

**INFLUENCE OF PROFESSIONAL DEVELOPMENT ON PERFORMANCE  
OF PUBLIC SECONDARY SCHOOLS TEACHERS IN TANZANIA**

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**A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR  
THE DEGREE OF DOCTOR OF PHILOSOPHY OF THE OPEN  
UNIVERSITY OF TANZANIA**

**2019**

**CERTIFICATION**

The undersigned certify that they have read and hereby recommend for acceptance by the Open University of Tanzania a thesis entitled “**Influence of Professional Development on Performance of Public Secondary Schools Teachers in Tanzania**” in fulfilment of the requirements for the Degree of Doctor of Philosophy of the Open University of Tanzania.

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.....

Signature

.....

Date

**DEDICATION**

This thesis is dedicated to the memory of my father, the late Ngitoor Siray Mollel; my mother; the late Nemanga Sikao Mollel; my wife, Regina Meitukut Meliyo; and my children, Happy, Magdalena, Lobikieki, Gudluck and Laurent.

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**ABSTRACT**

This study investigated the Influence of professional development on performance of Teachers of Public Secondary Schools in Tanzania's. Specifically, the study aimed to assess the influence of Pedagogical knowledge development on performance of teachers of secondary schools; examine the contribution of Environment contextual skills development on performance of teachers of secondary schools in Tanzania and establish the relationship between competencies development and performance of teachers in secondary schools. The study was carried out in four of Tanzania Mainland regions involves Eights (8) Districts. The study involved 314 respondents who are drawn from eight (8) Districts using multi stage sampling and simple random techniques. The data was collected using structured questionnaires and documentary reviews. The data was analysed using structural Equation Modelling techniques which look the causal relationship between the Professional Development on Performance of Teachers in Secondary Schools. The findings show that there is a positive significant influence of competency development and environmental contextual skills development on performance of Teachers in secondary schools. In addition pedagogy knowledge development was found to be insignificant in supporting performance of Teachers in Secondary Schools. This study concluded that competency development and context environmental learning have positive and significant influences on performance of teachers. The study recommended that, education officers at Districts level and school heads should put more effort on the professional development that is related on teachers' competency development and environmental contextual skills which was found to influence performance of teachers.



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### LIST OF ABBREVIATIONS

ADEM	Agency for the Development of Education Management
BEST	Best Education Statistics for Tanzania
CPD	Teacher Contextual Professional Development
CR	Critical Ratio
EFA	Explanatory Factor Analysis
ETP	Education and Training Policy
CSEE	Certificate of Secondary Education Examination
CFA	Confirmatory Factor analysis
HI	Null Hypothesis
INSERT	In service training
KMO	Kaiser-Meyer –Olkin
MI	Modification Index
MoEST	Ministry of Education, Science and Technology
MoEVT	Ministry of Education and Vocational Training
NECTA	National Examinations Council of Tanzania
NPS	National Policy in Education
O-level	Ordinary Level Examinations
OUT	The Open University of Tanzania
PEDP	Primary Education Development Plan
PPD	Professional Pedagogical Development
SAP	Structural Adjustment Programme
SE	Standardized Error



SEDP	Secondary Education Development Programme
SPSS	Statistical Package for Social Sciences
SEM	Structural Equation Modelling
SRW	Standardized Regression weight
TCPD	Teacher Contextual Professional Development
TJP	Teacher Job performance
UNESCO	United Nations Educational, Scientific and Cultural Organisation
URT	United Republic of Tanzania

## **CHAPTER ONE**

### **1.0 INTRODUCTION**

#### **1.1 Chapter Overview**

This chapter introduces the study by providing the background to the research, the problem statement, research objectives, research hypothesis, significance of the study, scope of the study, and the overall organisation of the thesis.

#### **1.2 Background to the Research**

Teacher professional learning is of increasing interest as a critical way to support the complex need of learning in order to succeed in the 21st century (Darling-Hammond, Hyler & Gardner, 2017). As argued by Oyedele and Chikwature (2016) that teacher's professional development is imperative to school success and teacher job performance. On the other hand Heike (2017) pointed out that professional development help teachers to explore knowledge and skills that helps them to implement new roles, develop new instructional techniques, refine their practice and broaden their scope as educators and as the trainers.

On the same perspective, Bicaj and Treska (2014) advocated that professional development has been a stimulus in raising the quality of teaching. In the same vein, studies show that development programmes for teachers are linked to competencies that are associated with the performance of teacher' in general (Nabila, 2016; Lyimo et al., 2017; Rejai, 2017). Hence excellent performance of both teachers and students

of every educational institution is dependent on its key human resource development through teachers' professional development.

To realise the importance of teacher's professional development, professional development in education has become part of a global process on education policies and practices of most countries. In United State (US) for example, to improve teaching quality, the US has adopted one time workshops as professional development programme where teachers meet for one up to three (3) hours per week to listen to a lecture on an isolated topic for their professional development (Desimone and Garet, 2015).

Analysis of the nationally representative schools and staffing survey shows that fewer than 20% of teachers in the United State (US) had eight hours or fewer of professional development in the 2011-2012 school year (Department of Education in United State, 2012 cited in Desimone and Garet, 2015). These figures suggest that professional development providers in US are increasingly directing resources to ensuring that teachers have access to such activities.

In Africa perspective, for example in Nigeria, in order to enhance teachers job performance through professional development, the government has established the national policy on education which advocate that "Teachers education shall continue to be given major emphasis in all educational planning and development". Further, the policy has stipulated the purpose of teacher education is to produce highly motivated, conscientious and efficient classroom teachers for all levels of national educational system.

Like other countries in both developed and developing world, in order to enhance teachers professional development, Tanzania has formulated teacher education development and management strategy 2007/08 to 2010/11, Education and Training Policy, and Education Sector Development Plan which all of them have provided a comprehensive, holistic, and an all-encompassing programme for attracting, obtaining, training, developing, and retaining adequate and high quality teachers and managers for all levels and aspects of the education system. In addition Tanzania government has established a number of training institutions ranging from teachers college to university to enhance professional development for teachers. The government also has regulated the private sectors to establish their own training centers and schools and organized training programmes and seminars as well as executive development and general management courses for teachers' development program. Base on government initiative observed, an analysis from 2011/12 to 2016/17 has shown that a total of 17,737 secondary schools teachers in Tanzania received in-service training for enhancing performance of secondary schools (URT, 2016).

Despite of the importance of professional development and the initiative which was done by the Government in developing countries, yet teachers' job performance is still low and majority of students are not performing well. Notably example Nabila (2016) in his research discovered that teachers' performance in Indonesia is likely below the average performance due to limited Pedagogic and Professional Competence at work despite of attending training. While In Ghana, poor

performance of teachers was due to lack of frequent in-service training (Hervie and Winful , 2018).

On the same line of argument Oyedele and Chikwature (2016) found that the professional development for teachers in Zimbabwe has been criticized for its cost, often vaguely determined goals, and for the lack of data on resulting teacher and school improvement that characterizes many efforts. In Tanzania, the poor performance of public secondary schools was observed in several years since the implementation of Secondary Education Development Programme (SEDP) which was from 2004-2009 phase one followed by the phase two from 2010-2015 for example the performance that was recorded from 2010 to 2016 shows a decrease in the number of students who score division 1-3 from 11.4% (2010) to 9.5% (2012) and there is an increase in the number of students who score in division IV from 38.9% (2010) to 49.6% (2012) (MOEVT, 2016). Parallel to that the performance of students show that, out of 163,855 students who sat for their final examination in 2008, 26.7% scored in division I-III, 56.9% in division IV and (16.3) in division 0 whereas the performance of students in 2015 shows that out 354,885 students who sat for their final examinations, 25.4% scored in divisions I-III, 2.6% in division IV and 32% in division 0 (URT, 2016).

In addition despite all efforts by the government of Tanzania to fulfill its commitment by formulation of policy and education strategies, the current education system of teachers professional development does not satisfy the needs of the school performance, there are many policy items which were not implemented properly due

to various factors such as inadequate funding and lack of proper implementation structure (URT, 2014).

Surprising of the initiative to enhance professional development and performance of teachers in secondary schools, little has been done in the research in analyzing the current influence of professional development and teachers job performance. Even those few studies conducted each have come with conflicting argument and finding on relationship between professional developments and teachers job performance. For example Essien et al., (2016) found that there exists a small relationship between the frequency of teachers' attendance at in-service training, seminars and workshops and their performance in terms of students' academic performance in Nigeria. Similarly Fejoh and Faniran (2016) findings showed that in-service training and staff development had insignificant combined effects but significant relative effects on workers' optimal job productivity.

They add that many teacher professional development initiatives appear ineffective in supporting changes in teacher practices and student learning. On the other side of conflicting view of Sultan and Shafi (2014) from Indonesia have concluded that perceived teachers' professional competence development predict teachers' performance in terms of the students' performance. Therefore it is not clear whether professional development tend to enhance teachers performance. As argued by Nabila (2016) that teachers who have attended the professional training are able to master various strategies or techniques in teaching and learning activities and master the foundations of education as contained within the competence of teachers. Given

this argument there is a need to fill a gap by understanding the influence of professional development on performance of teachers of public secondary schools in Tanzania.

### **1.3 Statement of the Problem**

Teacher professional development in Tanzania is enshrined in the Education and Training Policy as compulsory for fostering quality education (URT, 2014). In fact, the Tanzania Government has taken several initiatives to support such teachers' professional development aimed to improve performance of secondary schools including curriculum improvement, Support the training of teachers, budget the cost of training, provide the study leave for teachers who are attending the training. Despite the Government initiatives of training of teachers yet the performance of secondary schools is still not at good level because the outcomes of their teaching remain largely underwhelming as in most of the years massive failures of students in public secondary schools remained common feature (Mabula, 2012; Mchome and Muhoho, 2014). According to the national Examination results of 2016 among the four regions selected show that Njombe region has 13.1% failure rate, and Arusha is 46.3% Singida is 63% and Coast is 67% (URT, 2015). There is a need to investigate why these differences appeared while the teachers from all schools have received the same professional training to improve their job performance.

In one hand, Salman et al., (2012) found that massive failure in secondary schools in Nigeria is due to poor teachers' quality in terms of subject contents and lack of infrequency opportunities for further studies, attending seminars and workshops for

update teachers' professional skills. On the other hand, Mchome and Muhoho (2014) pointed out that incompetent and unmotivated teachers are responsible for the performance failure in public secondary schools in Tanzania.

In related perspective King (2013) commented that absence of reliable teachers guide to the students in Mbeya Secondary school in Tanzania as one factor accelerating mass failure and poor teacher's job performance. This was also evidenced by Sephania et al., (2017) who found that massive failure of learners in public secondary schools in Tanzania is due to the factor that in one hand, teachers do not allocate sufficient time to mark assignments and on the other hand do not counsel students who are facing problems in learning. Mfaume and Bilinga (2017) findings unveiled that absenteeism, abusive and violent behaviours, sexual abuse were prevalent forms of teachers' malpractices in schools which was due to lack of professional knowledge which affect their job performance. In addition, they adds that teachers' malpractice is still a problem of great concern in rural and urban schools in Tanzania. However, it is not clear whether the professional development programme influence performance of teachers in secondary schools. This is due to the theoretical debate and empirical debate raised for example Vroom (1968) on Expectancy Theory posited that performance of employees in the organization depends on ability in terms of competencies that employees applied in the performance of their duties. This theory has ignored to state other factors which are likely to influence performance of employees including knowledge and skills. On the other hand the Human Capital Theory has also linked to the influence of professional development on performance of teachers through the application of the knowledge gained from the



training but again the theory didn't address what type of knowledge and skills that through the professional development could help to enhance performance of teachers. Others scholars (Fejoh and Faniran, 2016; Essien et al., 2016) have come with insignificant findings which do not support the theories and other established empirical evidences. Given this situation of the performance of teachers and inconsistency finding on professional development, if the poor performance of teachers will continues it will affect students' academic success and school performance. This study filled the gap by studying the influence of professional development on performance of teachers in Public secondary schools in Tanzania.

#### **1.4 Study Objectives**

The research objectives of the study are:

##### **1.4.1 Main Objective**

The main objective of this study was to investigate the influence of professional development on performance of public secondary schools teachers 'in Tanzania.

##### **1.4.2 Specific Objectives**

Specifically, this study sought to:

- i) Examine the influence of pedagogical knowledge development on the performance of teachers in public secondary schools.
- ii) Assess the relationship between competencies development and performance of teachers in public secondary schools.

- iii) Determine the influence of environmental contextual skills development on performance of teachers in public secondary schools.

### **1.5 Research Hypothesis**

The followings are the research hypothesis which guided the study:

H1a: Pedagogy knowledge developments has a positive significant influence on performance of teachers in Public Secondary Schools

H1b: Pedagogy knowledge developments do not have a positive significant influence on performance of teachers in Public Secondary Schools

H2a: Competencies developments have a positive significant influence on performance of teachers in public Secondary Schools

H2b: Competencies developments have a positive significant influence on performance of teachers in Public Secondary Schools

H3a: Environment contextual skills development has a positive significant influence on performance of teachers in Public Secondary Schools

H3b: Environment contextual skills development does not have a positive significant influence on performance of teachers in Public Secondary Schools.

### **1.6 Significance of the Study**

First, at the theoretical level, the research results verify the use of integrated model which applied variables from the Expectancy theory and Human capital theory on the study of the influence of professional development on performance of teachers of public secondary schools. The model developed has become a useful tool for the

influence of professional development on job performance in Tanzania public secondary school. It also acts as a motivational tool for enabling to improved teachers programme through the use of competencies and teachers learning context professional development as key factors that influences performance of teachers in secondary schools. Second, while there is a general recognition of competencies gained by teachers from professional development as key attributes on their performance, due to limited research and lack of enough data in the area of professional development and performance of teachers in secondary schools, it has been difficult to provide factual evidence to policy and decision makers on the need to include them in the programmes development and educational policies, plans and strategies. Therefore, this study generates new knowledge and serves as data source for policy and decision evaluation relating to the professional development on teachers in secondary schools. Third, Education administrators and decision makers will be using the findings of this study to plan professional development programmer that will enhance the performance of teachers in secondary schools. Fourth, the methodology used in this study acts as a guide for future research to study the influence of professional development on teachers' job performance in secondary schools in Tanzania.

### **1.7 Organisation of the Study**

The thesis is divided into six chapters. Chapter one: presents introduces and provides the background to the study and other salient aspects such as the objectives and attendant questions as well as the significance of the study. Chapter two: presents the theoretical, empirical literature review and research gap that the study

set out to fill. Chapter Three: presents the methodology used. The Chapter puts the study in context and data collection methods are indicated. Testing of the parametric assumptions, reliability and validity tests as well as the measurement models are presented. Chapter Four: delineates the results of the study. These results are presented according to the study variables and hypotheses. The presentation is in the form of Tables and other relevant statistics. Chapter Five: presents the discussion of the findings.

The discussion hinges on comparing and contrasting literature with the results. New points of departure are identified and filled gaps presented. In this chapter, new knowledge is generated by stressing the theoretical implications of this study and, finally, Chapter six presents the conclusion, summary of the findings and recommendations of the study.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Chapter Overview**

This chapter comprises five parts, namely conceptual definitions, review of the relevant theories, empirical literature review, research gap and the conceptual framework and hypothesis formulation.

#### **2.2 Conceptual Definitions**

This sub-section presents the conceptual definitions of Professional Development and its various elements which are pedagogical knowledge, teacher competencies and environment context skills which in one hand is treated as a independent variable and performance of teachers on the other hand which is also treated as a dependent variable.

##### **2.2.1 Professional Development**

Several scholars have varyingly defined the concept of ‘Professional Development’. Maggioli (2003), for example, defines professional development generally as the skills and knowledge obtained for personal development and career development and, specifically, in education as the ongoing learning process which teachers engage voluntarily to adjust their teaching and learning to focus primarily on the needs of their students. On the other hand, Nkumbi *et al.*, (2008) define “Teacher Professional Development” as a process of improving the teachers’ academic standing as well as the acquisition of greater competencies and efficiency in discharging their

professional obligations in and outside the classroom. Futher, Tecle (2006) and Grayson (2004) define the concept as a process that is embracing all activities that enhance the professional career growth. Similarly, Chambulila (2013) defines “Professional Development” as the formal academic and professional advancement courses aimed to equip educators with relevant and up-to-date knowledge and competencies essential for quality enhancement. In this study, Professional Development refers to a process of improving both the teachers’ academic standing and the acquisition of greater competency and efficiency in discharging their professional obligations in and outside the classroom.

#### **2.2.1.1 Pedagogical Knowledge Development**

The concept of Pedagogical Knowledge development as the similar to the other concepts in the study scholars also have provide their definitions depends on the subject matter under the study. Nabila (2016) defined Pedagogical development as process aimed to develop teachers through their ability to integrating effective literacy instruction throughout the curriculum and across content areas to enhance student learning. Teachers honor the content appropriate to their teaching specialty by: - demonstrating an appropriate level of content knowledge in their specialty; and - encouraging students to investigate the content area to expand their knowledge and satisfy their natural curiosity. Hakim (2015) he also contribute on the concept of pedagogical knowledge by advocate that as the ability of teachers to manage the learning of learners includes understanding of learners, instructional design and implementation , evaluation of learning outcomes and the development of learners to actualize their potential on the same line of thoughts, While Komara (2007) join

with others scholars in defined the concept of pedagogical development where he provide his explanation on the pedagogical knowledge development as the ability of teachers to apply teaching skills in the classroom that have the direct influence on students to improve the teaching and learning.

In this study the concept of Pedagogical knowledge development is defined as the ability of teachers to manage the learning process of students covering the understanding of subject methodologies, subject design, presentation, evaluation, of the subject which the teacher is prepared to teach during the particular period. Teachers make their instructions relevant to students by: - integrating the skills and content in instruction during the teaching process.

#### **2.2.1.2 Competences Development**

Competence development as one of the variable on professional development refers to competence development is the practical or at least action-oriented approach which aims to develop these assets or competences. Competence development has set out to expand organizational measurement from command and control purposes towards enabling learning and self-renewal. Others have commented that Competencies development involves continually acquires knowledge and skills through education, training, work and general life experiences (Gupta, 2004). Many factors that influence competencies development from the lifelong learning journey have included several factors which are existing individual competencies, job requirements, the programmer context, past experiences and education, self-identity and personal beliefs, individual learning styles, learning support provided by others,

team relationships and dynamics.(Shafi,2014). In this study therefore, teacher competencies development refers to the practical strategies, practices, and rules to guide teachers in ways to improve instruction that improves student performance and the quality of the work experience. In one hand the teacher is supposed to plans and implements classroom procedures and routines that support student learning. The teacher is required to apply his/her ability to meet complex demands by drawing on and mobilizing psychosocial resources which including skills and attitudes in a particular context.

Spncer(1993) defined competency development as underlying characteristics of person related to the effectiveness of individual performance on the job on the direction Mcleland (1993) provides that competency development refers t basis of a personal characteristics that is the deciding factor in the success or failures of person doing a job in given situation.

In this study therefore the concept of competency development refers to situation where the teacher is required to Connects students' prior learning, life experiences and interests with learning goals, uses a variety of instructional strategies and resources to respond to students' diverse needs.

### **2.2.1.3 Environment Contextual Skills Development**

Environment contextual skill development is one of the basic skills necessary to teachers to provide an environment in which each child has a positive, nurturing relationship with caring adults by: maintaining a positive and nurturing learning



environment (Shafi, 2014). Teachers embrace diversity in the school community by: using materials or lessons that counteract stereotypes and acknowledge the contributions of all cultures; incorporating different points of view in instruction; and understanding the influence of diversity and planning instruction accordingly. Teachers treat students as individuals by; maintaining a learning environment that conveys high expectations of every student; adapt their teaching for the benefit of students with special needs by cooperating with specialists and using resources to support the special learning needs of all students; and using research-verified strategies to provide effective learning activities for students with special needs. Moos (1991) provide that Teachers work collaboratively with families of students and other significant adults by: communicating and collaborating with the home and community for the benefit of students.

In this study the concept of environment contextual skill refers to the ability of the teachers to use teaching environment and community around the school to create friendly working environment to support the teaching and learning process under which the schools is allocated.

### **2.2.2 Job Performance**

Miners (2006) defined job performance as the degree to which an individual helps an organisation to reach its goals. In the other words, the extent of the results a person achieves after doing the activities of a particular job. As Mlyuka (2015:42) puts it, “performance is often defined simply in output terms as the achievement of quantified objectives. But performance is a matter not only of what people achieve

but also how they achieve [it]”. Kohl and Deb (2008) define performance as a behavioural trait or action relevant for achieving organisational goals measured in terms of the level of contribution to the goals represented by a particular action or set of actions. Also, Martin (2005) defines performance as the level of an individual achievement measured against set targets.

In the context of this study, Mlyuka’s (2015) definition of job performance has been adopted as he treats job performance as an ability of employees to apply pedagogical knowledge, contextual environment skills and competencies that they have gained from the training to complete tasks assigned to them in a given organisation, which in turn enhances the anticipated output. This definition has been applied in this study to illuminate on the investigation of the contribution of professional training to enhancing the job performance of teachers in public secondary schools towards the reduction of the number of students who score in divisions 0 and IV—the poor grades—in their final examination. In short, the nature of job performance abetted by INSET training is a key.

### **2.3 Theoretical Literature Review**

In this study the Human Capital and Expectancy Theories were applied in complementary fashion. The followings subsection details these theories and their implication for the study.

#### **2.3.1 Human Capital Theory**

In order to analyze the influence of professional development on job performance among employee, Backer (1964) came with a Human Capital Theory. The Human

Capital Theory was proposed by Schumltz (1961) and developed extensively by Becker (1964). The theory advocates that education or training imparts useful knowledge and skills to workers which in turn increase their productivity and Job performance (Becker, 1964). On the same approach, the theory suggests that education or training raises the productivity of workers by imparting them with useful knowledge and skills, hence raising workers' future income by increasing their lifetime earnings (Becker, 1994). In addition, it postulates that expenditure on training and education is costly and, thus, should be treated as an investment aimed to increase output and personal income. Furthermore, Human capital theorists argue that an organisation would invest significantly to develop skills through training initiatives (Hatch and Dyer, 2004; Lepak and Snell 1999). As in the current study the idea of Backer has posit that professional development of teachers through acquiring knowledge and skills tend to raises their productivity and job performance. The human capital approach often explains the occupational wage differentials. In fact, the human capital approach is similar to the physical means of production found in factories and machines. One can invest in human capital through education, training, medical treatment and one's output is dependent partially on the rate of return on human capital relative to one's own. The human capital, in this regard, constitutes a means of production into which additional investment yields additional output.

Specifically, the theory states:

When any expensive machine is erected, the extraordinary work to be performed by it before it is worn out, it must be expected, will replace the capital laid out upon it, with at least the ordinary profits. A man educated

at the expense of much labour and time to any of those employments which require extraordinary dexterity and skill may be compared to one of those expensive machines. The work which he learns to perform, it must be expected, over and above the usual wages of common labour, will replace to him the whole expense of his education, with at least the ordinary profits of an equally valuable capital (Smith, 1960:101).

Overall, the Human Capital Theory is one of the most commonly applied approaches in economic frameworks of educational research. The theory works on the assumption that the well-being of a society is a function not only of the traditional stocks of financial capital, labour, and natural resources but also of the knowledge and skills of individuals. In particular, the theory predicts that increased knowledge and skill yields improved the economic outcomes for both individuals and societies. In terms of the professional development of teachers, the theory stipulates that the community expected good output from teachers whenever they have attended INSET training as a return of investment that come through professional development.

The Human Capital Theory also locates this explanation in knowledge and skill and, particularly, in education and work experience as the primary source of these attributes. Early applications of the Human Capital Theory focused primarily on the relationship between amounts of education and economic/social returns. However, recent developments in the literature suggest that the quality of education and educational investments made are critical in the human capital formation process. The theory shows that people practise what they become, what they do and how they make a representation of social reality. In this regard, Joseph (2008) asserts that education is a causal effect on performance. With regard to the performance of teachers in schools, the completion of in-service training should make teachers work

harder to utilise whatever knowledge and skills they have gained to boost the teaching and learning of students. Such exertions could result in an increase in the number of students who passed their examinations, which in turn could help to increase the number of students in the university and tertiary institutions trained to bolster the workforce that later improves the economy of the country. According to Psacharopoulos *et al.* (2004), the Human Capital Theory works on the assumption that an investment of a human being in terms of training is expected to return in terms of performance. Mincer (1958), Schultz (1961) and Backer (1975) affirmed that time and money spent on education to develop the human capital in an organisation should estimate the rate of return on such investment similar to an investment in physical capital.

Furthermore, the Human Capital Theory helps policy-makers and researchers to evaluate the relationships between education and training as inputs and economic and social benefits as outputs. The theory can also contribute to more effective policy development by helping policy-makers zero-in on the type of training that matter most for achieving the desired goals and outcomes such as economic growth, and heightened civic participation and productivity.

By using human capital theory, policymakers can be more effectively develop policies such as student loan and dual enrolment programmes to change individuals' cost/benefit calculations by, for example, reducing short-term costs associated with educational investments and boost their likelihood of pursuing further education. In more substantive ways, the Human Capital Theory answers questions about optimal

levels of individual/social investments in education, the kinds of investments that are most productive and rewarding, and when these investments can be best made. It is also useful for answering questions on the costs and benefits accruing from individual investments in education and types of policy interventions that reduce individual costs associated with educational investments.

Higher educational attainment and quality level could potentially yield greater productivity and wages across board. However, such treatment of education is problematic because the process of human capital formation varies for individuals and groups; similarly the returns from such investment in human capital could vary. Indeed, people learn differently and the quality of education in one context may prove ineffective in another. For example, investments required to achieve desired outcomes in rural-based schools differ from those obtaining in urban districts because of unique characteristics of their diverse student populations. It is, thus, incumbent upon policy-makers to consider the context of dependency of human capital investments to ensure that efficient allocation of resources and effective policy interventions at the national and state levels are the order of the day rather than an exception to the rule. As in the current study the idea of Backer has posit that professional development of teachers through acquiring knowledge and skills tend to raises their productivity and job performance. The applicability of Human Capital Theory in studying the relationship between professional development and job performance is observed in a number of studies. To start with notably example Fugar et al., (2013) found an evidence of the correlation between human capital development and organizational success and profitability through employee job

performance. They further found that investment in education has positive correlation with high performance of other industry categories. On the other hand, Olaniyan and Okemakinde (2008) found and concluded that human capital model investment in education has significant influence with economic growth and development. They further add that professional development is highly instrumental and even necessary to improve the production capacity of an employee and of a nation in general. This implies that professional development tend to enhance teacher job performance which intern it improve school performance.

Despite of its applicability in analyzing the relationship between professional development and job performance of an employee, Human Capital Theory has been criticized due to its weakness. Fugar,et al.(2013 have pointed out that social scientists have overestimated the payoffs from increased education and ignored complimentary inputs such as employee contract terms, and management practices which must exist for professional development to improve job productivity. To enhance this weakness scholar such as Fugar et al., (2013) has argued that human capital can be integrated with other variable to provide further analysis of employee job performance. Given this argument Becker's human capital theory has been resilient and still remains the principal theoretical construct that is used for understanding professional development on both from the perspective of the individual and the firm performance. Given this situation, this study used this theory for further analysis of pedagogical knowledge and teacher environment contextual skills on performances of teachers in secondary schools in Tanzania,

### **2.3.2 Expectancy Theory**

In order to analyze the influence of professional development on performance of teachers in secondary schools the expectancy theory was also used. This theory was initially developed by Vroom (1964), who introduced three key variables of valence, expectancy, and instrumentality. Since then the theory has undergone some transformations and has been applied by scholars such as Bandura (1986) in a study on predicting perceived employees' beliefs; Staples (1998) in a study on individual cognitive outcomes; Henry (2003) on the roles of computers self-efficacy and outcomes; and locally in Tanzania, by Mlyuka (2015) in a study on the teachers' job satisfaction and job performance. Porter and Lawler (1968), on the other hand, proposed an extension of the Expectancy Theory. In the development of the theory Lunenburg (2018) state the expectancy theory as effort invested by employees through competencies and personal behaviours rewarded by organization and gained from the training within the organization tend to bring about effective employee job performance. As in the current study, the competencies gained by the teachers within school as part of promotion for teachers tend to bring more efficiency in the performance of teachers. As argued by Göksoy and Argon (2015) that mutual expectations between the organization and the individual employee can be regarded as one of the issues that need to be considered in the realization of both organizational and personal goals. This means that value attributed to the benefits that will be gained from the organization is closely related to the expectations and it will not only provide vitality in organizational life but will also increase job satisfaction.



According to Porter and Lawler (1968), an individual's initial effort is influenced by one's perception of the value of the expected or projected reward and the likelihood that the effort would yield a reward. The probability that increased effort would translate into improved performance is tempered by an individual's traits and abilities and the perception of his/her role in an organisation. Under this theory, such abilities can be influenced by exposure to training which can serve as an intervening variable. Vroom's *expectancy theory* assumes that behaviour results from conscious choices among alternatives whose purpose is to maximise pleasure while minimising pain. Vroom realised that an employee's performance is based on individual factors such as personality, skills, knowledge, experience and abilities.

The theory was further developed by Porter and Lawler (Vroom, 1968) to integrate an interesting extension to the Expectancy Theory involving the addition of more variables to the original three in Vroom's proposition made in 1964. In this regard, value of the reward indicates that people desire various outcomes they hope they can achieve from their work. This value is placed on a reward depends on the strength of its desirability. However, this value is similar to valence in Vroom's model (Martin, 2005). The following descriptions illuminate to new insights into the Expectancy Theory, which have since enriched and broadened its original scope.

The **Perceived effort-reward probability** refers to a person's expectation that certain outcomes (rewards) are dependent upon a given amount of effort. **Effort**, in this regard, refers to how hard a person tries and the amount of energy he or she exerts into a given activity. As such, effort does not necessarily relate to how

successful a person is in executing an activity. After all, the amount of energy exerted depends upon the interaction of the input variables of value of reward and the perception of the effort-reward relationship.

**Abilities and traits** suggest that effort does not necessarily directly translate into performance but tends to be influenced by individual characteristics. In this regard, factors such as intelligence, skills, knowledge, training and personality affect one's ability to perform a given activity. **Role perceptions**, on the other hand, refer to how individuals view their work and the role they should play. These perceptions affect the type of effort exerted in a given endeavour. Moreover, role perceptions tend to affect the direction and level of action necessary for bringing about effective performance.

**Performance** depends on both the amount of effort exerted into an activity and the intervening influences of a person's abilities and traits coupled with their role perceptions. In this regard, for a person devoid of the right ability or personality, or with an inaccurate role perception of what is necessary, his/her exertion of energy might still result in a low performance level or task accomplishment.

As for **rewards**, they are desirable outcomes. In this regard, there are both intrinsic and extrinsic rewards. Intrinsic rewards derive from individuals as they are innate and include a sense of achievement, a feeling of responsibility and recognition (for example, as informed by Herzberg's motivators). Extrinsic rewards, on the other hand, stem from an organisation and actions of others, for example payment of salaries, the working conditions in place and the kind of supervision available (for

example, Herzberg's hygiene factors). This relationship between performance and intrinsic rewards often appears in form of a jagged line primarily because the extent of a given relationship depends on the nature of a job. The design of a job permitting, then variety and challenge would result, hence making employees feel capable of rewarding themselves for good performance. Such a relationship is construed to be direct. On the flipside, when the job design lacks diversity and challenges no direct relationship exists between good performances and intrinsic rewards. This occurrence accounts for a wavy line between the performance of an employee and the anticipated extrinsic reward, which also affirms that such rewards do not necessarily often provide a direct link to the work or job performance.

**Perceived equitable rewards** refer to the degree of rewards people believe they are entitled to receive for performing to a certain standard at the workplace. In this regard, many people have an implicit perception of the level of rewards they should receive relative to the requirements and job demands, as well as the envisaged contribution. In this regard, self-rating of performance is directly associated with the perceived equitable reward variable, for example, the higher levels of self-rated performance tend to be associated with the higher levels of the projected equitable rewards. The heavily arrowed line in the expanded graphical projection of the Expectancy Theory indicates an inextricable relationship between the self-rated part of performance and the perceived equitable rewards.

**Satisfaction** is not necessarily the same as motivation though at some level it might appear to be so. Strictly, satisfaction is an attitude, or an individual's internal related

state. Usually, satisfaction depends on both actual rewards received and perceived concomitant rewards from the organisation attached to a given performance standard. If the perceived equitable rewards are exponentially greater than actual rewards received, then the person experiences dissatisfaction. This satisfaction emanates from the actual rewards that meet or exceed the originally perceived equitable rewards.

The good explanations and positive attributes of the Expectancy theory pertaining to employee performance in an institution, the theory also has its own inherent limitations. In this regard, Schunk (2014) and Wigfield (2014) have alluded to the difficulty inherent in applying the theory to the management of workers in the workplace because it necessitates the identification of all potential outcomes for each employee to determine all the relevant expectations and before balancing everything to maximise employee motivation. One caveat, though, is that each employee is unique and may require a unique set of motivation relative to performance. Implicit in this postulation is that rewards cannot be uniform for all employees considering that their final effect might depend on individual traits of employees. In addition, the theory also works on the assumption that people are rational and, thus, do treat systematically and universally the potential results and their attendant expectations before choosing a particular behaviour (Martin, 2005). However, only a few people decide in such rational manner.

Despite the limitations of the theory, the Expectancy Theory remains largely useful in making sense of organisations bidding to enhance the job performance of their employees through training—as part of staff development—which has been a common occurrence in Tanzania's public secondary school teachers, the focus of this

study. Administrators in the education sector can also apply the theory to determine the primary outcomes for each employee before deciding on what type of training and performance levels required hitting the intended school targets and analysing the work situations for often contradictory expectations.

Under the expectancy theory, variables undertaken to predict performance is competencies (ability). Generally, these variables contribute to the enhancement of the job performance of teachers after benefiting from, particularly; INSET professional training, which add value to their professional prowess in their post-training engagement.

It is against this backdrop that this study applied variables drawn from the two theories—Human Capital and Expectancy Theory—as the predictor of job performance among public secondary school teachers. The Human Capital Theory as proffered by Smith (1960) uses pedagogical knowledge and environment contextual skills whereas the Expectancy Theory as promulgated by Vroom (1968) uses variable such ability (competencies) as variable as they contribute to the enhancement and quality of job performance. These variables have also been validated in the Tanzanian context where local studies conducted so far in the education sector have included those by Nkumbi *et al.* (2008), Omari (2012) and Mary (2014) who found that lack of competencies among teachers contributed to poor performance in their respective schools. In other words, they have underscored the value of competencies as a crucial factor in boosting work performance. In fact, all these scholars have recommended teacher professional development as one of the means for improving

the performance of students in schools once their teachers up their job performance and quality as part of the primary inputs. In short, these local studies also affirm the relevancy and appropriateness of the application of these twin theories—Human Capital and Expectancy Theory—in the context of Tanzania where the current study was executed.

In this study to avoid those weaknesses, the researcher integrated the expectance theory with human capital theory to provide further holistic picture of the relationship between professional development and employee performance.

### **2.3.3 Synthesis of Theoretical Perspectives and Summary of the Theories**

In this study, the Human Capital Theory was integrated with the Expectancy theory. The use of the combined model was justified by a number of scholars including Berker, 1994, and Martin, 2005. The findings demonstrated the explanatory power of the human capital theory when combined with the other theory or empirical evidences of theory. In this case two theories were combined to increase their explanatory power. Therefore, the Human Capital Theory was strengthened by Expectancy Theory to better explain the influence of teachers’ professional development and job performance.

**Table 2.1: Summary of the Theories**

<b>Theory</b>	<b>Variables</b>	<b>Sources</b>
Human Capital Theory	Pedagogical Knowledge Teacher context environment Skills	Becker, 1994
Expectancy Theory	Teacher Competencies (ability)	Vroom, 1964

## **2.4 Empirical Literature Review**

This section reviews empirical studies related to the research problem in addition to establishing the gaps that this study set out to fill. The empirical literature review focuses on studies conducted in the field of human resources management generally and training of employees and the training that have been conducted to teachers in secondary schools in particular. The aim was to contextualise the current study in already known body of literature prior to establishing the gaps in terms of geographical areas as well as knowledge, methodological and theoretical terms. Studies conducted outside Africa, within Africa and in the local context have been covered in this section.

### **2.4.1 The Influence of the Pedagogical Knowledge Development on Performance of Teachers**

Whittle, et al., (2018) carried out a study on teacher's perceptions of how they Influence Student Academic Performance in Australia in secondary school. Qualitative findings using thematic analysis indicated that teachers perceived content knowledge, expectations, passion and enthusiasm, pedagogical content knowledge and use of reflective practices to inform teaching is a key factors influencing student performance. On the other hand, Estaji and Dezfoolian (2018) carried out a study on teacher's pedagogical knowledge base as a predictor of teacher's reflectivity in Iran, The findings revealed that the teachers' pedagogical knowledge can predict the teacher's reflection significantly. The study differ from the these studies of Whittle et al., (2018), Estaji and Dezfoolian (2018) in sense that those studies only investigated one variable (pedagogical knowledge) that influence performance as contrary to

variables (teacher learning context skills, competencies and pedagogical knowledge) which influence performance of teachers in secondary schools in Tanzania.

Ibrahimu *et al.*'s (2017) study on effect of training methodology on employees' performance in Malaysia applied quantitative research design. Using a sample of 260 trainees drawn from a population of 810 employees with a 95 percent confidence level within 0.05 risk of sampling error from nine companies, the study found that two predictors—soft skills acquisition and training—significantly managed to predict the employees' performance.

The results of the study revealed a 14.5 percent increase in the employees' work performance in the firms under review because of their workers' acquisition of soft skills and a 27.9 percent increase registered in employee performance stemming from the training intervention. That study differs from the current study due to the contextual and environmental factors. The former study was conducted in the business atmosphere whereas the current study focuses on the education sector.

In addition, that study differs from the present one in terms of the applicable variables deployed in predicting the job performance. Whereas Ibrahimu *et al.*, (2017) study used soft-skills and training, the current study deployed knowledge, skills, competencies and attitudes as variables to predict the enhancement of job performance.

Liakopoulou (2011) carried out a study on teaching professionals to be effective in pedagogical in Greece. Findings using thematic analysis in qualitative indicated that



good teacher as most teachers seem to associate their effectiveness at work with didactic and pedagogical skills, as well as pedagogical knowledge. These particular findings contributed to a systematic and analytical description of the content of professional knowledge required for the successful performance of a teacher's pedagogical and didactic work. On the other hand, Hakim (2015) on his study of the contribution of Pedagogical Professional Development on the performance of learning shows that pedagogical knowledge has a significant influence in improving learning performance.

Peter (2017) conducted a study on the professional learning community's impact on the workplace training in Bangkok's metropolitan administration schools, examined the issues of relating to workplace learning in upper secondary schools. Utilising a case study, observation and interview for teacher network, the study established that in-service teacher training allowed teachers to share experiences and knowledge while consolidating students' life skills through peer community learning.

That study differs with the current one due to the methodology applied and context under which it was conducted. The study applied methods of quantitative and qualitative approaches whereas the current study only focuses on the deployment of the quantitative data collection and analysis approach coupled with multiple regression analysis in data presentation. However, that study is useful in making a comparison of the findings of the two studies.

In Africa perspective, Odumosu et al.(2018) carried out a study on teachers' content and pedagogical content knowledge on students' achievement in senior secondary

school in Nigeria. Findings using Multiple regression analysis indicated insignificant effect of content and pedagogical knowledge on students' achievement. The study recommends that teachers of Mathematics, with in-depth knowledge of the subject and well-groomed in teaching pedagogy should be allowed to teach algebra in schools. Habibu's (2015) paper on teacher professional development in three African countries of Tanzania, Sudan and Ethiopia found that staff development fostered lifelong learning from teacher pre-service up to retirement. In this regard, teacher professional development constitutes an innovative and exceptional cog in boosting the skills, knowledge and competencies of teachers at their respective working place.

That study differs from the current study in that it was conducted in 2015, that is, three years earlier than the current study. In the meantime, the time lapse could account for some changes that need further study and analysis. For example, there had been a change in government policies including shift the management of secondary schools from Ministry of Education to be managed by the President's office, Regional Administration and local government Authority, change of political regime from the Presidents, Honorable Jakaya Mrisho Kikwete to the current Presidents, Honorable John Pombe Joseph Magufuli and change of technology such as use of electronic software in the selection process of students in the interim period. This situation accounts for the difference between that study and current one with regard to the findings and implication of the results for the education setting.

#### **2.4.2 The Influence of Competencies Development on Performance of Teachers**

Kumar (2013) conducted a study on the Influence of Teacher's Professional Competence on Students' Achievement. Using thematic analysis it was indicated that competency standards are concerned with application of professional knowledge and skills within the workplace and are underpinned by teachers' professional values. Competence is usually associated with highly professional performance and there is a direct link in the field of education between a teacher's professional competence and pupil performance. On the other hand, Muzenda (2013) conducted a study on Competences and Students' Academic Performance using multiple regression analysis. The findings indicated that subject knowledge, teaching skills, lecturer attendance and lecturer attitude have significant positive influence on students' academic performance.

Similarly, Senge et al., (2018) conducted a study in Russia to investigate continuing pedagogical education as the means to develop competences of teachers in secondary schools, the findings shows that professional competencies of teachers will have a positive effect on educational process and academic performance which involves an exchange of experiences at conferences participation in joint international programmes.

The study differ from the current study in sense that Senge et al., (2018) investigate only one variables (competence) that influence performance of teachers while this study investigated three variables (pedagogical knowledge, teachers context skills and competencies) that influence performance of teachers in Tanzania. On the same

line, Prasertcharoensuk and Tang (2015) carried out a study on Influence of Teacher Competency Factors and Students' Life Skills on Learning Achievement. Using multiple regression analysis, researchers found that teacher competency factor that is curriculum and learning management has positive effect while self-development has a negative significant level. The study concluded that school administrators should promote teacher competency and student life skills since these two variables have successfully contributed in student learning achievement. Further, Hakim (2015) carried out a study on contribution of competence teacher on the performance of Learning. The results of data showed that, professional competence and social competence has a significant influence in improving learning performance. In Africa, Tayo (2007) conducted a study on perception of teachers' knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary schools. The result using multiple regression analysis show that students' perception of teachers' knowledge of subject matter, attitude to work and teaching skills has a significant relationship on students' academic performance.

On the other hand, Nbina (2012) investigated the influence of teacher's competence on students; academic performance in senior secondary chemistry. Data were analysed using the Pearson product Moment Correlation revealed that there is positive significant relationship between teachers' competence and students' academic performance in chemistry. Chemistry students taught by qualified teachers performed significantly better than those taught by unqualified teachers. Also chemistry students taught by experienced teachers performed significantly better than those taught by inexperienced teachers. Eliphaz (2011), who conducted a study

entitled “The Exploring Leadership Development in Tanzania and its Impact in the Management of Schools”, applied qualitative research design, on a sample of 25 participants. The study, which was conducted in Dar es Salaam region, found that the majority of the school heads who had attended management training had gained competencies, requisite experiences that are essential in leading their respective schools and, hence, contributed positively to the effective management of secondary schools in the country. The study, however, differs from the current study, which deployed the quantitative research design as opposed to the qualitative one used in that study.

In addition, the current study was conducted in four regions found on Tanzania Mainland as opposed to a single region of Dar es Salaam. Notably the region also has the highest prospect of providing opportunities for stakeholders to finance education as it is the business hub of the country. Also, the current study used a sample of 314 respondents drawn from a target population of 5,712 respondents as opposed that study which used a sample of only 25 respondents. The current study also differs with that research undertaking because Eliphas’ (2011) research looked at how the training of school heads affect the management of schools contrary to the current study, which involves teachers, academic masters, school heads, education officers and quality assurers.

#### **2.4.3 The Influence of Environmental Contextual Skills Development on Performance of Teachers**

Olabanji (2015) investigated the bearing of teachers’ teaching experience on the

academic performance of public secondary school students in Mathematics and English in Nigeria. The study, which adopted a descriptive study design, covered 31 senior secondary schools in the two local government areas under review. The results indicate that the teaching experience of the teachers had significantly influenced students' academic performance. That study differs from the current study on the basis of time and variable differentials. On the other hand, Ekpoh and Eze (2015) Principals' Supervisory Techniques And Teachers' Job Performance In Secondary Schools In Ikom Education Zone, Cross River State, Nigeria Results obtained revealed that a significant relationship exist between principals' supervisory techniques in terms of classroom visitation, workshop techniques and teachers' job performance. The study differs from the current studies in the sense that they investigated teachers experiences as the variable that influence performance while this study investigate teacher learning skills as the variable that influence performance.

Based on the findings, it was concluded that job performances of teachers would be enhanced when they are properly supervised by principals using the various supervisory techniques. McGatha et al.,(2009) conducted the study on the Effects of Professional Development in Formative Assessment on Mathematics Teaching Performance and Student Achievement. According to him, the professional development had an impact on teachers' cognitive level of questioning, use of peer assessment, and types of questioning strategies.

Rahman et al., (2011) conducted a study on the relationship between Training of

Teachers and Effectiveness Teaching. Quantitative data analysis found that teachers had a positive attitude towards developing human relationships with students, principal, and society in general. The results of the study also indicated that there is a significant co-relation between teachers training and study. The study differs from the current studies in the sense that the study investigated relationship between teacher training and effectiveness of teaching while the other one investigate on training and performance. Nyauchi (2014) conducted a study in Zimbabwe aimed to determine the relationship between the training and performance.

The study applied purposive sampling in the collection of the sample with the use of structured questionnaires. A sample size of study comprises of 131 respondents and the data was analyzed used quantitative techniques. The findings established a strong positive relationship between training and performance of employees. The study differ with the proposed study in the sense that the current study is conducted in the education sector and the formal one was conducted in Harare city involved staff outside the education.

Maina and Waithaika (2017) survey research on the impact of on-the-job training on the performance of the Kenya police service used a sample of 47,197 with whom he administered semi-structured questionnaires. The resultant data were subjected to multiple regressions coupled with the use of descriptive and inferential statistics.

The findings indicate that on-the-job training had a significant positive effect on the performance of the Kenya police force. However, the study's context differed from

the current one and it focused on the police force, whose rules of engagement are different from those of teachers. As such, the findings of that study may not necessarily be applicable in Tanzania's education sector where the interests of the teachers and schools heads are not necessarily the same as those of the police force who have to contend with rigid authority and hierarchy.

Nkumbi *et al.*, (2008) researched on teacher practices ascribed to professional development benefiting head teachers and primary school teachers, Ward education co-ordinators, District Education officials, school inspector, and members of schools committee in six school districts. Using a sample of 186 purposively selected respondents, the study deployed questionnaires, interviews, and observation checklists to collect requisite data. The study found that teacher professional development boosted teachers' academic and professional qualifications and engendered their career growth.

The study, however, differs from the current one based on secondary schools as opposed to primary schools whose operational design, academic qualifications, clients and environment differ markedly from those obtaining in secondary schools. In addition, that study was executed more than ten years ago. As such, the time element has to be factored in because the changes in the political regime, technological change and working environment that occurred in that period be discounted and have had either direct or indirect effects on the country's educational operational environment. As such, the likelihood is the results for the two studies



cannot be the same and neither can the findings of the earlier period be applied to the present time without qualification.

Ernest (2017) study examined the training and development of teachers and how it can enhance teaching competencies that will enhance their performance in the teaching of students under the Ghana Education services. The study employed quantitative research design and deployed sample of random sampling techniques to select the sample of 40 respondents for taking part of in the questionnaires survey. The study found that poor performance of teachers was attributed by poor competencies in teaching due to lack in service training. The study recommend for the provision of regular training programmes from teachers in a bid to improve the teaching competencies as the necessary for improving performance of schools. The study differs with current study in terms of methodology and the context under which it was conducted. That study applied mixed methods integrating both quantitative and qualitative approaches whereas the current study has deployed the quantitative approach in data collection and finally applied structural equation modelling analysis in the presentation of the findings results. The resultant findings could also provide a basis of making difference comparison of the two studies findings.

## **2.5 Research Gap**

Overall, several studies have been conducted in the area of training and job performance. These studies include Abeba (2015), Adeyeni (2013), Amin (2013), Adunola (2011), Asin (2013), Douglas (2013), Elnaga and Imran (2015), Gornitz (2011), Hervie and Winful (2018): Julius (2017), Khna (2013), Mbamba et al.,

(2014), Mlyuka (2015), Saeed (2012), Wachira (2013) and Zuhair (2014). The research gaps that emerged in these studies can be delineated and classified in the following areas:

Most of the studies conducted on the area of training and job performance occurred in contexts outside Tanzania, contexts that differ in terms of the working environment, staff motivation, leadership, and government policies which, nevertheless, have informed the development and enrichment of the scope of this study (see, for example, Abeba, 2015; Adeyeni, 2013; Amin, 2013; Adunola, 2011; Asin, 2013; Douglas, 2013; Elnaga and Imran, 2015; Gorlitz, 2011; Julius, 2017; Khna, 2013).

On the other hand, studies conducted locally on the performance include Mlyuka (2015), Mbamba et al., (2014) and Nkumbi *et al.* (2009). However, these studies differ from the current study for the following reasons: Mlyuka's (2015) study looked at motivation as variable that influence job performance among teachers in primary schools whereas Mbamba's et al., (2014) research treated education level as the variable that influences the job performance at the higher institutions. Finally, Nkumbi *et al.*, (2009) study on the teaching profession and teachers' performance focused on the primary as opposed to secondary schools. Overall, these studies on training and job performance dealt with primary schools and higher education institutions and overlooked secondary schools and shied away from looking at how knowledge, competencies, skills and attitudes affected the job performance of teachers at this level.

The current study, on the other hand, was conducted in four regions of Njombe, Singida, Arusha and Coast (Pwani) in which no studies had been conducted thus far, particularly on how the professional training contributed to enhancing the teachers' job performance through the pedagogical knowledge, contextual skills and competencies they had acquired via training and other forms of training opportunities.

In this regard, Ernest *et al.* (2018) insist that the poor performances observed in schools stem from unimplemented in-service training, which could otherwise have improved and sharpened the knowledge, skills and competencies of teachers for them to cope with changes brought by political regime, technology, curriculum and society demands. In this regard, literature provides that training can only facilitate employee knowledge and skills through quality additive learning and development. Armstrong (2014) and Davis *et al.*,(2002) also highlight the fact that employees have many avenues for acquiring new knowledge and skills. These avenues include workplace learning, self-directed learning, e-learning and mentoring.

In this regard, it is evident that formal education and training only imparts a small fraction of what employees can potentially learn at the workplace (Eraut, 1998). In fact, there are a number variables that are crucial in enhancing an individual's performance outside the training, which include employee engagement (Saks, 2016), and organisational citizen behaviour (Podasakoff *et al.*, 2009). Other variables are ethical climates, accountability, transparency, and organisational politics, which have a bearing on job performance (Harpaz *et al.*, 2016).

Most of these studies conducted in the local context on job performance applied sample from different locations which differ from those of the current study. Mlyuka's (2015) used teachers of primary schools and Mbamba et al., (2014) used students of the higher learning institutions. This study, on the other hand, used teachers of secondary schools, quality assurers, education officers, school heads, hence making the sample of the study differ from the samples of preceding local studies.

Most of these studies on employees and job performance applied theories largely singly as opposed to this study, which are used them in combination. For example, they deployed the Behavioural Theory (Abeba, 2015 and Ernest, 2018); the Predicting Theory (Mbamba et al., 2014); and the Expectancy Theory was applied by Mlyuka (2015). This study combines the Human Capital and Expectancy Theory (deployed by Mlyuka, 2015) to study the relationship between professional development and performance of teachers in secondary schools in Tanzania context.

The study combines the two theories to assess the influence of the professional development on performance of teachers in secondary schools because the Human Capital Theory focuses on how an individual improves performance in an organisation through the use of acquired knowledge and skills (Munjuri, 2013) whereas the Expectancy Theory deals with how individual effort induces the behaviour (attitudes) ability (competencies) that contribute to the improvement of the job performance (Mlyuka, 2015).

These variables are important in determining the job performance of teachers in

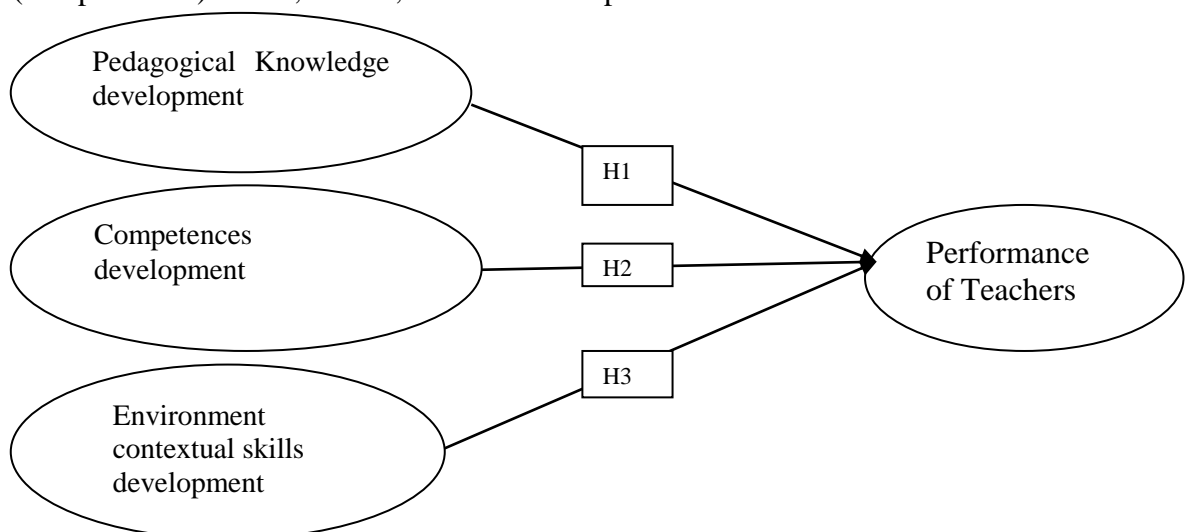
secondary schools in local context. In short, the two theories are complementary in the way they help enrich the study's exploration of how professional development add value and influence performance of teachers in secondary schools 'which has far reaching implications in terms of students' learning outcomes and academic performances.

## 2.6 Conceptual Framework and Operational Definitions

In this part the conceptual framework and operational definitions of job performance as dependent variable as well as professional development as independent variable.

### 2.6.1 Conceptual Framework

This model indicates that professional development for teachers enhances their job performance, hence leading to an increase in the overall school's academic performance. Moreover, professional development sharpens the teachers' contextual environment skills, pedagogical knowledge, teachers' attitude and ability (competencies) which, in turn, influence their performance.



**Figure 2.1: Conceptual Model of the Study**

Source: Researcher, 2019

The conceptual model views teacher professional development in terms of pedagogical knowledge, contextual environment skills and competencies, which are independent variables. On the other hand, it treats performance of teachers as a dependent variable. Figure 2.1 presents the conceptual model of the study.

### **2.6.2 Operational Definitions**

**Teacher Job performance:** As mentioned by Martin, 2005 followed by Mlyuka,2015 job performance is measured by looking the ability of employees to apply the technical knowledge and skills in the performance of the activities in the organization that lead to bring higher output. In terms of teachers are responsible to teach students so that they can acquire the skills and knowledge that will later help them in day to day activities. The performance of teachers in this study was measured by looking the ability of teachers to improve students' performance, student's attendance, job productivity and lastly is their commitment towards their job.

The output of students depend teachers' pedagogical knowledge, environment contextual skills and competences. The construct of job performance is teachers' commitment, teachers productivity, students attendance and students performance. Given this operational definition of technological attribute, this study posits the following hypotheses:

**H1a: Professional Development has a positive significant influence on performance of Teachers of secondary schools**

**H1b: Professional Development does not have a positive significant influence on performance of Teacher in secondary schools**

**Pedagogical Knowledge:** According to Liakopoulou ((2011) present that pedagogical knowledge refers to the way teachers in schools apply various teaching methods, select participative forms of teaching, use various teaching aids, maximize teaching time through systematic measures, assign work to students that will stir the interests of the students, monitor and evaluate the progress of students, set evaluation criteria for students and inform the students about them, and provide feedback to the students.

Shulman (1987) commented that pedagogical knowledge refers to the ability of the teachers to have the knowledge of curriculum and learners, knowledge of objectives and learning outcomes, teaching methodology that are relevant to learners.

In this study the pedagogical knowledge include to: improved instructional design, implementation of learning, Improved evaluation of learning, control and evaluate learning activities, improve class management, improved monitoring and evaluation of students progress, improved curriculum knowledge , knowledge of objectives and learning outcomes and Improved teaching methodology. Given this operational definition of pedagogical knowledge, this study posits the following hypotheses:

**H1a: Pedagogical Knowledge Development has a positive significant influence on performance of Teachers in Public Secondary Schools.**

**H1b: Pedagogical Knowledge Development do not have a positive significant influence on performance of Teachers in Public Secondary Schools**

**Competences Development:** Scholars have commented that teaching competency for teachers refers to the knowledge, attitude, skills and self-perception or the products that comes from by mixing these behaviors and resulting in consistent pattern of behavior leading to the attainment of expected outcomes. According to Rama (1979) teaching competency is the ability of a teacher manifested through a set of overt teacher classroom behaviors which is resultant of the interaction between the presage and the product variables of teaching within a social setting.

As suggested in one hand, Ornstein (1991) that in school the effective teachers refers to those with good competency in terms of knowledge and skills that they gained either from training or through experiences that help them to perform their task smoothly. While on the other hand Wilson, Shulman and Richet (1987) have been in the position that effective teachers is the one having knowledge in curriculum content and pedagogy that enhance students' performance in their subjects. This position is supported by Medley (1982) who have concurred with the above scholars arguments where he states that teachers' competency such as behavior, skills and knowledge related to school performance.

As presented by Wibawa et al., (2016) several studies conducted have categorized factors and influence which contribute to good performance including supporting environment, proper guidance, teaching experience and teacher's competence, adequate facilities and infrastructure, parental involvement and a positive classroom environment.



This study has applied the following as the factors that influence performance of teachers in relations to teachers competences Master and develop learning materials, plan and prepare lessons daily, Improved use of various teaching aids, maximize teaching time, Improved social interaction skills, Increased teaching ability , Master modern education technology, Master the curriculum content and Directing and guiding student learning activities. Given this operational definition of technological attribute, this study posits the following hypotheses:

**H2a: Competences Development has a positive significant influence on performance of Teachers in Public Secondary Schools.**

**H2b: Competences Development do not have a significant influence on performance of Teacher in Public Secondary Schools.**

**Environmental Contextual skills Development:** Hammer (2001) argued that the learning environment influence the performance of students, the findings proposes that teachers who have the skill in the teaching environment have a better chance to make students learn better as compared to those who not skilled in their school environment.

In other words, the category of the school determines the availability of a good learning environment for teacher trainees and students. The school environment which support the learns provide favorable climate for students to be more comfortable to concentrate on their academic activities that results in high academic performance (Usain et al., 2015). The learning environment influences the student's

behavior the way they interact. Shamaki (2015) argued that there is significant difference between performances of students taught in an ideal learning environment than students taught in dull learning environment.

In this study the learning environment referred is Understanding of school environment , Improved school counseling services, Improved cooperation with parents, Improve community relationship, interact effectively with learners, Improved interaction fellow teachers, fun learning atmosphere , creating interactions with others and secondary school industry awareness Given this operational definition of environmental attributes, this study posits the following hypotheses:

**H3a: Environmental Contextual skill development have significant on performance of Teachers in Public Secondary Schools.**

**H3b: Environmental Contextual skill development does not have significant on performance of Teachers in Public Secondary schools.**

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Chapter Overview**

According to Goretti (2008), research methodology is a way to systematically solve the research problem. In this perspective, the pursuit of a research is explained in different methodological assumptions. The research methodologies for this study are chosen in order to address the study objectives. The rationale for each choice is explained and discussed in terms of research philosophy, research design strategy, study area, study population, sample size selection and data collection tools. The section also indicates how the tools were developed and validated. The measurement part of this chapter indicates the study variables, data operationalization, data analysis tools used and ethical consideration.

#### **3.2 Research Paradigm**

As argued by Saunders *et al.* (2012) that a research paradigm is referred as a system of beliefs and assumptions guiding the knowledge development. In this study positivisms paradigm was used. Bryman (2015) advocated that positivism paradigm is a paradigm which is based on the assumption that the researchers produce knowledge and understand realities through theory and empirical testing.

The current study is based on various theories and empirical study on the influence of professional development teachers Job performance from which a study hypothesis was developed and validated through empirical data. These kinds of

research settings are deductive and comparatively positivistic in nature. In this sense, researching about the influence of teachers' professional development on teachers' job performance is better situated under positivism paradigm. Hence the applicability of positivism paradigm in this research is justified as it offer a chance to a researcher to use theory and test the significant influence of professional development on performance of teachers in secondary schools in Tanzania.

### **3.3 Research Approach**

As defined by Cresswell (2009) that a research approach is a specific method for data collection and analysis. In this study, the quantitative research approach was used to guide the method of data collection as well as the data analysis. On the other hand, Saunders *et al.*, (2012) advocated that quantitative approach has the ability of explaining the causal relations between the variables and hypothesis testing through data collected in statistical characteristics. In the current study, the researcher has developed hypothesis on testing the causal relationship between teachers' professional development and their performance.

In addition the data for testing the causal relationship between teachers' professional development and job performance was collected in the form of statistical characterization to save the purpose of the specific objective. The applicability of using quantitative approach in this study is supported by Bhatachrjee (2012) who confirmed that a quantitative research is done by collecting statistical data from which the empirical data are tested base on hypothesis formulated under study objective.

Hence the suitability of quantitative approach in this study is justified as it enable a researcher to collect statistical data in order to determine the significant influence of professional development on performance of teachers.

### **3.4 Research Design**

Explanatory research design is used to search for causal relationship (Cresswell, 2009). As in the current study, the researcher is intended to search for causal relationship between teachers' professional development and job performance. This means that explanatory research design assisted the researcher to explain whether or not there is significant influence of the hypothesis designed to test teachers' professional development and job performance. Hence explanatory research design was used to provide detail and rich picture on how professional development has causal relationship with teachers' job performance in telecommunication industry in Tanzania.

### **3.5 Study Area**

This study was conducted in four regions which are Pwani, Singida, Arusha and Njombe . The reason for selection of these regions was to balance the representation of region from every zone because schools are scattered in all regions in the country. These regions were selected to represent regions with either high performance or low performance in the national Ordinary ('O') level secondary examinations. During the national examination results of 2016, the four regions selected had the following characteristics in terms of performance and failure rate in 'O'-Level examinations.

The ordinary examination results of 2016 show that Njombe region had 13.1 percent failure rate Arusha had 46.3 percent, Singida had 63 percent and Coast is 67 failure rates (NECTA report, 2015). In the regions, two districts were selected from urban and rural where in each district, eights (8) secondary schools were also randomly included. To start with in Njombe region, the researcher involved Njombe city and Makambako, whereas in Singida, Singida Municipal Council and Ikungi were respectively involved. In Arusha region, Arusha Municipality and Arusha district were involved in the study. Finally, in Coast region, Bagamoyo and Chalinze were involved in the study. The research selected from the regional districts both urban and rural based areas.

Based on the justification of the study area, this area is justified to be useful to capture a research problem and data reflecting teacher's professional development and performance of teachers in secondary schools.

### **3.6 Population of the Study**

In most cases, a sampling design starts by identifying the target population. Scholars such as Kothari (2004) define a study population as the entire collection of cases or units about which the researcher wishes to make conclusions. The study population under this study was 5,712 populations which comprises of teachers, quality assurances and education officers from the four regions under study. The educations officers (school heads, teachers, education officials, and school quality assurers) have been selected in the current study because are the one have been employed to ensure

teaching activities are conducted in secondary school including teaching, supervision and evaluation of education performance.

In addition this population is the one that is organizing and coordinating teachers' professional development programmes in Tanzania though the identification of the training gap, budgeting, provide permission of teachers to attend the training and applied the skills, knowledge and competencies to improve the delivery of education .

This population was determined using the Basic Education Statistics for Tanzania (BEST) of 2016, prepared and produced by the Ministry of Education, Science and Technology (MoEST), which is responsible for the provision of education in the country. Hence the said population is justified to be useful as it comprised of unique respondents who are coordinating teachers' professional development and are the one evaluating teacher's job performance base on the staff development programme.

### **3.7 Sample and Sampling Techniques**

The study was designed to use the survey to gather data from the respondents because of the quantitative nature of the study. Secondary schools are generally scattered in all the regions of Tanzania. As it was not possible to survey all the schools in the country, the researcher sampled only a few secondary schools to represent the entire school population.

In sampling, only four representative regions of high performing and low performing secondary schools were picked. In the regions selected, the two regions had a high

pass rate on the performance of students in secondary schools and two other regions had a low pass rate in the performance of secondary schools. The two regions which have the low failure rate were Njombe and Arusha whereas the regions with high failure rate were Coast and Singida (NECTA report, 2015). Then from each region, random procedures were applied to identify districts for involvement in the study. In the districts, the simple random sampling was used to identified schools and teachers to be involved in the research.

Since the study population was large, it was unfeasible to survey all the potential units; instead, a study sample was utilised. Three designs—multi stage sampling, simple random sampling, and purposive sampling designs—were employed. Multi stage sampling was used for the selection of the sample from the regions because it guaranteed equal representation of each of the identified strata (Leedy and Ormrod, 2010). The simple random sampling method, on the other hand, was used to identify the number of respondents from teachers in each school. The use of this method reduced the prospect of sampling bias (Saunders *et al.*, 2009).

### **3.8 Sample Size of the study**

Determining the sample size in research is vital because it is impractical to survey the entire study population.

In this study, the sample was, therefore, drawn from the population of 5712 from the four regions. To simplify the process of sample size determination Yamane's (1967)



formula was adopted. Out of 5,712 sampling population, an estimated 375 was drawn for this study thusly:

$$n = \frac{N}{1 - N(e)^2}$$

Where n= sample size, N= target population, E= error of estimates (.05)

As from the target population of 5,712 respondents

Then the sample size =  $5,712/1 + 5,712(.05)^2 = 375$  respondents

Thus the formula yields the sample size of the study of 375 respondents.

**Table 3.1: Distribution of the Respondents in each Region**

<b>Respondents</b>	<b>Region</b>	<b>Districts</b>	<b>School</b>	<b>Total number</b>
Teachers	4	2	4x8	256
Academic Masters	4	2	4	32
Deputy school heads	4	2	4	32
School heads	4	2	4	32
Quality Assurance	3X4			12
Districts Officials	4	2		8
<b>Total</b>				<b>375</b>

### **3.9 Data Collection Methods**

This study is purely quantitative in nature based on the research design where mostly the use of survey method was applied. During data collection, questionnaires and documentary review was used.

#### **3.9.1 Structured Questionnaire**

A structured questionnaire was used as it attached at the appendix I and the coded questionnaire in appendix II for capturing data for statistical analysis. As argued by Kothari (2004) a structured questionnaire is mostly used to capture measurable data for statistical testing of the relationship of the study.

In this study the objectives is aims at determining the influence of professional development on performance of teachers of secondary schools in Tanzania. Within this context, a questionnaire was considered suitable in survey situations as it offer a standardized system of questions to collect measurable and factual data that classified specific groups and their circumstances in statistical characterization (Goretti, 2008). Hence questionnaire was used in this study during the quantitative survey due to its ability to capture statistical data in the field to test hypothesis of the study.

### **3.9.2 Documentary Review**

Documentary review was used during the data collection in the selected regions to provide support and give evidence of the data collected in a field. The documents that were reviewed including policies on training of teachers, curriculum that was used during the training, allocation of the budget, modules of leadership used for the training of schools heads, training plans that are available in the Districts as well as the list of teachers trained and finally the training reports as the guideline attached at appendix III. The use of documentary review methods refers to the analysis of documents that contain information about the phenomenon being studied (Bailey, 1994 cited in Mogalakwe, 2006).

Documentation was used in order to increase the level of in-depth insight by capturing data that was used to provide evidence of what was to be collected by means of questionnaire. Later, documentation review was used to provide data interpretation, support and evidence to support survey data. Social scientists use

documentary research to supplement and confirm information collected through social surveys and in-depth interviews (Mogalakwe, 2006). Thus, the use of documentary review in this study serves to enhance the quality and validity of collected data.

### **3.10 Validity and Reliability**

These terms are traditionally useful in assessing the quality of quantitative research. Overall, both validity and reliability are elements in research (Saunders *et al.*2009). The issues of validity and reliability in this study are delineated as follows: As already stated above, the essentiality of the validity and reliability of instruments in research can never be overlooked (Ngulube, 2010). According to Barton and Bartlett (2009), reliability describes the extent to which respondents consistently respond to the measure in the same manner.

#### **3.10.1 Validity**

According to Greener (2008) a test is said to be valid if it measures what it claims to measure. In this case validity is taken to mean ‘the determination of whether a measurement instrument actually measures what it is purported to measure’. Sobh and Perry (2006) postulated different kinds of validity namely content validity, construct validity and criterion validity that a number of scholars normally use them to ensure validity in their studies.

**Content Validity:** Content validity considers whether or not the items on a given test accurately reflect the theoretical domain of the latent construct it claims to measure

(Morse, 2002). It helps to determine whether a tool appears to others to be measuring what it says it does. In this study to ensure content validity, pilot study of survey instrument was done to determine and insure that the items on a given test accurately reflect the theoretical domain of the latent construct it claims to measure. Expertise in the professional development studies and few respondents used as a sample population helped the researcher to strengthen the data collection instruments by validating their coverage in the theoretical domain.

Towards this end, Betram (2004) argues that a clear and precise questionnaire is a must to ensure that the respondents comprehend effortlessly what the researcher wants them to provide. Similarly, Williams (2003) asserts that for a questionnaire to mean the same thing to all types of respondents it should be clear, succinct and unambiguous. As such, pre-testing of instruments before administering them in the field is mandatory (Babbie and Mouton, 2001).

In this regard, Saunders *et al.* (2009) maintain that pre-testing of research questions is instrumental in refining the questionnaire for the respondents to have no problem with responding to the questions contained therein. Thus, the pilot administration of the questionnaire was conducted in this study prior to the actual data collection in the field. This validation of the research tools was done during the pre-testing, cross-checking, and modification of the data collection tools. Changes, where necessary, were made before the application of the research tools in the field.

The questionnaires were piloted with teachers in four secondary schools in Bagamoyo district at Bagamoyo, Dunda, Nzanzale and Kingani secondary schools.

All these schools government-owned, hence meeting the qualification and classification as public institutions, a primary criterion in this study. Teachers were directed to fill out the questionnaires to enable the researcher to determine whether they fit the demands of the variables to be measured, to check whether the questions had accessible meaning, whether questionnaires made sense to teachers and whether they were relevant.

The researcher also distributed questionnaires to trainers of the ADEM for the same intention. The trainers went through the questionnaires and provided comments that were accommodated by the researcher. Parallel to the trainers, the questionnaires were also given to different education experts' including quality assurers to check whether the questions measured what they always check for during their school inspections. The questionnaires were also given to human resources personnel for them to scrutinise them for research data correctness and to ensure their validity. After collecting the suggested corrections, the researcher finalised the questionnaires and conducted fieldwork in the selected schools of each of the four regions.

**Construct Validity:** In research, construct validity of a measure is directly concerned with the theoretical relationship of a variable to other variables. Mello and Collins (2001) defined construct validity as the extent to which a measure 'behaves' the way that the construct it purports to measure should behave with regard to established measures of other constructs. According to Cohen (1979), if testing for construct validity, one should examine the scale being used by means of exploratory factor analysis and confirmatory factor analysis of validity.

Lastly, nomological validity is tested by relating measurements to a theoretical model that leads to further deductions, interpretations, and tests (Spiro and Weitz, 1990). To assess nomological validity one should have all standardized coefficients as significant values greater than 0.2. In this study at the measurement model all had standardized coefficients with a significant values greater than 0.2.

**Criterion Validity:** Criterion Related Validity which is also known as instrumental validity, criterion related validity is based on the premise that processes and instruments used in a study are valid if they parallel similar with those used in previous, validated research. This type of validity provides evidence about how well scores on a new measure correlate with other measures of the same construct or very similar underlying constructs that theoretically should be related (Kimberlin and Winterstein, 2008). This validity measure can be pursued in one of two contexts: predictive validity or concurrent validity. Concurrent validity uses an already existing and well-accepted measure against which the new measure can be compared. In order to ensure concurrent validity, in this study the data collection instrument were drawn and developed by considering strong validated literature.

### **3.10.2 Reliability**

According to Ellis and Levy (2009), reliability is the degree to which measures are free from error and therefore yield consistent results. On the other hand, Golafshani (2003) pointed out that, reliability is the extent to which results are consistent over time and an accurate representation of the total population under study is referred to

as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

Kirk and Miller (1986) cited in Golafshani (2003) identified three types of reliability referred in quantitative research, which relate to: (1) the degree to which a measurement, given repeatedly, remains the same (2) the stability of a measurement over time; and (3) the similarity of measurements within a given time period. Because reliability is consistency of measurement over time or stability of measurement over a variety of conditions, in order to measure repeatability, or stability-over-time, Scholar Zikmund (2003) suggested the use of test-retest method which advocates that, the same scale or measure be administered to the same respondents at two separate points in time. However, test-retest procedures may not be useful when participants may be able to recall their previous responses and simply repeat them upon retesting (Drost, 2012).

For instance, when the interval between the first and second test is too short, respondents might remember what was on the first test and their answers on the second test could be affected by memory. Alternatively, when the interval between the two tests is too long, maturation happens. Based on the above argument, in this study in order to insure the repeatability of the data collection instrument, the researcher conducted an exploratory study and pilot study before the main survey in order to insure that the instrument capture the context variable and use the language which is clear to the targeted respondents which had increased the suitability of data collection instruments.

On the other hand, the researcher used composite reliability to assess the internal consistency of the variables. Internal consistency measures the degree within the instrument and how well a set of items measures a particular behaviour or characteristic within the test. Internal consistency is also known as scale homogeneity, in other words, the ability of items in a scale to measure the same construct or trait. In the analysis a p-values above 0.5 are considered significant while the coefficients that range from 0.6 and above are considered more acceptable in scientific research although lower p-values can be used as well and accepted (Tabachnick and Fidell, 1996; Hair *et al.*, 2003). The Composite reliability (C.R) p-values > 0.5 was obtained in the current study as indicated in table 3.2 which meet this rule of thumbs and thus shows that the items used measures what it is purported to measure.

As argued by Fornell and Larcker (1981) that an internal consistent of any variable should score at least an composite reliability p-value of 0.60. Otherwise, low composite reliability p-values of equal or less than 0.5 suggests a lack of internal consistency of the measures, with items measuring different things for a given factor.

**Table 3.2: Composite Reliability (CR), Convergent and Discriminant Validity of Construct**

	<b>CR</b>	<b>AVE</b>	<b>MSV</b>	<b>MaxR(H)</b>	<b>CPD</b>	<b>TCPD</b>	<b>PPD</b>	<b>TJP</b>
<b>CPD</b>	0.896	0.815	0.169	1.027	<b>0.903</b>			
<b>TCPD</b>	0.925	0.718	0.169	0.959	0.411	<b>0.848</b>		
<b>PPD</b>	0.917	0.749	0.094	1.004	0.307	0.183	<b>0.865</b>	
<b>TJP</b>	0.817	0.605	0.048	0.868	0.220	0.186	0.216	<b>0.778</b>



### **3.10.3 Validity and Reliability Issues in Exploratory Factor Analysis**

To test sample adequacy for exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) was used to test sample adequacy. For the KMO statistic Kaiser(1974) recommends a bare minimum of .5 and that values between .5 and .7 are mediocre, values between .7 and .8 are good, values between .8 and .9 are great and values above .9 are superb. For these data the overall value for KMO is .963, which falls into the range of being good as indicated in table 3.3. With this KMO value the researcher is confident that the sample size for overall model was adequate for factor analysis to be conducted in this research as recommended by Kaiser, 1974 cited in Matsunaga, (2010) who argued that the fit model must contain the threshold of .5 and above.

Conversely, the Bartlett's test results as indicated in table 3.3 helped to measure the null hypothesis that the original correlation matrix is an identity matrix. A significant test tells that the matrix is not an identity matrix which provides evidence that, there are some relationships between the variables we hope to include in the analysis. For such data, Bartlett's test is highly significant ( $p < .001$ ) which justifies some relationships between the variables exist in correlation matrix which support to include the items found in the correlation matrix for the exploratory analysis. Hooper (2008) argues that Bartlett's Test of Sphericity reached statistical significance indicating the correlations were sufficiently large for exploratory factor analysis. Hence table 3.3 with  $p < 0.001$  help to justify that there are correlations in the data and are appropriate for factor analysis.

**Table 3.3: Kaiser Meyer Olkin and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.965
Bartlett's Test of Sphericity	Approx. Chi-Square	6.464
	Df	435
	Sig.	.000

**Table 3.4: Summary of Validity and Reliability in Exploratory Factor Analysis**

<b>Criteria for validity and reliability</b>	<b>Criteria</b>	<b>Methods used</b>
Nature of the variables	Continues variables	All variables are continues in the model
Nature of the population	Heterogeneous population	The population of the study were distributed in region, Districts, schools, experiences and gender disparities see Table 4.1
Sample size	At least from 200 to 400	Sample size was 378 KMO was used to test sample adequacy by earning p-value which greater than 0.05
Criteria to retain factor	Eigen value greater than 1  Cut off point of screen plot  Theoretical assumption  These must be at least 3 variables	All factor have the Eigen value greater than 1 see appendix iv  Cut off point of 4 and 9 observed  The model fit integrated model of Human capital and Expectancy theory  All factor have from 3 to four variables
Criteria for retain items and absence of multi-collinerity and singularity	High loading about 0.9  Low loading should be 0.4	High loading was 0.8  Low loading was 0.4
Level of correlation	Correlation must be 0.3 or greater	Bartlet test of sphericity .276

Adopted from (Yong and Pearce, 2013, Hooper, 2012, Kaiser, 1974 cited in Matsunaga, 2010)

After a summary of validity and reliability in exploratory factor analysis, Table 3.4 shows a summary of validity and reliability evaluation for confirmatory factor analysis as depicted.

**Table 3.5: A Summary of Validity and Reliability at Confirmatory Factor Analysis**

Validity component	Technique used	Heuristic/ <i>de facto</i> standards	Study model validation
Discriminant Validity	CFA as used in SEM	GFI>.90, CFI>.90, AGFI>80, AVE>share AVE	GFI=.949 , AGFI=.918 CFI=.949, See figure 4.2 AVE>share AVE see table 3.2
Convergent Validity	CFA as used in SEM	GFI>.90, CFI>.90, AGFI> .80, AVE at least 0.5	GFI=.949 AGFI=.918 CFI=.949 ,See figure 4.2 AVE are 0.5 and above
Reliability (Internal consistency)	Composite reliability(C.R)	All C.R p-value > 0.6 or 0.7	p-value are above 0.6 d.f see table 3.2
Content validity	Literature Review, Expert panels	Higher degree of consensus	Study instrument reviewed and consider experts opinion, pilot tested
Nomological Validity	SEM	Standardize path Coefficients	All standardized coefficients have significant values greater than 0.2
Predictive validity	SEM	Explained variances in the .40 range or above are desired	Achieved for all unobserved variable

**Source:** Straub *et al.*, 2004; Tabachnick and Fidell, 2007; Nelson and Ghods, 1998; Hoe, 2008) cited in Elly (2010) for the heuristic/*de facto* standards in relation to SEM.

### 3.11 Construct and Measurement indicators

The relationship between professional training and the enhancement of job performance in Tanzania's public secondary schools applied the variables drawn from the Human Capital and Expectancy theories. These variables are pedagogical

knowledge and teacher contextual learning skills which come from the Human Capital Theory and competencies (ability) and which come from the Expectancy Theory. In fact, several prior studies on the training and job performance have confirmed the relationship between these variables as contributors to the enhancement of performance in organisations (Abeba, 2015; Elnaga and Imran, 2013; Joana, 2015; Madukoma *et al.*, 2014 Quartey, 2012). These studies have confirmed that training and employees performance can be measured using questionnaires while deploying the likert scale with *cronbach alpha* that ranges from 0.687 to 0.819 (Abeba, 2015).

The instrument has also been applied in several studies on performance in different setting and the results seemed reliable in measuring the performance. Mohamed (2014), for example, has conducted a study on the influence of employee commitment on performance in a Coca-Cola company in Nigeria and found a positive and significant influence of employee commitment on employee performance. Khan (2010) also used the instrument with the same cronbach alpha to determine in measureable terms how employee commitment contributes to enhancing job performance in Pakistan's oil sector industry. The study found that employee commitment had positive bearing on job performance in that country's oil sector.

The results of the studies have shown that performance can be measured from a scale ranging from .668-.819. This study applied the questionnaire as used by Abeba (2015) with the Pearson significance of .78. The instrument has been applied in different environments and seems to be relevant in measuring the relationship

between training and job performance of employees in an organisation or the effect of the former on the latter. The same instrument was applied by Madukoma *et al.* (2014) who used the same questionnaire to examine the effect of training on job performance in the US using a scale of between .68 and .78.

**Table 3.6: Summary of the Measurement Scale**

<b>Construct</b>	<b>Measurement indicators</b>	<b>Questionnaire items</b>
Pedagogical knowledge	<ol style="list-style-type: none"> <li>1. Improved instructional design</li> <li>2. implementation of learning</li> <li>3. Improved evaluation of learning</li> <li>4. control and evaluate learning activities</li> <li>5. Improve class management</li> <li>6. Improved monitoring and evaluation of students' progress</li> <li>7. Improved curriculum knowledge</li> <li>8. knowledge of objectives and learning outcomes</li> <li>9. Improved teaching methodology</li> </ol>	1-9
Teachers' competencies	<ol style="list-style-type: none"> <li>1. Master and develop learning materials, plan and prepare lessons daily</li> <li>2. Improved use of various teaching aids</li> <li>3. maximize teaching time</li> <li>4. Improved social interaction skills</li> <li>5. Increased teaching ability</li> <li>6. Master modern education technology</li> <li>7. Master the curriculum content</li> <li>8. Directing and guiding student learning activities</li> </ol>	10-17
Environment contextual skills	<ol style="list-style-type: none"> <li>1. Understanding of school environment</li> <li>2. Improved school counseling services</li> <li>3. Improved cooperation with parents</li> <li>4. Improve community relationship</li> <li>5. interact effectively with learners</li> <li>6. Improved interaction fellow teachers</li> <li>7. fun learning atmosphere</li> <li>8. creating interactions with others</li> <li>9. secondary school industry awareness</li> </ol>	18-27
Teachers' performance	<ol style="list-style-type: none"> <li>1. improve job commitment</li> <li>2. improved students achievement</li> <li>3. Improved teacher job productivity</li> <li>4. Improve students attendance</li> </ol>	28-31

Furthermore, the same instrument was employed by Maliki *et al.* (2011) in Pakistan to study the effectiveness of training on the telecommunication and the banking systems. The empirical evidence of Abeba (2015), Madukoma *et al.* (2014) and Maliki *et al.* (2011) has established that reliability of measurement using research tools instrument to determine the effect of training on performance require scale ranges from the coefficient.68 to .85. From the literature review the researcher developed thirty one measurement indicators that have been used to measure the construct of the study as detailed in Table 3.6.

### **3.12 Ethical Considerations**

Ethical consideration in research refers to the means of carrying out a research in a proper channel which includes maintaining high standards, to ensure accuracy of data and mitigate misrepresentation of the collected data so that no one is harmed or is subjective to unwarranted suffering and certify trustworthy results from research for betterment of the society (Busher and James, 2012; Kombo and Tromp, 2006).

This means that, the researcher must obtain the participants' voluntary consent, address confidentiality and privacy issue in conducting the research and the researcher builds the relationship with participants, and the manner in which the information collected for the entire research is treated. This study took into account all ethical considerations as per the guidelines set by the Open University of Tanzania (OUT). Specifically, the questionnaires included an explanation of the purpose of the study.

In addition, the study strictly observed the issues of confidentiality and anonymity of participants. Prior to letting the respondents participate in the study, the researcher obtained their consent after briefing them about the nature of the study. They were also assured of the voluntary nature of their participation. Informants were assured that the data collected would be used for the intended purpose of the research and not otherwise. Moreover, a clearance letter from the Directorate of Research, Publications and Postgraduate Studies of the OUT was obtained to introduce the researcher to the officials of the regions concerned and the respondents (appendix v). After obtaining a research clearance from OUT prior to collecting data, the researcher then communicated with the education authorities in respective from regions to obtain necessary permits to visiting schools.

Finally, anonymity and confidentiality of the responses were observed in the entire research process. Furthermore, the study desisted from plagiarism and academic dishonesty by acknowledging all the sources both in-text and in the reference section.

### **3.13 Data Processing and Analysis**

This study is purely a quantitative research, which advocates for the use of quantitative techniques in data analysis. Data from this study were initially edited and cleaned before being transformed using the SPSS version 20 software for easy interpretation.

**Descriptive Data Analysis:** Descriptive data analysis was undertaken by using frequencies and percent. This helped to gain insights into the profile of teachers and

their school as well as other useful information on related to the influence of professional development on teachers' job performance. It also provides a picture of a sample in general which facilitates discussion of findings.

This study used the structural equation model which assumes the relationship between independent variables and dependent variable. Structural equation modelling is a multivariate statistical analysis technique used in analysing structural relationship (Bollen, 1989). This technique is a combination of factor analysis and multiple regression analysis that is applicable in analysing the structural relationship between measured variables.

In the current study, the hypothesis was designed using latent variable pedagogical knowledge development, Environment contextual skills development and teacher competencies. These latent variables are measured by the number of indicator variables (observed variables) in the model. Having the nature of this two kinds of variables namely observed and unobserved variable in the conceptual framework of the current study, SEM was a suitable method for analyzing this kind of model. This was also supported in a study by Oke, et al. (2012) who supports the use of a collection of measured variables to represent latent theoretical constructs more realistically than a single variable.

Further, SEM was also considered important in this study due to its ability to perform confirmatory factor analysis test whether the measurement of each latent variable is psychometrically sound. This means that, if error in relationships found during SEM



is estimated and removed, which only leaves the common variance behind, making the reliability of measurement explicit and relationships free of measurement error (Oke, et al., 2012). The reasons include, it takes a confirmatory rather than an exploratory approach provide explicit estimates for measuring errors that traditional multivariate procedures are incapable of either assessing or correcting.

Therefore, conclusions about relationships between constructs are not biased by measurement errors, and are equivalent to relationships between variables of perfect reliability. SEM is also preferred because of its ability to construct latent variables (variables which are not measured directly, but are estimated in the model) hence helping to explicitly capture the reliability/unreliability of measurement in the model, which in theory allows the structural relations between latent variables to be accurately estimated.

## **CHAPTER FOUR**

### **4.0 THE RESULT OF FINDINGS**

#### **4.1 Introduction**

This chapter presents the findings of the study. First, it starts by presenting the data presentation and analysis of characteristics of the sample and other descriptive statistics supporting description of the school under study. Finally, this chapter presents the analysis from survey by performing factor analysis (exploratory factor analysis and confirmatory factor analysis) and thereafter by testing the hypothesis developed under study.

#### **4.2 Demographic Data**

In the first part of the questionnaire, the informants were asked to provide personal information. The participants responded to most of the items appropriately albeit by providing divergent views. In all, 375 questionnaires were administered on public secondary school teachers, quality assurers, school heads and academic masters located in the four regions of Njombe, Singida, Arusha and Coast (Pwani), where the public secondary schools under review are located. The study finally collected the information from 314 respondents who have responded to the questionnaires were teachers, school heads, quality assurers and districts education officials. The information in one hand represent the expected populations because their closely to 94% of the expected sample of the study while on the other hand the remaining sample was 19(6%).

The respondents of the study composed teachers, heads, assistant heads, quality assurers and district education officers. These respondents were the major sources of information as they are responsible for teaching students in secondary schools from forms one to four of the 'O'-Level cycle. They all have either a diploma or a degree in education. Both female and male respondents with teaching experience of more than two years took part in the study. The school heads also participants in the study because they are responsible for the management of the schools with students undertaking 'O'-Level secondary school studies. These school heads were all graduates with experience of teaching in the schools of more than two years and were of both genders.

The school quality assurers, on the other hand, are respondents who were also major sources of information because they are responsible for inspecting the teaching and learning process in the country's secondary schools. They were all graduates with qualifications at either the diploma or degree level or both in the area of education. These respondents also had experience of teaching in schools of more than two years and were of both genders.

The educational officers were the major sources of information as their strategic position made them responsible for the management of teachers, school heads and other personnel, who worked in the schools. They were all graduates holding either diploma or degree in education or both qualifications. Of interest were female and male respondents in this category with more than two years of teaching experience in schools.

**Table 4. 1: Basic Demographic Data of the Respondents**

Gender	Percent (N=314)	Age	Percentage (N=314)
Male	55%	20-25	18%
Female	45%	26-29	32%
Total	100%	30-39	46%
type of training	Percentage (N=314)	40-49	14%
Professional	95%	50-59	4%
managerial	5%	Total	100%
Total	100%		
Marital status	Percentage (N=314)	Qualifications	Percentage (N=314)
married	69%	Diploma	10%
Separated	3%	Bachelor degree	85%
Divorced	3%	Masters	5%
Single	13%		
Total	100%	Total	100%
Teaching experiences	Percentage (N=314)	School location	Percentage (N=314)
below 5 years	41%	Urban	73%
5-10 years	32%	Rural	27%
11-15 years	19%	Total	100%
16-25 years	4%	Teaching subject	Percentage (N=314)
26-30 years	2%	Sciences	14%
above 30 years	2%	Mathematics	28%
		Languages	58%
Total	100%	Total	100%

#### 4.2.1 Respondents' Gender, Age, and Marital Status

The study collected data from 314 respondents in four regions of Arusha, Coast, Njombe and Singida. The details show that the majority of the respondents in the sample were male (55%) with a significant minority being female (45). The distribution is as detailed in Table 4.1. The study findings show that the majority of the respondents (46%) had an age distribution ranging from 30-39 years and few were scattered in the other categories as Table 4.1 illustrates.

This information indicates that teachers, who teach in secondary schools from the regions under review, were energetic enough to perform their duties very well. With

regard to the marital status of the respondents as displayed in Table 4.1, a variable that provides an inclination whether marital status has any influence on job performance, the results show that generally the majority of the respondents (214; 69%) were married. As such, the majority of the respondents had settled lives and, hence, could focus on their professional responsibilities knowing that their jobs provided stability that sustained their families. Indeed, to a certain greater extent these had more reason to be committed to their duties than those who were single; less tied to family responsibilities, and hence could potentially move on.

#### **4.2.2 Respondents' Teaching Experience and Academic Qualifications**

The data indicate that the academic qualifications of the respondents ranged from certificate to master's degree qualifications. Generally, the majority of the secondary schools teachers (85%) had a bachelor's degree in education, which is the most determining factor for teachers in secondary schools capable of teaching at both the 'O' and 'A' levels. Moreover, such qualification implies that were capable of teaching all the subjects of their specialisation taught in secondary schools. This information is also congruent with Rahman (2015), who also found that graduate teachers were more knowledgeable in teaching their respective subject of specialisation than the diploma holding teachers. In addition, the graduate teachers had the right skills required to deliver the curriculum. The details of the respondents by academic qualifications are also displayed in Table 4.1.

The information collected from the field show that the majority of respondents (85%) had teaching experience of 1-10 years. Indeed, more than 80 percent of the

respondents had ample experience of teaching students in secondary schools. Similarly, Rahman (2015) found that teachers with ample teaching experiences tended to be more knowledgeable in teaching their subject than their fellow teachers because they had the requisite skills that could be utilised in solving problems at school. The results are as detailed in Table 4.1.

#### **4.2.3 Teaching Subjects, School Location and Type of Training Attended**

The study was also interested in establishing the location of the schools under review. In all the regions visited, the schools were drawn from both rural and urban areas. The data collected show that 76 percent of the schools were urban-based whereas 24 percent were rural-based. This shows that most of the schools in the study area were urban-based, where there are a good number of facilities and good support system for education delivery such as electricity, water and housing for workers, which facilitate the teaching and learning process. In addition, the study was interested in the distribution of the districts in the study areas. The data indicate that 75 percent of the districts were located in urban areas and the remaining 25 percent in rural areas.

The researcher was also interested in understanding what subjects are taught in the public secondary schools under review to generate information on the subjects in which the teachers received INSET training. The data indicate that out of all respondents engaged in the study, 63 (21%) taught science subjects, 63 (21%) taught Mathematics and 162 (58%) taught language subject including Kiswahili and English. This shows that most of the teachers who undergo training teach science and

language subjects. The assumption was that the performance of teachers in these subjects be comparatively better than those for other subjects such as Geography, History, and Civics which the teachers taught without necessarily attending any value-adding INSET training.

The study was also interested in knowing the type of INSET training the teachers attended. The findings show that 296 (95%) of teachers had attended professional training offered by different institutions and 12 (5%) had attended management training offered by the Agency for the Development of Education Management (ADEM). Generally, this information shows that most of the teachers had undergone the training which have helped to sharpen their ability and capacity in the delivery of services (see details in Table 4.1). This conclusion is supported by findings from other studies such as Peterson *et al.* (2012), Moghari *et al.* (2011) and Walumbwa *et al.* (2010) who have found training as one of the components which enhance employees' capabilities, skills and knowledge, hence the resultant increase in the productivity of their respective organisations.

### **4.3 Model Formulation and Validation**

The aim of this part was to check if the proposed factor structures are indeed consistent with the actual data. This is because at the conceptual framework development, the researcher had developed the conceptual framework without data. Therefore, it was not clear if the constructs are aligned with their underlined measures. Given this context, the researcher used a factor analysis of both the

exploratory factor analysis and the confirmatory factor analysis to ensure that the constructs are aligned with their indicator variables as described below.

#### **4.3.1 Exploratory Factor Analysis**

The Exploratory factor analysis is used in order to ensure that constructs are aligned with their indicator variables. This is because at the start of any study, the researcher mixes hypothesized, empirical and theoretical measures of a construct from different empirical settings without data. Babyak and Green (2010) advocate that in a situation where there is incongruence between the researcher, theory and data, a poor model fit will always result. As such, researchers utilize the exploratory factor analysis to identify a set of unobserved factors that reconstruct the complexity of the observed data in an essential form (Henson and Roberts, 2006).

In performing the exploratory factor analysis, a principal component analysis with varimax rotation was conducted to assess the underlying structure for the thirty three (33) items of the surveyed questionnaire. In selecting factors to retain, four factor criteria were adopted namely, Eigen values, scree test (i.e., screen plot), the conceptual framework theoretical assumption and factors loading that have at least three items (Yong and Pearce, 2013). They further recommended the use of a combination of criteria to help to offsite the weakness of using one criterion.

Given this situation, four factors were base on the coded questionnaire attached at appendix two extracted based on those four criteria which explain 70% of the cumulative variance as attached in the appendix two. The five factor had the Eigen



values  $>1$  which meet the Kaiser's criterion which suggests retaining all factors that are above the Eigen value of 1 (Kaiser, 1960). Using a scree test (see appendix vi), all factors above the break/cut off point on screen graph were retained and those below the break/cut off point were dropped as recommended by Cattell (1966). Furthermore, four factor/components were produced and all produced factors were aligned with the conceptual Framework as recommended by (Yong and Pearce, 2013). Finally, all retained factors had at least three items/indicators as Yong and Pearce (2013) suggest retaining factors that have at least three items.

After discovering that the four factors have met the criteria and now they were qualified to be retained, further analysis of indicator variables was done in order to see if the indicators really fit to their underlying factors. In order to assess the suitability of each indicator variables to their underlying structure, the following criteria as recommended by Yong and Pearce (2013) was adopted for retaining/dropping an item/indicator as follows:

First, all items loaded into their associated factors were retained and those loaded into more than one factors were dropped.

Second, if more than two items were loaded in one factor, all item were retained and if less than three items were loaded in one factor, all were dropped.

Third, all items with loading ranging from 0.4 to 0.8 were retained and those with loading less than 0.4 or above 0.8 were dropped.

Yong and Pearce (2013) suggested these criteria to be adopted for either retaining the items or dropping the items in order to improve the model. As far as this study is concerned, table 4.2 presents a selected output of SPSS items which were dropped.

**Table 4.2: The Selected Exploratory Factor Analysis Output of Items Dropped**

<b>Factor</b>	<b>Item Removed</b>
Pedagogical knowledge Professional Developments (PPD)	<ol style="list-style-type: none"> <li>1. Implementation of learning(PPD2)</li> <li>2. control and evaluate learning activities (PPD4)</li> <li>3. Improve curriculum knowledge(PPD7)</li> </ol>
Competencies Professional Developments(CPD)	<ol style="list-style-type: none"> <li>1. Master and develop learning materials (CPD1)</li> <li>2. Improve social interaction skills (CPD4)</li> <li>3. Master the curriculum contents (CPD7)</li> </ol>
Teachers Contextual skills Professional Developments (TCPD)	<ol style="list-style-type: none"> <li>1. Understanding school environment (TCPD1)</li> <li>2. Improve cooperation with parents (TCPD3)</li> <li>3. Fun learning atmosphere (TCPD7)</li> <li>4. creating interaction with others (TCPD8)</li> <li>5. Secondary school awareness(TCPD9)</li> </ol>

**Pedagogy Professional Developments (PPD):** PPD2, PPD4 and PPD7 were eliminated from the analysis because they had weak loadings and hence affected its fitting. For example, PPD4 had a cross loading on PE and EE. For PE\_4, it was eliminated because it was loading weakly with the value less than 0.4.

**Competencies Professional Development (CPD):** CPD1, CPD4 and CPD7 were eliminated because they had weak loadings on their theoretical model and hence affected its fitting. For example, CPD4 had cross loadings on TJP and PPD. For CPD1, it was eliminated because it was having small values less than 0.4 of communalities. For CPD7 it had a negligible contribution because it was loaded alone in a single factor which failed to support theoretical assumptions.

**Teachers' Environment Contextual skills Professional Development (TCPD):**

TCPD1, TCPD3, TCPD7, TCPD8 and TCPD9 were eliminated from the analysis because they had weak loadings on the theoretical model and hence affected its fitting. For example, TCPD1 and TCPD7 had multiple loadings on PPD and CPD.

Given this perspective, the items that did not fit well with the factor solution were dropped from the analysis as described in table 4.2 and those which fitted very well were retained as described in table 4.3:

**Table 4.3: Rotated Component Matrix**

	Component			
	Pedagogy professional development(PPD)	Competencies Professional development(CPD)	Teaching context professional development(TCPD)	Teachers Job Performance(TJP)
PPD5	.894			
PPD8	.873			
PPD1	.869			
PPD9	.813			
PPD3	.773			
PPD6	.712			
CPD3		.927		
CPD2		.897		
CPD5		.893		
CPD8		.784		
CPD6		.614		
TCPD5			.915	
TCPD4			.910	
TCPD2			.900	
TCPD6			.896	
TJP4				.916
TJP3				.877
TJP1				.870
TJP2				.863

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Having established the study framework from the exploratory factor analysis, the next step was to perform a confirmatory factor analysis as described in detail in the following section:

### **4.3.2 Confirmatory Factor Analysis**

In this study, a confirmatory factor analysis was used to analyze theoretical constructs through assessing the loadings of the measures, error variances and covariance (Hooper, et al, 2008). At the beginning, the researcher used an Explanatory Factor Analysis (EFA) to discover if the original variables are organized in a particular way reflecting another latent variable. At this stage the aim was to confirm and harmonize a belief about how the original variables are organized in a particular way using Confirmatory Factor Analysis (CFA). To carry out a confirmatory factor analysis, a measurement model was developed to test for specification errors and the correlation between the latent variables (Yong and Pearce, 2013). In this section, measurement models of different variables as used in the conceptual framework are presented and thereafter the measurement models for the composite structure or variables are also presented.

#### **4.3.2.1 Model Fitness Evaluation in a Confirmatory Factor Analysis**

The following criteria were used to guide the model refinement process to achieve a better fit as recommended by Engel, et al.(2003) that a Standardized regression weight (S.R.W) value should be above 0.5 and Modification indexes (MI) that reveal high covariance between measurement errors accompanied by high regression weights between these errors' construct and cross loading items are candidate for deletion.

#### **4.3.2.2 Measurement Model for Baseline Model**

In the current study, in order to reach a baseline measurement model that fits both

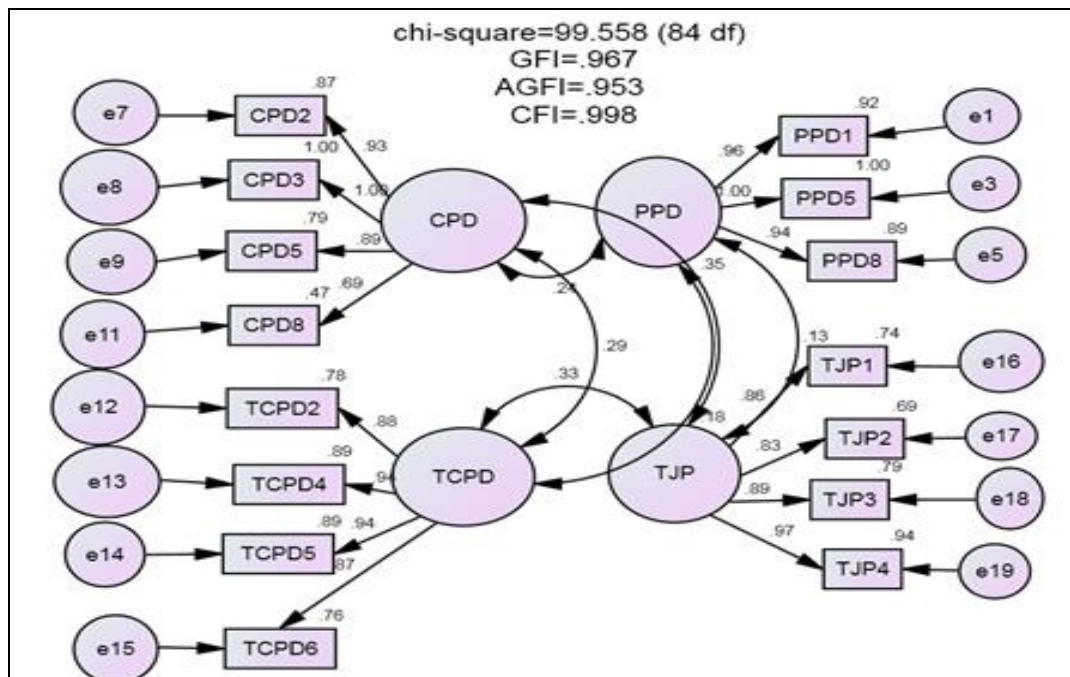
components, the four individual measurement models which were developed earlier were combined and a CFA was run with the maximum likelihood estimate in IBM Amos 20 to determine its fitness. After initial run, the results showed a bad model fit with CMIN/DF= 5.263, GFI=0.811, AGFI=0.762, CFI=0.702 and RMSEA=0.109. Based on Hoe (2008) recommendation which require a model to achieve the following minimum requirements CFI (>0.90 indicates good fit), RMSEA (<0.08 indicates acceptable fit), and commonly used  $\chi^2$  statistic ( $\chi^2$ / df ratio of 3 or less) in order to be considered fit.

In order to improve the model, some items that were affecting the significance of the model's fitness were removed as recommended by Hooper, et al. (2008) to remove the items that demonstrate low loading, those items standardized regression weights (S.R.W) values less than 0.5. The items that were removed include:

**Pedagogical knowledge Professional Developments (PPD):**PPD3, PPD6 and PPD9 were eliminated from the analysis because they had weak loadings and hence affected its fitting.

**Competence Professional Development (CPD):**CPD6 was eliminated from the analysis because they had weak loadings on the theoretical model and hence affected its fitting. At this point, elimination was made at the item level and items that were removed because not only they weakened the model, but were also indicating weak statistical power.

**Environment contextual skills Development (TCPD):** all construct have fit form the analysis because they have good strong loadings to theoretical model and hence do not affect the its fitting that is to say no construct was removed or deleted. After removing the items in the model, re-running the model indicated adequate fit results with CMIN/DF= 3.00, GFI=0.967, AGFI=0.953, CFI=0.998 and RMSEA=0.028. On the other hand, the observed variables with significant probabilities had positive standardized regression weights greater than 0.50 and the standardized path coefficients between measured variables and factors in the models showed that that all path coefficients between measured (manifest) variables and latent (un-observed) variables in the model were significant ( $p < 0.05$ ).



**Figure 4. 1: Standardized Measurement Model**

These results indicate that most of the factor loadings explaining the measurement model were adequate and thus reflected a very good reliability of the research constructs. As recommended by Hox and Bechger (2014), factors loading lower than

0.5 are not significant while Bentler and Yuan (2000) indicated that a negative regression weight on the other hand presents doubtful measurement models. In our case, the researcher has achieved the above good results; hence, the model achieved a robust measurement model as illustrated in Figure 4.1 . The retained items were used in the final analysis in the structural model.

**Table 4.4: Variables of the study**

<b>Variable</b>	<b>Description Construct</b>
Pedagogical knowledge professional Development (PPD)	<ol style="list-style-type: none"> <li>1. Improve instruction design (PPD1)</li> <li>2. Improve class room management (PPD5)</li> <li>3. Improve the knowledge of objectives and learning outcomes (PPD 8)</li> </ol>
Competence professional Development (CPD)	<ol style="list-style-type: none"> <li>1. Improve the use of various teaching aids (CPD 2)</li> <li>2. Maximize the teaching time (CPD 3)</li> <li>3. Increase teaching ability (CPD 5)</li> <li>4. Master the curriculum contents (CPD 8)</li> </ol>
Teacher context learning environment in professional Development (TCPD)	<ol style="list-style-type: none"> <li>1. Improve school counseling services TCPD 2</li> <li>2. Improve community relationship (TCPD 4)</li> <li>3. Interact effectively with learners (TCPD 5)</li> <li>4. Improve interaction with fellow teachers (TCPD 6)</li> </ol>
Teacher job performance (TJP)	<ol style="list-style-type: none"> <li>1. Improve job commitment (TJP 1)</li> <li>2. Improve student achievement (TJP2)</li> <li>3. Improve teacher job productivity (TJP 3)</li> <li>4. Improve Students attendance (TJP4)</li> </ol>

Based on the summary of the findings presented in figure 4.1 the standardized coefficient of at least 0.2 for all relation is achieved with the critical values(C.R) >1.96 using a significance level of  $p < 0.05$  indicating that there is positive and strong significant relationship between the observed and unobserved variables of the model. The results thus confirm a strong positive relationship between observed variables and unobserved variables. Hence, these are findings for a very strong frame

work that can be used in future for further analysis of the relationship in the structural model.

### 4.3.3 Structural Model

The basic structural model of the study has the relationship between pedagogy professional development, competences professional development and teacher's context professional development on teacher's job performance was analyzed. The results of the analysis using AMOS version 20 are diagrammed in the figure 4.2 below and the results for the goodness of fit indices base on four indices namely CMIN/DF, CFI, AGFI and RMSEA are presented in Figure 4.2 and elaborated.

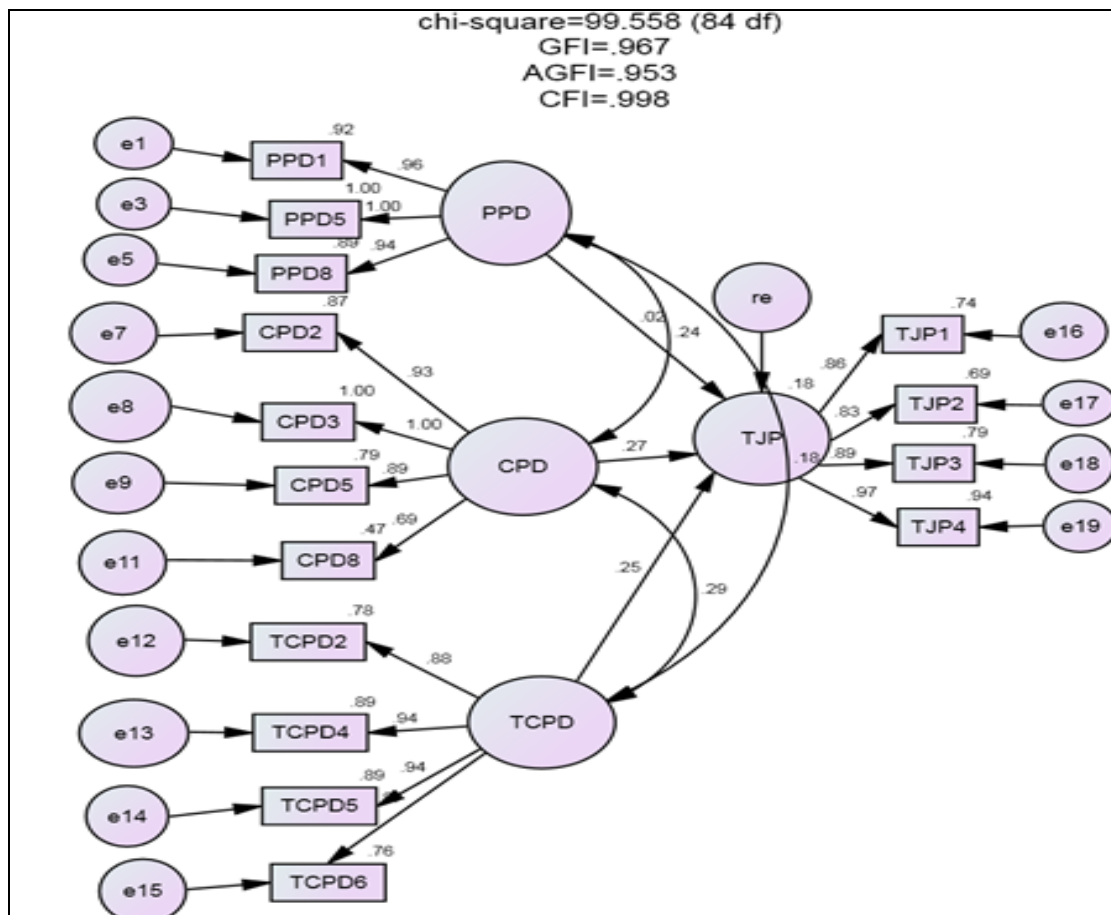


Figure 4.2: Structural Model



**Table 4.5: Variables of the Model Description**

<b>Variable</b>	<b>Description Construct</b>
Pedagogical knowledge Development (PPD)	<ol style="list-style-type: none"> <li>1. Improve instruction design (PPD1)</li> <li>2. Improve class management (PPD5)</li> <li>3. Improve the knowledge of objectives (PPD 8)</li> </ol>
Competence Development (CPD)	<ol style="list-style-type: none"> <li>1. Improve the use teaching aids (CPD 2)</li> <li>2. Maximize the teaching time (CPD 3)</li> <li>3. Increase teaching ability (CPD 5)</li> <li>4. Master the curriculum contents (CPD 8)</li> </ol>
Environment contextual skills Development (TCPD)	<ol style="list-style-type: none"> <li>1. Improve school counseling services (TCPD 2)</li> <li>2. Improve community relationship (TCPD 4)</li> <li>3. Interact effectively with learners (TCPD 5)</li> <li>4. Improve interaction with fellow teachers (TCPD 6)</li> </ol>
Teacher job performance (TJP)	<ol style="list-style-type: none"> <li>1. Improve job commitment (TJP 1)</li> <li>2. Improve student achievement (TJP2)</li> <li>3. Improve teacher job productivity (TJP 3)</li> <li>4. Improve students attendance (TJP 4)</li> </ol>

The findings for model fit in figure 4.2 are elaborated as follows: The ratio of the  $\chi^2$ , to the degree of freedom-CMIN/DF commonly referred to as normed chi-square value has yielded a value of 1.304, which range to the suggested cut of point values  $< 2$  or  $< 3$  by (Engel, et al., 2003). The CFI=0.998, GFI =0.967 and AGFI=0.953 obtained fall under the acceptable range whereas values close to 1.

Generally values above 0.9 indicate a good fit as suggested by Engel, et al.(2003). On the other hand, as suggested by Hoe (2008), a RMSEA value of 0= indicate perfect fit,  $< 0.05$  = indicate close fit, 0.05 to 0.08 indicate fair fit and 0.08 to 0.1 a mediocre fit,  $> 0.1$  =poor fit. Comparing to the current study findings, the RMSEA values of 0.028 which was produced in the analysis indicate that the model fits very well in the data. Having established a model fit which indicate a good fit using four indices, the path coefficient and hypothesis testing was evaluated as explained in the next section using this model.

#### **4.3.4 The Basic Model Path Coefficients and Relationship Testing**

The structural model in figure 4.2 was used to test the hypothesized relationships. The hypothesized relationships are examined against various coefficients and scores obtained from the analysis. In this research, the hypotheses are tested based on the direction, strength and the level of significance of the path coefficients. A standardized paths coefficient, critical value (C.R) and a significant level (p) were used in this study in testing and evaluation of the strength and the level of significance of the hypotheses. Testing hypotheses at each variable is done for comparison purposes.

##### **4.3.4.1 The influence of the Pedagogical Knowledge on Performance of Teachers**

The first postulated relationship in this study hypothesized a positive and strong significant relationship between Pedagogy professional developments and teachers' job performance as stated below.

**H1a: Pedagogical Knowledge Development has a positive significant influence on the Performance of Teachers in Public Secondary Schools.**

**H1b: Pedagogical Knowledge Development does not have a positive significant influence on the Performance of Teachers in Public Secondary Schools**

The analysis was done using SEM in order to determine the significant influence of Pedagogical knowledge development on performance of teachers in secondary schools as illustrated in Table 4.6

**Table 4.6: Teachers' Job Performance Basic Model Standardizes Regression Weight**

	Estimate	S.E.	C.R.	P	S.R.W	Remarks
TJP <--- PPD	.020	.042	.479	.632	0.01	Rejected
PPD1 <--- PPD	.988	.023	42.156	***	0.957	
PPD5 <--- PPD	1.023	.019	53.816	***	1.0	
PPD8 <--- PPD	1.000				0.943	

The path leading from *PPD* to TJP in Table 4.6 is used to examine the relationship between Pedagogy professional development and teachers' job performance. A weak positive path coefficient ( $\gamma = .0.01$ ) using standardized estimate results in Table 4.6 above indicates that Pedagogical knowledge development is weak positively related to the performance of teachers in secondary schools. This concurs with Chin (1998) and Hoe (2008) who argued that a standardized paths coefficient ( $\gamma$ ) should be at least 0.2 in order to be considered significant and meaningful for discussion. The results thus in the current study confirm the weak relationship between Pedagogical knowledge gained from professional development and performance of teachers' in secondary schools.

Apart from standardized coefficient, further analysis was done using critical ratio and p-value to determine the significant influence of Pedagogical knowledge development on teachers' job performance. In this study the findings yielded a critical values(C.R = 0.479 which is greater than 1.96) and significance level of  $p=0.632$ .The results concur with Hox and Bechger (2014) who argued that a relationship which has yield a critical ration which is greater than 1.96 and p-value is less than 0.05 is considered significant.

This means that the hypothesis H1a which states that pedagogical knowledge development has positive significant influence on performance of teachers in Public secondary schools was rejected while the hypothesis H1b which provide that pedagogical knowledge do not have the influence on performance of teachers in Public secondary schools is confirmed.

#### **4.3.4.2 The Influence of Competencies Development on Performance of Teachers**

The second postulated relationship in this study hypothesized a positive and strong significant relationship between competencies professional development and the performance of teachers as stated below.

**H2a: Competencies development has a positive significant influence on performance of teachers' in Public Secondary Schools**

**H2b: Competencies development do not had a positive significant influence on Performance of teachers' in Public Secondary Schools**

The analysis was done using SEM in order to determine the significant influence of competencies professional development on teachers' job performance as illustrated in Table 4.7.

**Table 4.7: Competencies Professional Developments Basic Model Standardizes Regression Weight**

			Estimate	S.E.	C.R.	P	S.W.R	Remarks
TJP	<---	CPD	.346	.067	5.128	***	0.27	Accepted
CPD2	<---	CPD	1.215	.070	17.332	***	0.933	
CPD3	<---	CPD	1.223	.067	18.223	***	1.0	
CPD5	<---	CPD	1.150	.069	16.555	***	0.887	
CPD8	<---	CPD	1.000				0.686	

The path leading from *CPD* to *TJP* in Table 4.8 is used to examine the relationship between competencies professional development and teachers' job performance. A positive path coefficient ( $\gamma = .27$ ) using standardized estimate results in Table 4.7 above indicates that competencies professional development are positively related to teachers' job performance. This concurs with Chin (1998) and Hoe (2008) who argue that a standardized paths coefficient ( $\gamma$ ) should be at least 0.2 in order to be considered significant and meaningful for discussion. The results thus in the current study confirm a strong positive relationship between competencies professional development and teachers' job performance.

Apart from standardized coefficient, further analysis was done using critical ratio and p-value to determine the significant influence of competencies professional development on teachers' job performance. In this study the findings yielded a critical ratio (C.R = 5.128 which is  $<1.96$ ) and significance level of  $p=0.000$ . The results concur with Hox and Bechger (2014) who argued that a relationship which has yield a critical ration greater than 1.96 and p-value less than 0.05 is considered significant.

This means that the hypothesis H1a which states that competencies professional development has significant influence on teachers' job performance is confirmed while the hypothesis H1b is rejected.

#### **4.3.4.3 The influence of Environmental Contextual Skills Development on Performance of Teachers in Public Secondary Schools**

The second postulated relationship in this study hypothesized a positive and strong significant relationship between Teachers environment contextual skills and performance of teachers as stated below.

**H3a: Environment contextual skills development has a positive significant influence on Performance of Teachers in Public Secondary Schools.**

**H3b: Environment contextual skills development does not have a positive significant influence on Performance of Teachers in Public Secondary Schools**

The analysis was done using SEM in order to determine the significant influence of Teachers context professional developments on performance of teachers as illustrated in Table 4.8

**Table 4.8: Environment contextual skills developments Basic Model**

			Estimate	S.E.	C.R.	P	S.W.R	Remarks
TJP	<---	TCPD	.232	.047	4.898	***	0.253	Accepted
TCPD2	<---	TCPD	1.008	.041	24.757	***	0.885	
TCPD4	<---	TCPD	1.034	.036	28.624	***	0.944	
TCPD5	<---	TCPD	1.038	.036	28.539	***	0.943	
TCPD6	<---	TCPD	1.000				0.874	

The path leading from *TCPD* to *TJP* in Table 4.8 is used to examine the relationship between Teachers context professional developments and teachers' job performance. A positive path coefficient ( $\gamma = .253$ ) using standardized estimate results in Table 4.8 above indicates that Environment contextual skills developments are positively related to teachers' job performance. This concurs with Chin (1998) and Hoe (2008) who argue that a standardized paths coefficient ( $\gamma$ ) should be at least 0.2 in order to be considered significant and meaningful for discussion. The results thus in the current study confirm a strong positive relationship between environmental contextual developments and performance of teachers.

Apart from standardized coefficient, further analysis was done using critical ratio and p-value to determine the significant influence of Teachers context professional developments on teachers' job performance.

In this study the findings yielded a critical values ( $C.R = 4.898$  which is greater than 1.96) and significance level of  $p=0.000$ . The results concur with Hox and Bechger (2014) who argued that a relationship which has yield a critical ration greater than 1.96 and p-value less than 0.05 is considered significant. This means that the hypothesis H1a which states that Teachers context professional developments have significant influence on teachers' job performance is confirmed while the hypothesis H1b is rejected.

#### **4.4 The results of the Documentary review on Professional Development of Teachers**

Additionally to complement the primary findings obtained in the field using

questionnaires, the study also reviewed several documents to find out whether the professional development of teachers was conducted in the areas under review. Such documentary proof counter-checked whether what the teacher respondents uttered in statistical terms were consistent with the documented evidence.

In this regard, the documents reviewed include the Education and Training Policy (2014), Teacher Curriculum and Modules for school heads, and annual performance reports. The Education and Training Policy (ETP) of 2014 that amended and superseded the earliest of 1995 was particularly reviewed. The Ministry responsible for Education has the Policy which provides the direction on how the education has to be offered in the country.

The current policy was adopted in 2014 following the elapse of the period of ten years since the 1995 ETP was promulgated. In the new ETP policy, Item 3.2.6 stipulates that there will be proper training for teachers at all levels for them to acquire necessary skill to enable them to perform their duties effectively and efficiently.

This is in line with the Education and Training Policy, 2014 items 3.2.1 which reads in part: “The government will strengthen the training of education official including teachers at all levels to allow them acquired the required knowledge and skills in order to produce the competent personnel” (ETP, 2014, p. 22). This implies that in both the old and new ETP, training of teachers is one of the strategic requirements of under the Ministry of Education, Science and Technology geared towards improving



their skills to enable them to execute their tasks efficiently and improve their students' performance.

Thus, the professional development of teachers aimed to improve their skills, knowledge on teaching the students. In fact, teachers' professionalism also addresses the relationship that teachers ought to have with various stakeholders, including pupils/students entrusted in their care. Other stakeholders include colleagues, parents, guardians, education authorities and the general community.

Apart from the ETP, the study also reviewed the teachers' training education curriculum. The curriculum indicates that the objectives of the teachers' training and education are to impart teacher-trainees with theories and principles of education psychology, guidance and counselling; principles and pedagogical skills of creativity and innovation; promote an understanding of the foundation of the school curriculum; sharpen the teacher-trainees' knowledge and mastery of selected subject, skills and technology.

The objectives also include imparting teacher-trainees with skills and techniques of assessment and evaluation in education; enable both the teacher-trainees and serving teachers and tutors to acquire leadership and management skills in education and training.

In addition, the curriculum of the professional development of teachers emphasises following competencies: Analysing the students' growth and development; guidance

and counselling for children at different levels; providing information to the relevant stakeholders; organising and managing the classroom; developing the use of different teaching and learning materials suitable for school children; using interactive and participatory teaching-learning methods suitable for children in school; and using professional and academic advisers to help pupils during classes.

Furthermore, the study reviewed the leadership modules offered by the Agency for the Development of Education Management (ADEM), which is charged with strengthening the capability and management skills of serving and future education managers and administrators. The purpose of this thrust is to improve the effectiveness and efficiency of institutions and the system at large. Only ADEM has been mandated in Tanzania to offer such INSERT training to serving teachers.

The topics for school heads include school management and leadership, public service and employment, motivation, performance appraisal, computer studies, project education, students administration, and welfares, planning and project write-up, guidance and counselling, school organisation, system, communication and protocol issues, office management and record-keeping.

It also looks at the role of key educational institutions in the country such as the Tanzania Institute of Education (TIE) and NECTA in relation to the curriculum and examinations, curriculum management. The methods applied in the delivery of the subject contents include lecturing, group discussions, case studies, and on-site visits.

Other key documents that shed light on the research problem pertaining to the study area include training plan, syllabus, modules, and timetable and performance reports. In the places visited in Singida, Arusha, Coast and Njombe regions, training reports on teacher training were available; however, there was no training plan found in all the district councils visited. In addition, the training syllabus for professional teachers was not available in the visited districts on the courses offered secondary school teachers.

The study also found that the training of teachers at the local level were mainly on *ad hoc* and not taken seriously by the local authorities as compared to other activities. In many cases, such INSET training was financed by donors who are interested in the learning situation in the schools and not the local authorities charged with improving the teaching and learning at their level. In Coast region's Bagamoyo District, for example, one such project, which facilitates capacity-building for teachers, is known as "Room to Read". This project was established to support the provision of education in secondary schools especially for girls who failed to attend the schools due to family problems. The project extend it is activity to support teachers from four schools in Bagamoyo Districts as the means of improving teaching and learning of sciences subjects. However, this project covered only a few secondary schools of Matimbwa, Kiromo and Zinga.

The review of the curriculum for teachers showed that only knowledge and skills were imparted among teachers particularly on how to teach at school. The curriculum shows that teachers who have attended the diploma programme have knowledge and

skills in pedagogical, teaching subject, guidance and counselling, and their special subjects in the secondary schools (MoEST, 2017). For verification purposes, the researcher also visited some of the teacher training colleges that offer professional training to observe whether these specified competencies were actually developed for the teachers.

The Morogoro Teachers College, for example, is mandated to offer pre-service training for secondary school teachers. The college's vision and mission of the pre-service training that "to develop high professional competencies in our students and serving teachers in order to meet the national education needs". Thus, the objectives of the teachers' training were to develop competencies for teachers to enable them to deliver their duties effectively when employed in school to meet the need of education. This statement concurs with the national vision which strives to have a good education to enable Tanzanians who work effectively in the country (URT, 2015).

In reality, however, the curriculum of professional development for teachers does not develop any competencies for teachers to enable them to teach and produce students who can compete in the labour market because most of them score in division IV and 0 in their final NECTA examinations. In other words, candidates for such teacher education qualification generally lack the necessary capacity to acquire the requisite competencies in the best way possible. This position is also supported by Nkumbi *et al.* (2008), who came up with a similar finding. In fact, most of the INSET pieces of training taking place are in the form of seminars and workshops.

Although such workshops try to bridge the competency gaps among teachers between what they learned in pre-service and actual teaching practices, the time allocated for such purposes is too short to explore important issues and actually make the participating teachers competent in the desired areas. In this regard, Meena (2009) argues that, although such seminars and workshops are common, they do not significantly impact on the teachers' work and in the context of this study—their job performance. The trouble is that the issues are presented as though they are not connected with teachers' work and setting (MoEVT and OUT, 2007). This is an anomaly worth correcting to ensure that such INSET yield the required dividends.

In-service education is currently a multi-player activity in which different institutions participate under the co-ordination of the Teacher Education Department. The Tanzania Institute of Education (TIE), ADEM and the Inspectorate, in their individual capacities, provide in-service education to teachers. Universities, non-governmental organisations (NGOs) and other organisations interested in education also offer in-service education, but mainly using the project approach. The big challenge is in validating the training contents in line with national priorities to prevent duplications and deviations from the national focus and curriculum requirements.

For the programme of school heads ADEM provides, school heads gained knowledge and skills to manage their schools in some areas such as financial management, supervision, day-to-day running of the schools and in monitoring

activities. However, Temu (2003), and Malekela (2004) report on the ADEM programme for schools heads, the present curriculum as was unlikely to have a resounding improvement impact on secondary school outputs and outcomes because such goals were not explicitly stated in the training objectives. They argue that, for the course programme to have an impact on the quality of the management of secondary schools on their output and outcomes, the objectives of the programme must focus on the output and outcomes of the educational institutions and the learners.

In addition, the modality of the delivery of the curriculum is largely but not exclusively teacher-centred despite the use of methods that deprive participants of their opportunity to contribute to the learning process through the interactive and problem-solving modalities and strategies. Furthermore, much of the training offered by ADEM took place in workshop and seminar-type settings and residential outings with little or no further feedback or support services. Overall, the programme seemed to be too theoretical, which did not help participating school heads to solve practical problems in their working environments. In this regard, Meena (2009) contends that such workshops were not an effective means for developing teacher competencies.

## CHAPTER FIVE

### 5.0 DISCUSSION OF THE FINDINGS

#### 5.1 Introduction

This chapter discusses the main findings of the study. The discussion is based on the findings from both survey and documentary review. The chapter recapitulates the information generated in the study, compares and contrasts the current findings with what was found in previous related studies. This helps to reflect on the findings about the nature of professional development on teachers' job performance and examine points of departure from literature, the study objectives, hypotheses, conceptual and theoretical frameworks of the study.

#### 5.2 The influence of the Pedagogical Knowledge Development on Performance of Teachers

The first postulated relationship in this study hypothesized a positive and strong significant relationship between Pedagogical knowledge professional developments on performance of teachers. A positive path coefficient ( $\gamma = .01$ ) using standardized estimate results indicates that Pedagogical knowledge gained from professional development do not positively related to the performance of teachers' secondary schools. Apart from standardized coefficient, further analysis was done using critical ratio and p-value to determine the significant influence of Pedagogical knowledge gained from professional development on performance of teachers.

In this study the findings yielded a critical values (C.R = .479 which is  $< 1.96$ ) and significance level of  $p = .632$  which indicate insignificant relationship. This finding is

supported by number of empirical evidence (Hervie and Winful, 2018; Mabula, 2012). Notably example Effiong, et al. (2015) concluded that a positive achievement in students taught by highly qualified teachers and those exposed to instructional materials during lessons. They argue that government should make available of the basic instructional materials that will be used by teachers because they will enhance an effective teaching and learning process. The finding collaborate with King (2013) found insignificant relationship between pedagogy knowledge and teachers' job performance.

They further argued that despite teachers are receiving training on pedagogy issue but their performance is affected by inconformity between numbers of teachers versus students, poor quality of textbooks, poor products of pupils joining secondary schools, absence of reliable teachers guide, and absence of action based exams, absence of labs, among others in Tanzania.

The result of the findings of Mfaume and Bilinga (2017) concluded the insignificant relationship between pedagogy skills and teachers job performance. They further unveiled that despite of pedagogy knowledge received by teachers but absenteeism, abusive and violent behaviors', sexual abuse to mention a few were prevalent forms of teachers' malpractices in schools that affect their performance. Their occurrence were attributed to teachers' low salaries and remunerations, poor living and working conditions, influence of science and technology, lack of professional knowledge and poor management as well as infrequent visits and inspections of schools in Tanzanian Public Secondary Schools



On the other hand Sa'ad and Usman (2014) found insignificant relationship between pedagogy knowledge and teachers' job performance as a current study finding. Their explanation of insignificant relationship is based on the dominance of mother tongue, inadequate qualified teachers of English language, negative attitudes of students toward English language, improper use of method in teaching English language, inadequate instructional media and facilities, lack of language laboratory for teaching English language are the causes of poor performance in English language among secondary school students of Dutse metropolis of Jigawa state in Dutse Metropolis of Jigawa State, Nigeria.

This similarity of the findings of the current study with the study done in other countries implies that pedagogy skills have insignificant contribution on teachers job performance in any context. This means that the finding from the current study can be applicable to other study and can be transferred to other countries for policy action.

Hervie and Winful (2018) found and concluded that, poor performance of teachers is due to lack of frequent in-service training on pedagogy issues. Similarly Wachira(2017) The study found there was a significant relationship between leadership styles and teachers' job performance. The researcher concluded principals practice various leadership styles. The researcher also concluded that supportive leadership style affects teachers' performance.

Despite of the support of findings from the current study to the previous studies, some of the previously studies did not support the current study. Notably example

Roberts (2013) found that teachers' pedagogy skills in the places they work are better placed to meet the educational needs of their students and their own professional goals. Salman et al., (2012) found pedagogy knowledge to have a significant influence on teachers job performance. They argue that enhancing the teachers' quality in terms of subject contents, providing them opportunities for further studies, attending seminars and workshops for update could help teachers on their role to play in teaching and learning of the subject effective. These findings imply that not all pedagogy skills are rewarding in supporting teachers job performance. They are still affected by contextual differences of school and government regulations of a country in which a school is situated. This means that despite the fact that pedagogy skills are significant but its significant level can be explained by different contextual variables within the area of the research.

### **5.3 The Influence of Competencies Development on Performance of Teachers'**

The study considered whether teachers' competencies development could have a positive and significant influence on teachers' job performance. As defined by Kaur and Talwar (2014) that competence is the capability to apply or use a set of related knowledge, skill and attitude to complete a task according to its standards in a defined work area. The empirical results in chapter four support the above hypothesis by yielding standardized coefficient estimate ( $\gamma$ ) of 0.27, critical ration(C.R) of 5.128 and significant p-value of 0.00. This is a positive and significant contribution of teachers' competencies development on teachers' job performance in secondary schools. These findings collaborate with the finding of Adeokin and Kazeem (2017) in Nigeria who found and conclude that teachers with a high sense of competence are

more likely to demonstrate more commitment to their job than others with low sense of competence.

The findings are also similar to the study done in Malaysia by Omar, et al. (2017) who found that perceived of teachers' competence predict students' performance and achievement motivation. This similarity of the findings of the current study with the study done in other countries implies that teachers' competence can have influence on teachers job performance in any context. This means that the finding from the current study can be applicable to other study and can be transferred to other countries for policy action.

The findings support the argument made on Human capital theory that education and training are seen as the most important ways in which the quality of the workforce of an employee could be enhanced (Becker, 1930). This implies that shaping an employee competences with training could help to enhance her or his job performance. The findings are also aligned with the argument made by Kaur and Talwar (2014) who argued on a significant positive relationship between teachers' teaching competency and their job performance.

The findings of these study has concurred with the argument made by Shukla (2014) who argued that a competent teacher is able to look into the future of the aspiring student and thus provide his or her best to bring nations dream come true. This implies that the competencies possessed by the teachers in a secondary school are subjected to have a strong influence on teachers' job performance. In addition the

findings have implies that there is association on training received by the teachers and the way they perform their job in secondary school.

While this study shares some similar findings the results differ in some of the variables. For example the current study has identified improved the use of teaching aids, maximize teaching time, increase teaching ability, and guiding students activities are among of the variables teachers tend to receive in training of improving their competencies for job performance while Xu and Ye (2014) have found that there exists a significant positive correlation between the teachers' competency level and teachers' job performance. They add that competency in terms of teaching ability and industry awareness has significance influence in explaining teachers' job performance.

On the other hand Kaur and Talwar (2014) found significant positive relationship between teachers' teaching competency and job performance which was explained in terms of competency in emotional intelligence. In related perspective Fehintola (2014) found competencies dimensions such as teachers academic qualification, teachers professional qualification, teachers content knowledge, teachers instructional quality, teachers' evaluation procedures, teachers' work value, teachers' classroom attendance' and teachers' job satisfaction are potent factors to academic performance of secondary school students in the study area. He further add that teacher's content knowledge and teachers' instructional quality could be regarded as adequate teachers' characteristics for brilliant academic performance.

These findings imply that not all competences are rewarding in supporting teachers job performance. They are still affected by contextual differences of secondary school. This means that despite the fact that competence is significant but its significant level can be explained by different contextual variables within the area of the research.

In unrelated perspective, other empirical evidences are not supporting the finding from the current study that teachers' competences tend to influence teachers job performances. For example Omar, et al. (2017) found that teachers' competence does not influence directly teachers' job performance. They further found that achievement motivation has a mediation effects on the relationship between teachers' competence and students' performance. Contrary to the current study their findings implies that the relationship between teachers' competencies and job performance can only be explained when there is a mediating effect of achievement motivation.

On the other hand, Goden, et al., (2016) found that the instructional competencies of the school heads did not relate or affect their management behavior in school. This insignificant relationship between teachers' competence on their job performance in secondary schools was found to be contributed by experience other than competences. Similarly Altındag and Hasbay (2018) found insignificant relationship between teachers' competences and job performance. In addition they found that teacher performance was affected mostly by management factors, followed by working environment and wages. These findings implies that performance of teachers is increased by providing them with working conditions in

which they can feel comfortable and under no pressure other than competencies. Base on these contradicting findings, the discussion of the current study can imply that not always teachers' competences can influence teacher job performance their other factors that must be consider.

On the other hand, Hervie and Winful (2018) conducted a study to assess whether professional development in terms of competencies could have impact on teachers job performance in Ghana. The study found a poor performance of teachers which was due to lack of frequent in-service training, lack of teaching and learning materials, lack of incentives and motivation, and improper supervision. The study recommended that Ghana Education Service should improve upon its in-service training policy to be consistent with the needs of teachers. Supardi (2017) found a significant relationship between competencies and teachers job performance. Further analysis shows that there is a difference of teacher competence based on levels of education, age and the length of their devotion. But there is no difference in the teacher competence based on their sex in Indonesia. The implication of this finding indicated that competence may be improved by level of education, short course, training and education in Indonesia.

#### **5.4 The influence of Environmental Contextual Skills on Performance of Teachers**

To address the third specific objective, it was hypothesized that, environmental learning context skills have a positive and significance influence on teachers job performance. Standardized estimate and critical ratio in structural equation modeling

was used to evaluate the strength of significant influence of environmental learning context skills on teachers job performance. A positive path coefficient ( $\gamma = 0.253$ ) using standardized estimate was found which indicates that environmental learning context skills is positive related to teachers job performance. Further results on the hypothesis above have yielded a significant critical ratio greater than 1.96 which concurs with Hox and Bechger (2014) who argued that any relationship which will result in a critical ratio greater than 1.96 is considered significant. The findings collaborate with the findings by who found that engagement of teachers with students and community is an indicator of quality of the learning environment and predicts important learning outcomes.

The findings also collaborate with the argument made by Obot (2017) that students with moderate and high level perception of teachers' characteristics experienced more interest in studies than students with low level perception. These findings support the conclusion made by Muhoho and Mchome (2014) who concluded and recommended the government to improve good relationship with teachers and work environment by attractive salaries, better treatment of teachers, and provision of sound learning equipment and infrastructure, total subsidization of the public schools education service delivery and ensuring effective management of this vital sector to the socio-economic development of this nation in Tanzania.

While this study shares some similar findings the results differ in some of the variables with previous studies. Notably the current study found a significant relationship between environmental learning context skills and teachers job

performance due to the factor that in house training had an impact on improved school counseling, improved community relationship, improved learners relationship and improved co teachers relationship which in turn influence their performance while Rahman, et al.(2011) found that teachers had a positive attitude towards teacher training and its effectiveness in classroom situation including actual instruction/academic work, classroom management, evaluation procedures, assignments, and developing human relationships with students, principal, and society in general.

These findings imply that contextual matters in explaining the significant of environmental learning skills and not all characteristics explaining environmental learning skills are rewarding. Scholars such Nadeem, et al. (2011) have found insignificant relationship between environmental learning context skills and teachers job performance. Their reasons of insignificant is that Nadeem, et al. (2011) found that poor socio-economic condition of the area where school is situated decreases the teacher's motivation but society gives more respect to female teachers as compare to male teachers. This implies that majority of teachers were affected by social condition which impact their teaching context.

King (2013) also found insignificant relationship which revealed a poor performance of teachers in secondary school in Tanzania. He argued that the relationship between teachers and the administration of education, which include decision of removing standard four and form two exams, decision to liberate textbooks used in the entire cadre of primary and secondary education among others affect their performance.



Nadeem, et al. (2011) also found that undue political interference also affects the teacher's performance.

These findings implied that when teachers who have gained skills in environmental learning context are not evolved in any changes in academic matter their performance in teaching might be affected by such changes. On the other hand, the insignificant relationship between environmental learning context and teachers job performance was found by Lyimo et al., (2017) who argued that teachers' working load is heavier, something which hinders effective teaching and learning. According to the scholar, teachers cannot have sufficient time to mark assignments and counsel students with difficulties in learning. The findings implies that the problem of inadequacy teachers tend to affect environmental learning skills of teachers and students which in turn influence teachers poor job performance.

## **CHAPTER SIX**

### **6.0 SUMMARY OF FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS**

#### **6.1 Introduction**

This study investigated the influence of teachers' professional development on enhancing teachers' job performance in Tanzania's Public Secondary Schools. More specifically, the study investigated the following three specific objectives: i) Assess how is the pedagogical knowledge development influence the performance of teachers in public secondary schools; ii) Examine the influence of environmental contextual skills development on performance of teachers in public secondary schools; iii) Examine the relationship between teachers' competencies development on performance of teachers in public secondary schools.

The study was carried out in four of Tanzania Mainland regions. It involved 314 respondents drawn from selected eight (8) districts using simple random and purposive sampling techniques. The data collected using structured questionnaires and documentary reviews were subjected to confirmatory factor analysis and exploratory factor analysis' techniques during the data analysis. Final chapter presents the key conclusions and implications of the main issues and recommendation for future study.

The implication of the study addresses the theoretical and practical implications of the results as well as the contribution of this study to school and policies important for school operating in developing economies.

The recommendations of this study are also highlighted and finally areas for future research relevant for professional development are recommended.

## **6.2 Summary of Major Findings and Conclusions**

This part addresses the main findings and conclusion of the study which are organized based on specific research objectives as described below:

### **6.2.1 The Influence of Pedagogical Knowledge Development on Performance of Teachers'**

To address the first specific objective, it was hypothesized a positive and strong significant relationship between pedagogy professional developments and teachers' job performance. A positive path coefficient ( $\gamma = .01$ ) using standardized estimate results indicates that pedagogical knowledge gained from the professional development is insignificant with the performance of teachers' in secondary schools. Apart from standardized coefficient, further analysis was done using critical ratio and p-value to determine the significant influence of pedagogical knowledge gained from professional development on performance of teachers.

In this study the findings yielded a critical values (C.R = .479 which is less than 1.96) and significance level of  $p=.632$  which indicate insignificant relationship

between pedagogical knowledge gained from the professional development measured by improved instructional design, improved class management and knowledge of objectives and learning outcomes and teachers job performance.

On the other hand, improved instructional design, improved class management and knowledge of objectives and learning outcomes which were used to measure pedagogical knowledge gained from professional development were all found with standardized estimate greater than 0.2 and critical ratio greater than 1.96. This helps us to conclude that, improved instructional design, improved class management, knowledge of objectives and learning outcomes offered in pedagogy professional development are not influencing performance of teachers alone their might be other factors which influence performance of teachers in secondary schools.

Generally, the study concludes that, pedagogical knowledge gained from the professional development acquired by secondary school teachers are not significant related to performance of teachers' in secondary schools. However, based on the study discussion of the findings, this study further concludes that not all attributes which are used to measure pedagogical knowledge gained from the professional development do push teachers to perform well in their duties. This is due to the contextual issue in which teachers work and support from their school they use to teacher.

### **6.2.2 The Influence of' Competencies Development on Performance of Teachers**

This study also examined the significant influence of competencies development on performance of teacher's in secondary schools. With respect to teachers'

competencies development, it was hypothesized that teachers' competencies development have positive and significance influence on performance of teachers. Survey data was analyzed using SEM to evaluate the significant influence of the said relationship base on standardized path coefficients ( $\gamma$ ) and critical ration (C.R).

The empirical results in chapter four support the above hypothesis by yielding standardized coefficient estimate ( $\gamma$ ) of 0.27, critical ration(C.R) of 5.128 and significant p-value of 0.00. This is a positive and significant influence of competencies development on performance of teachers' in secondary schools. On the other hand, improved use of teaching aids, maximize teaching time, increase teaching ability, and guiding students activities which were used to measure teachers' competencies development were all found to be significant.

Further results of the standardized path coefficients ( $\gamma$ ) in chapter four have yielded standardized regression weights of 0.27 which indicate a positive relationship between competencies development and performance of teachers. This implies that teachers' competencies development skills offered in professional development tend to influence performance of teachers in secondary schools. This study concludes that, improved use of teaching aids, maximize teaching time, increase teaching ability, and guiding students activities are attributes of teachers' competencies development skills that were found to influence teachers job performance.

Generally, the study concludes that, competencies development skills acquired by secondary school teachers are not significant related to their performance. However,

based on the study discussion of the findings, this study further concludes that not all attributes which are used to measure teachers' competencies development skills do push teachers to perform well in their duties. This is due to the contextual issue in which teachers work and support from their school they use to teacher.

### **6.2.3 The influence of Environmental Contextual Skills Development on Performance of Teachers**

In relation to teachers' job performance, it was hypothesized that environmental learning context skills has positive and significance influence on performance of teachers' in secondary schools. To evaluate the strength of significant influence of environmental contextual skills on performance of teachers the standardized estimate and critical ratio in structural equation modeling was used. A yield of positive standardized path coefficient ( $\gamma$ ) of 0.253 was yielded which indicated that teachers' job performance are positively associated with influencing teachers' job performance.

The results have also yielded a critical ratio of 4.898 and p-value of 0.000 which indicate a significant influence. Moreover, the four measures of environmental contextual skills namely improved school counseling; improved community relationship, improved learners relationship and improved co teachers relationship were all found to be positive and significant. This means that for teachers to improve their job performance they need to be exposed to environmental learning context skills namely improved school counseling, improved community relationship, improved learners relationship and improved co teachers relationship. This study

concludes that when teachers are exposed to environmental learning contextual skills namely improved school counseling, improved community relationship, improved learners relationship and improved co teachers relationship, are likely to improve their performance.

Generally, the study concludes that, the environmental learning contextual skills possessed by the teachers have a strong significance influence on their performance. However, based on discussion of the study finding, it can be concluded that not all skills possessed by the teachers are rewarding. This is due to the contextual environment in which teachers are operating.

### **6.3 Study Implications**

This section presents the theoretical, policy, managerial and practical and research implications of the study drawn from the findings, discussion and conclusions. Theoretical implications highlight the contributions of the study to the literature on the contribution of professional development on teachers' job performance.

Implication for researchers addresses the contributions of the study in advancing the methodology of the prior studies on the contribution of professional development on teachers' job performance. Managerial implications relate to the work practices of teachers who are attending training as part of their professional development in improving their job performance. The policy implications include recommendations for addressing policy issues relating to the development and speeding up the teachers professional development and teachers job performance.

### **6.3.1 Theoretical Implications**

Grounded in the Human capital theory and Expectancy theory literature, this study theoretically developed and empirically evaluated an integrated research framework incorporating factors from Expectancy theory and Human capital theory, for assessing the influence of professional development on performance of teachers in public secondary schools. While the training of employees and performance were typically studied separately in the literature (Ewetan, et al., 2015; Habibu, 2015; Odumosu et al., 2018:).

The results of the current study suggest that teachers' professional development is linked to human capital theory and expectance theory to explain the performance of teachers' in secondary schools. This unified perspective helps us to gain a more holistic picture of the relationship between the professional development and performance of teachers' in Tanzania public secondary school.

Furthermore, the construct of these theories in the current study are modified with measured variable borrowed from other empirical study which helped to provide further modification of the theories. The results of this study have given evidence of robust applicability of the integration of human capital theory with expectance theory using measured variable from empirical evidence. Researchers can now use our model which is proven to provide a useful framework for studying the influence of professional development on performance of teachers' in secondary schools.

Reviews of the recent literature on teachers job performance shows that most of previous studies focused on the influence of teachers professional development on



job performance as simple dichotomy or simply one dimension (Ewetan, 2015, Nabila, 2017: Winful and Hervie, 2016, Rahman, 2011;, Sephania et al.,2018) and accounts for the missing link the teachers performance measure as a way of explaining teachers job performance.

Studies have described that teachers job performance can be measured from basic operations that includes teachers commitment, students performance, school performance, teachers attendance (Ado, 2015: Askafai, et al. 2016: Kazeen and Adeokin, 2017: Loreta et al.,2016: longYe. 2013; Kaur,2014: Shukla,2014; Setiawan et al.,2018). This is a significant contribution to the academic literature where in the current study the researcher has advanced the integration of human capital theory and expectance theory by measuring the dependent variable teachers performance with indicator variable namely teachers commitment, students performance, school performance rather than one simple variable such as student performance.

The major contribution of this study has been to draw on prior research in the area of professional development in order to characterize performance of teachers using on professional development dimensions. Characterizing and measuring performance of teachers' on these dimensions had the advantage of first providing a richer picture of the performance of teachers in public secondary schools and second, it enabled the impacts of professional development to be determined for each measurement indicator of performance of teachers (teachers commitment, students performance, school performance). This extends previous studies and theories on job performance,

which have tended only to consider performance as simple indicator variable of one item such as student performance rather than a combination of attributes.

It is envisaged that the framework devised in this study to characterize and measure the influence of professional development on performance of teachers' had wider application. It could, for example, be applied in replication studies in higher education, as well as in studies of the influence of professional development on teachers in primary schools and teachers colleges. The model can be used for further testing of the proposed factors on other populations to further the relevance of professional development on performance of teachers' in other context.

### **6.3.2 Implication to Policy Makers**

The study finds and concludes that teachers' competencies development brought by in service training has a significant influence on performance of teacher's. The validated models segregate the characteristics of teachers' competencies development that could influence performance of teachers. In each case improved use of teaching aids, maximize teaching time, increase teaching ability, and guiding students activities are of an overriding influence on performance of teachers'.

These call for policies that help to create teachers' competencies development by improving teacher's use of teaching aids and increase teaching ability. In addition, from the finding which call for a policy that could help teachers to maximize teaching time and guiding students activities. The policy also should encourage the district council to organize professional development training and embrace on an entrepreneurial culture that leads to greater understanding of opportunities offered by

teachers' professional development. While national policies and strategies have put a lot of emphasis on the training for trainers in general, the current study suggests that the development of the education policy should address teachers' competencies professional development at the national level and regional level is imperative for professional development and performance of teachers'. Therefore, the study argues for national policies that address professional development issues at the national and at regional both of which underscore school culture as necessary for teachers professional development programme.

Policy and public interventions that emphasize both the leaning environmental contextual knowledge and skills are important. Teachers should be facilitated through better policy interventions that enhance learning and knowledge sharing on opportunities offered by professional development and its impact on their performance. Additionally, teachers should be encouraged and assisted to embrace more professional development behavior through proper policy guidelines. There is a need to have policy interventions designed to address teachers training services at ward level and school level. In line with this, public school should, in a way, be encouraged to share professional development facilities, knowledge, experience and skills among themselves. In that way, even conservative school performance could transcend.

### **6.3.3 Managerial and Practical Implication**

At managerial level, the district education officers are the ones who derive the equation that leads to professional development. In this regard, a resources

endowment of the school is mainly a subject that is defined by district education officers. In this case, it is implied that district education officers should strive to better understand the specific school activities they run and manage and thus align the training resource acquisitions and deployment to meet and fit the activities and needs of the schools. More importantly, they should strive to gain more knowledge that gives them the ability to coordinate and influence cost effective professional development programme.

In a situation where the district education officer lacks the necessary school knowledge and experience, the best option is to develop by training or hiring people with such skills. Additionally, they are to understand the various training options and once sourcing options are in order, district education officers could differentiate through school networks and contacts which influence the availability of the technical training support as well as reliable training services.

As for the school themselves in general, the findings from this study could be used by individual school to compare their current school status relative to other school in relation to professional development programme. Ward education officer and Head of school could use the framework in this study to assess the conditions under which professional development could be adopted; this should yield greater benefits from professional development programme. The findings could also serve as point of reference for other school in private sector that plan to adopt professional development programme . Most importantly, the results of this study could be

translated into a formal and coherent professional development strategy by secondary schools.

#### **6.3.4 Implications for Researchers**

The current study provides a guideline for researchers interested in professional development or related services in public secondary school setting. In particular, the philosophical, data collection instrument, validity and reliability, selection of variables and sampling procedure should also enlighten researchers on the methodological aspects of obtaining data from education setting in a local context of Tanzania.

This research has contributed to the field of methodological literature through the use of the quantitative approach for developing an understanding of the contextual forces on professional development and teachers' job performance. Given this situation this research has contributed to advance the research approach of prior studies evidence in the quantitative approach which results in better understanding of the context issue and at the same time providing explanatory power of the model but also has helped to provide empirical evidence of the suitability and applicability of quantitative approach in Tanzania public secondary school context for future similar studies.

#### **6.4 Recommendation for Future Research**

This study focused only on professional development and job performance relationship among public secondary schools in a few selected regions of Tanzania Mainland. Further research should consider the contribution of professional

development on job performance for teachers from colleges and primary schools in the context of Tanzania. This study confined itself to randomly selected public secondary schools in the four regions based on Tanzania Mainland of Arusha, Coast (Pwani), Njombe and Singida.

Thus, the resultant study findings may not necessarily be applied to other regions in Tanzania context and private schools as well. Against this backdrop, similar studies should be extended to other public secondary schools in other regions. In addition, a comparative study can be done to compare similar features for public and private secondary schools to determine, in a comparative manner, how teachers' INSET training enhances their job performance.

Future studies should also consider the inclusion of variables such as leadership, personality, values, role perceptions and motivation. The inclusion of such variables can further enhance the understanding of the influence of training and, hence, performance of teachers in a non-Western and resource-poor work environment such as Tanzania.

In the light of the correlations between professional development and job performance, future research studies could also seek to determine the role of the teaching environment, parental support, school leadership, community awareness as variables in influencing teachers' performance. Future studies should also consider how INSET training contributes to the improvement of organisational change, organisational climates, e-learning, knowledge sharing from the workplace, as important determinants of employees' performance in an organisation.

The result of the study revealed that pedagogical knowledge development had negative significant to the performance of teachers in secondary schools. The empirical studies in one hand supported the position that professional development provide techniques and instructional guide to teachers to improve teaching activities in the schools while other empirical studies have mentioned other factors which are necessary for the performance of teachers in secondary schools including background of students selected to join secondary schools, number teachers visé the number of students, presence of teacher guide as well as presence textbook and laboratory. This contradicting view call for research to observe whether the same results will be obtained if the different method in the data collection and data analysis were employed on the same relationship between pedagogical knowledge development on performance of teachers.

### **6.5 Limitations of the Study**

The study was conducted in four regions of Tanzania Mainland, hence leaving out other regions with the similar problems. As such, the generalisation of the findings of the study become difficult. For data collection, the study used only questionnaires and documentary review and, hence, left out other methods which might have been relevant to this study which include interviews and focus group discussions.

The teachers from the schools were randomly selected to be included in the sample. In the situation like this, there is a possibility of leaving out teachers who are information-rich in the qualitative sense, hence making the findings fail to capitalise on their knowledge base. The data of the study were subjected to multiple regression

to establish the relationship between variables that are pedagogical knowledge, teacher contextual skills and teacher competencies as independent variables, on the one hand, and job performance as a dependent variable, on the other hand. This approach limited the findings from using other similar methods. The study applied a 5-point likert scale measure in the research instruments.

The use of the likert scale has the some limitations as many respondents who are confused by the questions or who wish to respond in way that is not available on the scale will respond by giving a middle-level or non-committal responses. These limitations encountered in the use of likert scale in investigating the contribution of training in terms of knowledge, skills, competencies and attitudes to the enhancement of the teachers' job performance in selected Tanzania's secondary schools notwithstanding, the study results have not been compromised as many respondents responded to items of the questions according with only a small number indicating moderate agreement, which could signal non-committal answers.



## REFERENCES

- Abeba, M. (2015). The impact of training and development on employee performance and effectiveness in Ethiopia. *Journal of human resources and sustainability studies*, 3, 188-202.
- Adam, O., Stella, O., Mwanangoro, S. and Yona, K. (2017). The importance of training and development on performance for public water utilities in Tanzania. *African Journal of Education and Human Resources Management*, 2, 10-18.
- Adesole, M., Oyenyi, K., and Adeyemi, M. (2013). Empirical study of the relationship between staff training and job performance among Nigerian bank institutions. *International Journal of Academic Research in Education and Management Sciences*, 6, 108-115.
- Ado,T. (2015). Influence of learning environment on students' academic achievement in Mathematics: A case Study of Some Selected Secondary Schools in Yobe State – Nigeria, *Journal of Education and Practice*, 6. 40-44.
- Adunola, O. (2011). The impact of teachers' teaching methods on the academic performance of Primary School Pupils in Ijebu-Ode Local cut Area of Ogun State," Ego Booster Books, Ogun State, Nigeria. 2.
- Ahmad, I. and Din, S. (2009). Evaluating training and development. *Journal of Medical Sciences*, 7, 165-166.
- Ahmad, S., and Shahzad, K. (2011). Human resources management and employee performance: A case of university teachers of Azad Jammu and Kashmir (AJK) in Pakistan. *African Journal of Business management*, 5, 5249.
- Al-Awawdeh, W. (2011). Impact of using training strategy on the performance of employees at the department at Al Bayt University. *Al Manarah for Research and Studies* 17, 75-108.
- Alter, J and Cogshall, G. (2009). Teaching as a clinical practice profession: Implications for teacher preparation and state policy. New York: New York Comprehensive Center for Teacher Quality.

- Amin, A. (2013). The impact of employees training on the job performance in the education in Pakistan, *Journal of Scientific Research*. 17, 1273-1278.
- Amin, T. and Shila, S. (2015). Enhancing organization effectiveness by performing appraisal, training, and employees' participation. *European Journal of business management*, 7 .12-36
- Amstrong, M. (2014). *Amstrong handbook of performance management: an evidence based guide to delivering high performance* 5th edition London .
- Andreas, G (2018). How we can and why we have to reconstruct the teaching of students in schools. *International Journal of the lesson and learning studies*, 7. 85-97.
- Ang, H., Bartram, T., McNeil, N., Leggat, G. and Stanton, P. (2013). The effects of high-performance work systems on hospital employees' work attitudes and intention to leave: a multi-level and occupational group analysis. *The International Journal of Human Resource Management*, 24, 3086-3114.
- Anna, L. (2017). The deputy principal instructional leadership roles and professional learning, perceptions of secondary schools in Australia.
- Antonakis, J. and Dietz, J. (2011). Looking for validity or testing it, the perils of stepwise regression, extreme-score analysis, heteroscedasticity, and measurement error. *Journal of Business management*. 50, 409-415
- Aquins, H. and Kraiger, K. (2009). Benefit of training and development for individual and teams, organizational and society. *Annual psychology Journal*, 60. 45174 -45180.
- Argon, T and Goksoy, (S. 2015) Teacher views on performance and rewards in the framework of Expectancy Theory, *Journal of Education Science Research*, 5, 354-567.
- Armstrong, M. (2009). *Handbook of Human Resource Management Practice. 11th Edition*, Kogan Page Limited, London.
- Asaju, K. (2008). Manpower training and development: An essential for achieving organizational goals. *Journal of management and enterprise development*, 5, 15-30.

- Asfani, K., Suswanto, H. and Aji, P. (2016). Influential factors of students' competence World Transactions on Engineering and Technology Education, 14, 3
- Asim, M. (2013). Impact of motivation on employee performance with effect of training: specific to education sector in Pakistan. *International Journal of Scientific and Research Publications* 3, 1-9
- Atan, A. Raghanvan, S. and Mahmood, N. (2015). Impact of training on employees' job performance: A case study of Malaysia small medium enterprise *Journal*, 5, 40-50
- Athar, R. and Shah, M. (2015). Impact of training on employee performance in the banking sector Karachi. *Journal of Business and Management*, 17, 58-67.
- Ayeni, J. (2011). "Teachers professional development and quality assurance in Nigerian Secondary Schools," *World Journal of Education*, 1. 143-149.
- Babbie, E. and Mouton, J. (2001). *The practice of social research*. South African: Oxford University Press.
- Bandura, A. (1977). *Self-efficacy: Toward a Unifying Theory of Behavioral Change*. *Psychological Review*, 84. 191-215.
- Banerjee, J., Banerjee, B. and Bihowmik, M. (2015). Role of Pedagogy in Effective Teaching *Journal of Education Research and Review*, 2, 01-05
- Bartram, D., Robertson, I. and Callinan, M. (2002). Introduction: A Framework for Examining Organizational Effectiveness: The Role of Psychology, 1-12. UK: Wiley.
- Batty, D. and Franke, L. (2008). Transforming identities: Understanding teachers across professional development and classroom practice. *Teacher Education*
- Baumert, J., Kunter, M., Blum, W., Brunner, M., Voss, T., Jordan, A. and Klusmann, U (2010). Teachers' mathematical knowledge, cognitive activation in the classroom, and student progress. *American Education Research Journal*, 47, 133-180.
- Bayissa, A. (2015). The effects of training and development on employee performance and effectiveness, *Journal of Human Resource and Sustainability studies*, 3, 188-202.

- Beardwell, N. and Holden, B. (1993). *Managing for Success. 2nd Edition*, Publisher, England Prentice Hall.
- Bertram, C. (2004). *Understanding research: an introduction to reading the research. (2nd ed)*. Pietermaritzburg: School of Education, Training, and Development, University of KwaZulu-Natal.
- Best, J. and Khan, V. (2006). *Research in education (10th ed.)*. Boston: Allyn and Bacon.
- Bhalalusesa, E., Westbrook, J., Lussier, K., Sima, R., Qorro, M., Katabaro, J., Matonya, M., Tiboroaha, J. and Nzima, I. (2011). Teacher Preparation and Continuing Professional Development in Africa: The Preparation of Teachers in Reading and Mathematics and Influence on Practices in Tanzanian Primary Schools. Centre for International Education: University of Sussex.
- Bicaj, A. and Treska, T. (2014). The effect of teachers professional development in raising the quality of teaching *Academic Journal of International studies*, 3, 369-378
- Blass, F. and Ferris, R. (2007). Leader reputation: The role of mentoring, political skill, contextual learning, and adaptation. *Human Resource Management Journal*, 46, 5-19.
- Blömeke, S., Paine, L., Huang, T., Hsieh, J., Schmidt, H., Tatto, T. and Bankov, K. (2008). Future teachers' competence to plan a lesson: First results of a six-country study on the efficiency of teacher education. *Mathematics Education Journal*, 40, 749–762.
- Boselie, P., Paauwe, J. and Jansen, P. (2001). Human resource management and performance: lessons from the Netherlands. 12, 1107-1125.
- Botha, R. J. (2010). School effectiveness: Conceptualizing divergent assessment approaches, *South African Journal of Education*, 30, 605-620.
- Bressoux, P., Kramarz, F. and Prost, C. (2009). Teachers' training, class size, and students' outcomes: Learning from administrative forecasting mistakes. *The Economic Journal*, 119, 540-561.
- Bryman, A., & Cramer, D. (2009). Quantitative data analysis with SPSS 14, 15 and 16: A guide for social scientists. London:

- Burton, D. and Bartlett, S. (2009). *Key issues for education research*. Los Angeles: SAGE.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic Concepts, Applications, and Programming* (2nd ed.). New York:
- Chedié R. (2004) *Pedagogy Reforms in Tanzania learning from Experiences* . In N.Mtana, E. Mhando (Eds) . *Teaching and Learning in primary Education in Tanzania*
- Chen, C. and Huang, W. (2009). Strategic human resource practices and innovation performance—the mediating role of knowledge management capacity. 62, 104-114.
- Chilumika, N. (2013). *Teacher educators' professional development for implementing competency-based curriculum: A case of teachers' colleges in Tanzania* (Unpublished M.A Education Thesis).
- Cohen, D., & Soto, M. (2007). Growth and human capital: Good data, good results. *Journal of Economic Growth*, 1(3), 113-207.
- Colbert, A., Brown, S. and Choi, S. (2008). An investigation of the impacts of teacher-driven professional development on pedagogy and student learning.
- Collins, J. and Clark, D. (2003). Strategic human resource practices, top management team social networks, and firm performance: The role of human resource practices in creating an organizational competitive advantage. 46, 740-751.
- Coton, G., Niez, A. Lumbab, T and Goden, T. (2016) Influence of school heads' instructional competencies on Teachers' management in Philippines *International Journal of Engineering sciences and Research Technology*
- Dabale, .P., Jagero, N. and Nyauchi, M. (2014). “The relationship between training and employee performance in Zimbabwe”, *International Journal of Human Resource Studies*, 4, 61-72
- Darling- Hammond, L., Mauq, E., Garder, M (2017). *Effective Teacher professional Development*, Learning Policy Institute Research.
- Darling, L. and McLaughlin, W. (2011). *Policies that support professional development in an era of reform*. Pub Kappan.

- Darling, L., Wei, C., Andree, A., Richardson, N. and Orphanos, S. (2009). Professional learning in the learning profession: A status report on teacher development in the United States and abroad.
- Davis, L., Berge, Z., Verneil, D., Berge, N., and Smith, D. (2002). The Increasing Scope of Training and Development Competency. *Benchmarking: An International Journal*, 9, 235-289
- Delise, A., Gorman, C., Brooks, M., Rentsch, R. and Johnson, D. (2010). The effects of team training on team outcomes: A meta- analysis. *Performance Improvement Quarterly*, 22, 53-80.
- Desimone , A and Garet, M. (2015) Best practices in teachers professional development in the United States psychology, *Society and Education Journal*, 7, 252-263
- Desimone, M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 181-199.
- Devellis, R.(2012). *Scale development Theory and application* . Los Angles sage
- Drost, E. (2012). *Validity and Reliability in Social Science Research*. *Education Research and Perspectives*, 38, 105-123.
- Ekpoh, U and Eze, G. (2015) Principals supervisory techniques and teachers job performance in secondary schools in Ikom Education Zone Cross River State, Nigerias, *British Journal of Education*, 3, 31 – 40
- Ellis, P., Bell, S., Ployhart, E., Hollenbeck, R. and Ilgen, R. (2005). An evaluation of generic teamwork skills training with action teams: effects on cognitive and skill based outcomes. *Personnel Psychology Journal*, 58, 641-672.
- Elnaga, A. and Imran, A. (2013). The effect of training on employee performance. *European Journal of Business and Management*, 4, 137-147.
- Eraut, M.(1998). Non formal learning and tacit knowledge in professional work, *British Journal of Educational Psychology*, 70, 113-136
- Eric, O. (2012). The effect of training and development on employee performance at Accra Polytechnic. Unpublished master's thesis). Kwame Nkrumah University of Sciences and Technology. *European Journal of Business and Management*, 7, 2030-2032

- Ernest, C. (2018). Enhancing Teachers performance through Training and Development in Ghana Education service, *Journal of Human Resource Management*, 6, 1-8
- Essien, E., Akpan, O. and Obot, M. (2016). The influence of In-service training and workshops attendance by social studies teachers on academic performance of students in Junior secondary schools in Nigeria , *Journal of Education and Practices*, 7, 31-35
- Estaji, M. and Dezfoolian, S. (2018). Teachers' Pedagogical knowledge bare as a predictor of teachers reflectivity; comparing different components and perceptions *International Journal of Instruction*, 11, 491-510
- Evans, L. (2011). The shape of teacher professionalism in England: professional standards, performance management, professional development and the changes. *British Educational Research Journal*, 37, 851–870.
- Falola, H., Osibanjo, A. and Ojo, I. (2014). The effectiveness of training and development on employees' performance and organization competitiveness in the Nigerian Banking Industry. Bulletin of the Transilvania University of Branson, *International Management Journal*, 7, 161-172.
- Fehintola, J.O.(2014). Teachers' characteristics as correlates of students' academic performance among secondary school students in Saki-west Local Government Area of Oyo State, *Journal of Educational and Social Research*, 4, 453-466
- Fejoh, J. and Faniran, V. (2016). Impact of in-service training and staff development on workers job performance and Optimal productivity in Public secondary schools in Osun State in Nigeria, *Journal of Education and Practices*, 7, 183-189
- Filipatali, T. (2013). Evaluation of professional development initiatives for science tutors in Diploma Teachers colleges in Tanzania (Unpublished M.Ed Science thesis). University of Dar es Salaam. Dar es Salaam
- Flossmann, L. and Pohlmeier, W. (2006). Casual returns to education: A Survey of Empirical Evidence for Germany. fourth graders in North Cyprus. *The Journal of Educational Research*, 4, 234-243.

- Fugar, F., Mensah, A., Adinyira, E. (2013). Human capital theory implications for the Ghanaian construction industry development, *Journal of Construction Project Management and Innovation*, 3, 464-479
- Galanou, E. and Priporas, V. (2009). A model for evaluating the effectiveness of middle managers' training courses: evidence from a major banking organization in Greece. *International Journal of training and development*, 13, 221-246.
- George, D and Malley, P. (2003). *SPSS for window step by step. a sample guide and references (4th ed.)*. Boston.
- George, N., Abisola, O., and Adam, H. (2017). Effective classroom management and students' academic Performance in secondary schools in local Government in Nigeria *Research in Pedagogy*, 7, 43-56
- Geroy, D. and Wexley, P. (2001). Changing the mindset, the training myth and the need for a word class performance. *International Journal of human resources management*, 4, 586-600
- Gewasari, M and Manulling, B. (2017). The determinant factors that affect teacher performance of public senior high school in Deli Serdang District, *Journal of Research and Methods in Education*, 7, 12-21
- Gharakhani, D., Mavi, K. and Hamidi, N. (2012). Impact of supply chain management practices on innovation and organizational performance in Iranian Companies. *Management Journal*, 6, 5939-5949.
- Goden, T., Lumbab, T., Niez, A. and Cotton, G. (2016). Influences of school heads institutional competences on teacher management in Leyte Division Philippines, *International Journal of engineering Sciences and Research technology*, 5, 513-532
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8, 597-607.
- Gopalan, S., Mohanty, S. and Das, A. (2012). Assessing community health workers' performance motivation: a mixed-methods approach to India's Accredited Social Health Activists (ASHA) programme. *BMJ Open*, 2(5)



- Grimard, M (2018). Chicken Dance anyone, a quick experiential exercise for learning Expectancy Theory, *Developments in Business simulation and Experiential Learning Research*, 45.
- Gritz, M. (1993). The impact of training on the frequency and duration of Employment. *Econometrics*, 57(1), 21-51.
- Guarte, M. and Barrios, B (2006). Estimation under purposive sampling. *Communication in Statistics- Simulation and Computation*. 35, 277- 284.
- Gupta, C. (2007). *Human resource management* (8th ed.). New Delhi.
- Guskey, R. (2009). Closing the knowledge gap on effective professional development. *Educational Horizons*. Retrieved from [www.eric.ed.gov](http://www.eric.ed.gov)
- Hair, J. F., Black, B., Babin, B., and Anderson, R. E., (2010). *Multivariate data analysis*. (7th ed.). London:.
- Hakim, A (2015). Contribution of Competence Teacher (Pedagogical, Personality, Professional Competence and Social) On the Performance of Learning. *The International Journal of Engineering and Science*, 4, 01-12
- Hales, L. (1986). Training: A Product of Business Planning. *Training and Development Journal*, 40, 65-66.
- Hammer, J.(2001). *The Practice of English Language Teaching*. Pearson Educational Ltd., Edinburgh
- Hasbay, D and Erkut, A.(2018). Factors that affect the performance of teachers working in secondary-level education. *Academy of Educational Leadership Journal*, 22, 1-13
- Heike, B. (2017). Developing vocational competencies in secondary schools in the United Kingdom. *Journal of training and development*, 41, 39-49
- Hemaloshinee, V. (2013). The Influence of teachers' creativity, attitude and commitment on students' proficiency of the english language *Journal of Research and Method in Education*, 1,12-19
- Henry, J. (1998). Computer self-efficacy and outcome expectations and their impacts on behavioral intentions to use computers in non-volitional settings. *Journal of Business and management*, 1, 45-58.

- Hervie, D. and Winful, E. (2018). Enhancing Teachers performance through training and Development in Ghana Education Service. *Journal of Human Resources management*. 6, 1-8
- Hightower, A. and Zacharia, G. (2011). Improving students leaving by the support of quality teaching, Editorial project in education in Nigeria.
- Hobson, A., Maxwell, B., Stevens, A., Doyle, K. and Malderez, A. (2015). Mentoring and coaching for teachers in the further education and skills sector in England.
- Hochberg, D. and Desimone, M. (2010). Professional development in the accountability context: Building capacity to achieve standards. *Educational Psychologist Journal* , 45, 89-106
- Hoe, S. L. (2008). Issues and Procedures In Adopting Structural Equation Modeling Technique. *Journal of Applied Quantitative Method*, 3, 79-83.
- Holbeche, L. (2001). *Aligning Human Resources and Business Strategy*, Butterworth-Heinemann, Oxford
- Holloway, J. (2009). Performance management from multiple perspectives: taking stock”, *International Journal of Productivity and Performance Management*, 4, 391-399
- Hooper, D., Coughlan, J. and Mullen, M.(2008).Structural equation modelling: Guidelines for determining model fit. *The Electronic Journal of Business Research Methods*, 6, 53 – 60.
- Hox, J. and Bechger, M. (2012). *An Introduction to Structural Equation Modelling*. Family Science Review, 11, 354-373.
- Hoyt, W., Leirer, S. and Millington, M. (2006). *Analysis and interpretation of findings using Multiple Regression Techniques*. Rehabilitation Counselling Bulletin,4, 223-233.
- Ibrahim, R., Ali, B. and Kayonde, B. (2017). The effect of soft skills and training methodology on employees performance in Malaysia. *European Journal of training and development*, 41, 388-406
- Ijigu, W. (2015). The effect of selected human resource management practices on employees’ Job satisfaction in Ethiopian Public Banks”, *Emerging Markets Journal*, 5, 1-16

- Imonje,R., Nyagah, R. and Njoki,A.( 2017). Influence of learning environment and socio-behavioural support on academic performance of refugee children in public Primary Schools in Ruiru Sub-County, *Kenya Stratford Peer Reviewed Journals and Book Publishing*, 1, 9 - 18
- Iqbal, N., Ahmad, N., Haider, Z., Hamad, N. and Mir, S. (2014). Impact of training and development is on the employee performance: A Case Study of Different Banking Sectors of North Punjab. *Arabian Journal of Business and Management Review*, 4, 19-24.
- Ismail, H. (2017). Key performance indicators for excellent teachers in Malaysia, *international Journal productivity and performance*, 5, 305-316
- Iwu, C., Gwija, S., Benedict, H. and Tengeh, K. (2013). Teacher job satisfaction and learner performance in South Africa. *Journal of economics and behavioral studies*. 12, 838-850.
- Jagero, N., Komba, V. and Mlingi, D. (2012). The relationship between the Job training and employee's performance in Courier Companies in Dar es Salaam, Tanzania. *International Journal of Humanities and Social Science*, 2, 114 120.
- Jehanzeb, K. and Beshir, A. (2013). Training and development program and its benefits to employee organization. *European Journal of Business and Management*, 5, 243-252.
- Jiang, K. Lepak, P. , Han, K. , Hong, Y. , Kim, A. and Winkler, A. (2012). “Clarifying the construct of human resource systems: relating human resource management to employee performance”, *Human Resource Management Journal Review*, 22, 73-85
- Jie, S. and Roger, D. (2006). Training and management development in Chinese multinational enterprises, *employee relations Journal*, 4, 342-362.
- Jiohong, Z. (2018). teachers support for carrier development in Hongkong, *Journal of career Development*, 23, 122-144
- Johnson, J. (2008). The principal’s priority in a educational leadership, 66(1), 72-76. New results on the effects of teacher preparation on student achievement. *Economics of Education Review Journal* , 28, 49-57.

- Jones, M., Chonko M., Rangarajan, F. and Roberts, J. (2008). The role of job attitudes, turnover intentions and salesperson performance. *Journal of Business Research*, 60, 663-671.
- Julius, L. (2018). An examination of mathematical teachers preparations and teaching experiences in Africa and United States of America *Journal for Multicultural education*, 12, 161-171
- Kagoda, M. (2011). The influence of the schools learning environment on the performance of teacher trainees on school practice - A Case of the School of Education, Makerere University, Uganda, *Research Journal of Social Sciences*, 3, 244-262
- Kahangwa, G (2014). The effect of knowledge-based economy on higher education in practices in Tanzania paper on education published in the University of Dar es salaam
- Kaur, M. (2014). Teaching competency of secondary school teachers in relation to emotional intelligence. *International Journal of Learning, Teaching and Educational Research*, 3, 83-90
- Kazeem,O. and Adeokin, S. (2017). The impact of leadership style and sense of competence on the performance of post-primary school teachers in Nigeria. *International Journal of Educational and Pedagogical Sciences*, 11, 134-160
- Kennedy, J. (2009). The Impact of Training and Development on Job Performance (Doctoral Dissertation, Service of Ghana) A thesis submitted to the Institute of Distance Learning, Kwame Nkrumah University of Science and Technology).
- Kessler, R., Health, A., Kendler, K. and Neale, E. (1994). Multiple regression with data collected from relatives *Multivariate Behavioral Research Journal*, 29, 33-61.
- Khan, R., and Khan, A. (2011). Impact of training and development on organizational performance. *Global Journal of Management and Business Research*, 11, 62-68.

- King, E. (2013). Investigation of factors hindering quality education in secondary schools in Mbeya, Tanzania; *International Journal of Learning and Development*, 3, 52-62
- Kitta,S. (2004). Enhancing mathematics teachers pedagogical content knowledge and skills in Tanzania Enschede. University of Twente.
- Komara, E.(2007).Competencies required of a master, <http://suifuladi.wordpress.com/competencies>, teacher retrieved in 2007.
- König, J., Blömeke, S., Paine, L., Schmidt, H., & Hsieh, J. (2011). General pedagogical knowledge of future middle school teachers: On the complex ecology of teacher education in the United States, Germany, and Taiwan. *Journal of Teacher Education*, 62, 188-201.
- Kruger, S. (2006). Developing non technical and technical skills through co-operation education, the third vittach international conference July, 2006.
- Kuluchumila, R.(2014). Preparation and development of secondary schools heads in Tanzania, *British Journal of education*, 2, 9-39
- Kumar, C. (2014). The impact of training and development on employee performance. *Singaporean Journal of Business Economics and Management Studies*,3, 72-105.
- Kumar,V.(2013). The influence of teacher's professional competence on students' achievement, *Journal of Engineering*, 3, 12-18
- Lange, R. (2000). The identification of the most important non technical and technical skills required by students in Malaysia, *Journal of Education*, 25, 225-257
- Leanne, C. (2018). Management student's expectations and perceptions on the work readiness *International Journal of Educational Management*, 32, 825-850
- Leedy, P. and Ormrod, J. (2010). *Practical research: Planning and design* (9th ed). Boston: Pearson Education International.
- Liakopoulou, M (2011). The professional competence of teachers: *International Journal of Humanities and Social Science*, 1, 66-75
- Likert, R. (1932). *A Technique for the Measurement of Attitudes*. Archives of Psychology, 140, 1-55.

- Linnenburg, F.(2011). Expectancy theory of motivation: *International Journal of Management Business and Administration* 15,1-6.
- Long Ye, A.(2013). Impacts of teachers' competency on job performance in research Universities with industry characteristics: *Journal of Industrial Engineering and Management*, 7, 1283-1292
- Longnecker, O. & Fink, S. (2005). "Management training: benefits and lost opportunities", *Industrial and Commercial Training*, 37, 73-79.
- Loreta T. Goden, T. Lumbab, A. and Vennie G.(2016). Influence of school heads' instructional competencies on teachers' management in Philippines. *International Journal of Engineering Sciences and Research Technology*, 14, 513-535
- Loth, G. (2012). An assessment of the factors affecting the effective management of the staff performance appraisal function in work organizations Universities in Tanzania. Unpublished Doctoral Thesis, Open University of Tanzania.
- Lyimo,S., Too, J. and Etich, K, (2017). Assessment of teaching staff adequacy in Tanzania community secondary schools, A case study of Arusha District council. *International Journal of education policy , Research and review*, 4, 81-90
- Mabula, N. (2012). Promoting sciences subjects choices for secondary schools students in Tanzania, *International Journal of Academic Research*, 9, 234-245
- Mackelprang, W., Jayaram, J.and Xu, K. (2012). The influence of types of training on service system performance in mass service and service shop operations. *Journal of Economics*, 138, 183-194.
- Macpherson, A. and Holt, R (2007). Knowledge.Learning and Small Firm Growth: A systematic review of the evidence: research policy, 36, 172-192
- Madukoma, E. and Okafor, N. (2014). Effect of Training and Motivation on the Job Performance of Library Personnel of University of in Nigeria. Open Access Library Research 5.
- Mafumiko, F. and Tilya F. (2010). The compatibility between teaching methods and competencies based curriculum in Tanzania. Education and Development, *Journal of the school of Education University of Dar es Salaam*, 29, 37-54

- Maina, P. and Waithaka, P.(2017), Effects of on the job training on performance of the Kenya Police Service. *Journal of Business and Management* , 19 (8), 64-71
- Maliki, M., Ghafoor, M. and Naser, S. (2011). Organization effectiveness A case study of telecommunication and banking sector in Pakistan. *Journal of psychology and Business*, 2, 37-49.
- Martin, J. (2005). *Organizational behavior and management (3rd ed)*. London.
- Mary, A. (2014). Factors affecting the performance of students in the English language in Zanzibar secondary schools, *Journal of Education and Practices*, 5, 121-223
- Masanja, S. (2013). Effects of workplace conditions on primary school teachers' job satisfaction in Tanzania. Unpublished Doctoral Thesis, University of Dar es Salaam, Tanzania.
- Masood, T. (2010). Impact of Human Resource Management (HRM) Practices on Organizational Performance: A Mediating Role of Employee Performance (Doctoral dissertation, MOHAMMAD ALI JINNAH UNIVERSITY).
- Mbamba, U. and Gesase, A. (2014). Predictive ability secondary schools students performance to first year undergraduate students performance: *University of Dar es salaam Business schools students Journal of Business Management* .4, 64-124
- Mc Clelland, D. (1993). *The concept of competencies* in Spencer, L. and Spencer, B. (1993) Wiley, Newyork.
- McDowall, A. and Saunders, M. (2010). United Kingdom Manager's Conceptions of Training and Development. *Journal of European Industrial Training*, 34, 609-630.
- Mcgatha, B. Bush, W. and Rakes, C. (2009). The effects of professional Development in Formative Assessment on Mathematics Teaching performance and students' achievement <http://www.jmde.com> assessment for learning.
- Medina, R. (2010). Upgrading yourself-technical and non technical competencies. *IEEE potentials*, 29,10-29

- Meena, E. (2009). Curriculum innovation in teacher education: exploring conceptions among Tanzanian teacher educators. Ph.D Thesis, Åbo Akademi University
- Mehmood, N., Kamran, A., Sobia, I. and Afshan, S. (2012). Impact of training on employees performance; a case study of telecommunication sector in Pakistan. *Journal of contemporary research in Business management*, 4, 167-220
- Mfaume, H. and Bilinga, A. (2017). Prevalence of teachers professional malpractices in Tanzania public secondary schools. *Journal of Educational and training studies*, 5, 43-52
- Mizell, H. (2010). Why professional development matters. Retrieved from <http://www.learningforward.org>
- Mlyuka, E. (2015). The quest for a teacher job satisfaction-Job performance relationship in Tanzania public primary schools, Ph.D. Thesis, the Open University of Tanzania.
- Moghari, H., Lavasani, G., Bagherian, V. and Afshari, J. (2011). "Relationship between perceived teacher's academic optimism and english achievement: role of self-efficacy", *Journal of Social and Behavioral Sciences*, 15, 2329-2333.
- Mohamud, A. (2014). The effect of training on employees performance in a public sector in Kenya Doctoral Dissertation University of Nairobi.
- Moon, T. (2014). Mentoring the next generation for innovation in today's organization. *Journal of Strategic Leadership*, 5, 23-35.
- Moos, R. (1991). *Connections between schools, work and family setting in Fraiser, B. and Walberg, H. (Eds), Educational environment, evaluations antecedents and consequences Oxford, Pergaman, Press.*
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., and Spiers, J. (2002). Establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1, 1-19.
- Mosunmola A. (2016). Effective pedagogical skills in in-service teachers: *International Journal Science and Technology*, 20, 89-100



- Mugo, J. (2010). An examination of factors influencing employee turnover: A case of Teachers Service Commission in public secondary schools in Kenya. Unpublished Masters Project,
- Muhoho, J. and Mchome, J. (2014). Assessment of factors responsible for the performance of failures in public secondary schools in Tanzania. *International Journal of Innovation and scientific Research*, 9, 420-429
- Mumanthi, C. (2014). Effect of training on the performance of national police service. *Journal of Business and change management*, 5, 190-250
- Mundia, N. (2014). Role of Mentoring Programs on the Employee Performance in Organisations: A Survey of Public Universities in Kenya. *International Journal of Academic Research in Business and Social Sciences*, 4, 393-452
- Munjuri, G. (2013). Human capital, social capital, employee Empowerment, quality of decision and performance of commercial Banks and Insurance in Firms in Kenya PhD Thesis University of Nairobi.
- Murtini, W., Martono,T.(2015). The Effect of Pedagogic Competency, Personality, Professional and Social Competency Teacher to Study Achievement of Economic Lesson in State Senior High School of East Lombok District Academic Year 2015/2016, the 2nd International Conference On Teacher Training and Education Sebelas Maret University
- Murugan, A. & Rajoo, L. (2013). Students' perceptions of mathematics classroom environment & mathematics achievement: A Study in Sipitang, Sabah, Malaysia: Proceeding of the International Conference on Social Science Research, June 2013, Penang, Malaysia Organized By Worldconferences.Net
- Muzanda, A (2013). competences and students academic performance. *International Journal of Humanities and Social Science*, 3, 06 – 13
- Mwakyosi, G. (2013). The role of training in improving the performance of the police force in Tanzania Ph.D. thesis at Mzumbe University.
- Nabila, H. (2016). The influences of pedagogical competence and professional competence to performance of teachers social studies in TROLUWAN District , International conference on ethics of Business , Economics and social science

- Nadeem, M., Rana,S., Lone,H.,Maqbool,S., Naz, K., Akhtar, A.(2011). Teacher's competencies and factors affecting the performance of female teachers in Pakistan. *International Journal of Business and Social Science*, 19,234-270
- Nbina, B. (2012). Teachers competence and students academic performance in senior secondary schools chemistry. *Global Journal of educational research*, II, 15 – 18
- Ndunguru, S.(2015). The impact of on the job training on Employees Performance the case of secondary schools teachers in Songea Municipality (Master's Thesis, Open University of Tanzania).
- Neupane, R. (2015). Effects of coaching and mentoring on employee performance in the UK *International Journal of Social Sciences and Management*, 2, 123-138.
- Ngari, M. (2015). Influence of Training on Employees Performance a case of Judicial Lower courts in Kenya unpublished materials.
- Ngirwa, C. (2006). *Human resource management in African work organizations*. Dar es Salaam: National printing company.
- Ngulube, P. (2010). Mapping mixed research methods *in library and information science Journals in Sub Saharan Africa*, 42, 252-261.
- Nguni, S. (2005). A study of the effectiveness of transformational leadership on teachers job satisfaction, organizational commitment and organization citizen behavior in Tanzanian Primary Schools, Netherlands
- Ni, C. and Wang, Y. (2015). The impact of perceived organizational support and core self-evaluation on employee's psychological. *Journal of Human Resource and Sustainability Studies*, 3, 73-81.
- Nkonge, K. (2010). Factors that influence job satisfaction among secondary school teachers in Imenti South District in Kenya; Unpublished M.Ed Thesis, Chuka University College.
- Nkumbi, E. and Komba, W. (2008). Teacher professional development in Tanzania perception and practice. *Journal of International Cooperation in Education*,3, 67-83.

- Noor, A. (2009). Examining organizational citizenship behavior as the outcome of organizational commitment: a study of Universities teachers of Pakistan. November, 14.
- Nu'man, A. (2006). Relationship between training and performance of middle management in Yemen. A Thesis, Middle East University.
- Obot, M.(2018). Influence of teacher's competence in subject matter on students' interest in the learning of social studies education in Nigeria. *International Journal of Teaching and Education*, 3, 137 -15
- Odinga, M. (2010). Staff development programs and job performance of Lecturers of Moi University Ph.D. thesis Makerere University in Kampala.
- Odumasn, M., Olisama, O. and Areelu, F. (2018).Teachers content and pedagogical knowledge on students achievement in Algebra, *International Journal of Education and Research*, 6, 83-95
- Ogutu, M. (2012). *Competitive Strategies Adopted by Multinational Banks in Kenya*. Africa Management Review 2(1), 98-109
- Ojiekpo,O. and Charles E. (2015). Impact of instructional materials in teaching and learning of biology in Senior Secondary Schools in Nigeria. *International Journal of Social and Humanistic Sciences*, 62, 27-33
- Okechukwu, W.(2017). Influence of training and development employees performance on job satisfaction Among the staff of school of technology management and logistics , University Utara Malaysia. *Journal of technology Management and Business* 4,1-16.
- Okemakinde , T. and Olaniyan, D. (2008). Human capital theory: Implications for Educational Development. *Pakistan Journal of Social Sciences*, 5: 479-483.
- Okurame, D. (2008). Mentoring in the Nigerian academia experiences and challenges. *International Journal of Evidence Based Coaching and Mentoring*, 6, 45-56.
- Olabanji, O.(2015). Teachers' teaching experience and academic performance in mathematics and english language in public secondary schools in Nigeria. *International Journal of Humanities Social Sciences and Education*, 2, 123-134

- Olayinka, B.(2016). Effects of instructional materials on secondary schools students, academic achievement in social students in Nigeria. *World Journal of Education*, 6, 32-40
- Omari, I. (2012). The Ministry of Education and Vocational Training, Education Sector Human Resources situation analysis, Human resources for quality Education in Tanzania
- Omari, R., Ahmad, A., Hassan, S. and Roslan, S. (2017). Impact of perceived teachers competences on students performance evidences for mediating role of achievement in Malaysia. *International Research Journal of educational and sciences* 1, 2050-2158
- Ongalo, E.and Tari, J. (2015). Effect of employee motivation strategies on organizational performance: A Case of Electricity Generating and Distribution Firms in Kenya. *European Journal of Business and Management*, 7, 55-65.
- Onyango, W. and Wanyoike, M. (2014). Effects of training on employee performance: A Survey of Health Workers in Siaya County, Kenya. *European Journal of Material Sciences*, 1, 11-15.
- Onyango, I. (2012). The influence of training and development on employees' performance at Mudete Factory a Doctoral Dissertation University of Nairobi
- Opfer, D. and Pedder, D. (2011). Conceptualizing teacher professional learner. *Review of Educational Research Journal*, 81, 376-407.
- Orit, A. and Rinat, A. (2018). Teachers perceptions of empowerment and promotion during reforms. *International Journal of Educational Management*, 32, 155-170
- Otuko, H., Chege, K. and Douglas, M. (2013). Effect of training dimensions on employee's work performance: A Case of Mumias Sugar Company In Kenya. *International Journal of Business and Management Invention*, 2(9), 138-149
- Oyedele, V. and Chikwature, W. (2016). Factors that affect professional development in education on teacher efficacy in Zimbabwe, *European Journal of Research in Social Sciences*, 4, 1-16

- Pasaoglu, D. (2015). "Analysis of the Relationship between Human Resources Management Practices and Organizational Commitment from a Strategic Perspective: findings from the Banking Industry", International Strategic Management Conference, Procedia – Social and Behavioral Sciences, 315-324
- Peter, M. (2017). Developing teachers' capacity in Cambodia. An expanded model. *Journal of Asians Education and Development studies* 7(1) 2-14
- Peterson, J., Walumbwa, O., Avolio, J. and Hannah, T. (2012). "The relationship between authentic leadership and follower Job performance, *International Journal of Leadership Quarterly*, 23, 502-516.
- Pfeifer, C., Janssen, S., Yang, P.& Backer, U. (2011). Effects of training on employee suggestions and promotions in an internal labour market. Working Paper Series in Economics No. 202, University of Lüneburg
- Podsakoff, N., Whiting, S., and Posakoff, M, (2009). Individual and organization level consequences of organization citizenship behavior. *Journal of applied psychology* 94,122-141
- Prasertchoroensuk, T and Tang, K.(2015). The influence of teachers competency factors and students life skills on learning Achievement. *Journal of Social and Behavioral sciences*, 186, 566-572
- Purcell, J., Kinnie, N., Hutchinson, S., Rayton, B. and Swart, J. (2003). Understanding the People and Performance Link: Unlocking the Black-Box. Research Report, London. 2003;
- Quartey, H. (2012). Effect of employee training on the perceived organizational performance. A Case Study of the Print-Media Industry in Ghana. *European Journal of Business and Management*, 4, 77-87.
- Rahman H. (2016). Influence of quality of work life on organizational commitment amongst employees in manufacturing sector. *International Journal in Multidisciplinary and Academic Research*, 5, 351-414
- Rahman, A., Sambassivan, M. and Wong, F. (2013). Training and organizational effectiveness: Moderating Role of Knowledge Management Process. *European Journal of Training and Development*, 37, 472-488.

- Rahman, F. (2011). The relationship between the training of teachers and effective teaching. *Journal of business and social sciences*, 2, 150-160
- Raymond L, Hague N. and Sharon, F. (2004). "The effect of professional identification on job attitudes: A Study of Lawyers In Hong Kong", *Organizational Analysis*, 12 109 – 128
- Rebecca, W. (2018). Teachers leaders preparation and development in professional development. Themes and recommendations in Jana Hunziker (ed) *Teacher leadership development. Journal of professional development schools* 10,277-288
- Rekai, Z. (2017). Essential teaching methods to enhance learner academic achievements in Physical sciences in rural secondary schools in South Africa. *International Journal of Information and Learning*, 118, 170-184
- Riaz, A., Idrees, N. and Imran, A. (2013). "Employees' belief regarding training benefits and organizational commitment: A case in Banking sector of Pakistan", *Middle-East Journal of Scientific Research*, 16, 310-318
- Robert, P. (2015). The role of an authentic curriculum and pedagogy for rural schools and the professional satisfaction of rural teachers. *Australian and International Journal of Rural Education*, 23, 80-98
- Robison , D. and Mtika, P. (2017). Newly qualified teacher's professional learning through practitioner inquiry. *International Journal of Mentoring and Coaching in Education*,6 ,242-260
- Rongjin, H. (2017). Perceived professional knowledge and competencies of math teachers and its development in China. *International Journal of the lesson and learning studies* 6, 321-335
- Roslan,S., Omar, R., Ahmad, A. and Hassan, S. (2017). Impact of perceived teachers' competence on students' performance: Evidence for mediating role of achievement motivation among vocational colleges students' in Malaysia. *International Research Journal of Education and Sciences*, 1, 2550-2158
- Saeed, F. and Awan, A.(2014). Impact of professional training on employees performance in Pakistan banking sector. *Journal of accounting and Finance*, 8, 70-80.

- Saeed, M. (2012). Examining the relationship between the training, motivation, and employees, job performance *Journal of basic and applied scientific research*, 120, 12177-12183
- Sahinidis, G. and Bouris, J. (2008). Employee perceived training effectiveness relationship to employee attitudes. *Journal of European Industrial Training*, 32, 63-76
- Saks, M. (2016). *Organizational behavior; understanding and managing life at work*. Published in Canada , 672
- Salamin, M., Mohamed, A., Ogunilade, A. and Ayinla, J. (2012). Causes of mass failures in mathematics examination in secondary schools in Nigeria. *Journal of Education and practices*, 3, 79-88
- Saleem, Q., Shahid, M. and Naseem, A. (2011). The degree of influence of training and development on employee's behavior. *International Journal of Computing and Business Research*, 2, 2229-6166.
- Saunders, M., Lewis, P. and Thornhill, A. (2009). *Research Methods for Business Students (5th ed.)*. Harlow: Prentice Hall
- Schmidt, H., Cogan, L. and Houang, R. (2011). The role of the opportunity to learn in teacher preparation: An international context. *Journal of Teacher Education*, 62, 138-153.
- Schmidt, H., Huang, T., Cogan, L., Blömeke, S., Tatto, T., Hsieh, J. and Santillan, M. (2008). Opportunity to learn in the preparation of mathematics teachers: Its structure and how it varies across six countries. *Mathematics Education Journal*, 40, 735-747.
- Schunk, D. (2014). *Motivation in education, theory, research, and applications*, New York
- Senge ,N., Tatyana,B., Walentina, W. and Nina,D.(2018). A system of continuing pedagogical education in Russia. *International Journal of Education Management* ,11,201-326
- Sephania, N. Jacson, K. and Kipirgetiah, J. (2017). Assessment of teaching staff adequacy in Tanzania community schools, a case of Arusha District council. *International Journal of Educational Policy Research and Review*, 4, 82-89

- Serkan, B. and Emir C. (2014). Impact of training and development on employees performance in Bosnia And Herzegovina. *European Researcher Journal*, 89, 2125-2132
- Setiawan, D., Sitorus, J., and Natsir, M. (2018). Inhibiting factor of primary school teacher competence in Indonesia: Pedagogic and professionalism Published by Canadian Center of Science and Education Asian Social Science, 14,6.
- Shafi, M. and Sultan, S. (2014). Impact of perceived teachers competencies on students performance Evidence for mediating/moderating roles of class environment. *Journal of educational psychology*, 8,90-130
- Shaheen, A., Naqvi, H. and Khan, A. (2013). Employees training and organizational performance: Mediation by Employees Performance. *Interdisciplinary Journal of Contemporary Research in Business*, 5, 490-503.
- Shamaki, T. (2015). Influence of learning environment on students academic achievement in Mathematics a case study of selected schools in Nigeria. *Journal of education and Practices*, 6, 40-46.
- Shariq, A. and Drishtikon, M. (2012). Banking Professionals and attitudinal dimension of job satisfaction: *A Management Journal*, 3, 150– 173
- Shen, J. (2004). International training and management development: Theory and Reality: A Conceptual Study. *Journal of Management Development*, 24, 656-666.
- Shukla, S. (2014). Teaching competency, professional commitment and job satisfaction. A Study of primary school teachers. *Journal of Research and Method in Education*, 4, 44-64
- Shuman, L. (1987), *Knowledge and Foundation of the new reform*. Harvard Educational review 51,1-22
- Sila, .K. (2014). “Relationship between training and performance: a case study of Kenyan women finance trust eastern Nyanza region, Kenya”. *European Journal of Business and Social Sciences*, 3, 95-117
- Smith, K. and Collins, D. (2006). Knowledge exchange and combinations; the role of human resources practices in the performance of higher technology firms. *Academy of management journal*, 49, 544-601



- Stephen, T., Wucis, S., Liuduan, Y. and Opata, N. (2017). The impact of training and development on employees performance. A case study of Millicom Ghana limited. *International Journal of Information Research and Review*, 4, 3482-3487
- Sultana, A., Irum, S., Ahmed, K. and Mehmood, N. (2012). Impact of training on employee performance, A Study of Telecommunication Sector in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 4, 646-661
- Supardi Sate University (2017). Demographic perspective of teacher competence: A Comparative study of the teachers at senior high schools in Indonesia. *International Journal of Social Sciences and Humanities Invention* 4, 3305-3313
- Tabassi, A., Ramli, M. and Bakar, A. (2012). *Effects of training and motivation practices on teamwork improvement and task efficiency: The case of construction firms*. 30, 213-224.
- Tai, W. (2006). *Effects of Training Framing, General Self-efficacy and Training Motivation on Trainees'*. Emerald Group Publishers 35, 51-65.
- Tayo, B. and Adediwura, A (2007). Perception of teachers' knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary schools *Educational Research and Review* 2, 165-171
- Tebbal, A. and Kahssay, G. (2011). The effects of students centered approach in improving students skills. *Education Journal*, 2, 374-381.
- Tecele, L. (1991). New teachers and emotional of learning and teaching. *Cambridge Journal of Education*, 21, 319-329
- Tjosvold, D. and Kan, S. (2010). Team training in China: Testing and applying the theory of cooperation and competition. *Journal of Applied Social Psychology*, 40(1), 101-134.
- Tukunimulongo, J. (2016). Effect of on the job training on employees performance in Kenya. A case of Mumias Sugar Company Ltd. *International Journal of Research in Commerce, Economics and Management*. 74, 456-498
- URT (2016). The National examination results for ordinary level certificate
- URT (2013). The Basic Educational Statistics for Tanzania, unpublished materials

- URT (2014), Education and Training Policy under the Ministry of Education, Science and Technology, Government printer House.
- Voss, T., Kunter, M. and Baumert, J. (2011). Assessing teacher candidates' general pedagogical psychological knowledge: Test construction and validation. *Journal of Educational Psychology*, 103, 952-969
- Vroom, V. (1968). *Work and motivation*. New York: Wiley and Sons
- Wachira, J. M. (2013). The relationship between Employee Engagement and Commitment in Barclays Bank of Kenya. Master's Thesis, School of Business, University of Nairobi
- Wachira, M., Mbugua, Z. and Githumu, M. (2017). Effect of principals' leadership styles on teachers' job performance in public secondary schools in Kiini West Sub County. *International Journal of Humanities and Social Science*, 6, 72-86
- Walumbwa, O., Peterson, J., Avolio, J. and Hartnell, A. (2010). "An investigation of the relationships among leader and follower psychological capital, service climate, and job performance". *Personnel Psychology Journal*, 63, 937-963
- Wayne, A. J. and Youngs, P. (2003). Teacher characteristics and student achievement gains: A review. *Review of Educational Research Journal*, 73, 89-122.
- Whittle, R., Telford, A and Benson, A (2018). Teachers perception of how they influence students academic performance in VCE physical Education. *Australia Journal of Teacher Education* .43, 1-26
- Wibawa, A., Hary, S. and Asfan, K. (2016). influential factors of students competences: World Transactions on Engineering and Technology Education Research. 14, University of Malang Indonesia
- Wigfield, A. (2014). Expectancy Theory Achievement Motivation a Developmental Perspective, Educational Psychology.
- William, G. (2003). *Business research methods (7th ed.)* - USA.
- Wolff, A., McClelland, S. and Stewart, E. (2010). The relationship between adequate yearly progress and the quality of professional development. *Journal of School Leadership*, 20, 304-322.

- Wright, P. and Geroy D. (2001). Changing the mindset: the training myth and the need for world-class performance. *International Journal of Human Resource Management*, 12, 586-596
- Yamane, T. (1967). *Statistics and an introductory analysis*, 2nd Ed. New York
- Ye, L and Xn, A.(2014). Impacts of teachers competency on job performance in research. A case of Universities with industry characteristics, taking academic atmosphere as moderator. *Journal of industrial Engineering and Management* 7(5), 1283-1293
- Yoland, P. (2014). Determinants of high academic performance in Secondary schools in Tanzania, unpublished materials
- Zakaria, E., Chin, .L. and Daud, Y. (2010). “The effect of cooperative learning on student mathematics achievements and attitude towards mathematics. *Journal of Social Sciences*, 6, 272-275.
- Zikmund, W., Babin, B., Carr, J. and Griffen, M. (2010). *Business research methods*. Mason, OH: South-Western Cengage Learning
- Zuhair, A. (2014). Identifications of factors and their impact on employees training and organizational performance in Pakistan. *Journal of Management and Social Sciences*. 7, 93-109
- Zwick, T. (2015). Training older employees. *International Journal of Manpower*, 36, 136-150.

**APPENDICES****Appendix I: Questionnaire****Introduction Letter**

Dear Respondents:

I am Emanuel Siray Mollel, a PhD student at the Open University of Tanzania. I am currently conducting a study on the contribution of the professional Development on enhancing Teacher performance in Tanzanian's secondary schools. You have been selected to participate in this study. Kindly respond to the questions below as carefully as possible. Your responses will be used for academic purposes only and will be treated with utmost confidentiality. If you have questions about the questionnaire or the research in general, feel free to contact the researcher via the following email addresses: [nemboke@hotmail.com](mailto:nemboke@hotmail.com) or mobile phone +255 0754 657959

Thank you for your cooperation.

Yours

Emanuel Mollel

## Part 1: Demographic Information

Please respond by putting a tick in the appropriate box that applies to you.

1. Gender     a) Male [   ]     b) Female [   ]
2. Age a) 20-25             b ) 26- 29   (c ) 30-39   (d) 40-49   (e) 50-59   F ) over 60
3. Marital Status
  - a) Single     [   ]             c) Separated     [   ]             e) Widowed   [   ]
  - b) Married    [   ]             d) Divorced     [   ]
4. Position: a) School Head [   ] b) Academic Master [   ] c) School Teacher [   ]
  - d) District Official [   ] e) School Quality Assurer [   ]
5. Education qualifications
  - a) Certificate [   ] b) Diploma [   ]   c) University Degree [   ]
  - d) Master's Degree [   ] e) any other (specify) [   ]
6. For how long have you been in the teaching profession?
  - a) Less than 5 years [   ]                             d) 16 to 25 years [   ]
  - b) 5 to 10 years             [   ]                             e) 26 to 30 years [   ]
  - c) 11 to 15 years             [   ]                             f) above 30 years [   ]
7. Location of school     a) Urban [   ]     b) Rural [   ]
8. District where school is located     a) Urban [   ]             b) Rural [   ]
9. Region (a) Singida (b) Coast (c) Arusha (d) Njombe
10. Type of the subject taught in school
  - a) Science     [   ]     b) Mathematics     [   ]             c) Languages     [   ]
11. Type of a training attended a) Professional Training [   ]
  - b) Managerial Training [   ]

12. Duration of the training a) 1 Week [  ] b) 1 Month [  ]

c) More than 1 Month [  ]

13. Source of financing the training a) Government [  ] b) Donors [  ] c) Self [  ]

## **Part 2: Professional development and Performance of teachers in secondary schools relationship**

Please put a tick mark in the box which you think it presents the relationship of items that contribute to enhance teacher performance following in-service and managerial training. The interpretation of the number is as follows: *1=strongly Disagree, 2=Disagree, 3=Moderate, 4=Agree and 5=strongly agree.*

<b>Area1: PEDAGOGICAL KNOWLEDGE DEVELOPMENT</b>					
Professional development has assisted on instructional design	1	2	3	4	5
Career development advanced the implementation of learning	1	2	3	4	5
Teacher development program assisted on evaluation of learning	1	2	3	4	5
In services development enabled to evaluate the students' learning activities	1	2	3	4	5
Professional development has assisted to control the classroom	1	2	3	4	5
Career development improved the monitoring and evaluation of students	1	2	3	4	5
School training improved the knowledge of curriculum management	1	2	3	4	5
Teachers development program advanced the knowledge of objectives	1	2	3	4	5
Teacher training improve the teaching methodology	1	2	3	4	5
<b>Area 2: COMPETENCE DEVELOPMENT</b>					
In house training has enabled to master and develop learning materials, plan and prepare lessons daily	1	2	3	4	5
Professional development enabled to use various teaching aids	1	2	3	4	5
Training has enabled to maximize teaching time	1	2	3	4	5
Professional development has improved the skills in social interaction	1	2	3	4	5
Training and development has increased the teaching ability	1	2	3	4	5
Career development enabled to master modern education technology	1	2	3	4	5
Professional development enable me to cover and master the curriculum contents	1	2	3	4	5

Professional development enabled to become competent in directing and guiding student learning activities	1	2	3	4	5
<b>Area 3: ENVIRONMENTAL CONTEXTUAL SKILLS DEVELOPMENT</b>					
In house training increased the level of understanding of school environmental	1	2	3	4	5
Context learning increase ability in school counseling services	1	2	3	4	5
Professional development improved the cooperation between teachers and parents	1	2	3	4	5
Professional development enable teachers' to cooperation with the community	1	2	3	4	5
Career development increased ability to interact effectively with learners	1	2	3	4	5
Teachers development increased ability to get along with fellow teachers	1	2	3	4	5
Training has enabled to create a fun learning atmosphere in the class room	1	2	3	4	5
Career development improved the skill in creating interactions with others	1	2	3	4	5
Professional development increased secondary school industry awareness	1	2	3	4	5
<b>Area 4: PERFORMANCE OF TEACHERS</b>					
Teachers professional learning improved job commitment	1	2	3	4	5
Teachers professional development has improved students achievement	1	2	3	4	5
Teacher Professional development has improved Teacher job productivity	1	2	3	4	5
Teacher professional development improved handling of students attendance	1	2	3	4	5

**Appendix II: Coded Questionnaire**

<b>PPD</b>	<b>PEDAGOGICAL KNOWLEDGE DEVELOPMENT</b>
PPD1	Improved instructional design
PPD2	Implementation of learning
PPD3	Improved evaluation of learning
PPD4	Control and evaluate learning activities
PPD5	Improved class management
PPD6	Improved monitoring and evaluation of students progress
PPD7	Improved curriculum knowledge
PPD8	Knowledge of objectives and learning outcomes
PPD9	Improved teaching methodology
<b>CPD</b>	<b>COMPETENCE DEVELOPMENT</b>
CPD1	Master and develop learning materials, plan and prepare lessons daily
CPD2	Improved use of various teaching aids
CPD3	Maximize teaching time
CPD4	Improved social interaction skills
CPD5	Increased teaching ability
CPD6	Master modern education technology
CPD7	Master the curriculum content
CPD8	Directing and guiding student learning activities
<b>TCPD</b>	<b>ENVIRONMENTAL CONTEXTUAL SKILLS DEVELOPMENT</b>
TCPD1	Understanding of school environment
TCPD2	Improved school counseling services
TCPD3	Improved cooperation with parents
TCPD4	Improve community relationship
TCPD5	Interact effectively with learners
TCPD6	Improved interaction fellow teachers
TCPD7	Learning atmosphere
TCPD8	Creating interactions with others
TCPD9	Secondary school industry awareness
<b>TJP</b>	<b>TEACHERS PERFORMANCE</b>
TJP1	Improve job commitment
TJP2	Improved students achievement
TJP3	Improved Teacher job productivity
TJP4	Improved student attendance



**Appendix III: Documentary Review**

1. Education and Training Policy, 2014
2. Project for “Room to Ready”, Bagamoyo District Council, 2009
3. The Competency Based Curriculum for Diploma In Service Training for teachers in secondary schools in Tanzania.
4. The Training Documents from the Districts visited
5. The Training Modules of Heads of Secondary Schools in Tanzania , 2015
6. The Training Report for School Heads in 2015 produced by ADEM

**Appendix IV: Table 4.1 on Total variance Extracted**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.626	34.873	34.873	6.626	34.873	34.873	4.208	22.149	22.149
2	3.611	19.006	53.879	3.611	19.006	53.879	3.730	19.629	41.778
3	2.526	13.295	67.174	2.526	13.295	67.174	3.617	19.038	60.816
4	2.212	11.643	78.817	2.212	11.643	78.817	3.420	18.001	78.817
5	1.326	6.981	85.798						
6	.523	2.752	88.550						
7	.425	2.238	90.788						
8	.302	1.592	92.380						
9	.253	1.331	93.711						
10	.213	1.122	94.833						
11	.198	1.042	95.875						
12	.174	.914	96.789						
13	.167	.880	97.669						
14	.111	.586	98.255						
15	.101	.533	98.788						
16	.094	.495	99.283						
17	.065	.344	99.627						
18	.043	.229	99.855						
19	.028	.145	100.000						

Extraction Method: Principal Component Analysis.

**Appendix V: Research Permit**

THE OPEN UNIVERSITY OF TANZANIA  
 DIRECTORATE OF POSTGRADUATE STUDIES

Kawawa Road, Kinondoni Municipality,  
 P.O. Box 23409  
 Dar es Salaam, Tanzania  
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 Ext.2101  
 Fax: 255-22-2668759,  
 E-mail: drps@out.ac.tz

Our Ref: PG201401614

Date: 5<sup>th</sup> October 2017.

To whom it may concern

**RE: RESEARCH CLEARANCE**

The Open University of Tanzania was established by an act of Parliament No. 17 of 1992, which became operational on the 1<sup>st</sup> March 1993 by public notice No. 55 in the official Gazette. The act was however replaced by the Open University of Tanzania charter of 2005, which became operational on 1<sup>st</sup> January 2007. In line with the later, the Open University mission is to generate and apply knowledge through research.

To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you Mr Emanuel Siry Mollé Reg PG201401614 pursuing PHD (ARTS). We hereby grant this clearance to conduct a research titled "*contribution of Training to the enhancement of Job Performance in Tanzanias Public Secondary school teachers*". He will collect his data at Coast Region, Mbeya, Arusha, Mwanza, Singida, and Dar es salaam regions. from October 10<sup>th</sup>, to January 10<sup>th</sup>, 2018.

In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820. We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Hossea Rwegoshora'.

rof Hossea Rwegoshora  
 or: VICE CHANCELLOR  
 THE OPEN UNIVERSITY OF TANZANIA

## Appendix VI: Scree Plot

