



(RESEARCH ARTICLE)



## Teacher professional knowledge application and service delivery in public secondary schools in Bungoma East Sub County, Kenya

Julius Namaulula <sup>1,\*</sup>, Peter Kijana <sup>1</sup> and Juma Injendi <sup>2</sup>

<sup>1</sup> Department of Educational Planning and Management, Kibabii University, Kenya.

<sup>2</sup> Department of Educational Foundations, Masinde Muliro University of Science & Technology, Kenya.

International Journal of Science and Research Archive, 2023, 09(01), 078–093

Publication history: Received on 27 March 2023; revised on 02 May 2023; accepted on 05 May 2023

Article DOI: <https://doi.org/10.30574/ijrsra.2023.9.1.0354>

### Abstract

The purpose of this study is to determine the effect of teacher professional knowledge practice on teacher service delivery. The study was guided by Goal Setting Theory by Edwin Locke (1979) and adopted a descriptive research design. The study population of 1050 respondents comprising of three Curriculum Support Officers (CSO), 78 Principals, 80 Deputy principals and 870 teachers from public secondary schools in Bungoma East Sub County. The sample size was determined using Krejcie and Morgan formula for determining sample sizes where a sample size of 263 was achieved. The study employed purposive, stratified and random sampling techniques to draw the respondents. All the Curriculum Support Officers were used in the study. The researcher used questionnaires and interview guides to collect data. Quantitative data was analyzed using descriptive statistics and presented in tables. Qualitative data was analyzed as per themes and subthemes and described using quotations. The study established that there was little impact on teacher service delivery by preparation of lesson plans, use of teaching/learning aids in class, marking of learners' exercise books, lesson observation and ratings by school managers in public secondary schools.

**Keywords:** Application; Professional Knowledge; Service Delivery; Schools

### 1. Introduction

An effective teacher should possess a wide range of qualifications, which could greatly enhance their performance. Some of these qualifications include personality traits related to the professional role of a teacher, which can be nurtured and developed through initial education and continuous training (Kay, 2003). Specifically, studies have shown that traits such as flexibility in terms of the appearance of students, a sense of humor, a sense of fairness, patience, enthusiasm, creativity, care and interest in the students all contribute to the effectiveness of teachers (Malikow, 2005 & Harslett et al, 2000)

The attitudes of teachers affect their degree of commitment to their duties, the way they teach and treat their students, as well as how they perceive their professional growth (Chen and Revogno, 2000 & Darling-Hammond, 2000) Teachers who have high expectations for their students and insist on promoting learning for all students tend to be more effective (Malikow, 2005). Another factor which contributes to the effectiveness of teachers is a feeling of commitment to the job at hand (Coladarsi, 2002) and interest in the personal life of the students and their families (Harslett et al, 2000). Knowledge of self and contemplation are important because they presuppose critical and careful reflection on the part of the teacher and on his actions and self (Turner-Risset, 2001).

In America, a study conducted by Bond et al, (2000), Lusic & Sykes, (2006) found that teachers applied in classrooms what they had learnt from the appraisal process. Teachers are required to use a variety of skills as they teach. One of the skills is to be observed by his supervisor or his peer as he teaches. A study conducted by Kane and Straiger (2012)

\* Corresponding author: Julius Namaulula

in the US on teacher appraisal based on classroom observations showed that there is a positive relationship between teacher appraisal based on classroom observations and students' performance. The study also showed that high quality teacher appraisal based on classroom observation improved the performance of mid-career teachers both during the period of appraisal and in subsequent years,

Classroom teaching is a complicated activity that requires teachers to possess enormous thinking skills and a solid knowledge base (Turner 2013). Kansqrem (2005) carried a study in Finland and found that the education system attaches a lot of seriousness when it comes to the teacher content knowledge. This is because the teacher is expected to guide the development of students as extensively as possible. Knowledge of the subject matter is a prerequisite for effective classroom instruction. A teacher's understanding of subject facts, concepts, principles, methodology and important generalizations determines his/her pedagogical thinking and decision-making.

A study by Patel (2005) in Angola found that the professional knowledge that is essential for one to be an effective teacher extends well beyond the subject matter to encompass the following: subject matter knowledge whereby the teacher is expected to know the content matter thoroughly before he enters the classroom to teach. According to Aina and Adedo (2013), assessment and feedback are important to student learning because it improves students' learning. An effective teacher should be able to know how, when and the type of assessment and feedback needed in his/her class.

A study carried by Ayeni (2011) in Nigeria found that professional knowledge such as mastery of the content skills also counted a lot in the way teachers discharge their duties. This was in support of Ogumin (2007) earlier assertion that professional renewal and career development for all teachers is necessary if quality education outcome has to be achieved. A study by Obodo (2009) in Senegal found that content knowledge is important and a serious factor to be considered for any effective teacher. The study found that what a teacher knows is what he will teach the students and if the teacher is not conversant with what he teaches that teacher may not be effective. Content knowledge, the disciplinary understanding of the subject taught exerts a significant influence on teachers' classroom behavior. In a study in Southern Sudan by Wesonga (2006) found that teachers with stronger knowledge content are more likely to use practices that can help students construct and internalize knowledge such as : asking higher level questions, encouraging students to explore alternative explanations, involving students in more inquiry based learning, allowing more student directed activities and engaging students in the lesson (Birman et al, 2003). Researchers have explored the impact of teachers' content knowledge through tallying coursework taken by the teachers and administering questionnaires or classroom observations. The literature has been consistent in the findings about the positive association between teacher content knowledge and students' learning at all grade levels, particularly in Mathematics (OECD, 2005). In South Africa, Shepherd (2013) carried out a study on the impact of teachers' subject knowledge on the learner performance and found that teachers with positively related knowledge are associated with effective teaching. A study carried out by Namudu (2005) on staff appraisal system and teachers' performance at Aga Khan Schools in Kampala, found that teacher-based evaluation carried out by teachers had high influence on how they evaluated themselves (Individually or group based) to identify their weakness and strength so as to improve.

In a study conducted by Njeru (2006) in Embu on factors affecting performance of science subjects found that when a teacher's subject matter knowledge is insecure for instance when a teacher is teaching unfamiliar areas of curriculum his/her ability to give appropriate and effective explanations in the classroom is limited, rendering them ineffective. The professional knowledge of effective teachers reaches beyond merely the knowledge of the subject matter (content knowledge) and instructional strategies (pedagogical knowledge). Professional knowledge also encompasses an understanding of students and environmental contexts. Effective teachers often used the knowledge of their students for instance, knowledge of students' learning abilities, prior achievement, cultural background and personal interests to decide what to teach and how to teach. Based on this expansive knowledge, teachers can anticipate the conceptions, misconceptions and possible difficulties their students are likely to encounter while learning particular content (Jasman 2000 & Anderson, 2004) TPAD as an accepted performance management instrument is designed to determine how teachers' professional knowledge will affect his duties as a teacher.

### **1.1. Utilization of Teaching and Learning Resources Effectively**

The purpose of utilizing teaching and learning resources in class is to assist the teacher with the presentation and transmission of educational content and achievement of educational objectives, whilst assisting the students in acquiring knowledge and profiling different abilities and values. Common goals of teaching and learning resources include:

- Student motivation
- Developing creativity

- Evoking prior knowledge
- Encouraging the process of understanding, decoding, organizing and synthesizing the educational content, logical thinking and reasoning, communication and interaction.
- Contributing to the development of different skills and acquisition of values of students as well as the retention of desirable knowledge, skills and attitudes.

Whether or not these teaching and learning resources will achieve their purpose, roles or numerous duties, it all depends on their correct use within the educational process.

## **1.2. Preparation of Professional Documents**

### *1.2.1. Schemes of Work*

According to Mukwa & Too (2002), a scheme of work is a detailed analysis and sub-division of the syllabus into weeks, terms and periods for the purpose of orderly and systematic teaching or learning. It indicates the amount of work or ground a teacher or student is likely to cover during a week, a month, a term or a whole year. According to Ayot & Patel (1987), a scheme of work is a written description of the work that has been planned for a particular content to be covered over a specified period of time. According to Macharia (1987), a scheme of work is a work plan indicating sequentially the topics or themes on a given subject. It is a projection of what the teacher intends to cover with his/her students within a given period. In other words, a scheme of work is simply the survey of the work a teacher intends to cover during a prescribed period.

Teachers should prepare their teaching schemes in advance so as to ensure that resources are collected in time. The schemes should be checked by the Heads of subject Departments and finally by deputy Head Teacher or Head teacher. Staff members should be informed about the deadlines (Bakhda, 2004).

The preparation of schemes of work is about breaking up the content of a syllabus into meaningful components or units and arranging these components in a logical sequence for teaching. Schemes of work no doubt represent an effort by the teacher to plan systematically. It therefore means that a teacher prepares schemes of work before embarking on the teaching period. As the teacher prepares schemes of work, it's necessary for them to pay attention to changing times, changing nature of students, the available learning facilities as well as changes in subject matter. Schemes of work prepared in a certain year for a certain class may not be suitable for use in another year unless the changes that may have occurred have been accommodated.

Schemes of work are prepared yearly or termly. More often than not, teachers are supposed to prepare them at the beginning of the year or term and follow them in their day-to-day curriculum implementation. The school administration should provide materials for preparation. The schemes of work are normally prepared in triplicate so that the individual teacher retains one copy, the head of department another copy and the head of the school another copy.

A scheme of work serves the following functions according to Mukwa & Too (2002). To begin with, they encourage a teacher to read widely, plan his/ her lessons and develop the same well, especially for lessons, which require more time and attention in preparations at the beginning of the course or the term. Secondly, it helps teachers or student teachers to provide continuity in the lessons and sequence in the learning in an orderly manner. This approach gives students a sense of order in whatever they are learning. Thirdly, the scheme of work ensures that the syllabus is completed or covered within a given period of time. This is made possible by the use of topic schedule.

Without a scheme of work, a teacher may take a lot of time on one or so lessons/ topics leaving him /her with little time to attend to other topics. Fourthly, when a teacher or a student-teacher has prepared a scheme of work, he/she becomes confident in his work because he/she would have consulted a variety of relevant sources of information, selected suitable media and materials for instruction and prepared the appropriate instructional objectives. (Mukwa & Too, 2002) Fifth, a Scheme of work helps a teacher make requisition for the necessary materials and also encourages him/her to check on all the materials available in the school. This is so because the teacher shall have indicated these materials in the scheme of work. Further, by the end of the course or specified period, a teacher can study the scheme of work to see what he/she taught well and what he did not teach well; what he/she covered and what he/she might have left out. This would help a teacher make adjustments in his/her instructional design for the following season. (Mukwa & Too 2002).

For instance, he/she could make changes in the techniques and approaches selected to conduct a given topic. This is the quality of a professionally growing teacher. In addition to that, Schemes of work facilitate lesson planning since they give a teacher ready instructional objective, topics/sub-topics, learning aids, reference etc. These are indicated in the scheme of work. Lastly, in the event of an emergency or handing over or taking over from a departing teacher, it is very easy to know where one reached and what he/she had covered. This makes it easier to know where one reached and what he/she had covered. This makes it easier for the new teacher to start off from where his or her colleague left. Schemes of work make it easy for supervisors and schools inspectors to advice and counsel the teachers in their charge. They also help the head teachers and other educational administrators check on whether the teacher is following the agreed syllabus or whether he/she has hatched up his/her own alternative syllabus. (Mukwa &

Too, 2002). When making a scheme of work, a teacher must be aware of the following problems. Some of these are beyond control. However, a teacher can make provisions for them. The problems include: -

A scheme of work is an individual teachers' affair and this may not be acceptable to others e.g. during handing over. The Ministry of education has attempted to provide schemes of work in some subjects in primary schools. But some teachers have complained that they do not understand how the analysis of subjects was done. (Mukwa & Too, 2002).

Frequent changes in the school teaching staff either because they are proceeding to leave, retirement or getting normal transfer. Most of these teaching personnel leave their schemes of work uncompleted. (Mukwa & Too, 2002)

Schemes of work should be designed to ensure that the knowledge, skills and capabilities, understanding and attitudes of the pupils are developed over a particular period in order to ensure progression in learning. (Susan, et.al, 2006).

### *1.2.2. Elements of a Good Scheme of Work*

According to Mukwa & Too (2002), a good scheme of work comprises two main parts: - the title and the body. The title includes the subject itself, subdivision of the subject, the term, the class, the duration, period and the year. All these information is presented at the top of the scheme of work. According to Ayot & Patel (1987), the essential elements of a scheme of work include; administrative details such as; name of school, class, subject, term and year.

The main body of the scheme of work comes immediately after the title and consists of nine vertical columns containing the following elements, starting from the left:

- The week/lesson – which answers the question “when am I going to teach? A school term has about 13 weeks. However, not all the weeks were available for teaching. A teacher should therefore indicate time schemed for in terms of weeks available for teaching in the particular school term and the available teaching lessons each week.
- Lesson topic/subtopic- Topic is a section or portion of the subject area that has been selected for teaching by the teachers. The Topics are sourced for from the syllabus
- Lesson objective which answers the question “what behavior do I expect the student to demonstrate after the lesson? According to Mukwa and Too 2002, a lesson objective is a description of the behavior expected of a learner after instruction. According to Ayot & Patel (1987), in writing objectives a teacher is guided by the following questions: -
  - What do you want to be learnt by learners?
  - How do these objectives relate to long-term objectives of the subject?
- Teaching method- which answers the question “how would I arrive at the objective I have set for myself or which ways shall I use to arrive at the set goal?

Mukwa & Too (2002) say that for the achievement of comprehensive objectives of different subjects, teaching methods are needed to expose the learner to knowledge and experiences helpful.

- Learning aids which answer the question “which materials would I use to arrive at the set goal. Learning aids/resources are teaching and learning materials needed to reinforce or supplement learning activities. They are also called educational aids, audio-visual aids or teaching aids. They include – textbooks, chalkboards, real things or resource persons, radios, models, libraries, maps, charts or audio-visual aids like films, filmstrips or television programmes.
- References which answers the question “which are the source of information for the lesson” References must include the titles of the materials /resources, consulted, the authors/editors and where possible the pages from which that information is extracted.

- Assessment column which answers the question, how do I know that I has arrived at the set goal? It is necessary to specify the type of assessment tool the teacher intends to use e.g., examination test, projects.
- Remarks columns which answers the question “was there anything odd about my planned instructional work?”
- Learning activities. Learning activities are a description of what the students were doing or involved in during the teaching-learning process. (Ayot & Patel, 1987).

Learning activities for each of the lessons in the scheme of work should be indicated. Only the main learning activities are necessary in the schemes of work.

Every teacher has a scheme of work, but it may exist only inside his/her head and it may be incomplete. Just as the curriculum is the answer to the learners’ question, “why do we have to learn this? The scheme of work is the answer to the teachers’ question, “what am I going to do?”

Unfortunately, the scheme of work has been devalued by bureaucrat belief of many teachers that exist only to satisfy – in this obsessional morbid distrust of professional discretion and of pulling up plants to see are growing – managers and inspectors craving for ‘evidence’ of adequate needs to be rescued from this fate. (Atherton, 2010). It is the teachers’ equivalent of the builder’s plan and the engineers block working document. It is not immutable, just as building plans can be checked. It is made to be messed with, to be annotated and scrawled all over. It is a useful evaluation tool you can have because given that most of us repeat it year on year, reference to last years’ well-worn scheme (and the year before) gives the best guide on how to change things for this year. (Atherton, 2010).

In Qatar, a scheme of work for grades 1 to 12 is a long-term plan to help schools to achieve the aims for science and introduction to the standards. It interprets the new curriculum standards and translates them into coherent teaching units, typically 6 to 12 hours of work. The scheme shows how the units can be distributed with each grade and across grades in a sequence, continuity and progression in children. The units can then act as a guide to teachers when they create the scheme (SEC Teachers Network, 2010)

The Qatar scheme of work for science: Draws the standards together into coherent, manageable teaching units, indicates the approximate number of teaching hours for each unit and orders the units across two semesters of the school year so that they build on preceding work, link with and prepare children for the next grade and also develops sufficient detail in each unit about what to teach for the teachers to be allocated. (SEC Teachers Network, 2010).

The flow of the units reflects continuity and progression in children’s learning throughout the school year and provides one or more opportunities to revisit particulars, standards or groups of standards throughout the course. This gives children the chance to consolidate their learning in a range of contexts and to make connections between aspects of the subject (SEC Teachers Network, 2010).

### *1.2.3. Lesson Plan*

A lesson plan is a systematic instruction in a subject that comprises the amount of teaching that can be given at one time to the students. (Too & Mukwa, 2002). A lesson plan is a systematically planned approach to teaching and learning that consists of the subject and the topic to be taught, objectives and an introduction, activity and conclusion stages, to be used by the teacher when teaching. A lesson plan is a detailed description of the course of instruction for an individual lesson. (Mitchell & Tchudi, 2009). It shows what the teacher and his /her students should cover during a single or a double lesson. In the words of L.B. Sands, a lesson plan is actually a plan of action. It includes the working philosophy of the teacher, his/her knowledge of philosophy, his/her information about the understanding of his/her pupil, comprehension of the objectives of education, his/her knowledge –of the material to be taught and his/her ability to utilize effective method. Thus, a lesson plan is the way the teacher intends to keep his students busy during a particular period. It indicates what and how the teacher and his/her pupils are going to do in that period. A daily lesson plan is developed by a teacher to guide class instruction. The detail of the plan would vary depending on the preference of the teacher and the subject being covered. There may be requirements mandated by the school system regarding the plan. (Mitchell & Tchudi, 2009)

### Preparation of Lesson Plans

Preparation involves asking oneself pertinent questions about one’s pupils, subject matter as well as the best methods for handling the subject matter. The objectives must specify what students would achieve, how they would go about it, the conditions under which it was done, the standards of achievement and how this were measured. Teachers should prepare lesson plans at all times. Preparation involves giving much thought to the subject matter, in terms of knowing

the right sources of information and not taking pupils for granted. Lesson plans should be prepared for every lesson that is being taught.

According to Mukwa & Too (2002), a good lesson plan should include the following: Name of teacher, date, time (time table period and sequential time), school, class or form and number of learners, subject, topic, sub-topic if any, content – specific course / topic content to be covered in a sequential order, course aims stated in broad or short-term goals and objectives to be met by both the learner and the teacher. It is necessary that a teacher or a student teacher prepares a lesson plan for the following reasons.

A lesson plan acts as a form of reminder of what a teacher is going to teach how he or she intends to teach it. The actual lay out of the lesson notes makes it necessary for a teacher to consider perceptions which he or she might otherwise ignore or skip. According to Monica & Sarita (2005), an ideal lesson plan should be:-

Objective based-the lesson plan must be based on one or other objectives, written and defined clearly. The plan should have appropriate material aids –correct decision regarding the charts, graphs, diagrams, and maps should be taken while preparing ideal lesson plans, marked of proper places, which the teacher is to use while teaching. The plan should also be based on previous knowledge so as to avoid any difficulty in acquiring new knowledge by the pupils. It should also be divided into units-lessons are of three types; Knowledge lessons, skill lessons and appreciation lessons. All relevant steps of these three types of lesson plans should be determined in an ideal lesson plan. Each lesson should be divided into suitable units so that the pupils may understand it gradually.

Further the lesson plans language should be simple-The simplicity of the lesson and clarity of thoughts should be according the mental level of pupils. The lesson plan should be subject centered, not language oriented. It should be made clear what activities a teacher and the pupils are to perform. The activities of a teacher and the pupils should be determined before –hand in an ideal lesson. More so the teacher should gain the knowledge of maxims of teaching. Only then, he /she can use appropriate strategies or methods, tactics, techniques and aids in order to classify the events and facts, which occur in different situations and a possible correlation, should occur to enable the pupils to acquire the knowledge as a whole. Examples should be used which have relevance with the daily life of pupils. This depends upon the comprehensive knowledge and experience of the teacher. The techniques and occasion of providing individual guidance to the pupils should be indicated and the lesson plan encourages a logical development and preparation.

The lesson plan provides an outline of one lesson within a scheme of work. In planning a lesson, you are working out the detail required to teach one aspect of the scheme of work. (Capel, et.al, 2009).

#### The lesson plan format

Lesson plan formats may vary from one educational institution to another, in Kenya primary school's teacher training colleges have a very comprehensive lesson plan format.

At universities, which specialize in secondary and post-secondary teaching the format is different.

Generally, a well-developed lesson plan reflects interests and needs of students. It incorporates best practices for the educational field. The lesson plan correlates with the teacher's philosophy of education, which is what the teacher feels is the purpose of educating the students. School requirements and a teacher personal taste, in that order, determine the exact requirements for a lesson plan. Unit plans follow much the same format as a lesson plan, but cover an entire unit of work, which may span several days or weeks. Modern constructivists teaching styles may not require individual lesson plans.

The unit plan may include specific objectives and timelines, but lesson plans can be more fluid as they adapt to student needs and learning styles. (Mitchell & Tchudi, 2009)

#### Importance of Lesson Planning

First lesson planning is important in achieving definite goals and objectives – while preparing a lesson plan the teacher should keep before him the general and specific aims of each lesson. Thus, if his field of work was delimited, should think of ways, means and devices to realize his aim most successfully. (Monica & Sarita, 2005)

Secondly lesson planning is important in preventing wastage – lesson planning prevents wastage of time and energy of both the teacher and the taught. Prepared beforehand, the treatment of the lesson was logical orderly and systematic

with no haphazard or thoughtless teaching. All efforts were made to clarify the main point during the allotted period. There shall be neither repetition nor disunity between the different steps of the lesson. (Monica & Sarita, 2005).

Lesson planning also creates self confidence in the teacher – by planning his lesson wisely in relation to his topic and his class a teacher shall enter the classroom with full confidence in himself. He shall know how to proceed, what general and particular lines are to be followed, what material to be used and what activities are to be carried out by him as well as by his pupils. His lesson notes would indicate the steps that he would follow and the stages through which he would pass. Fully prepared to deal with all the possible difficulties likely to arise during the course of a particular lesson a teacher is sure to achieve success through lesson planning. (Monica & Sarita, 2005).

It also creates thoroughness and effectiveness – keeping in view the mental capacities, attitudes, habits, interests and aptitudes of the pupils to be taught, a good lesson is planned before actual teaching. The teacher collects all the teaching aids, illustrative materials and other essential things that contribute to effective teaching. He is able capture pupils' interests and make learning natural and effective. (Monica & Sarita, 2005).

Lesson planning also makes evaluation possible – a good lesson planning enables the teacher to evaluate his work as the lesson proceeds. He would try to learn from both success and failure. Evaluation is possible only when definite aims and objectives are kept in view. Learning experiences are given to realize those aims while tests of progress are prepared for undergoing the outcomes of instruction. (Monica & Sarita, 2005).

#### Purposes and Functions of Lesson Planning

There are a number of important purposes and functions to the planning of lessons which are worth noting. First and foremost, planning enables a teacher to think clearly and specifically about the type of learning he or she wishes to occur in a particular lesson, and to relate the educational objectives to what is known about the pupils and the place of study. (Kyriacou, 1998)

Secondly, it enables the teacher to think about the structure and content of the lesson.

This includes thinking about how to devote to each activity. Indeed, one of the most important skills is that of judging how much time should be spent on each activity in a lesson and the best pace of progress through the activities (Kyriacou, 1998)

Thirdly, planning quite considerably reduces how much thinking the teacher would have to do during the lesson. Once the lesson is in progress there were much to think about in order to maintain its effectiveness. The fact that the lesson as a whole has been well planned means that you can normally focus your attention on the fine tuning of the lesson, rather than trying to make critical decisions on the hope. (Kyriacou, 1998)

Fourthly, planning leads on to the preparation of all the materials and resources in general that were needed. (Kyriacou, 1998)

Fifth, keeping notes would provide a useful record for the teachers' future planning, particularly in relation to giving similar lessons to another group of pupils and in planning which would extend what they have done in that particular lesson. Indeed, it is very useful, particularly in the early years of teaching to make a brief note at the end of each lesson of any point you want to draw your attention at some future time when you need to refer to the lesson notes again. (Kyriacou, 1998).

#### *1.2.4. Record of Work Covered*

A record of work is simply a summary of the work done or covered in a class at the end of every lesson. (Ayot & Patel, 1987). After teaching, the teacher writes down what has been covered and this is called a record of work. The teacher evaluates his/her performance and it is therefore a true record of his /her feelings about the lesson and the students learning progress. Thus, the teacher must keep a summary of the work covered and do so every day after the lesson.

#### Importance of Keeping a Record of Work

It helps the teacher to learn about the ability of his/her students especially when the record of work reveals the number of assignments, tests and examinations that the teacher has given out. It also helps the teacher to adjust and draw up more appropriate schemes of work, lesson plan and then evaluate his/her teaching strategies used in the classroom. By keeping a record of work the teacher becomes successful in his /her teaching career and the fact that this record of work

can be used in case of any eventualities, immediate transfer, unexpected death, escape for green pastures, prolonged sickness among other things makes it important every time a lesson is taught. (Ayot & Patel, 1987).

#### Preparation of Records of Work Covered

Most schools have record books for the same at departmental levels. Teachers are expected to record the work they have already covered in class for every lesson taught. (Macharia & Wario, 2009).

##### *1.2.5. Students Progress Records*

The progress consists of marks and grades achieved by the pupils during the term, as the work is covered. The progress record is designed to show the progress each child is making every week. It is recommended that the teacher should assess the progress made by each child on every piece of work given. (Macharia & Wario, 2009).

#### The Purpose of Student's Progress Records

School records are official documents and may be required to be produced by official administrators. They are in a way a testimony that the teacher is working. They also serve to assess what has been achieved in the past by the learners, to show the present rate of progress that the learners are making, to show the areas of difficulty for individual learners so that remedial teaching can be planned for, to provide the basis for guidance and counseling of learners and to assist in the smooth transition of learners from one school to another.

If records are going to serve their purposes well, the following principles should be kept in mind the records must be easy to keep, easy to understand and be based upon knowledge that is common to all teachers, the records should provide enough details about a subject to enable another teacher to make a balanced judgment and they must be neatly kept. (Macharia & Wario, 2009)

Preparation of professional documents is a very important aspect in curriculum implementation for effective results. The ministry of Education through the Directorate of Quality Assurance is mandated with the responsibility of ensuring that there is effective implementation and delivery of the curricula in all institutions of learning. In this regard, the DQAS provide external scrutiny as to how curricula are being implemented at the institutional level. This means that the respective institutions managements have the responsibility to ensure quality in day to day of curricula delivery processes.

The above requirements are enshrined in Ministry of Education charter which requires that schools and other institutions, be visited and standards assessed on regular and on a daily basis or weekly basis. For example, the secondary sub sector, the requirements are that each secondary school is externally standard assessed every three years while primary schools are to be assessed once every term.

At school/Institutional level it is the responsibility of the management to develop clear work plans on how to ensure that each and every teacher carries out his/her responsibility appropriately for the benefit of the learner. In this respect the principals/Head - teachers, Deputy Head - teachers, Heads of Departments and any other administrative officers for example Deans of Curriculum are expected to develop their own supervision schedules and monitoring tools for this purpose. Reports produced by these Internal/school-based Quality Assurance officers are expected to be tabled before the respective schools management committees.

The above internal Quality Assurance Officers continuous standards assessments are critical to the achievements of required knowledge, skills and competencies amongst learners. Without the realization of this, all the efforts of the education sector were of little effect. As such internal curriculum delivery assessment provides the backbone of the education system. Global, approximately 76 million people have become infected with HIV. Today, about 38 million people are living with HIV, and tens of millions of people have died of AIDS-related causes since the beginning of the epidemic (UNAIDS, 2020). HIV primarily affects those in their most productive years, where the youths especially University students belong. HIV Counselling and Testing (HCT) is the main strategy employed in the prevention and control of HIV/AIDS worldwide.

---

## **2. Material and Methods**

The study was carried out in Bungoma East Sub County, Bungoma County, Kenya. The choice of the Sub County was influenced by the declining performance in the Kenya Certificate of Secondary Education examination in the last five



years compared to other 9 Sub Counties namely: Bumula, Bungoma West, Bungoma Central, Mt. Elgon, Kimilili, Tongaren and Webuye West, of Bungoma County. The study adopted a descriptive survey research design.

The target population in this study comprised of all teachers of public secondary schools in Bungoma East Sub County together with three Curriculum Support Officers (CSOs). According to the Sub County Human Resource office, there are 1028 teachers in 78 public secondary schools. The teachers in this study were categorized as 78 principals, 80 deputy principals and 870 teachers spread in 3 zones-Webuye Ndivisi and Lugusi. The researcher included curriculum support officers since they monitor implementation of Teachers Performance Appraisal Development (TPAD).

**Table 1** Sample size

Strata	Target population	Sample size	Sample size %
Principals	78	20	25
Deputy principals	80	22	25
Teachers	870	218	25
CSOs	3	3	100
Total	1050	263	25

Source: Researcher (2022)

### 3. Results and Discussion

The objective of the study sought to determine the effect of teacher professional knowledge practice on teacher service delivery in public secondary schools in Bungoma East Sub County. This objective was assessed by soliciting and analyzing views from principals, education officials, deputy principals and teachers on various themes, aspects and indicators. As such, various statements from the respondents related to teacher service delivery were presented in figures, tables, statements and on a five-point Likert scale.

#### 3.1. Teachers Response on Teacher Professional Knowledge Practice

The study sought to find out the teachers' opinion on teacher professional knowledge practice on teacher service delivery. Various statements on teacher professional knowledge practice were put on Likert scale ranging from 1 – 5. In this study the score of 1 was assigned to strongly disagree, 2 to disagree, 3 Neutral, 4 to agree and 5 to strongly agree. The average mean score is 2.5. The findings are presented in Table 2.

**Table 2** Teacher Professional Knowledge Practice

Attributes of Teacher professional knowledge practice (n=187)	SD		D		NS		A		SA		Mean	Std.
	n	%	n	%	n	%	n	%	n	%		
Professional knowledge assist teachers to demonstrate mastery of subject content and use appropriate instructional methods	21	11%	64	34%	12	6%	68	36%	24	13%	3.09	1.023
Professional knowledge and practice have helped teachers to undertake lesson observation at least once a term.	8	4%	12	6%	6	3%	99	53%	54	29%	3.83	1.231
Professional knowledge and practice assist teachers to utilize teaching/learning resources effectively	13	7%	67	36%	13	7%	74	40%	21	11%	3.14	0.965
Professional knowledge and practice assist teachers to prepare professional	1	1%	15	8%	6	3%	88	47%	76	41%	4.18	0.452

documents based on the current syllabus/designs												
Professional knowledge and practice have assisted teachers to have ability to identify learners' capability and learning styles.	56	30%	96	51%	9	5%	21	11%	7	4%	2.11	1.420
Professional knowledge and practice have helped teachers to have ability to identify and nurture learners' talents	42	22%	89	48%	4	2%	38	20%	14	7%	2.43	1.033
Professional knowledge and practice have assisted teachers to develop ability to access, retrieve and integrate ICT in teaching and learning	43	23%	98	52%	6	3%	24	13%	16	9%	2.32	1.201
Professional knowledge and practice have assisted teachers to have the ability to carry out learner assessment, feedback and reporting on learners' learning	3	2%	28	15%	15	8%	88	47%	51	27%	3.80	0.632
<b>Composite values</b>											<b>3.11</b>	

Source: Field Data (2022)

Table 2, sought to determine the various aspects of Teacher professional knowledge practice. From the table it can be deduced that the average mean for the study was 2.5 as derived from the minimum mean of 1.00 and the maximum mean of 5.00 respectively. Based on this finding it was revealed with a mean of 3.11 and standard deviation of 1.002 that teacher professional knowledge practice and teacher service delivery was slightly above the average mean of 2.5. This revealed that a majority of teachers were satisfied with the teacher professional knowledge practice on teacher service delivery in public secondary schools in Bungoma East Sub County.

The respondents agreed that Professional knowledge assist teachers to demonstrate mastery of subject content and use appropriate instructional methods (Mean = 3.09, SD = 1.023). 21 (11%) respondents strongly disagreed, 64 (34%) respondents disagreed, 12 (6%) respondents were not sure, 68 (36%) respondents agreed and 24 (13%) respondents strongly agreed. Teachers' response on professional knowledge practice assisting teachers to demonstrate mastery of subject content and use of appropriate instructional methods, yielded a mean of 3.09. This meant that professional knowledge of practice assisted teachers to demonstrate mastery of subject content and use of appropriate instructional methods. The findings of the study concurred with those of Obodo (2009) who found that content knowledge is important and a serious factor to be considered for any effective teacher. The study found that what a teacher knows is what he will teach the students and if a teacher is not conversant with what he teaches that teacher may not be effective.

The respondents also agreed that Professional knowledge and practice has helped teachers to undertake lesson observation at least once a term. (Mean = 3.83, SD = 1.231). 8 (4%) respondents strongly disagreed, 12 (6%) respondents disagreed, 6 (3%) respondents were not sure, 99 (53%) respondents agreed and 54 (29%) respondents strongly agreed. This meant that 82 percent of teachers agreed that lesson observation comments improved future lesson performance, 10 percent disagreed. This was confirmed by a mean of 3.83 as an indication of agreement. The findings of the study were supported by Zhan and Ng (2015) who found that senior teachers' comments improve interns and young teachers teaching strategies and future preparations. The study findings contracted those of Marika *et al.* (2021) who found that observers negative remarks demoralised teacher delivery.

The teachers agreed that Professional knowledge and practice assist teachers to utilize teaching/learning resources effectively (Mean = 3.14, SD = 0.965). 13 (7%) teachers strongly disagreed, 67 (36%) teachers disagreed, 13 (7%) teachers were not sure, 74 (40%) teachers agreed and 21 (11%) teachers strongly agreed. The findings in Table 4.7 show that 51 percent of teachers agreed that professional knowledge practice influenced teachers to utilize teacher/learning resources effectively. This was supported by the Deputy Principals response with a mean of 4.15.

The teachers strongly agreed that Professional knowledge and practice assist teachers to prepare professional documents based on the current syllabus/designs (Mean = 4.18, SD = 0.452). 1 (1%) teacher strongly disagreed, 15 (8%) teachers disagreed, 9 (3%) teachers were not sure, 88 (41%) teachers agreed and 76 (41%) teachers strongly

agreed. The study sought to find out whether professional knowledge and practice had influence on teachers' preparation of professional documents based on the current syllabus/designs. The teachers' percent response revealed that 41% strongly agreed, 47% agreed and 9% disagreed. It meant that 88% of teachers agreed that professional knowledge practice influenced preparation of professional documents that enhance teachers' delivery. It was confirmed by a high mean of 4.18 as an agreement. The findings of the study were supported by Gilbert (2017) who found that teachers' professional knowledge practice had positive significance on teachers' preparation of professional documents that improved their delivery. Zhang (2017) found that appraisal of teachers' delivery.

Further, the respondents disagreed that Professional knowledge and practice have assisted teachers to have ability to identify learners' capability and learning styles. (Mean = 2.11, SD = 1.420). 56 (30%) respondents strongly disagreed, 96 (51%) respondents disagreed, 9 (5%) respondents were not sure, 21 (11%) respondents agreed and 7 (4%) respondents strongly agreed. The results on effect of professional knowledge practice in identifying learners' capability and learning styles by teachers showed a mean of 2.11. This meant that teachers' professional knowledge practice had no effect on teachers' ability to identify learners' capability and learning styles.

The respondents also disagreed that Professional knowledge and practice has helped teachers to have ability to identify and nurture learners' talents (Mean = 2.43, SD = 1.033). 42 (22%) respondents strongly disagreed, 89 (48%) respondents disagreed, 4 (2%) respondents were not sure, 38 (20%) respondents agreed and 14 (7%) respondents strongly agreed. The findings of the study on effect of teachers' professional knowledge practice in identifying and nurturing learners' talents yielded a mean of 2.43. It meant that teachers' professional knowledge practice had no effect on teachers' ability to identify and nurture learners' talents.

The respondents also disagreed that Professional knowledge and practice have assisted teachers to develop ability to access, retrieve and integrate ICT in teaching and learning (Mean = 2.32, SD = 1.201). 43 (23%) respondents strongly disagreed, 98 (52%) respondents disagreed, 6 (3%) respondents were not sure, 6 (3%) respondents agreed and 16 (9%) respondents strongly agreed. According to table 4.7, majority of the teachers (75%) disagreed that professional knowledge practice assisted them to access, retrieve and integrate ICT in teaching and learning. This meant that most of the teachers lack the ability to access appropriate ICT Learning/teaching materials in their schools. This percent of teachers also felt that most of the teachers do not have the ability to integrate appropriate ICT learning/teaching materials in their lessons so as to improve their service delivery and stimulate learning. The findings of the study were supported by Khatete *et al.* (2014) who found that many teachers were not computer literate in Kenya thus had not adopted ICT in teaching to access teaching materials. However, the findings of the study were contradicted by those of Kampylis and Berki (2014) who found that appraisal processes compelled teachers to acquire ICT skills.

Lastly, the respondents also agreed that Professional knowledge and practice have assisted teachers to have the ability to carry out learner assessment, feedback and reporting on learners' learning (Mean = 3.80, SD = 0.632). 3 (2%) respondents strongly disagreed, 28 (15%) respondents disagreed, 15 (8%) respondents were not sure, 88 (51%) respondents agreed and 51 (27%) respondents strongly agreed. The findings of the study on effect of teachers' professional knowledge practice in carrying out learner assessment feedback and reporting on learners' learning yielded a moderate mean of 3.80 (78%) of the respondents agreeing. This meant that professional knowledge practice had an effect on carrying out learners' assessment, feedback and reporting learners' learning. The study findings were supported by those of Aina and Adedo (2013), who found that assessment and feedback are important to students learning because it improves students' learning. An effective teacher should be able to know how, when and the type of assessment and feedback needed in his/her class.

### **3.2. Deputy Principals' Response on Teacher Professional Knowledge Practice**

The study sought to find out the Deputy principals' opinion on Teacher professional knowledge application. Various statements on teacher professional knowledge practice were put on Likert scale ranging from 1 – 5. In this study the score of 1 was assigned to extremely dissatisfied, 2 to dissatisfied, 3 to somehow satisfied, 4 to satisfy and 5 to extremely satisfy. The average mean score is 2.5. The findings are presented in Table 3.

**Table 3** Deputy Principals' Response on Teacher Professional Knowledge Practice

Attributes of teachers on teacher professional knowledge on teacher service delivery	n	Mean Statistic	Range	Std. Deviation	Skewness		Kurtosis	
	Statistic				Statistic	S.E	Statistic	S.E
Professional knowledge assist teachers to demonstrate mastery of subject content and use appropriate instructional methods	20	3.31	4.00	1.431	2.677	0.246	9.353	0.488
Professional knowledge and practice have helped teachers to undertake lesson observation at least once a term.	20	3.89	4.00	0.927	1.566	0.258	2.829	0.511
Professional knowledge and practice assist teachers to utilize teaching/learning resources effectively	20	4.15	4.00	1.54	0.346	0.245	-1.094	0.485
Professional knowledge and practice assist teachers to prepare professional documents based on the current syllabus/designs	20	3.24	3.00	0.670	3.854	0.243	23.168	0.481
Professional knowledge and practice have assisted teachers to have ability to identify learners' capability and learning styles.	20	3.52	4.00	0.950	0.230	0.245	-0.496	0.485
Professional knowledge and practice have helped teachers to have ability to identify and nurture learners' talents	19	1.36	4.00	1.038	1.044	0.254	0.647	0.503
Professional knowledge and practice have assisted teachers to develop ability to access, retrieve and integrate ICT in teaching and learning	20	2.13	3.00	1.381	0.453	0.254	-1.205	0.503
Professional knowledge and practice have assisted teachers to have the ability to carry out learner assessment, feedback and reporting on learners' learning	19	4.35	4.00	0.859	1.001	0.254	1.298	0.503
Composite values		2.91		0.977				

From computed data in table 3, it can be deduced that the average mean for the study was 2.5 as derived from the minimum mean of 1.00 and the maximum mean of 5.00 respectively. Based on this finding it was revealed with a mean of 2.91 and standard deviation of 0.977 that teacher professional knowledge practice on service delivery was slightly above the average mean of 2.5. These revealed that a slightly more than half the Deputy principals were satisfied with the teacher professional knowledge practice on service delivery in public secondary schools in Bungoma east sub

county, Kenya. The Deputy principals agreed that professional knowledge practice affected teachers' service delivery in Bungoma East sub county, Kenya.

The Deputy principals agreed that professional knowledge assist teachers to demonstrate mastery of subject content and use appropriate instructional methods (Mean = 3.31 SD = 1.431). From table 3, the findings showed a mean 3.31. This meant that professional knowledge practice assisted teachers in mastery of subject content. The finding of the study was supported by those of Obodo (2009) who found that content knowledge is important and a serious factor to be considered for any effective teacher. The study found that what a teacher knows is what he will teach the students and if a teacher is not conversant with what he teaches that teacher may not be effective. On Deputy principals' opinion about use of appropriate instructional methods, a mean of 3.31 indicated that the effect of professional knowledge practice on use of appropriate instructional methods improved teachers' service delivery. The findings of the study were supported by Kiamba *et al.* (2018) who found that teaching pedagogies had little influence on teaching and learning outcomes.

The Deputy principals also agreed that professional knowledge and practice has helped teachers to undertake lesson observation at least once a term (Mean = 3.89 SD = 0.927). The Deputy principal's response on professional knowledge practice on undertaking of lesson observation at least once a term showed a mean of 3.89. This meant that the Deputy principals agreed that professional knowledge practice influenced undertaking of lesson observation at least once a term. The findings of the study were supported by Zhan and Ng (2015) who found that senior teachers' comments improved interns and young teachers' teaching strategies and future preparations.

The Deputy principals strongly agreed that Professional knowledge and practice assist teachers to utilize teaching/learning resources effectively (Mean = 4.15 SD = 1.54). This meant that the majority of Deputy principals agreed that professional knowledge practice assisted teachers to utilize teaching and learning resources effectively.

The Deputy principals agreed that Professional knowledge and practice assist teachers to prepare professional documents based on the current syllabus/designs (Mean = 3.24 SD = 0.670). This meant that most of the Deputy principals agreed that professional knowledge practice influenced teachers' preparation of professional documents based on current syllabus/design which enhanced service delivery. The findings of the study were supported by Gilbert (2017) who found that teachers' professional knowledge practice had positive significance on teacher's preparation of professional documents that improved their delivery.

A majority of the Deputies agreed that Professional knowledge and practice have assisted teachers to have ability to identify learners' capability and learning styles (Mean = 3.52 SD = 0.950). This meant that a majority of the Deputy principals agreed that professional knowledge practice influenced teachers' ability to identify learners' capability and learning styles. This was in disagreement with the teachers' feeling that professional knowledge practice had no effect on teachers' ability to identify learners' capability and learning styles. The findings of the study were supported by Stanley (2014) who found that individualized learning programs enhanced equity and inclusivity in education.

The Deputy principals strongly disagreed that Professional knowledge and practice has helped teachers to have ability to identify and nurture learners' talents (Mean = 1.36 SD = 1.038). This concurred with the feeling of teachers at a mean of 2.11. It meant that teacher professional knowledge practice had insignificant effect on teachers' ability to identify and nurture learners' talents. The findings of the study were supported by those of Otieno and Makua (2016) who found that individualized education program had insignificant effects on education inclusivity in Kenya.

The Deputy principals disagreed that professional knowledge and practice have assisted teachers to develop ability to access, retrieve and integrate ICT in teaching and learning (Mean = 2.13 SD = 1.381). This concurred with teachers' response at a mean of 2.32. The mean of below 2.5 in each case meant that teacher professional knowledge practice did not assist teachers to access, retrieve and integrate ICT in teaching and learning. The findings of this study were supported by those of Khatete *et al.* (2014) who found that many teachers were not computer literate in Kenya thus had not adopted ICT in teaching to access teaching materials. However, the findings of the study were contradicted by those of Kampilis and Berki (2014) who found that appraisal processes compelled teachers to acquire ICT skills.

Lastly, the Deputy principals strongly agreed that Professional knowledge and practice have assisted teachers to have the ability to carry out learner assessment, feedback and reporting on learners' learning (Mean = 4.35 SD = 0.859). This meant that Deputy principals, like most of the teachers agreed that teacher professional knowledge had positive significance on teachers' carrying out learner assessment, feedback and reporting learners' learning. The findings of this study were supported by those of Aina and Adedo (2013), who found that assessment and feedback are important to

student learning because it improves students’ learning. An effective teacher should be able to know how, when and the type of assessment and feedback needed in his/her class.

**3.3. Analysis of the Study Model (Regression Analysis of Teacher Professional Knowledge Practice on Teacher Service Delivery)**

The main goal of the study was to determine the effect of teacher Professional knowledge practice on teacher service delivery in public secondary schools in Bungoma East Sub County. In this study, regression model was used where the model summary, variance (ANOVA) and standardized coefficients were applied. The aim of this analysis is to identify those variables simultaneously associated with a dependent variable and to estimate the separate and distinct influence of each variable on the dependent variable. The analysis of variance is used to determine whether the regression model is a good fit for the data. The coefficients or beta weights for each variable allows the study to compare the relative importance of each independent variable. In this study the unstandardized coefficients and standardized coefficients are given for the multiple regression equations.

The model was of the form:

$$Y = \beta_0 + \beta_1X_1 + \epsilon.$$

- Y = teacher service delivery
- X<sub>1</sub>= teacher professional knowledge application
- β = Coefficient of variation
- ε<sub>1</sub> = the error term

The findings were summarized in Table 4

**Table 4** Model Summary between Teacher Professional Knowledge Application on Teacher Service Delivery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.625a	0.598	0.562	0.25366

The results for the model summary are as presented in Table 4, where R<sup>2</sup> (coefficient of multiple determinants) is shown. As the model depicts, the adjusted R<sup>2</sup> is 0.562, an indication that there is a relationship between teacher Professional knowledge practice on teacher service delivery. This means that a proportion of 56.2 % of teacher service delivery can be explained by the singular effect of *teacher Professional knowledge practice*.

The model significance was presented using the ANOVA test. The findings were summarized in Table 5.

**Table 5** ANOVA for Teacher Professional Knowledge Practice on Teacher Service Delivery

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	73.256	1	89.235	186.235	0.000 <sup>b</sup>
Residual	34.235	186	0.356		
Total	107.491	187			

a. **Dependent Variable:** teacher service delivery ; b. **Predictors:** (Constant), teacher Professional knowledge practice

Results in Table 5, shows that the significance of the F-value of 186.235 which is greater than the F critical and significant at 0.05. This implies that teacher Professional knowledge practice has a significant effect on teacher service delivery, satisfying the coefficients for Teacher Professional knowledge practice on teacher service delivery are summarized in table 6.

**Table 6** Coefficients for teacher Professional knowledge practice on teacher service delivery

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.65	0.5562		3.569	0.000
teacher Professional knowledge practice	0.426	0.0253	0.415	56.325	0.000

a. Dependent Variable: teacher service delivery; **Source:** Field Data 2022

As shown in Table 6, the unstandardized coefficient for the variable was 1.65 and the P-value is 0.000. The new model now becomes:

$$Y = 1.65 + 0.426X_1 + \varepsilon$$

Were

Y = teacher service delivery

X<sub>1</sub> = teacher professional knowledge practice

β = Coefficient of variation

ε<sub>1</sub> = the error term

Thus, implying that at a significance level of 0.05, teacher professional knowledge practice will impact teacher service delivery by up to 42.6 %. The findings also indicate that the t-statistics (56.325) is higher than the t-critical (1.26), an indication that teacher professional knowledge practice significantly influences teacher service delivery. Based on the findings, The F-statistics produced (F = 186.235) was significant at 5 per cent level (ρ < 0.0001), thus confirming that the predictors (teacher professional knowledge practice) were useful for predicting teacher service delivery.

---

#### 4. Conclusion

Based on the finding, it was concluded that teacher professional knowledge application was useful for predicting teacher service delivery.

#### *Recommendations*

Based on the study findings the researcher recommends that;

- Teacher Service Commission should make regular follow up on school principals in order to enforce preparation of lesson plans to realize teacher service delivery.
- There is urgent need for the organization of regular workshops/seminars for teachers, Deputy principals and principals on the importance and current developments and progress in the use of conventional instructional materials and resources in enhancement of classroom performance in public secondary schools in Bungoma County.

---

#### Compliance With Ethical Standards

##### *Acknowledgments*

We appreciate all the respondents who provided data for this study

##### *Disclosure of conflict of interest*

No conflict of interest.

##### *Statement of informed consent*

Respondents were given the option to withdraw partly or in whole from the study process due to the voluntary nature of their involvement. Respondents were assured that their identity would remain anonymous and the facts given were for the research. This was meant to make them participate willingly.

## References

- [1] Cohen, L. & Marion L. (2000). *Research Methods in Education*. London Routledge falmer.
- [2] Cohen, D., & Hill, H. (2000). Institutional Policy and classroom performance: The mathematics reform in California. *Teachers College Record*. 102, 294-343.
- [3] Fullan, M. (2002). *Change Forces: Probing the Depth of Educational Reform*. Falmer Press.
- [4] Kothari, C.R. (2004). *Research Methodology methods and techniques*, 2nd edition. Delhi: New Age International.
- [5] Krejcie, R.V/, Morgan, W.D. (1970): Determining sample size for research activities. *Educational and Psychological Measurement*: 30 (3); 607-610
- [6] Malikow, M. (2005). A cultural Analysis of Multinational Factors that influence teacher identity. *Electronic journal of research in Education Psychology*, No. 13, Vol. 13, 2007, ISSN: 1696-2095
- [7] Mugenda, O.M, & Mugenda, A.G (2003). *Research Quantitative and Qualitative Approaches*: Nairobi Act Press.
- [8] Singh, S.P. & Rana, S. (2014). *Impact of Performance Appraisal on the motivation of teachers of Professional Institutions*. Dahradun.
- [9] Teachers Service Commission (2005). *Code of Regulation for teachers*. Revised 2005. Nairobi.
- [10] Tessema, M. & Soeters, J. (2006). Challenges and procedural justice as predictors of satisfaction with personal and organizational outcomes. *Academic of Management. Journal*, 35, 626-637.
- [11] Turner-bisset, R. (2006), *Cognitive Apprenticeship and Teachers' Professional Development Journal of in-service Education* Vol.32, 2006.
- [12] Vasset, M.F. (2011). *The effect of Performance appraisal in the Norwegian Municipal Health Services: A case study*, Human Resource for Health.