning activities.

Karabenick and Conley (2011) argued that unlike current findings, teachers wanted to participate in professional development so as to improve their subject-matter knowledge, enjoy and make fun, enhance their career, while not demanding too much time and effort. Teachers reported a preference for professional development when other teachers in their school were participating and when their principal encouraged them to participate. It was logical to argue that teacher professional development motivation revealed in this study relates to all of these professional development characteristics.

The findings support the constructs of the theory of the constructivist (Vygotsky, 1980) whereby the educator is required to facilitate learners with opportunities and support to promote learning. This will occur only when the teacher is motivated by the most significant factors. On the basis of these findings, It is noted that teachers’ motivation by various programmes are influenced by many factors which include intrinsic and non-intrisic values that seem to be the prime factors influencing teachers in the whole process of teaching and leaning in the classrooms.

# 4.4 The Influence of INSET-PST on Classroom Interaction

The second key question of the study sought to investigate the extent to which the INSET-PSTinfluenced classroom interaction among teachers and pupils and thus improving teaching and learning. To generate information for this question, classroom interaction was observed in the schools where the INSET-PSTtraining was conducted. In each class observed, the lesson had 40 minutes duration.

The purpose of the observation was to gather detailed information on how the whole process of teaching and learning was being conducted. The focus was to determine the ability of the teachers to present knowledge (subject matter) in a form that can be understood by learners, that is, the ability of teachers to provide activities that give ample opportunities for learners (pupils) to construct their own knowledge. Moreover, lesson observation aimed at exploring how the learners applied a variety of strategies to solve problems. In summary, classroom observation was done so as to enable the researcher to assess the quality of teaching and learning in the classroom in the following areas: teachers’ knowledge of subject content, teachers’ use of interactive teaching-learning practices, teachers’ use of relevant teaching-learning materials, teachers’ engagement with language development and the quality of pupil’s learning. A summary of teachers’ classroom activities in the lessons observed is presented in Table 4.2.

Table 4.2: Teacher-pupils Classroom Interaction

| **Aspect** | **Responses (N = 6)** |
| --- | --- |
| **Unsatisfactory** | **Satisfactory** | **Good** | **Very good** | **M** | **Decision** |
| *f* | *f* | *f* | *f* |
| Range of teaching and learning activities | 2(33%) | - | 3(50%) | 1(17%) | 2.50 | Good |
| Use of instructional materials | 1(17%) | 2(33%) | 2(33%) | 1(17%) | 2.50 | Good |
| Explains the topic accurately and clearly | - | 1(17%) | 2(33%) | 3(50%) | 3.60 | Very good |
| Makes effective use of chalk/blackboard | - | 1(17%) | - | 5(83%) | 4.00 | Very good |
| Uses of paired/ group work | 1(17%) | - | 1(16%) | 4(67%) | 3.40 | Good |
| Asked pupils closed/open questions |  | - | 1(17%) | 5(83%) | 3.83 | Very good |
| Asks pupils to demonstrate in front of the class | 1(17%) | - | 2(33%) | 3(50%) | 3.17 | Good |
| Encourage pupils to ask questions | 1(17%) | - | - | 5(83%) | 4.00 | Very good |
| Includes pupils with additional learning needs | 1(17%) | - | 3(50%) | 2(33%) | 3.60 | Very good |
| Effectively manages timing of lesson | 1(17%) | - | 2(33%) | 3(50%) | 3.60 | Very good |

**Key:** *f= frequency, %= Percentages, M=Mean*

**Source**: Fielddata, 2013

According to data presented in Table 4.2, teachers performed very well in classroom teaching with regards to aspects such as *‘Making effective use of chalk/blackboard (Mean=4.0), Arranging classroom to facilitate learning (Mean = 4.0*) *and*  *Encouraging pupils to ask questions’* (*Mean= 3.83 );* just to mention a few as illustrated in Table 4.2. On the other hand, there are some aspects whereby teachers did not perform well such as *‘Range of teaching and learning activities (Mean=2.50) and* *Use of instructional materials’ (Mean=2.50).* This might be interpreted that in-service training made teachers to improve much and that it might be the reason why they were able to ask questions and also encourage much the learners to ask questions during classroom interaction and making effective use of board and classroom arrangement. One of the teachers who was observed in the classroom admitted as follows:

*‘The programme has helped me to employ participatory methods of teaching which enhance teaching and learning. As such pupils seem to be the source of knowledge as compared to previous time before this programme was started, where lessons were taught through teacher centered methods’(Respondent No.A7, April,2013).*

The fact that all aspects fall between Good and Very Good mean shows that interactions and thus teaching and learning have improved. These findings support those of Welsh (2010), who found that in-service training for teachers in primary and secondary schools as well as in teachers colleges improved professional development by strengthening teachers' perceptions on how pupils learn and process information that they are being exposed to and tested on.

Additionally, in such training teachers are able to practice new strategies which they later on implement in their classroom environments, such as cooperative learning and role playing. Due to the incorporation of various teaching methods, pupils are likely to perform better and both pupils and teachers will benefit from greater achievements. Therefore, it becomes fundamentally important for teachers to be prepared not only when they begin to teach, but equally important in advancing their expertise throughout the entirety of their careers.

Bowker (2010) argues that an important aspect or requisite of a teacher in asking questions to pupils is the ability to motivate them, unlock their properties, histories, meanings, causes, correlates, or consequences from the web of given-out that would otherwise make them hidden. He maintains that in the classroom, questioning must be nurtured, questions must be in a pace with answers, and both questions and answers must be appropriate to the levels of experience, familiarity, and cognitive functioning of the inquirers. Teachers need to reflect on their assumptions and expectations by asking children for feedback on the teaching-learning process and on what happens in the classroom in general. Teachers can learn from pupils as well.

The findings presented in Table 4.2 also revealed that, lesson observation on a teacher who did not attend INSET-PST showed that the teacher used the teacher centered method in presenting the lesson without using teaching aid. In this context one of the teachers observed who did not attend INSET-PST had this to say in one of the interview sessions:

*“The classroom participation of pupils when I was teaching English was minimal since I failed to employ various teaching techniques in the lesson presentation. This is due to lack of in- service training. I have never attended any in-service training since I was employed as a teacher for the past 12 years” (Respondent No. A3, Aprili, 2013).*

The explaination by the teacher shows that even though the teacher had a long experience in teaching, he was still using the traditional methods of teaching in contrast to those teachers who had attended INSET-PST. The teacher did not fully involve pupils in teaching the lesson. The teaching was dominated by the teacher hence leading minimal pupils’ interaction.

Furthermore, teacher-pupil interaction can also be obtained through ensuring good sitting arrangement in the classroom. It is argued that children sitting farthest away from the teacher have the fewest interactions with the teacher, are the least involved in classroom activities, and have the lowest achievement scores. Implications of such findings are obvious (Denise, 2000). Teachers need to find ways of being physically close to their pupils, especially those who experience problems in learning.

A teacher who manages his/her classroom by walking around can be close to every learner at different times. Denise found that a classroom environment which enhances creativity provides pupils with choices, accepts different ideas, boosts self‐confidence, and focuses on pupils’ strengths and interests than the current ones in encouraging teacher-pupils interaction.

# 4.5 The Influence of School-Based INSET-PST in Enhancing Teaching and Learning Development

The third research question sought to investigate how the teaching strategies/skills were influenced by school-based INSET-PST in enhancing teaching-learning development. The question was two-fold: first, asking teachers who had attended the school – based INSET-PST to explain the extent to which the activities which they had learned in the process enabled them to improve their teaching skills in some selected professional aspects such as: preparation of lesson plans; preparation of teaching aids; methods of teaching science and mathematics; methods of teaching civics and social sciences; and methods of teaching work skills. Respondents were expected to respond to a five point scale which ranged from ‘not at all’ to ‘extremely well’ representing 1 to 5 scores respectively. Second, an independent-samples t-test was conducted to compare the improvement of teaching and learning strategies for teachers who attended school-based INSET-PST and those who did not attend.Tables 4.3 and Table 4.4 present the results.

Table 4.3: Respondents view on the Improvement of their Teaching Skills

|  |  |
| --- | --- |
| **Factor** | **Responses(N = 50)** |
| **Not at all** | **Slightly** | **Much** | **Very much** | **Extremely** | **M** | **Decision** |
| ***f*** | ***f*** | ***f*** | ***f*** | ***f*** |
| Preparation of lesson plans | 1(2%) | 3(6%) | 15(30%) | 24(48%) | 7(14%) | 3.66 | Very much |
| Preparation of teaching aids | 1(2%) | 2(4%) | 19(38%) | 23(46%) | 5(10%) | 3.58 | Very much |
| Methods of teaching science /Maths | 5(10%) | 2(4%) | 22(44%) | 18(36%) | 3(6%) | 3.24 | Much |
| Methods of teaching Civics and Social sciences | 4(8%) | 6(12%) | 20(40%) | 19(38%) | 1(2%) | 3.16 | Much |
| Methods of teaching Work skills | 3(6%) | 7(14%) | 18(36%) | 20(40%) | 2(4%) | 3.22 | Much |

Key: *f= frequency, %= Percentages, M=Mean*

**Source:** Fielddata, 2013

The data in Table 4.3 indicate that majority teachers reported that they had between much and very much improvement in the measured skills. Very much improvement was reported in two professional skills; namely, preparation of lesson plans and preparation of teaching aids (M = 3.66 & M = 3.58 respectively). Much improvement was reported in methods of teaching civics and social sciences (M = 3.16 & M=3.24 respectively). Such improvement was reported by most respondents whose proportions were 39 (78 percent) for preparation of lesson plan and 42 (84 percent) for the preparation of teaching aids. These proportions were interpreted as a mastery of the skills trained, and thus one could easily hypothesize the influence of the school-based INSET-PST on teaching skills.

These findings are in line with those of Harwell (2003), who did a study on the implication of staff development particularly continuous professional learning to teachers. He found that the process had the most powerful impact in lesson planning among the staff. In addition, Avalos (2011) found that collaborative learning had an influence on teachers’ changes in teaching particularly on planning of the lessons among other factors, although to varying degrees. He also observed that this was not related to years of experience but to the extent to which they had engaged in various stages of collaborative and reflective learning. To check this further, Table 4.4 presents the data from an independent-samples t-test analysis.

Table 4.4: Influence of School-based INSET-PST on Teaching-learning Skills

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attendance status** | **N** | **M** | **SD** | **t-test** |
| ***t*** | ***df*** | ***p*** | ***Mean******difference*** |  | ***Eta square*** |
| Attended | 44 | 29.5 | 5.5 | 3.61 | 48 | .001 | 8.95 |  | .21 |
| Not attended | 6 | 20.2 | 7.4 |  |  |  |  |  |  |

***Key:*** *N=Number of a sample, M=Mean, t=t-test, df=difference level, p= Signifance level*

**Source:** FieldData, 2013

The independent-samples t-test was conducted so as to compare the reporting of the improvement of teaching/learning strategies for 44 teachers who attended school-based INSET-PST and 6 teachers who had not attended.Table 4.4 indicates statistically significant difference between respondents who attended school-based INSET-PST to be M= 29.9, and SD = 5.5. Those who did not attend training had the following results M= 20.2 and SD=7.4); while t(48) = 3.61, *p* = .001 (two tailed) in reporting their improvement in teaching learning methodology. The magnitude of difference was large (eta-squared = .21). Likewise, these results resemble those reported by Magina (2010), which indicated that among 77 respondents, 20(26.7 percent) reported that they had attended in-service training; while 55 (73.3 percent) said that they had not attended in-service training.

Results further indicated that there was statistically significant difference in scores for respondents who said they had attended in-service training (M = 75.8, SD = 5.9) and those who had not attended any in-service training (M = 71.5, SD = 5.0; t (75) = 3.103, *P* = 0.003 (two tailed). These results can be interpreted that there was an influence of school-based INSET-PST on teaching/learning strategies. This could also be a reason why, according to data seen in Table 4.2, the overall teacher-pupil classroom interactions were rated dominantly between good and very good. When interviewed, the District Education Officer (DEO) admitted by saying:

 *“The programme has improved the teaching methodologies of teachers. This is reflected by the fact that performance of pupils improved in the year 2012 in standard seven national examination results in these schools under the programme when compared to 2009 results before the introduction of this programme. In 2010 the district was the last but one.. However, in the 2012 and 2013 respectively the district took the second position in the region. Most of schools which did well were under* *INSET-PST Programme” (Respondent No .A9, April, 2013).*

The explaination above by the DEO is justified in Table 4.5.

**Table 4.5: Standard Seven National Examination Results for Schools with**

 **INSET-PST**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **School** | **2010** | **2011** | **2012** | **2013** |
| **Pupils sat for Exams** | **Passed** | **Pupils sat for Exams** | **Passed** | **Pupils sat for Exams** | **Passed** | **Pupils sat for Exams** | **Passed** |
| School B1 | 125 | 101(80.8%) | 87 | 66(75.8%) | 69 | 68(98.5%) | 104 | 97(93.3%) |
| School B2 | 96 | 57(59.4%) | 147 | 123(83.7%) | 119 | 116(97.5%) | 127 | 123(96.9%) |
| School B3 | 124 | 97(78%) | 113 | 100(88.5%) | 122 | 107(87.7%) | 132 | 129(97.7%) |
| School B4 | 70 | 66(94%) | 43 |  40(93%) | 41 | 36(87.8%) | 47 | 41(87.2%) |
| School B5 | 88 | 68(72%) | 89 | 52(58%) | 90 | 78(86.6%) | 108 | 85(78.7%) |

***Source:*** FieldData, 2013

Data in Table 4.5 show that since the programme started operating in these schools in 2009, there has been improved the performance of pupils in the examinations considering the pass percentage. This is no wonder as results in Table 4.2, 4.3 and 4.4 show a greater influence on those who attended INSET-PST to have improved their teaching strategies/skills.

These findings are similar to those of Helen (2007) who found that teachers who had opportunities of engaging in continuous professional learning and development had a substantial impact on pupils’ learning hence improve in pupils’ perforamnce. This means that teachers had gained from the in-service training program and had a strong and positive effect on improved teaching. The quality of teaching lies in the ability of the teacher to transform the knowledge (subject matter) in the form that can be understood by the learners. This should be done through activities that give ample opportunities for pupils to construct their own knowledge.

On the other hand, Jacob and Lefgren (2005) in Chicago found that marginal increases in in-service training had no statistically or academically significant effect on either reading or Maths achievement, suggesting that modest investments in staff development may not be sufficient to increase the achievement of elementary school children in high poverty schools. The different findings might emanate from the nature of the sample studied and the fact that, despite being a correlate of teacher performance and professional development, neither does INSET automatically lead to learners’ academic success nor stands as the only sufficient determinant factor of academic success. However, it works together with other factors such as cognitive, affective and quality of instructions given to learners (Bloom, 1956).

In this study, it was evident that every individual teacher could not be equally good in all areas of work. Thus, it was necessary to develop each individual’s capabilities to the maximum so that she/he could respond to the conditions of professional work and the changing life demands. Teachers’ in-service training in the Tanzanian context is a function of the interaction between and among five key players or stakeholders. These are the MoEVT, universities, schools, the community and teachers themselves.

The MoEVT is responsible for providing policy and financial support for teachers’ professional development. Universities and Teachers Training Colleges are responsible for providing training, conducting policy oriented research and providing relevant literature and materials to support teachers in schools. The school management has the role of providing support to teachers on a daily basis through advice, supervision, monitoring and evaluation of the teaching and learning activities. The community, through respective school board, is responsible for supporting the TPD by providing the necessary resources in the school budget. The teacher is responsible for being proactive in seeking opportunities for his/her own professional development.

Komba *et al.* (2006) clarified the practices of teachers INSET in Tanzania that include the formal mentoring programs. Other forms of practice are the meetings held at school level and at cluster level for the purpose of reviewing and reflecting on practice on a regular basis. The author emphasized that the establishment and effective utilization of Teachers Resource Centre is an important element in the PD of teachers. Informal practices include team teaching and the sharing of experiences and educational resources among teachers, which greatly contributes to self improvement.

The policy and practice of education in Tanzania in recent years have been influenced by two major initiatives. These are the Education and Training Policy (ETP) (URT, 1995) and the Education Sector Development Programme (ESDP) (URT, 2001). The ESDP was formulated so as to address critical issues and problems facing the education and training sector in general in Tanzania. The programme is a comprehensive and complex undertaking entailing many fundamental changes including Information, Communication and Technology (ICT) as well as the participation of many and varied actors in the education and training sector.

These changes/reforms and interventions are primarily focused on the learner, the teacher and the teaching/learning environment ultimately intended to improve the academic achievements and competences of the learner. One of the objective of ESDP is to improve the quality of both formal and non formal education through strengthening INSET of teachers and tutors, supplying adequate teaching-learning materials; rehabilitation of school/college and training institutions physical facilities; consolidating PRESET programmes; promoting research in education and training institutions, and strengthening monitoring and evaluation.

However, none of the targets have been fully met. The efforts done by this programme is quite clear, yet much effort is needed since this study indicates there was high demand of INSET for teachers so as to meet the macro economy policy of the Tanzania Development Vision 2025 which states:

*“education should be treated as a strategic agent for mindset transformation and for the creation of a well educated nation, sufficiently equipped with the knowledge needed to competently and competitively solve the development challenges which face the nation” (URT, 1999).*

Teachers are expected to play new roles as part of the systemic reform efforts. Teachers’ in-service training provides opportunities for them to explore new roles, develop new instructional techniques, refine their practice and advance themselves both as educators and as an individual. It is important that educators, parents, policy makers and the general public understand the teachers’ expectations, their new roles and responsibilities.

However, schools are bureaucratic and hierarchical. Teachers are isolated from one another and have learned to work alone. Principals usually have not been asked to support teamwork, and leadership has been linked only to formal roles. PD has relied upon the deficit model in which an expert imparts knowledge and information to teachers who are assumed to be deficient and in need of outside expertise to teach them new modes of working with pupils. Komba *et al.* (2008) insisted that it was important that PD shifted its emphasis from working with teachers to working towards the improvement of teaching and learning for all pupils.

Teachers’ in-service training in this era of changing demands on teachers is most important. It is inappropriate to structure teacher development as a single period of teacher education at the start of career. One of the valuable initiatives in in-service training is the involvement of the experienced teachers in the design and delivery of courses at the school level. This has the double benefit of ensuring that the courses are relevant and practical, while also providing development opportunities for the experienced teachers (Gaynor, 1998; Condy 1998; Monk 1999).

However, despite the enthusiastic claims for in-service teacher education, the impact of some schemes have some disappointment. There are numerous examples of projects involving short interventions that showed little sustained change in classroom teaching. It seems clearly that the training aimed at making a change in teacher methods must provide opportunities for the teacher to practice with such methods over a reasonable period (Monk, 1999). The teacher is the heart of classroom instruction (Galabawa, 2001) The effectiveness of the teacher depends on his/her competence (academically and pedagogically) and efficiency (ability, workload and commitment), teaching and learning resources, teaching and learning method, and support from education managers and supervisors (Mosha, 2004; Rogan, 2004; Van den Akker & Thijs, 2002).

# CHAPTER FIVE

# 5.0 SUMMARY AND RECOMMENDATIONS OF THE STUDY

# 5.1 Introduction

This chapter presents the summary, conclusion and recommendations of the study. It also outlines some suggestions for further research. This study intended to find out the effectiveness of the school-based INSET-PST in enhancing TPD in Bagamoyo District in Tanzania. Data was collected through the use of interviews, observations and questionnaires. The target population was primary school teachers in Coast Region specifically in Bagamoyo District. The study sample consisted of 81 respondents. Among these were 50 teachers who filled the questionnaires, 5 were headteachers and District education officer who responded to guided interview and twenty five teachers participated in focus group discussion.

# 5.2  Summary of Findings

Generally, the findings revealed that school-based INSET-PST was effective towards improvement of teachers to apply teaching and learning activities. The first research objective and related question sought to investigate the factors which generally motivated primary teachers to participate in various types of PD activities. Findings have shown that teachers were motivated by different factors at varying degrees. While Some indicated were slightly motivated others were extremely well motivated. Two factors seem to have been leading in motivating most teachers to participate in the school-based INSET-PST training and other training programs. These involved the need to improve their knowledge and the possibility of sharing and exchanging views with others (M = 3.22 & M = 3.12 respectively). For these factors, most responses were skewed between much and extremely well motivated. In real numbers the proportions of the responses were 40 (80%) for knowledge improvement and 37 (74 percent) for possibility of changing views with other teachers. The least supported factor was mentioned by 40 (80 percent) respondents who indicated that it was not salary increament which attracted them to attend school-based INSET-PST training and other training (M = 1.46). It shows that it is not the need for money or any material incentives which motivated the teachers to participate in professional development seminars or workshops. Rather, teachers needed to improve their knowledge and to exchange views with their fellow teachers. These factors are related to intrinsic motivation for teacher performance.

Secondly, teacher-pupil interaction was significant for some factors such as *‘Making effective use of chalk/blackboard* (Mean=4.0), *Arranging classroom to facilitate learning* (Mean = 4.0) and *Encouraging pupils to ask questions* (Mean =4.0).Unlike others, the training encouraged much interaction between teachers and pupils which improved pupils’ learning. On the other hand, respondents did not score well in other few aspects of classroom interaction such as *‘Range of teaching and learning activities (Mean=2.50)* and *Use of instructional materials (Mean=2.50).* Based on the findings in the second question, it might be interpreted that as a result of in-service training, teachers improved much and were able to encourage more participation of learners during classroom interaction, except in just few aspects of PD.

Thirdly, remarkable significance was observed for teachers who attended school-based INSET-PST (M= 29.9, SD = 5.5), more than their counterparts (M= 20.2, SD=7.4); t (48) = 3.61, *p* = .001 (two tailed) in their improvement in teaching - learning strategies. The magnitude of difference was large (eta-squared = .21). The least though much improvement was reported in the methods of teaching civics and social sciences (M = 3.16). Such improvement was reported by most respondents whose proportions were 39 (78 percent) for preparation of lesson plan and 42 (84 percent) for the preparation of teaching aids. These proportions were interpreted as a mastery of the skills trained, and thus one could easily hypothesize the positive influence of the school-based INSET-PST on teaching skills.

# 5.3 Practical Implications of the Findings

These study findings imply that a study for in-service programs like INSET-PST provide teachers with a unique opportunity to develop professionally and be well prepared for a broad range of a role to play in the renewal and certification of competent practitioners by developing new relationships with teachers and the government and by re-valuing the role of professional development within the education context.

This study revealed that in-service training is the most potent contributor to teachers’ performance. The implication of this to the employer is that they should try and adopt effective in-service training programs, knowing that teacher development is a process along a continuum of learning. It requires change over time and is achieved in stages depending on teachers' experience gained in instructional and management practice on their career. The process also depends on the degree of services and support a country's level of economic and political development allows it to provide.

These study findings can be used by different education stakeholders, including universities and teachers colleges, MoEVT, practictioners, teachers and policy makers/planners in the following ways: From the time teachers begin any initial preparation or teaching, provision needs should be made for ongoing development of their subject matter knowledge; the concrete skills to teach, observe, assess, and reflect; incentives; and career growth. Studies have showed that teachers should also be enabled to form linkages to other teachers (and supervisors) to help them support each other and solve challenges through discussion, modeling and coaching, and involvement with other aspects of school and educational change. Isolation and lack of communication between teachers should be reduced.

As earlier stated, educational stakeholders are key actors in promoting professional development of teachers. First, all stakeholders should call for new approach that puts teachers needs and perspectives at the centre of decision-making. Teachers’ motivation is a critical factor in education management and policy formulation at all levels, school, regional, national and international levels. Second, head teachers should ensure that their teachers are highly motivated and satisfied. Efforts should be made to provide proper incentives, effective communication, equal opportunities for all to attend seminars and introducing of remedial classes within their capacity.

Third, local government councils’ executive directors should strive to make their schools more attractive by ensuring that conducive climate exists in their schools in order to ensure effective teaching and learning environment. The employer, local government councils’ executive directors should also create a situation whereby employees can get short seminars or workshops in their local areas which could cost less. Workers should also be well motivated whether intrinsically or extrinsically. When teachers are re-educated they can manage to deliver the relevant materials to their learners, hence increase performance. Fourth, the MoEVT in partnership with stakeholders should initiate an in-service training unit to solve the in-service training funds, run in-service training courses, workshops and seminars both at the district and regional levels and not just for Ministerial officials. The MoEVT also has a responsibility to provide sufficient teaching and learning materials to support the curriculum, adequate facilities, and ongoing support for the issues that teachers face.

# 5.4 Conclusions of the Study

On the basis of study findings, it makes sense to conclude that an INSET-PST programme can make some difference in terms of motivating teachers to participate in professional development. In addition, teachers professional development programmes like the INSET-PST help teachers in improving their teaching methodologies/strategies, preparing and improvising teaching aids using resources from local environment. The study findings stress the need to promote the use of the facilitation and constructivist theories as guidelines for studying topics related to teacher professional development particularly school-based in-service programmes.

# 5.5 Recommendations for Administrative, Policy Actions and Further Research

The following are action areas and areas of further studies. Some questions which warrant own studies, emerged for example teachers still use traditional methods of teaching, problems of academic documents such as preparing lesson plans and schemes of work and provision and use of teaching aids in lesson presentation. Also there are issues which also need actions to solve them. For example, inadequate teaching and learning materials, teachers’low morale in teaching due to low pay, poor infrastructure and delay to be promoted.

# 5.5.1 Recommendations for Administrative Actions

1. Pre-service teacher training courses need to put emphasis on developing a firm foundation of knowledge of the subject matter, skills in in lesson preparation, classroom management, and effective use of teaching-learning materials including teaching aids.
2. There should be planned and conducted workshops, seminars, and other short courses that offer structured opportunities for the teachers to acquire knowledge and skills. Teachers should be encouraged to take part in these as they will make a difference in their knowledge and skills.

# 5.5.2 Recommendations for Policy Actions

1. The Education Training Policy of MoEVT (1995) insists on inservice training for teachers. The Ministry Education na Vocational Training should implement fully the policy with collaboration with other ministries including Prime Minister’s Office-Regional Administration and Local Government as well as other education stakeholders.
2. The Department of School Inspectorate in the MoEVT which deals with quality assurance of education should monitor the implementation of the policy on inservice training for teachers.

# 5.5.3 Recommendations for Further Research

1. There is a need to conduct a more comprehensive study on INSET~~-~~PST in other districts of the country in order to have a deeper understanding of different contexts under which such programmes are implemented.
2. Other studies should be done on casual effects of teacher professional development and performance in the context of rural and remote areas.

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# APPENDICES

Appendix 1: Questionnaire for Primary School Teachers

The purpose of this study is to assess the effectiveness of school-based in-service training (INSET-PST) for primary school teachers in enhancing teacher professional development with the aim of improving teaching and learning. Since you are among the stakeholders of the programme, you are kindly requested to provide the required information for assessing the effectiveness of the school-based INSET for primary school teachers commonly known as *Mafunzo ya Walimu Kazini Elimu ya Msingi* *(MWAKEM)*. Be open, frank and stay assured that the information you provide will be treated as confidential.

**Personal particulars:**

Please indicate your:

School…………………………………………………………………………………

Education qualifications ………………..…………………………………………….

Age; ………………………………..….Sex; …………………...…………………….

Teaching subjects……………………………………..Class………………………….

**General Information**

1. Please indicate your teaching experience by putting a tick in the appropriate bracket.

1. 2-4 to years ( )
2. 5- 7 years ( )
3. More than 7 years ( )

2. Have you attended any INSET during the past years? Yes ( ) No ( )

3. How many school based INSET-PST training activities such as seminars, short courses and workshop have you attended during the past four years?

1. One ( )
2. Two ( )
3. Three ( )
4. More than Three ( )
5. None ( )

4. Please indicate the extent to which each of the following factors has motivated you to participate in the school-based In-service training activities that are offered to you such as seminars, workshops and upgrading courses.

For each of the factors, indicate the extent by inserting an “X” in only one of the brackets on the right hand side.

**Aspect Extremely Very much Much slightly not at all**

1. Possibility of salary increment ( ) ( ) ( ) ( ) ( )
2. Possibility of promotion ( ) ( ) ( ) ( ) ( )
3. To improve knowledge ( ) ( ) ( ) ( ) ( )
4. Possibility of getting Subsistence

allowances ( ) ( ) ( ) ( ) ( )

(v) Possibility of Exchanging Views

with other teachers ( ) ( ) ( ) ( ) ( )

1. Travelling to other places ( ) ( ) ( ) ( ) ( )

(vi) Getting a break from teaching

 in the Classroom ( ) ( ) ( ) ( ) ( )

5. To what extent have the School-based INSET for PST activities enabled you to improve your skills in each of the following aspects?

 **Aspect extremely well Very much Much slightly not at all**

1. Preparation of lesson plans ( ) ( ) ( ) ( ) ( )
2. Preparation of

 of teaching Aids ( ) ( ) ( ) ( ) ( )

1. Methods of teaching Science/

 Maths ( ) ( ) ( ) ( ) ( )

1. Methods of teaching Civics,

 and Social Sciences ( ) ( ) ( ) ( ) ( )

1. Methods of teaching

 Work Skill ( ) ( ) ( ) ( ) ( )

6. To what extent did the school-based INSET-PST activities enable you to improve your knowledge in the subject matter for the following (subjects)?

 **Subject Extremely well Very much Much slightly not at all**

1. English ( ) ( ) ( ) ( ) ( )
2. Maths ( ) ( ) ( ) ( ) ( )
3. Teaching Methodologies ( ) ( ) ( ) ( ) ( )

7. (a) Is there any INSET programme for teachers in the school where you are teaching.

1. Yes ( )
2. No ( )

(b) If the answer is “Yes”, what type of INSET programme?

(c) What can you say about its implementation so far.

1. Excellent ( )
2. Very Good ( )
3. Good ( )
4. Fair ( )
5. Poor ( )

8. To what extents have the School-Based INSET for PST activities in your school improved the teachers professionally in the following aspects?

 **Aspect Extremely well Very much Much slightly not at all**

1. Knowledge of subject matter ( ) ( ) ( ) ( ) ( )
2. Preparation of lesson plans

Schemes of work and subj. logbook ( ) ( ) ( ) ( ) ( )

(iii) Improvisation and use of teaching Aids ( ) ( ) ( ) ( ) ( )

(iv) Blackboard work ( ) ( ) ( ) ( ) ( )

 (v) Promoting the participation of pupils

 in the lessons ( ) ( ) ( ) ( ) ( )

 (vi) Use of textbooks in teaching ( ) ( ) ( ) ( ) ( )

 **Thank you for Your cooperation**

Appendix 2: Interview Guide Questions for District Education Officer

The purpose of this study is to assess the effectiveness of school-based in-service training (INSET) for primary school teachers in enhancing teacher professional development with the aim of improving teaching and learning. Since you are among the stakeholders of the programme, you are kindly requested to provide the required information for assessing the effectiveness of the school-based INSET for primary school teachers commonly known as *Mafunzo ya Walimu Kazini Elimu ya Msingi* *(MWAKEM)*. Be open, frank and stay assured that the information you provide will be treated as confidential.

**Personal particulars:**

Please indicate your:

District…………………………………………………………………………………

Education qualifications ………………………………………………………………

Age………………………….Sex;……………..Date of interview……….…………..

**General Information**

1. How many primary school teachers are there in your district?
2. Is there any INSET programme for primary school teachers in your district? If the response is “YES”, To what extent has the programme been implemented?
3. What type of training activities are done in order to implement the school -based INSET for primary school teachers?
4. To what extent are the teachers interested in attending school-based INSET?
5. In your opinion, which factors motivate the teachers to take part in the school-based INSET activities?
6. How many of the primary school teachers in your district attended any type of school-based INSET this year and last year?
7. Which factors discourage some of the teachers to participate in the school -based INSET activities?
8. In what ways do teachers benefit when they participate in school-based INSET activities?
9. Have school-based INSET activities for teachers led to any improvement in the academic performance of the pupils in your district?

**Thanks for Your Cooperation.**

Appendix 3: The Interviews Guide Items for Head Teachers

The purpose of this study is to assess the effectiveness of school-based in-service training (INSET) for primary school teachers in enhancing teacher professional development with the aim of improving teaching and learning. Since you are among the stakeholders of the programme, you are kindly requested to provide the required information for assessing the effectiveness of the school-based INSET for primary school teachers commonly known as *Mafunzo ya Walimu Kazini Elimu ya Msingi* *(MWAKEM)*. Be open, frank and stay assured that the information you provide will be treated as confidential.

**Personal pariculars**

School……………………………………….…………………………………………

Education qualifications …………………………...………………………………….

Age; ……………………………….…….Sex; ……………………………………….

**General Information**

1. How many teachers are there in your school?
2. What are the qualifications of your teachers by sex and grade?
3. What opportunities are there for regular development of primary school teachers to access IN-SET?
4. Do you think the teaching and learning environment in your school is conducive. How?
5. (a) What INSET pragrammes for teachers are there in your school and to what extent have they been implemented.

(b) To what extent has it been implemented?

1. How many teachers in your school have attended any INSET programme of any type through seminar, workshop or short course during this year and last year?
2. Do you think that the INSET has enabled the teachers (who participated) to improve their teaching skills?
3. Which factors hinder the implementation of an INSET programme for teachers?
4. In which ways should the INSET for teachers be improved so as to make it more effective?
5. (a) Are teachers in your school interested in attending or participating in in-service training?

(b) Which factors discourage the teachers to participate in INSET activities?

1. To what extent has the participation of teachers in INSET activities led to an improvement in the academic performance of pupils in your school?

 **Thanks for Your Cooperation.**

Appendix 4: The Focus Group Discussion Guide for Teachers

The purpose of this study is to assess the effectiveness of school-based in-service training (INSET) for primary school teachers in enhancing teacher professional development with the aim of improving teaching and learning. Since you are among the stakeholders of the programme, through group discussion you are kindly requested to provide the required information for assessing the effectiveness of the school-based INSET for primary school teachers commonly known as *Mafunzo ya Walimu Kazini Elimu ya Msingi* *(MWAKEM)*. Be open, frank and stay assured that the information you provide will be treated as confidential.

**Personal pariculars**

School………………………………………………………………………………..

Education qualifications ……………………………………………………………..

Age; ………………………….Sex; …………… Date of interview………………….

**General Information**

1. Is there any INSET pragramme for teachers in your school?
2. What benefits can you get if you participate in TPD activities such as seminars,workshop and upgrading courses?
3. Which problems do TPD,activities face in your school?
4. What should be done in order to improve the activities of the implementation of TPD in your school.

 **Thanks for Your Cooperation.**

Appendix 5: Classroom Observation Schedule by the Reseacher

**A. General Information**

Name of School……………………………………………………………………

Date……………………………………………………….………………………..

 **B. Details of the lesson**

Teacher’s name……………………………………………………………………

Sex……………………………………………………………..………………….

Class……………………………………………..Subject………………..……….

Start Time……………………………… End Time……………...………………

No, of pupils presented……………… Absent…………………..………………..

Lesson Topic…………………………………………………..………………….

Lesson Objectives………………………………………..……………………….

**C. Class Observation**

Using the following scale, indicate by ticking in the appropriate box indicating the quality of lesson planning andteaching and learning.

**1=unsatistifactory, 2=satistifactory, 3=good, 4=very good**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson planning** | **1** | **2** | **3** | **4** |
| Range of teaching and learning activities |  |  |  |  |
| Use of instructional materials |  |  |  |  |
| Additional assessment needs |  |  |  |  |
| Assessment learning |  |  |  |  |
| Setting of homework (if appropriate) |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Judging the quality of teaching and learning** | **1** | **2** | **3** | **4** |
| States objectives and provides overview of lesson |  |  |  |  |
| Explains the topic accurately and clearly |  |  |  |  |
| Emphasizes key points of the lesson |  |  |  |  |
| Make effective use of chalk/blackboard |  |  |  |  |
| Creates positive classroom climate |  |  |  |  |
| Knows and uses of pupils names |  |  |  |  |
| Use of paired /group work |  |  |  |  |
| Arranges classroom to facilitates learning |  |  |  |  |
| Asked pupils closed questions |  |  |  |  |
| Asked pupils open questions |  |  |  |  |
| Calls on pupils individually to demonstrate answer questions |  |  |  |  |
| Asks pupils to demonstrate in front of class |  |  |  |  |
| Acknowledges pupil answers |  |  |  |  |
| Probes pupils answers |  |  |  |  |
| Comment on pupils answers |  |  |  |  |
| Encourage pupils to ask questions |  |  |  |  |
| Moves around the classroom to interact with pupils to provides spoken or written feedback |  |  |  |  |
| Effectively manage the class |  |  |  |  |
| Includes pupils with additional learning needs |  |  |  |  |
| Uses of plenary to summarize, consolidate and extends learning |  |  |  |  |
| Effectively manages timing of lesson |  |  |  |  |

Appendix 6: Research Clearance Letter



Appendix 7: Introduction Letter of Tassilo Millinga from OUT

