

THE UNIVERSITY OF ZAMBIA

THE EFFECTS OF THE STRENGTHENED TEACHERS' CONTINUING PROFESSIONAL DEVELOPMENT (CPD) PROGRAMMES ON PUPIL PERFORMANCE AT GRADE TWELVE LEVEL IN SELECTED SECONDARY SCHOOLS OF SOLWEZI DISTRICT.

BY

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AUTHOR'S DECLARATION

I **ZINNIA NGUMBWE** hereby declare that the work in this dissertation is my own original work and that it has not been previously submitted for a degree at this or any other university.

Signed:

Date:

DEDICATION

First and foremost, this dissertation is dedicated to my heavenly father, the Lord Jesus Christ and the Holy Ghost for the supernatural financial support, ability and guidance rendered to me during the compilation of this document.

Secondly, it is dedicated to my lovely children; Darius, Simata and Sikamatuma for their enduring spirit during my study period at the University of Zambia.

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CERTIFICATE OF AAPPROVAL

This dissertation of Zinnia Ngumbwe is approved as a partial fulfilment of the requirements for the award of the Master of Sociology of Education of the University of Zambia

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LIST OF ACRONYMS

CPD	Continuing Professional Development
ECZ	Examinations Council of Zambia
HEAZ	Home Economics Association Of Zambia
LATAZ	Languages Association of Zambia
MOE	Ministry of Education
SBCPD	School Based Continuing Professional Development
SMASTE	Strengthening of Mathematics, Science and Technology Education
SPRINT	School Programme of In-service for the term
PETAZ	Physical Education Teachers' association in Zambia
TGM	Teacher Group Meeting
ZAME	Zambia Association for Mathematics Education
ZASE	Zambia Association for Science Education
ZEST	Zone Education Support Team

OPERATIONAL DEFINITIONS OF TERMS

EFFECTIVE CPD PROGRAMMES

Doing the right things in CPD programmes so that it brings about the desired effects or produces the intended results

INSET

The acronym INSET stands for In-service Education for Teachers. It is one of the approaches to professional development. It takes place within the school, outside the school at the zone, district, provincial and national levels and also as subject based INSET. It can be defined further as organized learning activities practiced within and outside the school for the purpose of developing teachers' professional knowledge, skills, attitudes and competencies. People involved in INSET are already serving teachers.

LEARNING

This is an active process where students construct knowledge, skills, values, norms and attitudes.

LESSON STUDY

This is a problem solving approach used with SPRINT through teacher collaboration to develop and design lessons while examining successful teaching strategies which enhance students' learning (MOE2010).

LIFELONG LEARNING

The learning of a teacher. A teacher is learning throughout his/her teaching lives.

PROFESSIONAL DEVELOPMENT

These are organized learning activities designed to equip employees with knowledge, skills, attitudes and competences, required to perform competently in their present and future jobs, so that they increase their efficiency and that of the organization (Hughes 1991).

SCHOOL BASED CPD

These are activities that are conducted or use the school as the venue for teacher professional development.

SECONDARY EDUCATION

Refers to the second level of education that runs from Grade Eight to grade Twelve.

SPRINT

This is the school-based system of Continuing Professional Development for Teachers based in schools and supports teachers' resource centres and in-service Coordinators. The system involves small teacher group meetings that meet on a Regular basis to discuss regular issues.

STRENGTHEN CPD

To make CPD activities stronger or intensify CPD activities in schools.

TEACHING

This is the process of imparting knowledge, skills, values, norms and attitude into a learner. It is there to facilitate and support the process of gradually gaining more independence.

QUALITY EDUCATION

This is defined as the type of education where the teaching learning process develops the analytical skills of learners, promotes children's ability to form and transform concepts, enables learners to acquire as well use knowledge, stimulate learners to express their beliefs intelligibly while empowering them to develop and live by a Personally held set of values (MOE, 1996).

Abstract

The Study embarked on finding out the effects of the strengthened continuing professional development programmes for teachers on pupil's performance at grades twelve levels in selected Secondary Schools of Solwezi District. It was a survey study that used both the quantitative and qualitative research designs. The sample comprised of one hundred respondents as follows: the Principle Education Standard Officer, Education officer for Teacher Education Department, Provincial Resource Centre Co-ordinator for secondary schools, nine Senior Education Standard Officers, four Head Teachers (one from each sampled secondary school), twenty Heads of Departments (five from each Of the four sampled secondary schools-one from each department), sixteen teachers (four from each sampled secondary school) and forty eight pupils (12 pupils from each school-four from each of the grades from 10 to 12). The research instruments used in the study were questionnaires, interview guides and focus group guides instruments to collect data.

The study revealed some of the following effects of the strengthened continuing professional development programmes for teachers on pupils' performance at grade twelve (12) level in Solwezi District as the major reasons of building capacity in teachers so that they can teach effectively and ultimately improve pupil performance at grade level. The study also established that institutionalisation of SBCPD activities in Secondary Schools was one of the major measures that was taken to strengthen CDP activities in Secondary Schools of Solwezi District. Lesson study demonstrations, long term degree courses and short term resource centre meetings were the cardinal types of CDP activities that were carried out in Secondary Schools of Solwezi District. The study revealed that teachers' attitudes and commitments towards work greatly improved. However, the results of commitment had not yet trickled down to impact pupils' final examinations. This is so because pupil's results from 2006 to 2012 portray a forward and backward mode of performance. One of the major recommendations that the study made was that MOE should ensure that school based CDP programmes for teachers cover both content and methodology as this would help teachers cover both at the same time.

CHAPTER ONE

1.0 INTRODUCTION

This chapter begins with the background to the study. It thereafter presents the statement of the problem, purpose of the study, research objectives and research questions that tallied. It further presents the significance of the study, conceptual framework and limitations of the study. It ends with a summary.

1.1 BACKGROUND TO THE STUDY

The social, political and economic development of any country largely depends on the type of education that it offers to its citizens (MOE, 1996). A lot of nations always strive to offer quality education which is a transformative type of education. According to MOE (1996), this transformative type of education (quality education) of any education system heavily depends on knowledge, skills, values and attitudes that teachers acquire at their initial training levels as well as during their teaching career life time through Continuing Professional Development programmes of teachers. The quality of education tends to be evaluated in terms of the number of students passing the final national examinations (Eshiwani, 1993). Schools can make a difference to students' achievement and effective teaching is one of the factors which contribute to success. The other factors that influence students' performance are text books, classroom management, inspection and supervision, good infrastructure, patterns of discipline and characteristics of school climate (Rutter et al., 1979). However, the most outstanding factor which influences students' performance has to do with effective teaching as can be seen from the table below:

Table 1: Contributions made by various inputs for academic achievements

Inputs	% Contribution to good results
Effective Teaching	75
Adequate text books/tuition and equipment	15
Good Physical facilities effectively used	9
Others e.g Supervision, inspection and community support	1
Total	100

Source: Chitiavi (2002)

The history of Continuing Professional Development programmes for teachers in Zambia dates back to the colonial period as early as 1923, an educational policy guideline was established in the colonial office by the advisory committee on native education in British Tropical Africa (Snelson, 1974). Snelson (1974) further explains that the Advisory Committee recommended the establishment of a system of specially trained visiting teachers as a means of improving village schools and continuing with the training of teachers.

After independence, the government's desire and encouragement to continue with the notion of CPD was enshrined in the First National Development Plan between 1964 and 1973, which stressed the importance of expanding teacher training and upgrading facilities since the country had embarked on massive rapid expansion of schools (MOE, 1977), contributing on the existence of CPD- programmes for teachers after Zambia's independence. Snelson (1974) – postulates that Chalimbana was announced in Parliament in 1968 as an In-service Teacher Training College that was expected to meet the training needs of the large number of teachers that required retraining.

In 1971, a Second National In-service College was opened in Lusaka under the name "The Lusaka College for Teachers of the Handicapped" which changed its name to "Zambia Institute of Special Education" (ZAMISE). According to Manchishi (2004), this college was established to offer in-service

training programmes for serving teachers in Special Education (the blind, the Hard of Hearing, Mentally –retarded and the physically handicapped).

Manchishi (2004) further states that the University of Zambia and teachers' colleges like Nkrumah and Copperbelt Secondary Teachers' college also started offering upgrading programmes for teachers who wanted to teach in Secondary Schools by the late 1960s. It is also worthy to make mention of the facts that the Ministry of Education through the Directorate of Standards and Curriculum has all along continued to organize, participate and attend seminars and workshops at national, provincial and district levels in order to update teachers on the current innovations and trends in the Ministry of Education (MOE, 1996). Similarly, MOE (1996) points out that, adhoc in-service programmes were usually organized by subject associations during holidays to cater for special training needs through national and provincial workshops and seminars.

In recognition of donor support towards CPD, MOE (2001) elaborates that a number of donor agencies participated in the provision of in-service training to either teachers or education managers. Some of the donors involved were; the Swedish International Development Agency (SIDA), the Overseas Development Administration (ODA), the Commonwealth Secretariat (COMESEC) and the Canadian Development Agency (CIDA).

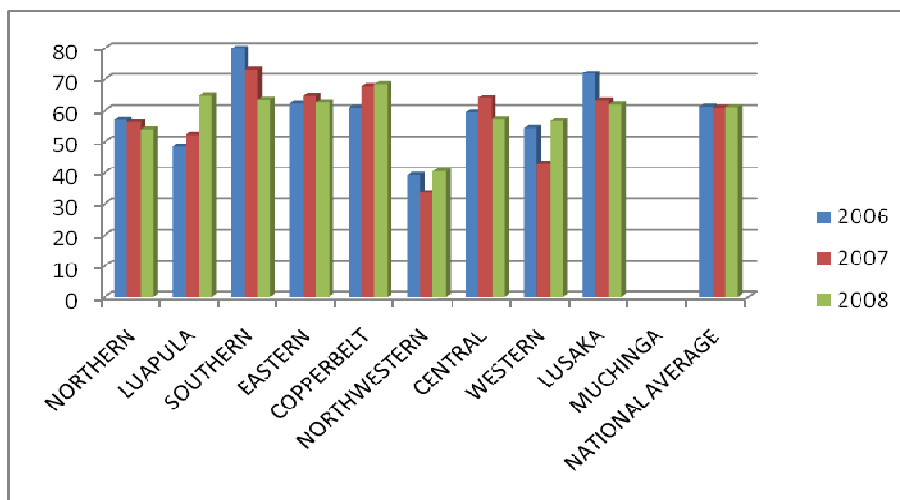
MOE (2001) further explains that in 1994 the Ministry of Education initiated a project which was known as "Action to Improve English, Mathematics and Science" (AIEMS). This project was designed to improve the quality of education through the development of a sustainable, decentralised system of INSET for teachers in Primary and Secondary Sectors. MOE (1996) outlined that the project stressed the role of the Teachers Resource Centres as being Instrumental in the decentralisation of INSET. In the quest of implementing this initiative, 78 Teacher Resource Centres at Provincial and District Levels

were established and equipped. Modules were also developed as training materials and the cascade model was affected for the purpose of having a multiplier effect. Textbooks in English, Mathematics and Science, science kits as well as mathematics kits were equally- distributed to all secondary schools.

In the final analysis, following the subsequent reviews and evaluations of the initiative of AIEMS, MOE (2001) states that despite all the inputs by the Ministry of Education, the idea of CPD was not well received in the secondary school sector because there was no clear monitoring and evaluative system at school level through which all in-service training would be relayed. In other words, CPD was not institutionalised at the secondary school level.

Despite the government putting in all these measures of Continuing Professional Development in secondary schools, the North-Western Province had continued recording poor results at the Grade Twelve (12) level since 2006. The Ministry of Education set a national target of fifty percent (50%) pass rate and above for all the provinces. North Western could not reach that target as it can be seen from the figure below:

Figure 1: GRADE 12 NATIONAL EXAMINATIONS RESULTS 2006 - 2008.



(Source: ECZ, 2006 – 2008)

When the North Western Province was experiencing poor performance at Grade twelve levels, the Central Province was running a JICA sponsored programme known as Strengthening Mathematics, Science and Technology Education (SMASTE). This programme was aimed at improving the teaching of science, mathematics and technology in secondary schools. After the evaluation of this programme which was rolled out to all subjects, it was discovered that it was very successful and results in Science and Mathematics improved at grade twelve level in Central province as such, it was extended to North-Western Province in order to help address the problem of poor pupil performance at the Grade Twelve level, which was mainly associated with poor lesson delivery techniques by teachers. Hence forth, Continuing Professional Development Programmes were strengthened in the schools of the North-Western Province of Zambia. Whose impact on grade 12 pupils for example, is yet to be established.

1.2 STATEMENT OF THE PROBLEM

Continuing Professional Development (CPD) is an important tool for enhancing the knowledge and skills of teachers like any other profession. The enhanced skills of the teacher are thereafter reflected in effective teaching and ultimately better pupil performance. However, Grade twelve results in the North Western Province with CPD continued to be poor for the years between 2006 and 2008. In the quest to improve pupils' performance at grade twelve, the Province strengthened C.P.D activities in secondary schools by introducing lesson study interventions in all subjects. Therefore, we do not know whether the strengthened secondary school Teachers' continuing professional development had improved the teachers' skills and ultimately improved pupil performance at grade twelve level.

1.3 PURPOSE OF THE STUDY

The purpose of the study was to examine the effects of the Secondary teacher's CPD programmes on pupil performance at Grade twelve final examinations level in Solwezi District.

1.4 GENERAL OBJECTIVES OF THE STUDY

The general objective of the study was to examine the effects of the secondary teachers' CPD on pupil performance at grade twelve final examinations level in Solwezi District.

1.5 SPECIFIC OBJECTIVES OF THE STUDY

The specific objectives of the study were to:-

1. investigate the reasons for strengthening CPD programmes for Secondary School Teachers in Solwezi District.
2. establish the measures taken to strengthen CPD programmes for Secondary School Teachers in Solwezi District.
3. find out the nature of CPD programmes for secondary school teachers carried out in Solwezi District.
4. examine the effects of the secondary school teachers' CPD programmes on pupil performance at Grade twelve final examinations level in Solwezi District.

1.6 RESEARCH QUESTIONS.

The research embarked on finding answers to the following questions:-

1. what reasons led to the strengthening of CPD programmes for Secondary School teachers in Solwezi District?
2. what measures were taken to strengthen CPD for secondary school teachers in Solwezi District?

3. what nature of CPD programmes for Secondary School teachers were carried out in Solwezi District?
4. what were the effects of the strengthened CPD programmes for secondary school teachers on pupil performance at Grade twelve final examinations level in Solwezi District?

1.7 SIGNIFICANCE OF THE STUDY

The study was conducted in order to shed more light on the effects of the strengthened CPD programmes for Secondary School Teachers on pupil performance at grade twelve (final examinations) – level. It was hoped that the study findings would help the Ministry of Education, politicians, non-Governmental Organisations (NGO) and other concerned stakeholders to improve on the offerage of CPD programmes for teachers in secondary schools. It was also assumed that the study findings would contribute to the academic body of knowledge worldwide.

1.8 LIMITATIONS OF THE STUDY

The study was limited to two variables namely: Professional development and pupil performance. Distant rural schools and busy work schedule of some respondents was another constraint to the study. However, the researcher did her best in following them up until data was solicited from them and camped for three days at each rural school.

1.9 Delimitation Of The Study

Other relevant variables that have not been covered will form the basis of another study. The two rural secondary schools were accessible at the time of collecting data.

1.10 CONCEPTUAL FRAME WORK OF THE STUDY.

The study was guided by the training model form of conceptual frame work developed by Joyce and Shower in 1980, According to Little (1994) and *Mcdiarmid (2002)*, the training model is universally recognisable and has in recent years been the dominant form of CPD for teachers in most countries that include Zambia. *Mcdiarminid and Kelly (2002)* describe the training model as one that supports a skills based technocratic view of teaching whereby CPD programmes provide teachers with the opportunity to update their knowledge, skills, values and attitudes in order to be able to improve on their work competencies. Day (1999) also explains that in the training model, the skills, knowledge, values and attitudes are generally delivered to the teacher by an expert who usually determines the agenda. Little (1994) further explains that teachers' CPD programmes in a training model usually take place within the institution in which the participants work and sometimes off site whenever deemed as being necessary. According to *Solomon and Tresman (2002)*, the training model is a standard based view of teacher development whereby teachers strive to attain particular skills specified in a nationally agreed standard criterion through different CPD programmes.

However, *Solomon and Tresman (2002)* stress the need for teacher's CPD programmes to be well identified and tailored in order to meet teachers' professional development needs, that brings about improvements in teaching, learning and attainment. In the case of the Zambian Secondary Schools, both Institutionalised and off site upgrading CPD programmes for teachers are carried out with the aim of improving lesson delivery that usually results in good pupil performance. *Solomon and Tresman (2002)*, *MOE (1996, 2000 and 2002)* advocated for teachers' CPD programmes that met teachers' professional developmental needs as well as those that bring about improvement in teaching, learning and good pupil performance.

Basing on the above outlined facts concerning the training model, one would clearly understand and deduce that the theory is related to the study, in the sense that it addresses the study's major concerns as it brings out an understanding of the reasons for conducting CPD activities, the nature of CPD activities, measures to be taken for effective CPD programmes the extent to which they should be carried out as well as the expected effects of CPD programmes in schools.

1.11 SUMMARY

This chapter has revealed that the notion of CPD programmes for teachers is not a new trend but rather an old one that dates back to the inception of modern Education in Zambia. The background to the study has clearly outlined the history of the teacher's CPD programmes from colonial times to date. It has clearly been revealed that at every educational phase and level, the teachers' CPD programmes were meant to update and equip the teachers in order to improve on their performance which in turn should result in high pupil performance. In the following chapter, a review of literature on the strengthened Continuing Professional Development for secondary school teachers has been undertaken according to the objectives of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reviews Literature related to studies and works on the effects of Continuing Professional Development Programmes for Secondary School Teachers on pupil Performance at Grade Twelve level. The literature will be reviewed by first looking at the different definitions of Continuing Professional Development Programmes for teachers. Thereafter, related literature addressing all the five objectives of the study will be reviewed. The chapter will then end up with a brief summary.

2.1 Different Definitions of Continuing Professional Development Programmes for Teachers

Literature on Continuing Professional Development Programmes for teachers can never be clearly understood without elaborate definitions on the phrase "Continuing Professional Development Programmes". According to MOE (2007), the term "CPD" can refer to other terms like "Human Resource Building", "Life long Learning" and "In Service Education and Training" (INSET). It is clearly indicated in the Draft baseline report on CPD programmes in Primary Colleges of Education of the Ministry of Education (2008), that CPD has no universal definition, but that many writers have defined it in different ways but with over lapping meanings. MOE 2004) defines CPD as organised learning activities designed to equip employees with knowledge, skills, attitudes and competencies required to perform completely in their present and future jobs, so as to increase their efficiency and that of the organisation. MOE (2004) further clarifies that CPD also includes

professional support in form of advisory work of inspectors, appraisals, career development, mentoring, and promoting a job description. According to the definition of CPD outlined above by MOE (2004), CPD is characterised by organised planned- learning activities that are purposeful, conducted within a specified period of time that include on the job/ in house training activities as well as off the job / out of house activities that are jointly organised with other organisations and result in personal development and organisational development.

According to Ndopu (2009), Continuing Professional Development is all types of professional learning undertaken beyond the initial training of teachers (Ndopu, 2009). Kelly defines CPD as any activity which enhances the quality of teaching and learning within the school (Kelly, 2006). According to Kelly, CPD should develop the individual, the school and should directly impact what goes on in the classroom.

Bulb and Earley (2004) outlined the following concerning the definition of CPD;

"An on-going process encompassing all formal and informal learning experiences that enables all staff and individuals together with others to think about what they are doing, enhance their Knowledge and skills and improve ways of working so that students' Learning and well being is enhanced. Therefore, CPD should strike a balance between individuals, group, schools and national needs; encourage a commitment to professional and personal growth: and increase self-esteem, self-confidence, job satisfaction and enthusiasm for working with children and colleagues".

Bulb and Earley (2004) further explains that CPD is about professional lifelong learning which usually helps us to respond to ever changing situations and exercise judgement in informed and creative ways. Pachler and Field (2004) remind us that CPD should be seen as a means to rejuvenating practices, expand our professional repertoire, and increase our self-esteem/self-confidence and enthusiasm for teaching in order to achieve enhanced job satisfaction.

Blandford (2000) looks at CPD as the development of teachers and support staff to enhance their knowledge, skills and ability to improve the quality of teaching and learning in schools. Similarly Bolam (1993) views CPD as any professional development activities engaged in by teachers, which enhance their knowledge and skills and enable them to consider their attitudes and approaches to the education of children, with the view to improve the quality of teaching and learning processes.

The analysis by the Poly-Technique South West study on In-service and Continuing Professional Development defined it as any activity /process or series of processes that increases individually the level of skill, knowledge and understanding which enable them to carry out their current range of tasks more effectively or prepare them for a future role.

From the s above definitions, it is clear that there is no universal definition of the term "CPD" in any literature. However, by supplying some interpretations, a true picture of what CPD is, would be attained.

2.2 Reasons for Strengthening Continuing Professional Development programmes in Secondary Schools.

According to Day (1999), effecting change in the classroom is one of the core reasons for strengthening the teachers' CPD programmes in any school. Day (1999) explains that in whatever, sort of CPD programme that teachers get involved, the final expected outcome should be that which brings change to the teaching and learning processes that takes place in the classroom. For that reason, Day anchored the following:

The type and extent of any CPD activities matter only to a lesser extent. Even few CPD strategies could be so functional as long as they end up in impacting classroom change for both the teacher and learner.

MOE (1996) critically recognises improved CPD programmes for teachers as a key factor for improving the quality of education in Zambia. The above assumption has some authentic origin from MOE (1996: 108), where it is stated that:

The initial preparation provided at teacher Training colleges and universities, does not more than lay the foundation for a life time of teaching. There is need for regular on going continuing professional development in a process that is never complete.

MOE (1992), encouraged teachers to get involved in CPD because it enables teachers to teach effectively and that in turn helps in the improvement of the learners' results. This has been substantiated in table 1 of chapter one. Although

there are other factors that contribute to good pupil performance, effective teaching contributes seventy five percent towards good pupil performance.

GRZ (2005 and 2007) elaborated that improved CPD programmes of the teaching staff of any level is critical if the aspiration of enhancing the quality of learning in primary and secondary schools is to be realised. To this effect, the Directorate for Teacher Education and Specialised- Services (TESS), JICA and the Flemish Association for Development Cooperation and Technical Assistance (VVOB) agreed to cooperate in strengthening the systems of CPD in Basic Colleges of Education, Secondary schools and primary schools.

MOE (1996:115) says that:

The pre-service programme the trainee teachers undergo, is not sufficient for life. It is just a foundation. Therefore, teachers/ lecturers while in the service, need some sort of on-going training for them to deepen their knowledge, extend their professional skills and keep themselves up-to date on new developments in their profession because education is not static but dynamic.

The initiative of strengthening CPD programmes in secondary schools undertaken by the Ministry Of Education in collaboration with JICA in order to improve on the teacher's professionalism that in turn usually impact pupil performance positively concurs with sentiments of Craig et al (1998:x11), who point out that;

From the time teachers begin any initial preparation or teaching, provision need to be made for on-going Professional development to enable them improve their

*subject matter knowledge, concrete skills to teach,
observe and reflect clearly on their pupil performance as
part of their professional growth.*

As far as Hargreaves (1994), Harland and Kinder (1997) and Craft (2000) are concerned, CPD is important in the pursuit of improvement in the teaching and learning processes. According to Hargreaves (1994), there is clear evident relationship between teacher-professional development and pupil performance.

Improving individual staff performance, facilitating change in attitudes: towards work, rectifying ineffective practice, orienting new staff, promoting professional values and laying a foundation for implementing educational policies are some of the reasons for strengthening CPD for teachers in schools (Gilley 1989).

For Fitch and Kopp (1990), CPD for teachers should be encouraged for the reasons that they provide on-going programmes and services designed to explore new development in education and they also improve job related skills as well as foster the personal growth of the staff.

Smith (1980) indicates that CPD creates a climate in which that attainment of effective teaching becomes the on-going concern, encourages staff to contribute to innovation in their own subject matters and also develops an awareness of learners' needs.

Smith and Cronje (1992) observe that CPD promotes optimum utilization of human resources as individuals in an enterprise have different combination of interests, capabilities, habits and skills. They therefore explain that staff development programmes control such individual capabilities into a uniform vision, thereby ensuring that every member's talent and abilities are effectively utilized in support of institutional goals and objectives.

Oldroyd and Hall (1991) point out that teacher's CPD programmes result in teacher competence. They clarify that overall competence is a matter of the degree to which an educator or a teacher has mastered a set of individual –competencies. Oldroyd and Hall (1991) further explain that in the school situation, lessons learnt through trial and error serve as part of in-service training programmes known as Continuing Professional Development. According to Oldroyd and Hall (1991), most staff development programmes bring about change in teachers' beliefs and attitudes, change in the teacher as content knowledge and change in teacher as instructional practices.

Schilecty and Whitford (1983) suggest the following three key interrelated reasons as to why CPD should be strengthened and encouraged in schools:

- (1) The establishing function which supports the introduction of new programmes of study, new teaching methods and technologies and new organizational procedures in individual schools, educational regions and the total system;
- (ii) the enhancement function where the performance capacities of staff members are enhanced by improvements of existing skills and increasing-teachers' knowledge of new developments in their fields of teaching and
- (iii) the maintenance function which relates to these conditions which must adhered to if established administrative and organizational patterns are to be operated effectively.

In the final analysis, teachers' CPD programmes need to be strengthened in schools simply because they are an important rationale in supporting teacher change that lead to effective teaching that consequently improve pupils' learning and results.

2.3 Measures taken to Strengthen continuing professional development programmes in Secondary Schools

The idea of offering in-service training to teachers through adhoc workshops and out of site (school) up grading programmes was seen to be ineffective, as it did not cater for a large number of teachers at once and was also seen as one that deprived schools of some members of staff during the period they were out (Manchishi, 1996). Because it was not possible to in-service many teachers through workshops, the Ministry Of Education in 1994, with the help of the Overseas Development Agency (ODA), launched the largest in-service training programme for teachers in Zambia. It was known as "Action for Improving English, Mathematics and Science (AIEMS)". Its' main activity was to In-service teachers through Resource Centres at district and provincial levels. To strengthen and develop the existing provision of in-service education for teachers in primary and secondary sectors through the building and equipping of fourteen provincial resource centres and the establishment of fifty-seven (57) district resource centres (MOE/ODA, 1997- unpublished). At the secondary school level, the system was supported by regular extended lists by In-service coordinators and school inspectors (renamed as Standards Officers) who conducted face to face training because the number of secondary schools was small in the districts. (Manchishi,1996).

Following the subsequent reviews and evaluations of the above initiative of strengthening the provision of the teachers' CPD activities in schools, CPD was not well received in the secondary school sector, because there was no system at school level that would be a vehicle through which all in service training would be relayed. In other words, CPD was not institutionalised at secondary school level (MOE, 1998).

To address the above clarified scenario, MOE (1996) suggested the following strategies basic principles regarding the provision of CPD for teachers in schools:

- (i) programmes that are demand driven in order to respond to identified needs;
- (ii) programmes that focus on school needs and are school based/ resource centre based;
- (iii) cost effective programmes that enable large numbers of teachers to have opportunities for learning; and
- (iv) programmes that include not only studies on subject content but also on methodologies and use of only relevant teaching materials.

In response to the demands made in the policy document (Educating Our Future) for the need to put in place a CPD system that was demand driven, school focussed / school based and cost effective, the School Programme of In service for the Term (SPRINT) was launched in 1998. It was piloted in Lusaka Province schools and later taken to full scale to all the provinces (MOE, 1998). SPRINT, is a school based in-service programme which was designed to operate in all basic schools (Grades 1 – 9). However, it was extended to high schools (Grades 10- 12). Through SPRINT, In-service education has now been institutionalised in all the schools and in all the teacher resource centres. Teacher Group Meetings, Head Teachers In-service Meetings, School In-service Monitoring as well as subject meetings at the Resource Centres (SMARC) all involve In-service activities which constitute the SPRINT system (MOE, 1996, 1998) and (2003- unpublished).

One of the measures that were supposed to be taken so as to strengthen CPD in their Schools as cited by the National Staff Development Council (2001) and TDA (2007) was that of the ownership and professional responsibility factor. According to the National Staff Development Council (2001), teachers just like their pupils should take ownership and control of their learning to ensure commitment and

enthusiasm from them and they should recognise CPD as their own right and to see to it that equality of access is promoted. Teachers ought to see to it that CPD provision is well differentiated by recognising different learning styles that effect every teacher's life stage and career aspirations. The National Staff Development Council (2001) affirms that CPD ought to be teacher driven in secondary schools because they are the key players who should own and sustain CPD activities if they are to succeed.

The other measure taken by most secondary schools in strengthening CPD activities is that one postulated by Fullan. For Fullan (2000), institutionalisation and regularisation of CPD activities to an extent whereby they become part and parcel of the school curriculum as well as forms part of the routine work of the department and the individual teacher, is one way CPD can be strengthened in schools. As far as Fullan (2000) is concerned the secondary school CPD programmes should work as a system that brings the following characteristics:

- (i) represents the vehicle by which all school based in-service training are delivered to teachers for their Professional Development;
- (ii) take recognition of the fact that teachers are reflective practitioners who take full responsibility of their own Professional Development growth;
- (iii) is school based and managed by Heads of Departments;
is supported by Head teachers; and
- (iv) is supported by subject Association working closely with in-service coordinators through the Teacher Resource Centres (TRCs) at Provincial, District and Zone levels.

Garret et al (2001) note that one of the key factors to strengthening CPD activities in secondary schools is that of ensuring that the provision of CPD programmes match with particular professional needs. This fit between the developmental needs of the

teacher and the selected activity is critically important in ensuring that there is positive impact at the school and classroom level.

MOE (2007) describes two step measures that have been put in place to strengthen CPD for teachers in schools. The first step involves the identification of pedagogical gaps in teachers either by teachers themselves in Departments / Teacher Group meetings identifying topics which they find difficult to teach or by school managers and their management teams identifying shortcomings in a teacher through lesson observation, a frank discussion is held between the assessor and the assessee to identify the lesson strengths and weaknesses. The second step involves helping teachers to improve their teaching techniques (or updating them on the new techniques). This is done through a process known as "DODI" (Demonstrate, Observe, Discuss and Implement). In this process, a competent (resource person) in the department, teachers or subject meeting at the Resource Centre either volunteers or is requested to do a lesson demonstration on the identified pedagogical gaps while others observe and take note of whatever they see. After that, a discussion is held and those teachers who were found with some shortcomings are required to improve by applying the ideas from the colleagues in their classrooms. They are again observed to see if progress has taken place).

MOE (2007) cites SMASTE as a measure that the Ministry of Education in collaboration with JICA introduced in Secondary Schools to strengthen the teaching of Science, Mathematics, and Technology Education, in order to improve on the results. The programme was piloted in Central Province, but after assessing its' effectiveness, it was then extended to other provinces including the North-Western Province which was by then experiencing poor results at the final examination grade twelve level.

The school CPD and monitoring (SIMON) is the other quality control measure that has helped to strengthen teachers' CPD activities in secondary schools. This is a measure by which verification on whether the teaching and learning are being

carried out in a satisfactory manner by way of follow-ups through monitoring and inspection. It is therefore a process that enables one to reflect on the strengths and weaknesses of their teaching as well as discuss with colleagues within or outside the school in assisting to improve. Under this strategy as indicated by MOE (2010), both internal and external monitoring are conducted while focussing on the classroom environment, learning achievement, teacher competence, school support, utilisation of the teaching/ learning resource and community involvement. The monitoring is usually done by the teacher himself/herself, colleagues, school management, in-service coordinators, standards officers, as assessors of the quality of the teaching in relation to its impact to the learning situation. As a critical friend, the subject coordinator visits each school in the cluster twice per term.

MOE (2010), further cites the teacher's CPD credit system as one of the strategies that the Ministry of education has put in place to strengthen CPD activities in Secondary Schools. Teacher appraisal is central to Professional Development in Schools. The relationship between appraisals, Professional Development and School Improvement is fundamental to school improvement. The purpose of appraisal is to motivate and develop individual teachers so as to enhance performance. The awarding of credits should not be seen as an end but as a means to professional growth. This appraisal system through the awarding of credits for good performance is meant to act as an evaluation leading to performance related rewarding and CPD opportunities. Activities that would qualify a teacher for credits in this appraisal system are as follows:

- (i) Attendance at the DODI, SMART (1 Credit)
- (ii) Attendance at the subject Association Conference (2 Credits)
- (iii) Attendance at training workshop that involves knowledge and skills acquisition and transfer (2 Credits)
- (iv) Demonstrating lessons at DODI, in the School (3 Credits)

2.4 TYPES OF CONTINUING PROFESSIONAL DEVELOPMENT ACTIVITIES CARRIED OUT IN SECONDARY SCHOOLS

While adhering to the dissertation that there are many types of CPD programmes that are usually undertaken in schools, Blandford (2000) believes that all the different types of CPD activities can be grouped into four as outlined below:

- (i) Professional Education: this includes higher education level courses that teachers attend at colleges and universities that allow them to attain higher professional qualifications such as first degree, masters degrees and so forth;
- (ii) Professional training: this involves CPD activities such as conferences, seminars, workshops and any other short courses that are designed to provide teachers with professional knowledge and skills. Trainers of such CPD activities often come from outside the school;
- (iii) Professional Development: this constitutes school based INSET CPD programmes, self-development efforts, peer observations, induction and team teaching; and
- (iv) Professional Support: this category of CPD involves activities that are provided by the education managers and INSET- coordinators in schools. Examples of such CPD activities are career development, redeployment, team building, mentoring, promotion, job description and so on.

On the contrary, Lieberman (1996) classifies CPD programmes under the following groups:

- (i) direct learning which includes CPD activities like all sorts of short courses, conferences and subject association meetings;

- (ii) learning in school such as peer coaching, critical friendship, mentoring, lesson study, action research and task related planning; and
- (iii) out of school learning such as network, visits to other schools and school university partnership.

With all the several approaches of CPD activities that can be undertaken by teachers in any given school, Craft (1996) is of the idea that the kinds of professional development activities / programmes make the most desirable difference to practice are those that are identified and chosen by the teachers themselves, simple because they are the ones who know what gaps need to be filled in their professional practice. Craft (1996) further advises that the first step to be taken by any school with regard to the types of CPD programmes to be undertaken is that of identifying the content and pedagogical gaps in the teachers. He (Craft) therefore suggests that CPD programmes that are more relevant to the teachers' needs should allow them (teacher) to control and guide its development and sustainability of the CPD programme.

In the same line of thought, MOE (1996) advocates for CPD programmes that are demand driven so as to respond to the teachers' identified needs, school focused and school based as well as cost effective so as to reach a large number of teachers. MOE (1996) supports the idea of both within the school and outside the school programmes for teachers in schools. INSET as the other name for the teachers' CPD programmes can take many forms such as educative school meetings, seminars, workshops, study tours, subject association conferences and lecturers (Hass, 1957).

MOE (1996, 1998) and (2003 – unpublished) indicates that SPRINT is one of the school focused and school based type of INSET programme which was designed to operate in all basic schools but also extended to operate in all secondary schools. Through SPRINT, In-service Education was institutionalised in all secondary schools

as well as all teacher resource centres. MOE (1996) further explains that Teacher Group meetings, Head teachers In-service meetings, school in-service monitoring as well as subject meetings at the Resource Centres (SMARC) are all In-service activities which constitute the SPRINT system.

Garrets, et al (2001) cite departmental meetings as one of the SPRINT CPD activities that are very prominent in secondary schools. They (Garret, et al) say that subject departments are places where policy statements are translated into actions and the school curriculum is implemented. In the quest of managing the school curriculum, the department has to ensure that it satisfies one of the conditions of good management practices by holding departmental meetings. The frequency of such meetings usually depends on the culture and tradition of each school and the Agenda of such meetings. Usually, Departmental meetings are for planning and reviewing programmes that relate to teaching/learning. According to Garret, et al (2001) departments are also mandated to hold departmental CPD programmes. Departmental CPD programmes enable the teachers to experience, reflect, theorise and put into practice every subject content and pedagogy. The idea behind departmental CPD activities is to create a forum where teachers pool resources, share responsibilities and ideas, identify subject related problems and search for solutions. It is the responsibility of the HOD to demonstrate quality teaching methods to members of the department in order to maintain high educational standards. MOE (2010), point out that lesson study through the demonstration, observation, discuss and implement (DODI), experience, reflect, observe, try and integrate (EROT) and Plan, Do, See and Improve strategies is one of the CPD activities carried out by teachers in Secondary Schools. Basically, the idea behind the lesson study approach of CPD is that of creating an opportunity for teachers within a department or from different schools but of the same subject, to interact, work together, share their experiences, learn from each other on aspects concerning classroom practice in content delivery and methodology, make reflections as well as relate classroom to practice through lesson study, other CPD activities like peer coaching which involves coaching others and being coached in one's

subject/vocational area is usually conducted by subject members. Mentoring new colleagues, peer review, peer observation, peer shadowing and team teaching are likewise carried out (Guskey, 1994).

Subject Association Meetings at the Resource Centre (SMARC) is one of the CPD activities that is carried out by teachers in secondary schools as pointed by Hustler et al (2003). They (Hustler et al) clarified that the teachers Resource Centre is both a place and concept where teachers' skills are improved and innovations shared. Teachers of the same subject from different schools usually conduct meetings at arranged dates at the resource centres to discuss a lot concerning their subject. According to Hustler et al (2003), the teachers' resource centre can respond to the needs of the teachers and enhance their professional growth in a positive and constructive way. Hustler et al (2003), further argue that teacher resource centres emphasise inactive approach to learning and special attention is usually paid to maintain an informal atmosphere that encourages interaction among participants and build self-confidence as well as knowledge.

Kamwengo and Ndlovu (2004) observe that up-grading courses type of CPD programmes were very prevalent in secondary schools. They indicate (Kamwengo and Ndlovu, 2004) that the majority of the secondary school teachers preferred, gaining further qualifications in their subject/industrial expertise at accredited universities. Secondary school teachers favoured such type of CPD activities simply because they did not only broaden their professional content and pedagogical base but rather that they obtained recognised qualification papers that raised their professional status and self-esteem globally.

The school CPD and monitoring (SIMON) as exemplified by MOE (2010), is another school In-service monitoring CPD activity that is undertaken in secondary schools from time to time. This is one of the quality control measures by which verification on whether or not the teaching and learning process that takes place in the classroom are being carried out in a satisfactory manner, by means of follow-ups

through monitoring and inspection. According to MOE (2010), SIMON are regular in-service programmes that involve internal and external monitoring by standards officers, subject coordinators, provincial resource centres (PRCC), Head teachers, deputy head teachers, senior teachers, and school INSET coordinators. A SIMON visit can also be a forum for lesson study as it provides an opportunity to discuss the observed lesson, integrating new ideas with provision for re-teaching the lesson.

Moreover, MOE (2010) also cites stakeholders' workshops and facilitators' workshops as some of the notable CPD activities which secondary school teachers participate in. Such workshops are planned and held during holidays at agreeable venues according to the designed strategy. School INSET coordinators, zone Inset coordinators, some identified class teachers facilitators, heads of Department/ Heads of Sections, Deputy Head teachers and Head teachers are required to participate in such workshops facilitated and monitored by PEST and DEST. Stakeholders, workshop is meant to achieve the following objectives for all the stakeholders:

- (i) to make stakeholders aware of the frame work for the programme and roles to be played;
- (ii) to exchange information and experiences on the implementation of the programme in order to improve classroom practice;
- (iii) to address needy areas;
- (iv) to compare their school performance with others;
- (v) to learn new knowledge and acquire skills;
- (vi) for facilitators, help them to strengthen the facilitation skills, generate termly topics for school based CPD and consolidated progress reports for lesson study;
- (vii) for head teachers, such workshops strengthen their knowledge and skills on the management of schools including teacher professional development through school based CPD activities and to exchange information and experience on school management; and

- (viii) For Deputy Head teachers, stakeholders' workshops help them to strengthen their knowledge and skills on the implementation of school based CPD activities.

In the final analysis, Edmonds (2001) note that CPD programmes in any given school, should consist of activities that were the most relevant to the teachers' professional Development Plan and that could range from the formal ones such as subject position workshops, conferences, up-grading qualification courses to the informal ones like reading journal articles or reviewing websites related to one's area of specialization.

2.6 EFFECTS OF CONTINUING PROFESSIONAL DEVELOPMENT ON PUPIL PERFORMANCE AT GRADE TWELVE LEVEL

MOE (1996) approved the fact that there was a close relationship between the teachers' CPD programmes and the performance of the learners in the classroom. Hargeaves (1994) also supports the above assertion by affirming that CPD was widely acknowledged to be important in the pursuit of improvements in teaching and learning. Day (1999, 2003) establishes that the relationship between teacher development and school development in terms of pupil performance was well established and reinforced in research literature of several studies. In addition, Maden and Hillman (1996), stated that successive research projects have reiterated that the quality of professional interaction, the focus on teacher development and relentless pursuit of improved teaching and learning which were key characteristics of school effectiveness that came about through learner performance. However, Harris (2002) laments that the impact of CPD on pupil performance at any given level remains significantly under evaluated, simply because the effects were always long term, as they usually occurred as a means of multiplier effects.

Harris explains that determining the effects of the teachers' CPD programmes on pupil performance were not something that could be decided there and then but rather after a long time, simply because not all pupils were direct participants of the teachers CPD programmes. Further Harris, (2002) says that the effects were assumed to trickle down from the direct participants (the teachers) to the indirect participants (the pupils) without any tangible evidence or proof. Harris (2002) further argued that the assertion that CPD activities improve the teaching and learning processes is not always true, but rather that such depends on whether the teachers' CPD were tailored to do so and are those related to teachers' professional needs and not anyhow. For that reason, Hopkins and Harris, (2001) recommends that provisions of CPD programmes should match with particular professional needs, so as to yield the usual expected outcome of improving the teaching and learning processes. In line with the above, a study undertaken by Day (2000) on the evaluation of teachers CPD programmes in schools reveals that where teachers CPD programmes were poorly conceptualised, insensitive to the concerns of individual teachers and made little efforts to relate learning experiences to work place conditions, evidence showed that such CPD programmes made little or no impact upon teachers or their pupils.

Guskey, (2002) postulates that well-tailored teachers CPD activities that were well matched to teachers' professional needs were discovered to have improved the learners performance after some good time. However, Guskey indicates that evidence of such positive effects of CPD programmes on pupil performances needed to be collected using clear indicators such as studying the learners' performances at fortnight tests, end of term tests and final examinations for continuous good years. Guskey (2002) suggests that yearly indicators like good pupil performances progressively were signs of positive effects. Guskey also argues that basing evidence on teachers reports that their CPD activities improved their teaching and the learning of their learners without any tangible proof would be superficial and limited.

A study by Eastwood and Louis (1992) on school improvement revealed that improved schools were marked by a constant interchange of professional development programmes that teachers engaged in. The study showed that improved schools were those that invested in the CPD activities of its teachers and engaged teachers in various forms of job related professional learning. The study revealed that creating collaborative professional learning environment for teachers that enhanced pupil performance at any level was the single most important factor for successful school improvement. The study findings highlighted that greater differentiation of provision is needed in CPD to ensure that the professional needs of all teachers were adequately met with a major aim of improving the teaching and learning processes that brought about good pupil performance.

According to Garret et al (2001), the impact of CPD on pupil performance should be assessed after a long term and should not only be based on self reports of teachers' CPD experiences, but rather be based on outcomes too. Concerning the effects of the teachers' CPD activities on the performance of the learners, Garret et al (2001) further suggest that the outcomes of the academic achievement / attainment of pupils were the ones that needed to be assessed rather than just considering pupil performances in terms of affective and behavioural outcomes.

Dadds (1997) was also of the view that there should be a fit between the Professional development activities in order to bring about positive impact at classroom level. Dadds further explains that in this way, the evaluation of the impact on whatever had been done becomes straight forward, as long as what was to be achieved was established at the onset of the professional development activity. Muij et al (2004) talk of an inter-relationship among teacher, pupil and school outcomes. Muij et al then explain that CPD was meant to meet all the needs of the teachers, pupils and the school outcomes, as long as there was awareness of those needs throughout the CPD process.

The results from the Garret et al (2000) study on the significance of teachers CPD activities in schools revealed that Teaching and Learning processes were improved when teachers were engaged in Continuing Professional Development activities, because such enhanced their knowledge and skills and enabled them to change their attitudes as well as approaches towards the Education of Children. Further, the study findings also established that CPD for teachers were beneficial because teachers were able to access new ideas, share experiences more potential for school and classroom improvement. Enough evidence came out from the study that indicated that attention to continuous teacher learning can impact directly upon improvements in pupil learning and achievement. Joyce et al (1994) concurs with the study results of Garret et al (2000) on the significance of teachers' CPD activities in schools by stating that, where teachers expanded their knowledge base and improved on their teaching practices, were more likely that they would provide an increased range of learning opportunities for pupils. Moreover, research Literature from the Garret et al (2000) study revealed that CPD for teachers had a positive impact on curriculum, teachers pedagogy, teachers' sense of commitment and ultimately on pupil performance.

According to Cordingly et al (2003), reviewed various outcomes reported by Pupils themselves, after certain teachers CPD activities indicated that their teachers changed in behaviour towards work and had affected them in the following ways:

- (i) greater pupil enthusiasm and motivation; and
 - iIncreased confidence which resulted in improved performance in their class work.

Cordingly et al (2003) also indicated that Similarly, teachers' reports of effects of their CPD activities on pupils included the following:-

- (i) better pupil attitudes;
- (ii) improved behaviour;
- (iii) increased interest and involvement in lessons which resulted in good pupil performance

2.8. SUMMARY

Several authorities as substantiated in the Literature above indicates that teachers CPD activities are one of the key factors to enhancing quality education in schools. The Literature outlined above shows that several measures such as institutionalising CPD activities in schools as well as creating a sense of ownership into the teachers by allowing them to be responsible for their own CPD activities, were taken to strengthen CPD programmes in schools. Going by MOE (1996) the literature above outlines that CPD activities were a mandate and educational Policy strategy that needed to be undertaken by every school regularly depending on the types of CPD activities. Several types of teachers' CPD activities that were undertaken by secondary school teachers through the master vehicle SPRINT such as TGMs within departments, lesson study demonstrations, stakeholders workshops, facilitators workshops as well as the out of school upgrading courses had been indicated in the above literature review. The above literature exemplified that generally, teachers CPD activities brought positive impact on teaching and learning processes that usually resulted in improved learner performances. However, the literature review also indicated that only those well-tailored teachers CPD activities that meet particular professional needs of individual teachers were the ones that have been discovered to bring about improvements in learner performances.

Having reviewed the Literature on the teachers' CPD activities undertaken in secondary schools, the research methodology will be discussed in the next chapter.

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION

This chapter introduces the methods that were used in carrying out this study. These include the research design, target populations, sample size, sampling procedure, research instrument, data collection procedure and data analysis.

3.1 RESEARCH DESIGN

The study was a survey that used both the qualitative and quantitative research designs. As in accordance with White (2005), a survey research is one that describes what is in existence in terms of effect and attitudes. A survey research investigates the existing conditions, points of views that are held and the effects that are being felt. This study was an investigation into the existing strengthened Continuing Professional Development programmes for secondary school teachers. It was an attempt to examine the effects of the Continuing Professional Development programmes for secondary school teachers on pupil performance at Grade twelve level.

3.2 LOCATION OF THE STUDY

Basically, the study was conducted in selected rural and urban secondary schools of Solwezi District namely; Solwezi Technical, Solwezi Day, Meheba and Mutanda. However, to help in the verification of the effects of the teachers' CPD programmes on pupil performance the Provincial Education Office and the Provincial Resource Centre were part of the study location. The four secondary schools of Solwezi urban and rural were chosen because

they were among the earliest schools that got involved in the strengthened of CPD programmes when they rolled out to the North-Western Province from the Central Province. The Provincial Office and the Provincial Resource Centre were chosen as some of the study locations because of their roles of spear heading and monitoring educational standards in secondary schools.

3.3 STUDY POPULATION

The study targeted the Principal Education Standard Officer, senior education standards officers, Provincial Resource Centre Co-ordinator for secondary schools, Education Officers (Teacher Education Department), Head teachers, Head of departments, secondary school teachers and senior secondary school pupils from Grades ten (10) to twelve (12). Senior education standards officers, provincial resource co-ordinator and the education officer for teacher education department were chosen as part of the study population for the major reason that they were the ones who were mandated to mentor teachers as well as monitor standards of any educational programme that took place in secondary schools which included teachers' CPD programmes.

Similarly, head teachers, head of departments and secondary teachers were a suitable target population simply because they were the ones who were actively involved in the CPD programmes.

Senior secondary school pupils from grade ten (10) to twelve (12) were chosen as a suitable target population for the reason that at least they had stayed long enough in the secondary schools, while seeing their teachers attending different types of CPD programmes and sometimes selected to get involved in some CPD programmes.

3.4 SAMPLE SIZE

The sample comprised of one hundred respondents which included the Principal Education Standards officer, Education Officer for Teacher Education Department, Provincial Resource Centre Co-ordinator for secondary schools, 10(ten) Senior Education Standards Officers, 4 Head teachers one from each sampled secondary school) 20 Heads of Departments (five from each of the four sampled secondary schools – one from each department), 16 teachers) four from each secondary school) and 48 pupils (twelve (12) from each school – four (4) from each of the grades from ten (10) to twelve (12).

The table below shows the sex of the teachers and pupil respondents. As can be seen from the table most of the respondents of about 48 (55%) were male while 40 representing (45.4%) were female.

Table 2: Responses on the Gender of Teacher and pupil Respondents.

NAME OF SCHOOL	TEACHERS			PUPILS		
	Male	Female	Total	Boys	Girls	Total
Solwezi Technical	5	5	10	6	6	12
Solwezi Day Secondary	5	5	10	6	6	12
Meheba Secondary	5	5	10	6	6	12
Mutanda Secondary	5	5	10	6	6	12
TOTAL	20	20	40	24	24	48

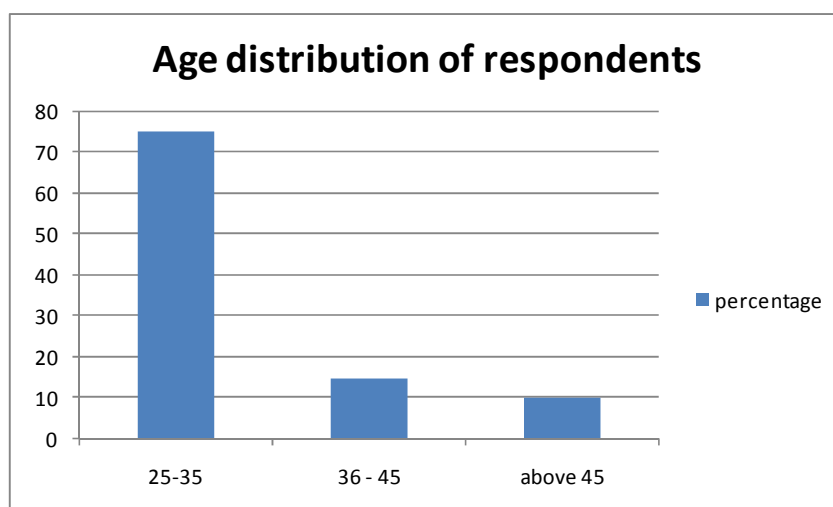
Source: Field Data.

The above table shows that the Gender aspect was balanced among the sampled teacher and pupil respondents.

Age of the Teacher Respondents

As regards the age of the teacher respondent, the majority of them 30 (75%) fell in the age range of between 26-35 years, (15%) respondents indicated that they were between 36-45 years while the last 4 (10%) indicated that they were above 45 years old, as can be seen from the figure below.

Figure 2: Age of the Teacher respondents (which also include Headteachers and heads of Departments).



Source: field data.

The value of including the variable of age ranges in the study was to verify that the teachers were within the stipulated age range for working teachers which is normally between 23 and 55 years in Zambia.

Highest professional qualification of the Teacher Respondents

Respondents were asked to indicate their highest professional qualifications. As can be seen from the table below, 30 (75%) of the respondents indicated that they were Bachelor of education Degree holders, 8 (20%) were Secondary Teachers Diploma Holders and 2 (5%) indicated that they were Master of Education Degree Holders.

Table 3: Highest Professional Qualification of Teacher Respondents

Highest Qualification	Frequency	Percent
Bachelor of Education Degree	30	75
Secondary Teachers Diploma	8	20
Master of Education	2	5
TOTAL	40	100

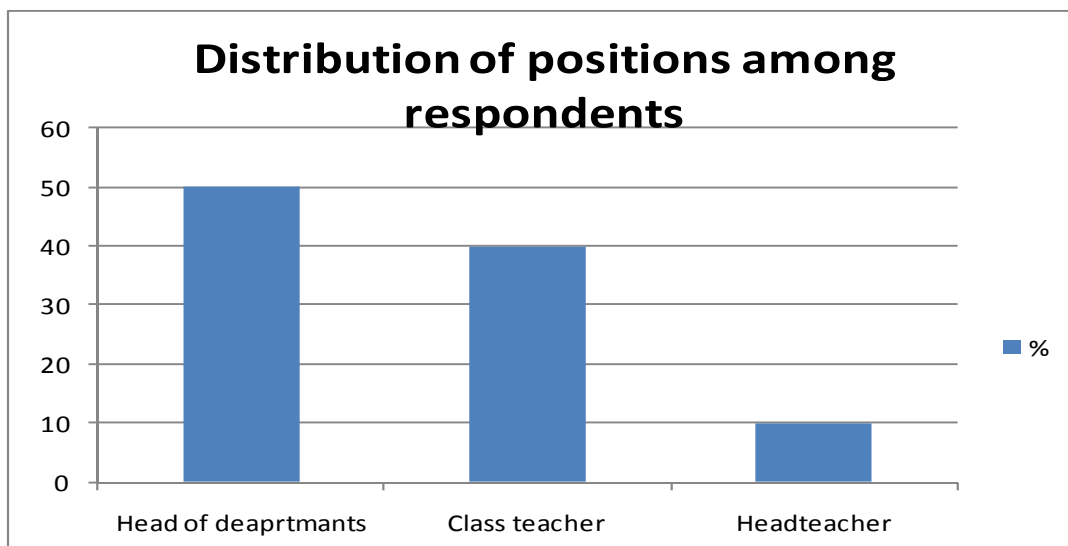
Source: Field data

It is very clear from the above table that the majority of the teacher respondents were Bachelor of Education Degree holders. It was therefore likely that the teachers would have been involved in the CPD upgrading programmes at various universities. They were therefore a suitable sample to be in the position of evaluating the effects of such CPD activities on pupil performance at grade twelve level.

Positions held at place of work by the teacher's Respondents.

According to figure 3 below, 20 (50%) indicated that they were Heads of departments, 16 (40%) indicated that they were classroom secondary school teachers and 4 (10%) indicated that they were Head teachers.

Figure 3: Responses on Positions held at the place of work by the Teacher Respondents



Source: field data.

Number of years served in the current position by the teacher respondents.

As can be noted from the table shown below regarding the number of years that respondents had served in their current positions, 20 (50%) had served from 6-10 years, 8 (20%) had served from 0 -5 years while 4 (10%) indicated that they had served from 11 – 15 years. 6 (15%) indicated that they had served from 16 – 20 years and 2 (5%) served from 21 – 25 years.

Table 4: Responses on Number of years served in current position by Teacher Respondents

Years served in Current Position	Frequency	Percent
0 – 5	8	20
6 – 10	20	50
11 – 15	4	10
15 – 20	6	15
21 – 25	2	5
TOTAL	40	100

Source: field data

The above table reveals that most of the teacher respondents had enough experience in their current jobs. They therefore witnessed the commencement of the strengthened teachers CPD programmes in their schools and had participated enough in such activities. They were therefore suitable to establish its effects on pupil performance, more especially at the Grade twelve level.

3.5 SAMPLING PROCEDURE

Purposive sampling was used in order to access knowledgeable people for example those who had in depth knowledge about the strengthened CPD in secondary schools. It identified the following respondents: the Principal Education Standards Officer, Education Officer for Teacher education department, Senior Education Standards Officers, Head teachers, Heads of Departments and the Provincial Resource Centre Co-ordinator. Purposive

sampling was used simply because the above cited respondents were the target group of people believed to be key informants in terms of providing relevant and reliable information related to the study due to their positions at the place of work. This was done in accordance to the explanation that White (2005) gave concerning the nature of purposive sampling. He said that the concern is to acquire in depth knowledge from those who are in position to give it.

Stratified random sampling technique was used to select respondents such as teachers and pupils because these needed to come from homogeneous subgroups with equal numbers from all schools (of which gender balance was an important variable). Each group contained subjects of similar characteristics. Teachers were to be picked from every department just as pupils were to be selected from grades Ten, Eleven and Twelve classes. As it is the procedure of stratified random sampling as in accordance with best and Khan (2006) simple – random sampling was further done in arriving at the actual numbers of respondents that were needed in each subgroup (stratum). Stratified random sampling helped in ensuring that subgroup within the target population of teachers and pupils were represented and also unbiasedly included in the sample size as postulated by Kombo and Tromp (2006).

3.6 RESEARCH INSTRUMENTS

The research instruments used in the study were questionnaires, which is a widely used useful tool for collecting survey information; open ended interviews guide. Interview is a flexible tool for data collection, enabling multi-sensory channels to be used: verbal, non-verbal, spoken and heard; Focus Group Discussion guide, focus group discussion are a form of group interview. This is the discussion of the topic supplied by the researcher yielding a collective view; and documentary analysis is where official documents like ECZ results are used. Questionnaire is a widely useful tool for collecting

survey information. Questionnaires were used to collect data from Senior Education Standards Officers, Head teachers, Heads of departments and teachers. The interview guide was used to collect data from respondents like the Principal Education Standards Officer, Education Officer for Teacher Education Department the Provincial Resource centre co-ordinator and the District Resource co-ordinator. Data from pupils were collected through the focus group discussion guide. Secondary data were also collected through content analysis of authentic documents like CPD annual reports prepared by VVOB, Secondary School Teacher Education CPD – Literature and internet documents related to the study. Three instruments were used for data collection for triangulation sake and because they were suitable for survey studies. This enabled the researcher to investigate the existing conditions, points of values that were held and the effects that were being felt as supported by Leedy and Ormrode (2010). The use of various data collection sources enabled the researcher to collect comprehensive rich data as exemplified by Deves (1998)

3.7 Data Collection Procedure

First and foremost, the researcher got permission from the office of the Provincial Education Officer for North-western Province, to conduct research around the Provincial Office and in the secondary schools of Solwezi district. The above ethical procedure was made easier by the introductory letter that was given to the researcher from the office of the Assistant Dean of Post Graduate Studies of the University of Zambia. Thereafter, the researcher commenced her research work.

Primary data were first and foremost collected from Senior Education Standards Officers, Head teachers, Heads of Departments and Teachers through the use of questionnaires. Furthermore, Focus Group Discussions were conducted on pupils in each of the selected four secondary schools

found in Solwezi Districts. Interviews were conducted with the Principal Education Standards Officer, Education Officer for Teacher- education Department and the Provincial Resource Centre Co-ordinator. Data from focus Group discussion and interviews were collected by recording. Moreover, secondary data were also collected from available CPD reports, literature prepared by V V O B / Teacher Education Department, the Provincial Office analysed results and Examinations Council of Zambia results as well as from the internet.

3.8 Data Analysis

In accordance with White (2005), qualitative data collected from the focus group discussion guide and the interview guide were analysed by coding and grouping the emerging themes that were meaningfully interpreted. The statistical package for social sciences (SPSS) was used to analyse quantitative data from questionnaires which generated frequency tables and percentages that were presented in form of tables and graphs. Data collected from various sources (both Primary and Secondary sources) substantiated each other and were integrated to produce comprehensive rich data.

3.9 Ethical Issues.

One cardinal ethical issue that the researcher observed was that of obtaining permission from the Provincial Education Office before entering into the research sites, (Deves, 1998). The researcher also did assure the respondents of the ethical issue of anonymity and confidentiality by advising them not to disclose their names during any data collection strategy.

3.10 Summary

The methodology part of this study has covered a lot of concerns on how data was collected and analysed. The instruments used in the collection of primary data were questionnaires, interview guides and focus group

discussions. Secondary data was collected from analysed results from the ECZ and the Provincial Education Office. The analysis of both primary and secondary data helped in bringing out comprehensive data. The next chapter then presents the findings of the study.

CHAPTER FOUR

DATA PRESENTATION / PRESENTATION OF THE FINDINGS

4.0 INTRODUCTION

This chapter presents the findings of the study with reference to the research questions of the study as outlined below;

1. What were the reasons for strengthening C.P.D programmes for secondary school teachers.
2. what measures were taken to strengthen C.P.D Programmes for teachers in secondary schools.
3. What were the nature of C.P.D Programmes for teachers carried out in secondary schools.
4. What were the effects of the strengthened C.P.D programmes for teachers in secondary schools on pupil performance at grade twelve level.

4.1 REASONS FOR STRENGTHENING CONTINUING PROFESSIONAL DEVELOPMENT FOR SECONDARY SCHOOL TEACHERS ON PUPIL PERFORMANCE AT GRADE TWELVE LEVEL IN SOLWEZI DISTRICT

(a) Senior Education Standards Officers, Head teachers, Heads of Departments and Teachers.

Most respondents from this category indicated in the questionnaire that C.P.D was strengthened in the secondary schools of Solwezi District because of failure to deliver lessons effectively by most teachers which resulted in poor pupil performance at grade twelve level. Some respondents indicated that C.P.D was strengthened in secondary schools due to the need for professional development at school level. One Head teacher said,

The core reason for strengthening C.P.D in secondary schools was that of enabling teachers to develop each other in their needy areas at school level, in order to improve on both teacher and pupil performance.

Other respondents indicated that C.P.D was government policy in secondary schools whose main aim was to capacity build teachers through teacher group meetings within the school and as well as through In-service training outside school premises while explaining on the above point, one SESO clarified that,

C.P.D is the Ministry of Education Policy of upgrading teachers within or outside school premises to develop them professionally in order to enhance their lesson delivery.

Further, few respondents from this category also indicated that C.P.D was strengthened in secondary schools in order to sensitize teachers in the new innovations that were introduced by the Ministry Of Education such as the lesson study approach.

(b) The Principal Education Standards Officer, Education Officer (Teacher Education Department) and the Provincial Resource Centre Co-ordinator.

During interviews on the reasons for the strengthening Continuing Professional Development programmes for secondary school teachers in Solwezi district, responses from this category of respondents indicated that it was a directive from the Ministry of Education, since the North-Western Province was among those picked for the introduction of SMASTE programmes in order to help to improve Grade Twelve results that were always among the least. Enabling mathematics and science secondary school teachers to interact with each other professionally while sensitizing one another within their areas for specialization was one of the core reasons why C.P.D programmes were strengthened.

In addition, other responses indicated that poor lesson delivery by most teachers which resulted in poor pupil performance at grade twelve level contributed to the reasons for strengthening C.P.D activities in secondary schools of Solwezi District. In line with the above response, the education Officer for Teacher Education Department said that,

*It's like most secondary school teachers
had challenges in handling certain topics
before C.P.D programmes were strengthened.*

Further, during the face to face interview with Provincial Resource Centre Co-ordinator, she stated that one other cardinal reason that led to the strengthening of C.P.D activities in secondary school was that it was government's policy of developing teachers professionally at school level.

(c) Pupils

Most views from pupils during the focus group discussions indicated that C.P.D activities were strengthened in secondary schools with a view to allow teachers of different subjects within departments to share academic knowledge as well as effective lesson delivery to the learners. One student commented that:

Of late C.P.D activities are all over which usually indicate presentations from both the teachers and learners within the same meetings.

The pupil respondents also stated that C.P.D activities were strengthened with a major reason of improving the quality of teaching and learning in schools.

4.2 MEASURES TAKEN TO STRENGTHEN CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES FOR SECONDARY SCHOOL TEACHERS IN SOLWEZI DISTRICT

(a) Senior Education Standards Officer, Head teachers, Heads of Departments and Teachers

This category of respondents indicated that several measures had been taken to strengthen C.P.D programmes for Secondary School Teachers in Solwezi District such as the introduction of the lesson study approach. This was meant for Science and Mathematics but rolled out to all departments. Decentralization of C.P.D programmes to school level with clearly defined structures meant to run C.P.D activities was one of the measures taken to strengthen C.P.D activities for teachers in secondary schools making C.P.D activities a school policy. Making CPD mandatory for all the teachers was another measure taken to strengthen C.P.D in secondary schools. One teacher stated that,

Attending C.P.D activities is a must in our school, just as attendance for the actual teaching is. That is so simply because there is even an attendance register marked by the Head teacher at each C.P.D activity.

Respondents also indicated that motivation of teachers by school administrations through the provision of snacks and other necessary demonstration materials during C.P.D meetings was another measure taken to improve C.P.D activities for secondary school teachers in Solwezi District.

Other respondents from this category indicated that group presentations, individual teacher facilitations and demonstrations while the rest of the

teachers observed during C.P.D activities at school and departmental level was the other measure taken to strengthen C.P.D programmes in secondary schools. In appreciating this measure, one Head of department explained that, "Group presentations, individual teacher facilitations and demonstrations enhanced teachers' research skills that widened their scope on different material content".

(b) The Principal Educations Standards Officer, Education Officer (Teacher Education Department) and Provincial Resource Centre Co-ordinator.

Views from face to face interviews with this group of respondents indicated that appointment of C.P.D Focal Point persons or Co-ordinators in secondary schools was one of the cardinal measures that was taken to strengthen C.P.D activities. Holding of CPD stakeholders' meetings each term and orientation of teachers on the value and purpose of CPD activities were some of the measures that some respondents in this category cited. Respondents further indicated that ensuring that CPD activities were planned for and monitored by Head teachers accompanied by written reports helped to strengthen CPD activities in most secondary schools of Solwezi Districts. Moreover, the other aspect cited by respondents that helped to strengthen CPD activities in secondary schools was that of the regular interactions of teachers within departments through lesson study approach.

(c) Pupils:

Most pupil respondents stated that the frequent holdings of C.P.D activities within departments in which pupils were usually used in lesson demonstrations helped to strengthen C.P.D activities in secondary schools. Explaining on how departmental CPD meetings helped to strengthen CPD programmes, one pupil said that,

From the time I came to this school in grade ten (10), teachers always meet in their departments on Friday afternoons to discuss on effective ways of teaching certain lessons/ topics. At most times, they usually use us in their lesson presentations during such meetings. I think that has helped to strengthen what you are calling CPD.

Other pupils indicated that the provision of refreshments like soft drinks and biscuits helped to strengthen CPD programmes in secondary schools as it encouraged teachers and the invited pupils to always attend without fail.

4.3 THE NATURE OF THE TEACHERS' CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES CARRIED OUT IN THE SECONDARY SCHOOL OF SOLWEZI DISTRICT

(a) Senior Education Standards Officers, Head Teachers, Heads of Departments and Teachers.

Concerning the nature/ types of CPD programmes for teachers carried out in the secondary schools of Solwezi District, most respondents from this category indicated in the questionnaire that higher education level courses like first and second degrees that allowed them to attain higher professional qualifications within their areas of specialization, such as the recent sponsored fast track first degree programme for Science and Mathematics education. Other respondents cited professional training C.P.D programmes such as subject association conferences like HEAZ, PETAZ, SMASTE, ETAZ and so forth, seminars, in house workshops, school/departmental subject meetings

that involved lesson study cycle demonstrations were equally cited as the major CPD programmes for teachers carried out in most secondary schools of Solwezi District.

(b) The Principal Education Standards Officer, Education Officer (Teacher Education Department And Provincial Resource Centre Co-ordinator

Responses from interviews with this category of respondents also indicated that long term professional qualification awarding CPD programmes were the most prevalent ones among secondary school teachers. Other responses indicated that school based INSET CPD programmes for teachers like subject teacher group meetings, in-house workshops, departmental lesson study and demonstrations were carried out in secondary schools. They also indicated that other professional support CPD activities were provided by education managers and Inset co-ordinators who regularly visited schools. The Provincial resource centre Co-ordinator explained that:

As a Provincial Resource Centre, we have a time table in which we go round all the secondary schools to sensitize teachers on how CPD programmes are supposed to be conducted. At certain times, we even conduct demonstrations on any latest professional skills that need to be communicated to the teachers, for their own benefit and that of the learners.

(c) Pupils:

During the Focus Group Discussions most pupil respondents stated that they were very much aware of the professional upgrading that their teachers usually underwent, like those professional ones undertaken at the University of Zambia, Zambian Open University, Rusangu University and University of Lusaka: other pupils' responses cited subject association conferences in which

some of them were picked to go and present on certain coached topics. Pupils also indicated that their teachers usually attended school /departmental teacher group CPD meetings in which some pupils picked from various classes were used for presentations of lesson study cycles. Lamenting on the inconveniencies that the frequent weekly CPD activities usually cause on the learners to miss lessons, one pupil stated that:

"You know what madam! A week barely passes by without teachers holding their departmental teacher group meetings. We are usually Inconvenienced in the sense that it becomes difficult to access teachers on duty whenever such meetings are in place.

Few pupil respondents indicated that sometimes teachers of various departments went to attend different types of seminars and workshops held in other districts or parts of the country.

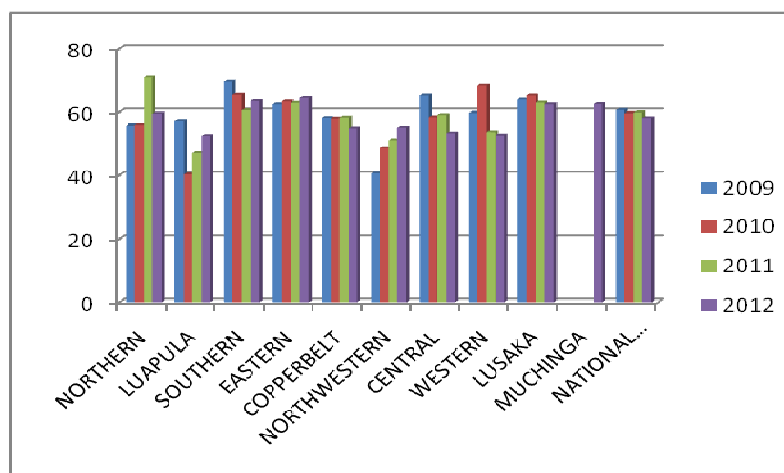
1.11 EFFECTS OF THE STRENGTHENED CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES FOR SECONDARY SCHOOL TEACHERS ON PUPIL PERFORMANCE AT GRADE TWELVE LEVEL IN SOLWEZI DISTRICT.

(a) Senior Education Standards Officers, Head teachers, Heads of Departments and Teachers.

The majority of the respondents from this group indicated in the questionnaire that performance of learners at the grade twelve level had improved ever since CPD activities were strengthened in the secondary schools of Solwezi District. Others stated that CPD activities like those of qualification up-grading imparted a lot of advanced contents, skills values and attitudes into the teachers that enabled them to competently and skilfully tackle any syllabus topics during their lesson delivery. Respondents from this category also stated that the lesson study approach, lesson demonstrations and presentations that teachers were always involved in during CPD activities

did help them to improve on their daily- lesson delivery that in turn made it easier for pupils to grasp any taught lesson and hence improved likewise in their end of term tests and final examinations later on. However, few of the respondents from this category indicated that although it was generally cited that the strengthened teachers' CPD activities in secondary schools had a positive impact on the performance of pupils, but the reality had it that the yearly grade twelve (12) analyses at school level did not substantiate such assertions, although at provincial level the results started improving steadily as can be seen in the graph below. They therefore explained that such were just mere assumptions because of the view that grade twelve final examinations were not continuously improving every year but were changing following the up and down ward reverse pattern of performance, as can be seen from the Provincial Grade 12 Examination result analysis from 2009-2012 in the table below:

Figure 4: GRADE 12 NATIONAL EXAMINTIONS RESULTS – 2009 -2012

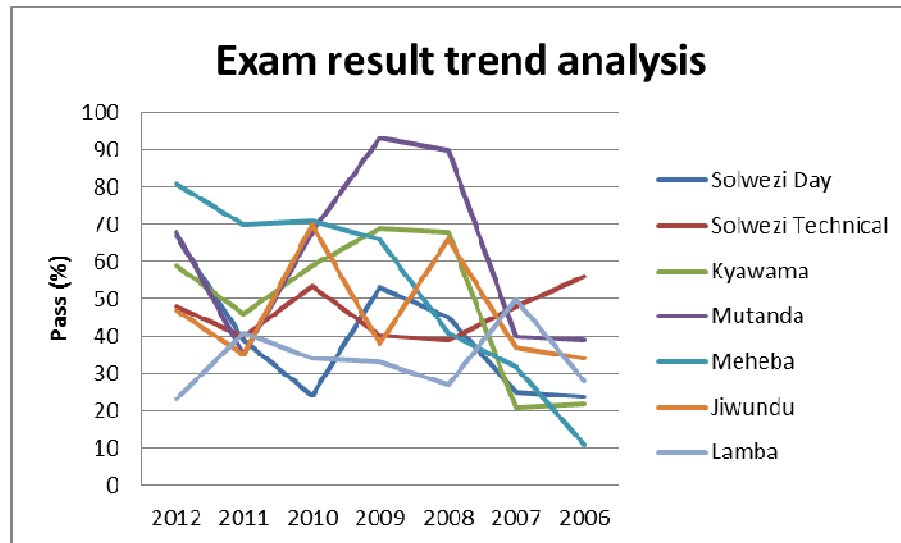


(Source: ECZ, 2009 – 2012)

(b) The Principal Education Standards Officer Education Officer from The Teacher Education Department and the Provincial Resource Centre Co-ordinator.

During interviews on the effects of the strengthened CPD activities for secondary school teachers, some respondents in this category of respondents indicated that well tailored CPD activities are expected to positively influence teaching and learning processes and thereafter cause pupils to improve in their performance in the final examinations. Somehow that was not the case with the teachers' CPD activities for secondary schools of Solwezi District. Respondents explained that there were no clear indicators to show any positive impact of the strengthened CPD programmes of teachers in the secondary schools of Solwezi District on pupils' performance at grade twelve level. This they said was due to the fact that the grade twelve results in the secondary schools of Solwezi District were of the forward and backward (reverse) pattern of performance and still continued to be among the least rank order, as can be seen in the following table below:

Figure 5: Grade Twelve (12) Final Examination Result Analysis for Secondary Schools in Solwezi District from 2006 – 2012



Source: PEO Database

In addition, responses from other respondents emphasised that there were greater impacts of the strengthened CPD activities on the performance of teachers because teacher's attitudes towards work greatly improved as well as their lesson delivery. It was clarified that the effects were not yet very clear on the pupils' performance at the grade twelve level simply because their performance at final examination level was that of the reverse type ever since CPD was strengthened in the Province. Respondents further explained that it was only going to be feasible and authentic to state that the CPD programmes for secondary school teachers had a positive effect on pupils' performance at the grade twelve level only if pupils' performance instantly changed and was continuously improving year after year. Moreover respondents said that multiplier effects are usually achieved after a long time because by then teachers would have practiced the new knowledge and skills acquired during CPD activities. In other words they are long term and not

short term. However, respondents explained that indicators like teachers' commitment and good lesson delivery to learners, were signs of positive effects that would improve results in the long run.

(c) pupils

During the Focus Group Discussions, majority of the pupil respondents indicated that from the time CPD activities started they noticed some great change in the way their teachers delivered lessons as a result of their active involvement in school/ departmental CPD activities. They expected pupil performance at grade twelve level to tremendously improve as well, as a matter of multiplier effect. Other pupils stated that their teachers' CPD activities would have positively impacted on pupil performance at grade twelve level greatly only if almost all the pupils were also actively involved in the very school and departmental CPD activities. Pupil respondents explained that it was not possible for pupil's performance to have positively impacted by programmes in which only few pupils participated.

4.6 SUMMARY

The Ministry of Education fully supported the implementation of the strengthened CPD programmes in Solwezi District. One of the objectives of the SMATE School based CPD was to improve teaching and learning in the classroom so as to improve pupil performance at grade twelve level. However, the study has revealed that performance in most schools of Solwezi District were of the forward and backwards reverse pattern while at the Provincial level, the results were improving steadily. As indicated by most respondents that teaching and learning had improved, it is hoped that pupil performance at grade twelve level in Solwezi District will continuously prove. Having presented the discussion of the findings as outlined above, conclusions and recommendations of the study are presented in the next chapter.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.0. INTRODUCTION

This chapter is a discussion of the major findings that came out of the study on the effects of the strengthened continuing professional development programmes for secondary school teachers, on pupil performance at grade twelve (12) level in Solwezi district. The study set out to address four questions that tallied with the following four objectives: to investigate on the reasons for strengthening CPD programmes for secondary school teachers in Solwezi district, to establish measures taken to strengthen CPD programmes for secondary school teachers in Solwezi district, to find out the nature of CPD programmes that secondary school teachers in Solwezi district were involved in and to examine the effects of the strengthened CPD programmes for secondary school teachers on pupil performance at grade twelve level in Solwezi district.

5.1. REASONS FOR STRENGTHENING CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES FOR SECONDARY SCHOOL TEACHERS IN SOLWEZI DISTRICT.

As explained in the section on methodology, data on the effects of the strengthened CPD programmes for teachers on pupil performance at grade twelve (12) level in secondary schools of Solwezi District was obtained from all the sampled respondents and official documentation from Examinations Council of Zambia, Provincial Education Office and Secondary schools on different occasions. Findings from most respondents like the senior education standard officers, Head Teachers, Heads of Departments, Pupils and Teachers indicated that CPD for secondary school teachers was strengthened because

of failure to deliver lessons effectively by most teachers who were diploma holders and consequently resulted in poor pupil performance at grade twelve (12) level. They revealed that there was need to strengthen CPD in secondary schools in order to build capacity in the teachers so as to improve on pupil performance. This research finding was in line with MOE (2010:1) where it is outlined that the main business of school is that of teaching and learning and teachers are an important factor in bringing improved learning achievements in pupils. As such the teachers' professional needs should be addressed adequately if desired pupil performance levels are to be attained. It further says that teachers' knowledge, competencies and skills are vitally important in enhancing pupil performance. As already stated in chapter one table 1 on the contributions made by various inputs for academic performance, there are other factors which influence students' performance like class management, inspection and supervision, good infrastructure and text books. Among these factors, the most outstanding factor which contributes a larger percentage towards learners' achievement is effective teaching (Chitiavi (2002).

In addition, findings from respondents like the Principal Education Standard Officer, Education Officer (Teacher Education) and the Provincial Resource Centre Coordinator revealed that strengthening CPD programmes for teachers in secondary schools of Solwezi District was MOEs' policy and directive of developing teachers professionally at school level in order to sensitize them on the new innovations that were introduced by the ministry, such as the lesson study approach. This finding was in line with Smith (1980) who indicated that CPD creates a climate in which the attainment of effective teaching becomes the on going concern and orients staff to new innovations in their own subject matter and also develops the awareness of learners needs.

The above research findings concerning the reasons for the strengthened CPD programmes for secondary school teachers in Solwezi District indicated that

strengthened CPD activities were well known by most teachers and found an enabling environment in most secondary schools. This is so because almost all the key sampled respondents were fully aware of the programme and gave almost the same reason as to why CPD activities in secondary schools were strengthened. Such a scenario was an indication of a well tailored CPD programme that meant to meet teachers' needs or gaps in secondary schools of Solwezi District since from onset the goal was clearly indicated.

5.2. MEASURES TAKEN TO STRENGTHEN CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES FOR SECONDARY SCHOOL TEACHERS IN SOLWEZI DISTRICT

In line with responses obtained from the senior education standard officers, Head teachers, Heads of Departments and Teachers respondents, the study established that CPD was not a new thing in secondary schools of Solwezi district but that it was not effective. The introduction of the lesson study approach made CPD programmes to be strengthened in secondary schools of Solwezi district. This research finding was in line with what is obtained in MOE (2010) where SMASTE was cited as one of the measure that MOE in collaboration with JICA introduced in secondary schools of Central Province to strengthen the teaching of science, mathematics and technology education, using the lesson study approach and rolled out to all subjects after noticing improved pupil performance in Science and Mathematics. Respondents further indicated that decentralization of CPD programmes at school level through SPRINT, with clearly defined structures and roles meant to identify CPD needs, Plan for CPD activities and implementing for CPD needs as well as making CPD activities as school policy and mandatory as to MOE policy were the other measures that the study established. Such findings agreed with Fullan (2000) who postulated that institutionalization and regularization of CPD activities to an extent whereby they become part and parcel of the school curriculum as well as forming part of the routine work of the department and the individual teacher is one way CPD can be strengthened in schools.

The above research findings on measures that were taken to strengthen CPD activities for secondary school teachers in Solwezi district were an indication of the strengthened and institutionalized SPRINT activities in secondary schools of Solwezi District. It was an indication that CPD activities were taken to full scale in the secondary schools of Solwezi District by teachers themselves. That was a fulfilment of what MOE (1996) designed concerning the operation of SPRINT as a vehicle that was foreseen to advance CPD programmes in schools.

5.3. THE NATURE OF THE TEACHERS' CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES CARRIED OUT IN THE SECONDARY SCHOOLS OF SOLWEZI DISTRICT

As far as this objective was concerned, the study established from the responses of most respondents like the principal education standard officers, education officer (Teacher Education), Head teachers, Provincial Resource Centre Coordinator and Teachers, that Secondary School Teachers were involved in both long and short term CPD programmes. The long term programmes they underwent were higher education level ones like first and second degree programmes with the University of Zambia, Zambian Open University and the University of Lusaka. This research finding confirmed with what Kamwengo and Ndlovu (2004), observed and stated that the majority of the secondary school teachers preferred gaining further qualifications in their subject of expertise at accredited universities. According to Kamwengo and Ndlovu (2004) secondary school teachers preferred such type of activities simply because they did not only broaden their professional content and pedagogical base, but rather such type of CPD programmes helped them to obtain recognized qualification papers that raised their professional status and self-esteem.

The study also revealed that the short term CPD programmes which most secondary school teachers in Solwezi district were involved in were subject

association conferences like HEAZ, PETAZ, SMASTE, ZASE ZAME, LATAAZ just to mention a few. In addition, teachers were also involved in in-house workshops, school departmental subject meetings that involved lesson study cycle demonstrations. This research finding tallied with Garet et al (2001) who cited departmental meetings as well as subject meetings as one of the SPRINT CPD activities that were very prominent in secondary schools. This research finding was very critical to the instrumentation of CPD programmes in secondary schools, simply because subject departments are places where policy statements are translated into action and the school curriculum implementations. Departmental CPD programmes enable the teachers to experience, reflect, theories and put into practice every subject content and pedagogy.

The study findings further revealed that other professional support CPD activities recieved were provided by Education Managers and inset co-ordinators who regularly visited secondary schools. These findings concurred with MOE (2010) who cited the school CPD and monitoring (Simon) as the other school In-service monitoring CPD activity undertaken in secondary schools from time to time. The professional support CPD activities that were provided by the education managers and INSET coordinators was one of the quality control measures, by which verification on whether the teaching and learning process that took place in the classroom was done in a satisfactory manner or not, by means of follow ups.

5.4. THE EFFECTS OF THE STRENGTHENED CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES FOR SECONDARY SCHOOL TEACHERS ON PUPIL PERFORMANCE AT GRADE TWELVE LEVEL IN SOLWEZI DISTRICT

An overview of the effects of the strengthened CPD programmes for secondary school teachers on pupil performance at grade twelve was given through the responses from all the sampled respondents and documents from Examinations Council of Zambia, the Provincial Education Office and secondary schools. The reasons for extending SMASTE from Central Province to North Western Province as mentioned in the back ground of the study, was to improve pupil performance at grade twelve level because the North Western Province results were very poor and more especially in 2008 examinations where the province came last in the nation. This was in line with what Wandiba (1996) remarked concerning the schools of western Kenya, by stating that once the pride of the nation in academic excellence, which dropped drastically in educational standards. He attributed the poor standards to unpreparedness of teachers. He further said that there was something wrong with teacher competencies' and instructional matters. Meaning that teachers' competencies were the key in improving pupil performance.

As in line with the responses obtained from the principal education standard officer, senior education standard officers, education officers (Teacher Education Department) Provincial Resource Centre Coordinator, Head teachers, Heads of departments, and Teachers the study established that teaching and learning had improved in most secondary schools of Solwezi District, ever since CPD programmes for teachers were strengthened. The study revealed that CPD activities like those of upgrading qualifications and school based continuing professional development imparted more knowledge, skills, values and attitudes into teachers that enabled them to competently and skilfully tackle any syllabus topic in their lesson delivery. This research finding approved what MOE (1996) noted by stating that there was a close

relationship between the teachers' CPD and the performance of the learner in the classroom. The same above research findings also concurred with Hargreaves (1994) who affirmed that CPD was widely acknowledged to be important in the pursuit of improvements in teaching and learning. However, the study established that although it was generally cited that the strengthened secondary school teachers CPD had a positive impact on pupil performance, reality on the ground as can be seen in figure 5 of chapter four showed that, grade twelve results from 2009 at school level were not continuously improving every year but were rather changing following the up and down reverse pattern of performance. This implied that the assertions given by the respondents were not substantiated but were just mere assumptions without tangible evidence but basing on the provincial performance at national level which were progressing steadily from 2010 as can be seen from figure 4 of chapter four.

The same above research finding also confirms what garret etal (2001) suggested by stating that the impact of CPD on pupil performance should be assessed after a long term and should not only be based on self-reports of teachers' CPD experiences, but rather be based on final examinations out comes too.

The study findings revealed clarifications that explained that it was only going to be sensible and authentic to ascertain that CPD activities for secondary school teachers in Solwezi District had a positive effect on pupil performance at grade twelve level if pupils' performance was continuously improving every year. Also the study revealed that multiplier effects were usually achieved after a long time, because a persistent pattern is what clarifies such. In other words, since the target group (pupils) were not directly involved in the CPD programmes, but rather their teachers, the expected outcomes were to be a multiplier effect and multiplier effects are long term achieved. This is true because teachers needed time to practice after acquiring new skills,

knowledge, values and attitudes that's when effects can be seen. As such indicators like teachers' commitment towards work and effective lesson delivery to learners were established as signs of positive effects that would improve results in the long run.

The above research findings conformed to Guskey (2002)'s findings who postulated that well-tailored teachers' CPD activities that were matched to teachers' professional needs were discovered to have improved the learners' performance after some good time. Guskey, (2002) indicated that evidence of such positive effects of CPD programmes on pupil performances, needed to be collected using clear indicators such as studying the learner performances at fortnightly tests, end of term tests and final examinations for continuous good years. Guskey (2002) also suggested that yearly indicators like good pupil performances progressively were signs of positive effects. This implies that basing evidence on teachers' reports that their CPD activities improved their teaching and learner performance without any tangible proof would be superficial and limited. This research finding confirmed what Guskeys' (2002) impact model outlines concerning the five levels of CPD impact. Guskey (2002) outlined that the participant's reactions to the course provision was the first level, followed by participants learning, then organizational support change, also participants' use of knowledge and students learning out comes as the fifth level. Impact at level 5 on student outcome accommodates measuring such learning in terms of knowledge skills, values and social and emotional development.

5.5. SUMMARY

The discussion of the research findings had been conducted above in accordance with the four objectives of the study. Most of the research findings were in accordance with what other authorities discussed in Chapter

two (2) discovered. The conclusion and recommendations of the study would be presented in the next chapter (chapter six)

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

Introduction

The data which was obtained in this study provided some useful information to bring out important recommendations on the effects of the strengthened CPD programmes for secondary school teachers' on pupil performance at grade twelve level in Solwezi district.

Conclusion

It can be concluded that the Ministry of Education in collaboration with JICA undertook the initiative to strengthen CPD programmes for teachers in secondary schools of Solwezi District using the lesson study approach in all subjects. This was done in order to improve on teacher and learner performance in the classroom and ultimately improve grade twelve results (MOE 2010). Teachers' knowledge, skills, values and attitudes are key in the process of teaching and learning of students and bring out positive outcomes. Therefore, we can say that CPD is important to teachers because they gain knowledge, skills and confidence which assures of a highly skilled and motivated workforce needed to provide an appropriate level of education for the specialist and the general population (The white Rose Consortium, 2005). This is supported by Hammond (2000) who contends that the measure of teacher quality is more strongly related to student achievement as also explained in Guskey (2002) fifth level of CPD impact, than other kinds of educational instruments such as reduced size and overall spending on education. However, positive and negative effects on pupil performance were seen in this study.

One of the positive effects revealed by the study was that teachers were able to teach with confidence any syllabus topic by using the lesson study approach in the school based continuing professional development and after attaining first degrees.

Such CPD programmes helped them to acquire the knowledge, attitudes and pedagogical skills required to teach effectively.

Another positive effect of the strengthened CPD programmes for secondary school teachers on pupil performance was the commitment shown by teachers in terms of lesson preparations after attending lesson study demonstrations. This is a positive indicator to teach effectively and ultimately improve learner performance in the final national examinations,

However, one of the negative effects that the study brought out was the up and down reserve pattern of performance at school level in almost all the secondary schools of Solwezi district and with an exception of Meheba Secondary School which had been progressing since then.

Furthermore, the effects of CPD activities for teachers were seen as a multiplier effect, Meaning that learners are not direct beneficiaries of CPD programmes but indirect beneficiaries.

Against the findings and discussions of the study, the researcher concludes that strengthening CPD programmes for secondary schools was critical if the aspiration of improving pupil performance at grade twelve level is to be realized. This could be enhanced by emphasizing on the purpose of CPD from onset and throughout the process of the CPD programme.

6.2. RECOMMENDATIONS

Belo are some of the recommendations which are a consequence of the findings of the study:

1. Ministry of Education and all researchers at the University of Zambia to strengthen the systems of updating the website on CPD activities conducted for secondary school teachers. This would help all stakeholders to access information on CPD activities going on in the ministry;

2. MOE to appoint eCPD Coordinators/guiders at all levels of the education system. This would help in terms of accountability on CPD activities and will help smooth running of CPD activities by distance;
3. MOE to develop tools to evaluate pupils' performance after CPD programmes for teachers. This would help to evaluate learning outcomes after conducting CPD programmes;
4. MOE to allocate more funds to Teacher Education Department as CPD activities requires a lot of resources. This will help to have effective CPD activities at school level and the Resource Centres;
5. MOE to strengthen capacity building of Head teachers or School Managers in CPD activities. This would help school managers to develop a deeper understanding of how to manage and run CPD activities in schools;
6. schools to strengthen existing monitoring and lesson observations systems to provide more focus and accountable evidence for classroom impact of CPD programmes;
7. school administrators should be involved in CPD activities so that they can influence teachers' practices after acquiring new knowledge and skills to improve pupil performance;
8. the number of SBSPD activities that a teacher attends should be used as the criteria for promoting teachers, appraisal system for salary increment; and
9. MOE to ensure that school based CPD programmes for teachers covers both content and methodology. This will help teachers build capacity in the area of content as well.

6.3. **SUGGESTIONS FOR FUTURE RESEARCH**

1. Role of the Head teacher/Resource Centre Co-ordinator in the academic achievement of pupils in secondary schools.
2. More comprehensive study should be undertaken to include a larger population on more than one district to ascertain whether the strengthened CPD transcends to other districts.
3. Continuing Professional Development Programmes and teacher performance in the primary schools of Mufumbwe District.
4. The role of CPD programmes for teachers in promoting educational standards in secondary schools of the North Western Province.

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APPENDIX I

THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

SCHOOL OF EDUCATION

**DEPARTMENT OF EDUCATIONAL SOCIOLOGY, PSYCHOLOGY
AND SPECIAL EDUCATION**

FOCUS GROUP DISCUSSION GUIDE FOR GRADE 10, 11, 12 PUPILS

STUDY TOPIC: EFFECTS OF THE STRENGTHENED TEACHERS' CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES ON PUPIL PERFORMANCE AT GRADE TWELVE LEVEL IN SELECTED SECONDARY SCHOOLS OF SOLWEZI DISTRICT.

INTRODUCTION

The major reason of having this focus group discussion with you is to get information on the effects of strengthened Continuing Professional Development (CPD) for secondary School Teachers on pupil performance at Grade Twelve (12) in Solwezi District. We therefore request you to participate freely to the best of your ability. Every response that you give will be treated with high confidentiality. Do not mention your names when contributing unless you want to. Will you allow us to record the discussion on a tape?

1. Do you have knowledge about the existence of Continuing Professional Development (CPD) for the teachers in your school?

2. From your understanding of C.P.D. what do you think could be the purpose of it?
3. When did teachers start holding CPD meetings and when was it strengthened?
4. What were the reasons for strengthening CPD at your school?
5. What measures were put in place to strengthen CPD activities in your school?
6. What CPD activities take place at your school?
7. Do you benefit from CPD programmes? If the answer is Yes or No explain
8. Is there any change in performance from the time CPD was strengthened in your school?
9. How often do your teachers hold CPD's activities in your school?
10. Is there any relationship between CPD activities for teachers and pupil performance in class?
11. From your experience what can you say about your performance from the time CPD was strengthened at your school?
12. What else can you recommend about the strengthened CPD activities at your school?

God Bless you for participating willingly. Thank you.

APPENDIX II

THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

SCHOOL OF EDUCATION

**DEPARTMENT OF EDUCATIONAL SOCIOLOGY, PSYCHOLOGY AND SPECIAL
EDUCATION**

**QUESTIONNAIRE FOR SENIOR EDUCATION STANDARDS OFFICERS,
HEADTEACHERS, DEPUTY HEADTEACHERS, HEADS OF DEPARTMENT AND
TEACHERS IN SOLWEZI DISTRICT.**

STUDY TOPIC: EFFECTS OF THE STRENGTHENED TEACHERS' CONTINUING
PROFESSIONAL DEVELOPMENT PROGRAMMES ON PUPIL
PERFORMANCE AT GRADE TWELVE LEVEL IN SELECTED
SECONDARY SCHOOLS OF SOLWEZI DISTRICT.

INTRODUCTION

This questionnaire is designed to collect information from concerned stakeholders
like

you on the above cited topic. The major aim of the study is to find out the effects of
the strengthened Continuing Professional Development for Secondary School
Teachers

on pupil performance at grade twelve in Solwezi District. You have been identified
as

one of the key informants in the study. Therefore, your willingness and honest
responses and contributions will help in the establishment of the effects of the
strengthened CPD by the Ministry of Education, with its concerned stakeholders.

Your
response will be treated with strict confidentiality and you will remain anonymous.

INSTRUCTIONS

Do not write your name on the questionnaire. Respond by putting a tick in the box
or

writing the response in the space provided.

SECTION A: DATA

1. SEX

Male

☐

Female

☐

2. AGE

1. 10 – 25

☐

2. 26 – 35

☐

3. 36 – 45

☐

4. Above 45

☐

3. MARITAL STATUS

1. Single

☐

2. Married

☐

3. Divorced

☐

4. Widowed

☐

4. NATIONALITY

1. Zambian

☐

2. Non Zambian

☐

How many children do you have?

1. Boys

2. Girls

SECTION B:

6. Highest Academic / Professional Qualification

- | | |
|---------------------------------------|----------------------|
| i. Secondary Teacher's Diploma | <input type="text"/> |
| ii. Bachelor of Education Degree | <input type="text"/> |
| iii. Master of Education Degree | <input type="text"/> |
| iv. Doctor of Philosophy in Education | <input type="text"/> |

7. Position held at place of work:.....

8. How long have you served in the position in question 7 above?

- | | |
|----------------|----------------------|
| 0 – 5 years | <input type="text"/> |
| 6 – 10 years | <input type="text"/> |
| 11 – 15 years | <input type="text"/> |
| 16 – 20 years | <input type="text"/> |
| 21 – 25 years | <input type="text"/> |
| Above 25 years | <input type="text"/> |

SECTION C

1. Where did you train from as a teacher?

.....

2. Do you think your initial training was adequate in preparing you for the teaching profession?

If yes explain:

.....

.....

If no explain:

.....

.....

3. What do you think should happen after your initial training?

.....

.....

.....

4. What do you understand by the term Continuing Professional Development (CPD)?

.....

.....

.....

5. When was C.P.D.

(i) Introduced in your school?

.....

.....

(ii) Strengthened in your school?

.....

.....

6. Do you hold CPD meetings in your School? If yes?

Monthly

Weekly

7. What type of C.P.D activities are carried out in your school?

i.

ii.

iii.

8. Who conducts these CPD activities (i.e. facilitators and trainers)?

.....

9. What are the teachers' attitudes towards CPD activities?

.....

.....

.....

10. What is your role in CPD activities conducted in your school?

.....

.....

.....

11. What are the benefits of the strengthened CPD activities in secondary schools:

i. To teachers:.....

.....

.....

ii. To pupils:

.....

.....

12. Is there any relationship between CPD and Pupil Performance?

i. If the answer is yes explain:.....

.....

.....

ii. If the answer is no explain:.....

.....

.....

.....

13. What led to the strengthening of CPD at your school?

.....

.....

14. What measures were taken in the strengthening of CPD?

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.....

.....

15. Are you happy that such measures were introduced in CPD activities? If yes explain

.....

.....

.....

16.How was performance in terms of teaching and learning before CPD was strengthened?

.....

.....

17.How has been pupil performance at grade twelve level after strengthening CPD activities?

.....

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18.What else can you propose concerning the CPD activities in your school?

.....

.....

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.....

God Bless you for participating willingly. Thank you.

APPENDIX III

THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

SCHOOL OF EDUCATION

**DEPARTMENT OF EDUCATIONAL SOCIOLOGY, PSYCHOLOGY AND SPECIAL
EDUCATION**

**INTERVIEW GUIDE FOR THE PRINCIPAL EDUCATION STANDARDS
OFFICER (PESO), EDUCATION OFFICER – TEACHER EDUCATION
DEPARTMENT, PROVINCIAL RESOURCE COORDINATOR – SECONDARY
SCHOOL.**

STUDY TOPIC: EFFECTS OF THE STRENGTHENED TEACHERS' CONTINUING
PROFESSIONAL DEVELOPMENT PROGRAMMES ON PUPIL
PERFORMANCE AT GRADE TWELVE LEVEL IN SELECTED
SECONDARY SCHOOLS OF SOLWEZI DISTRICT.

INTRODUCTION

The purpose of this interview is to help us get more information on the above cited topic. You have been identified as one of the key informants in the study. This interview guide is one of the instruments to perform this evaluation exercise. Every response that you give will be confidential and the information which will be collected

will be used for the purpose of evaluating the strengthened CPD only. We therefore request you to participate freely and effectively.

DATE: -----

STATION: -----

SEX: -----

POST: -----

Number of years served in that position:-----

a. What is your academic level of Education?-----

b. What is your highest Professional Qualification?-----

1. What is the Ministry's policy on CPD activities in Secondary Schools?

.....
.....
.....

2. What type of CPD activities are conducted in Secondary Schools?

.....
.....

3. What is your role in these CPD activities in Secondary Schools?

.....
.....

4. What is your understanding about the reasons for the strengthening
Continuing Professional Development (CPD) activities in Secondary Schools?

.....

.....

.....

5. What measures were taken to strengthen CPD activities in Secondary Schools?

.....

.....

.....

6. Are you sure that CPD activities are conducted in Secondary Schools? Explain more.

If yes how often, if no explain why?

.....

.....

.....

7. How do you rate the extent at which CPD activities are carried but in Secondary Schools?

.....

.....

8. What is the relationship between CPD activities that your teachers attend and their work?

.....

.....

.....

9. Explain how CPD has benefited the following:

i. The teacher

.....

.....

.....

.....

ii. The learner

.....

.....

.....

.....

10. From your experience what can you say about pupil performance from the time CPD was strengthened in Secondary Schools compared to the previous years.

.....

.....

.....

11. What else can you recommend about CPD activities in Secondary Schools of North Western Province?

.....

.....

.....

God Bless you for participating willingly. Thank you.