



INFLUENCE OF TEACHER PEDAGOGICAL COMPETENCIES ON PUPILS ACADEMIC PERFORMANCE IN PUBLIC PRIMARY SCHOOLS IN KENYA

Loice Teygong¹,

Kapkiai Moses²,

Oduor Daniel²

¹Faculty of Education and Human Resource,
Kisii University, Kenya

²PhD, Faculty of Education and Human Resource,
Kisii University, Kenya

Abstract:

Teachers have important influence on learners' academic achievement. However, Chepkorio division in Elgeyo Marakwet County has witnessed average results in academic performance in the Kenya Certificate of Primary Education (KCPE) examination. The study target population comprised of 521 teachers and 47 headteachers from Chepkorio Division. A sample size of 42 headteachers and 226 teachers were selected. The data was analysed both qualitatively and quantitatively using both descriptive and inferential statistics. It was found out that teachers utilised learner-centred approaches more as compared to teacher-centred ones; print media: textbooks and references books were commonly used as opposed to audio and video media in classrooms. The study recommends that; in-service training should be provided to teachers and head teachers should supervise teachers' utilisation of various instructional resources in classrooms.

Keywords: pedagogical, competencies, academic performance

1. Introduction

Teachers' ability and wisdom in handling learning activities in school will have a direct impact on learners' active involvement in learning activities (Copriady, 2014). Pedagogical competency refers to the skills and personality of a teacher in handling the

instructional process with the help of instructional methods, teaching aids and resource (Ugbe, 2000). The competencies of teachers thus incorporates a range of subject knowledge content, an understanding of learning styles and methods, and how to translate such knowledge into effective instructional methods while developing an ability to comprehend and nurture the unique person that is every learner (Darling-Hammond, 2006; Noddings, 2007). According to Rivkin, Hanushek and Kain (2005), various factors influence academic performance of pupils in schools. Pedagogical competencies in this study are referred to the four components: teaching methods and utilisation of instructional resources. Research examining teacher characteristics confirms the logical conclusion that poor academic performance of pupils correlates strongly with poor quality of teachers teaching them in school (Anselmus, 2011). Effective pupils learning and academic performance is hampered by weaknesses in teachers' pedagogical content knowledge (PCK) and classroom practices (Akyeampong, Pryor & Ampiah, 2006). For instance, whereas appropriate instructional methods would facilitate grasping of new concepts, inappropriate methods are likely to constrain knowledge retention and application (Chang, 2010) hence poor academic performance by pupils. This study therefore investigated if the results on the influence of teachers' pedagogical competence in Chepkorio Division agree with the above studies.

2. Problem Statement

All the teaching and learning processes in the classrooms cannot be what it should be without the teacher (Stavreva, 2013). At the same time, teachers cannot be effective without possessing certain characteristics (Wamala & Seruwagi, 2013). Teachers' pedagogical competencies are therefore indispensable in the teaching and learning processes. There has been inconsistent performance of pupils in KCPE examinations (Table 1) in Chepkorio division over the past five years. To this end, it is not understood whether teacher competencies with regard to utilisation of instructional resources; and teaching methods could be the reason for unsatisfactory performance in examinations. Therefore there was need to conduct this research to establish influence of teachers' pedagogical competencies on pupils' academic performance in public primary schools in Chepkorio division.

2.1 Objectives

The following were objectives of the study:

1. To find out influence of teacher competency to use various teaching methods on pupils' academic performance in public primary schools in Chepkorio Division;

2. To establish influence of teacher competency to use instructional resources on pupils academic performance in public primary schools in Chepkorio Division.

3. Literature Review

3.1 Teacher Competencies

For teaching and learning process to take place in classrooms, teachers are the most significant persons (Stavreva, 2013). The success of any curriculum to be implemented needs teachers who are competent (Wamala, & Seruwagi, 2013). Similarly, Ilanlou and Zand (2011) observed that the success of educational plans in each country depends on the teachers armed with required competencies and professional skills. Akiri (2013) also observed that quality of education and performance of learners depends on the teachers as reflected in the discharge of their duties. Sultan and Shafi (2014) define competencies as particular and self-evident qualities that teachers should have. Whereas Bloom divided teachers' competencies to emotional, cognitive and practical with the most competencies that a teacher should have being; being familiar with various thinking skills and applying them and also being familiar with new learning and teaching methods and applying them in class. Furthermore, Ilanlou and Zand (2011) said that teachers need to be good class managers by having specific skills of communicating with pupils in their classes, have research skills and evaluate the academic achievement in class. On his part, Prasertcharoensuk, Somprach and Keow (2015) saw that teachers need to have the following competencies; curriculum content mastery, providing curriculum content to pupils in a proper order, organizing the content, mastery in employing training tools in practice, keeping accurate records and giving feedback to the learners. For this study, the study focused on competencies skills of teachers based on; teaching methods, utilization of instructional resources, evaluation techniques and preparation of professional documents.

Moreover, Prasertcharoensuk, et al (2015) also observed that competency of an individual teacher can be detected through the work behavior and that will be a success indicator for the institution rather than his/her educational level or intelligence. In United States, McRae (2012) examined the relationship between learner perceptions of teacher competence support, self-efficacy for reading, and reading achievement for African American and European American learners. The study sample consisted of 366 seventh grade learners in an ethnically and economically diverse school district. African American learners perceived statistically significantly higher levels of teacher competence support for reading compared to their European American peers. Teacher competence support was significantly associated with self-efficacy. This study focused

on how teacher pedagogical competencies influenced the academic performance of pupils in primary schools.

3.2 Teaching Methods and Pupils Academic Performance

Teaching is an interactive process through which knowledge and skills are shared with students, with a view to improving pupils understanding and ability to manipulate the social, economic, political and physical environment to enhance their survival (McRae, 2012). The main objective of teaching is to bring about desirable learning in learners. In this regard, pupils are expected to develop appropriate knowledge and skills, which are necessary for solving problems and improving human life (Okunbanjo, 2013). In most cases, the teacher initiates communication and influences learners to think in a particular way as guided by the syllabus. However, whether the teacher authoritatively leads communication throughout the instructional process or whether the teacher takes up facilitation role is a matter of choice (Dufresne, et al, 2010). While teachers' training makes specific recommendations in favour of participatory exploratory approaches, the teacher's efforts are often influenced by cognitive orientation in conjunction with the objectives of the teaching-learning process (Tella, et al, 2010).

Teaching methods in classroom can be teacher-centered, learner-centered or mixed approach. Watson (2003) noted that quite often teachers prefer methods that make their work easier based on their beliefs, personal preferences and norms of their disciplines. In this regard, some teachers believe that lessons should be teacher-centered, where the teacher is the expert and the authority in presenting information (Ahmad & Aziz, 2009). Nevertheless, teacher-centered methods are associated with inadequate stimulation of pupils' innovative capacities, intellectual thinking and memorization, cramming of facts, poor knowledge retention and high dependency among graduates (Adeyemi, 2008; Tanner, 2009). The review of the following studies however, concentrates on teacher-centred methods without explaining various approaches that are associated with it. It was the interest of this study to identify which teaching methods teachers were using in Chepkorio Division and determine their influence on pupils' academic performance. Other studies show that teachers adopt pupil-centered approaches, in which their role is restricted to facilitation of the teaching process (Ahmad & Aziz, 2009). Learner-centered methods are associated with imaginative, critical and creative skills; active participation of learners in the learning process through discussions and intellectual engagement; as well as higher learning performance and effectiveness in addressing problems of humanity (Curtin, 2005; Ahmad & Aziz, 2009). Although teachers have the discretion to choose methods for delivering lessons to their pupils, Chika (2012) observed that learner-centered teaching

method is a powerful strategy for improving pupils' academic performance in examinations and application of knowledge and skills acquired.

The method used by teachers in sharing knowledge with pupils in classroom is a factor influencing learning performance of learners at all tiers of the education system. Chang (2010) pointed out that while appropriate instructional methods are likely to enhance learning performance; inappropriate teaching methods are known to stifle knowledge retention and realization of learning objectives. Consequently, aligning teaching methods with the needs and preferences of pupils is considered important for higher academic performance (Zeeb, 2004). Zeeb indicated that pupils, whose styles are not matched with teaching methods that were chosen by teachers, were less likely to develop interest in learning. In the absence of learner interest in a subject, concentration level drops and academic performance was greatly impaired. In Macedonia, Stavreva (2013) research was to show the use of teaching methods used in the teaching process in teaching the content area of biological sciences. The research included 15 full time learners in their second year of study majoring in biology at the university. Results showed that academic achievement in lessons began with experiment or slide demonstration was higher than lesson beginning with lecture method. This study has also showed that learner comprehension can be enhanced with lesson started with experiment, because these activities increase learners' interest in the topics. The research by Stavreva was conducted in secondary schools in Macedonia while this research was done in Kenya. Chang (2010) investigated the effectiveness of teacher-centered and learner-centered pedagogical methods on the performance of pupils. The study found that learner-centered methods were more effective in influencing the perception of pupils towards science subjects. Learners placed more value on active participation in-group discussions than attendance of lectures. Learner-centered methods fostered greater flexibility in teaching and stimulate intellectual engagement with teachers and among students (Chang, 2010). This study determined how teachers are using the above mentioned methods and their influence on pupils' academic achievement.

In Nigeria, Aina and Olanipekun (2015) study reviewed the controversy surrounding the teachers' qualifications and its influence on learners' academic achievement. The study measured teachers' qualification using seven indicators which are: formal education, experience, subject matter knowledge, pedagogy studies, duration of training, certificate/licensing and professional development. The paper reviewed different opinions on the relationship between these indicators and learners' academic achievement. They found out that there was a common opinion that subject matter knowledge, pedagogy studies, professional development and years of experience are imperative and positively correlated with learners' academic

achievement. Moreover, Okunbanjo (2013) examined perceived competence and teacher autonomy support as predictors of learners' academic achievement. The sample consisted of two hundred and fifty learners randomly selected in senior secondary schools. Result showed that perceived competence and teachers' autonomy support significant combine in predicting learners' achievement. Elsewhere, Aina and Olanipekun (2015) found that pupils' academic performance was significantly related to the instructional methods used by teachers in classroom. In this regard, the methods used to deliver lessons were found to have greater impact than the content covered in a course of study.

Sessional Paper No. 1 of 2005 amplifies the Government's commitment to enhancing quality of education at all tiers of education (basic and tertiary) to produce people with adequate knowledge and skills to tackle challenges of the 21st Century (RoK, 2005). The instructional methods adopted by teachers remain paramount in realization of objectives of the sectoral policy guidelines regarding quality of education provided (Odundo, 2013). Odundo found that government and other education stakeholders continue to provide sound curriculum, physical infrastructure and human resource; but observed that such measures alone cannot improve learning performance without appropriate instructional methods. Poor instructional methods have been associated with poor academic performance in science and arts-based subjects in the national examination (Muraya & Kimano, 2011; Kang'ahi, et al, 2012). Odundo (2013) noted that learners who experience a mismatch between teaching methods used during teaching and their preferred styles often felt that their learning needs were being addressed using an unfamiliar language. The mismatch posed a difficulty for some learners in internalizing the materials delivered, leading to lower grades in examinations.

A number of empirical studies have investigated the link between instructional methods used in subjects such as in secondary schools (Muraya & Kimano, 2011; Kang'ahi et al, 2012). Kang'ahi et al (2012) investigated the influence of teaching styles on learners' academic performance in Kiswahili language in secondary schools. The study found a positive relationship between teaching styles and learners' academic performance. Besides, pupils' academic performance was seen to increase with more learner-centered teaching styles. Furthermore, Muraya and Kimano (2011) found that cooperative learning (learner centered) approach resulted in significantly higher mean performance scores compared to regular teaching (teacher centered) method. The study concluded that learner-centered method was an effective teaching approach, which should be adopted by biology teachers. This study determined the competency teachers have towards the use of this method in enhancing pupils' academic performance in

primary schools. When it comes to primary schools, the linkage between teaching methods and academic performance at the primary tier remains scanty in terms of academic literature, especially in Kenya. Similarly, there is little or no effort to support teachers already in service to improve their teaching methods. These issues influenced the researcher to conduct this study. This study will investigate teachers' competency on the use of teaching methods and how it influences pupils' academic performance in public primary schools in Chepkorio Division.

3.3 Learning Resources Use by Teachers on Pupils Academic Performance

Learning resources include textbooks, charts, maps, audiovisual and electronic instructional materials such as radio, tape recorder, television and video tape recorder (Likoko, Mutsotso & Nasongo, 2013). Other category of material resources consist of paper supplies and writing materials such as pens, eraser, exercise books, crayon, chalk, drawing books, notebooks, pencil, ruler, slate, workbooks and so on (Atkinson, 2000). Chenge and Syomwene (2016) assert that instructional leadership consist of direct and indirect behaviours that significantly affect teacher instruction and, as a result, pupils learning through provision of adequate resources for learning. Hopkins (2001) pointed out that the prime function of leadership for authentic school improvement is to enhance the quality of teaching and learning hence improved academic performance by pupils.

Shiundu and Omulando (1992:179) contend:

“For curriculum implementation to be effective, it requires continuous support which maybe realized through various support services, some of which may include: providing staff with materials whose utilization can be discussed in relation to the implementation process.”

Bishop (1995) considered the importance of instructional resources material in the implementation of innovation. Bishop holds that the teacher's ability to implement curriculum change is a function of the availability of the tools for the job. Wamala and Seruwagi (2013) observed that it is the kind of instructional resource available which had great implication on what goes on in schools today. Olembo et al, (1992) cited by Chenge and Syomwene (2016) argued that the school administration should take responsibility for the selecting and procurement of instructional materials which necessitate effective teaching and learning process. Resources are necessary for any implementation of an innovation lack of resource materials and facilities frustrate teachers' and diminish their motivation (Girvin, 2005). Adequate material and facilities

will boost the teacher confidence thus effective and productive teaching sessions. The instructional material is crucial ingredients in learning and the intended curriculum cannot be really implemented without them. Instructional materials provide information or organize the scope and sequence of information and presents opportunity for students to use what they may have learned.

Barasa (2005) opines that the use of resources can be made more effective if the teacher has knowledge and skills on how to effectively utilize in the teaching-learning process. Barasa highlights the fact that the availability of teaching resources and the teachers' awareness of their utility enhance learner performance. It is the responsibility of the headteachers to assist the teachers in identifying instructional materials for use in teaching. Eshiwani (1993) observed that the expenditure on instructional material per pupil and the management efficiency of material per pupil may boost school performance. Instructional resource materials are necessary for the implementation of an innovation. Gross et al, (1971) reported that curriculum implementation in schools was hindered by the lack of adequate instructional resource material and facilities. This is because instructional resource provides the link between the world of obstruction and real life situation and these resource material used in curriculum implementation need not only be available but also be in the right quantities. This study will examine teachers' competence on the use of instructional resources and its influence on pupils' academic performance in primary schools.

The use of learning resources in the classroom has the potential to help the teacher explain new concepts clearly, resulting in better pupils understanding of the concepts being taught (Kadzera, 2006). In a survey, to find factors that facilitate teacher skill, teacher morale, and perceived student learning in technology-using classrooms, Baylor and Ritchie (2002) found that teachers valued the use of technologies in class and that it had an impact on pupils content acquisition; the use of technology added to class academic performance. Nabwire (2008) carried out a study in Kenya on the use of visual aids and suggested that visual aids introduce variety in the lesson and thus stimulate learning. The process of learning involves the activities in which pupils engage in order to make sense of or master the content they are learning. In addition, they offer manipulative or other hands-on activities for pupils who need them to facilitate learning (Rotumoi & Too, 2012). This study investigated whether teachers in Chepkorio division improvised visual aids in teaching for the purpose of improving academic performance of pupils in schools. Mutai (2006) cited by Likoko et al,(2013) postulated the pre-school pupils academic performance is strengthened when there are enough reference materials such as textbooks, stationary and teaching aids. From the reviewed studies, it is evident that inadequate research has been conducted to

determine the influence of instructional resource on academic performance of pupils in primary schools. This study sought to find out whether the teachers utilise instructional resources in the teaching and learning process and how it influences pupils' academic performance in public primary schools in Chepkorio Division.

3.4 Materials and Methods

The study employed the descriptive survey design. This study was carried out in public primary schools in Chepkorio Division, which is one of the divisions in Keiyo Sub County, in Elgeyo Marakwet County. The study population were all public and private primary schools in Chepkorio division. The final sample size consisted of 42 headteachers and 226 teachers totalling to 268 respondents. The data collection instruments that were used to collect data from the selected respondents were questionnaires, interview guide and document analysis. The data collected was analysed using quantitative and qualitative methods. Both descriptive and inferential statistics of data analysis was employed. In descriptive analysis, frequencies, percentages, mean and standard deviation was used. While in inferential statistics, Pearson Product Moment Correlation was employed. Qualitative data obtained from open ended questions and interview schedule was also analysed using content analysis.

4. Findings and Discussions

4.1 Teaching Methods and Academic Performance in Primary Schools

The first objective of the study was to determine the influence of teaching methods employed by teachers and academic performance in Chepkorio division primary schools. Therefore, the teachers were asked to indicate the frequency to which they applied the following methods; group discussions, problem solving, questions and answers, brainstorming and demonstration in teaching using the following scale: always (5), occasionally (4), sometimes (3), rarely (2) and never (1). The results are presented in Table 1.

Table 1: Teaching methods used by teachers in schools (N=184)

Teaching methods	Never		Rarely		Sometimes		Occasionally		Always	
	F	%	f	%	f	%	f	%	f	%
i. Question and answer	10	5.4	10	5.4	18	9.8	24	13.0	122	66.3
ii. Problem solving	4	2.2	16	8.7	50	27.2	50	27.2	64	34.8
iii. Demonstration / modelling	8	4.3	14	7.6	42	22.8	68	37.0	52	28.3
iv. Group discussions	8	4.3	14	7.6	44	23.9	80	43.5	38	20.7
v. Brainstorming session	18	9.8	22	12.0	46	25.0	62	33.7	36	19.6

From the five teaching methods that teachers were requested to indicate the frequency to which they used (Table 1), 122 (66.3%) of teachers acknowledged that they always use question and answer method, 24 (13.0%) applied it occasionally, 18 (9.8%) sometimes, 10 (5.45) rarely and only 10 (5.4%) did not utilise the method. On problem solving method, 64 (34.8%) always used the method in their classrooms, 50 (27.2%) used occasionally, 50 (27.2%) sometimes, 16 (8.7%) rarely and 4 (2.2%) did not use this method in their teaching. Results on the use of demonstration and modelling, 52 (28.3%) of teachers always used, 68 (37.0%) occasionally applied, 42 (22.8%) applied the method sometimes, 14 (7.6%) used the method on rare times and 8 (4.3%) did not use this technique. Results further revealed that group discussion method was not regularly preferred mode of teaching as 38 (20.7%) of teachers admitted that they always utilised it, 80 (43.5%) utilised the method occasionally, 44 (23.9%) sometimes, 14 (7.6%) rarely and 8 (4.3%) did not use the method. On the fifth method, 36 (19.6%) reported that they used brainstorming and modelling sessions regularly, 62 (33.7%) applied the method occasional times, 46 (25.0%) sometimes, 22 (12.0%) rarely and 18 (19.8%) did not used the method. The average computation of means and standard deviation for the results presented above shows that the mean average was 3.8 with a standard deviation of 1.11 which suggests that teachers occasionally varied teaching methods in classrooms. Table 10 presents the results on other methods of teaching used by teachers in classrooms.

Table 2: Other teaching methods that teachers use

Other teaching methods	Frequency	Percentage
Experiments / practicals	20	10.9
Debate	16	8.7
Dramatisation	34	18.5
Story telling	18	9.8
Peer teaching	2	1.1
Role play	14	7.6
Project method	12	6.5

The mentioned teaching methods were not the only one applied by teachers in primary schools in Chepkorio division; through open-ended question, the teachers were asked to indicate other methods that they used to teach their pupils in class. These methods were; use of experiments (10.9%), debate (8.7%), dramatisation, (18.5%), storytelling (9.8%), peer teaching (1.1%), role play (7.6%) and project method (6.5%) as are presented in Table 2. The head teachers interviewed mentioned that question and answer method was used in 5 schools, demonstration (4), discussion (4), child centered (3), experiment and practicals (3). Project method, discovery learning, storytelling, miming and role-

play were used rarely in schools. This shows that varieties of methods are used in schools where learner-centered methods feature prominently as opposed to teacher-centred ones. The results are similar to Odundo and Gunga (2013) whose findings confirmed that learner-centered instructional methods accounted for a larger proportion of variance in the performance of students in business studies. This is because learner-centered methods are more effective in enhancing learning achievement in business studies than teacher-centered approaches. To determine the relationship between teaching methods and academic performance, a Karl Pearson correlation analysis was computed. This was arrived at after computing the scores for teaching methods used by teachers against dependent measures of academic performance that were on ordinal scale. The results are given in Table 3.

Table 3: Teaching methods and performance of pupils in classroom

		Teaching methods	Performance
Teaching methods	Pearson Correlation	1	.229**
	Sig. (2-tailed)		.002
	N	184	184
Performance	Pearson Correlation	.229**	1
	Sig. (2-tailed)	.002	
	N	184	184

** . Correlation is significant at the 0.01 level (2-tailed).

The correlation results shows that there exist positive relationship ($r=0.229$) between teaching methods used by teachers and performance of primary schools in Chepkorio Division. The correlation also appears to be significant at 0.01 level which suggests that continuous use of different approaches to teaching by teachers will raise the academic performance of pupils in primary schools. In consistent with the study results, Odundo and Gunga (2013) established that learning achievement was also associated with teacher-centered instructional methods, including lecture, dictation and chalkboard notes, as well as learner-centered approaches, including group discussions, take-way assignments and brainstorming. In addition, Kimani et al, (2013) established that teachers' provision of individualized attention to weak students has a significant effect on academic achievement in secondary schools in Nyandarua County. From the above studies, it is clear that teacher usage of various instructional methods in classrooms will improve learning which will later lead to better academic outcomes among pupils in schools. When head teachers were asked to give their perception on how utilisation of various teaching methods, one head teacher said that:

“They have made learning enjoyable, meaningful and real in daily life situation and high level of knowledge is retention and is practical oriented.”

Another head teacher indicated that:

“It promotes confidence among learners and creates room for competition.”

The response made by head teachers underscores the importance of teachers utilising various teaching methods as they increases learners understanding, learners gain variety of skills and knowledge, performance is improved, learner centered methods of teaching are fostered, increase competition in the classroom and encourages teamwork. This calls for the teachers to take up the challenge of always shifting and improving their teaching and learning approaches that are cooperative and child-centred.

4.2 Utilisation of Instructional Resources and Academic Performance

The second objective of the study sought to determine the instructional resources used by teachers in learning in their classrooms and its relationship to student academic performance in primary schools in Chepkorio division. Therefore, the teachers were given a list of seven instructional resources to indicate the frequency of using them. They were to use a scale of five; always, occasionally, sometimes, rarely and never. The results of the analysis are presented in Table 4.

Table 4: Instructional resources used in learning (N=158)

Instructional resources	Never		Rarely		Sometimes		Occasionally		Always	
	F	%	f	%	f	%	f	%	f	%
i. Textbooks	0	0.0	10	5.4	8	4.3	14	7.6	152	82.6
ii. Reference materials	2	1.1	16	8.7	34	18.5	42	22.8	90	48.9
iii. Charts and maps	2	1.1	8	4.3	56	30.4	64	34.8	54	29.3
iv. Shapes and geometry	6	3.3	16	8.7	56	30.4	68	37.0	38	20.7
v. Pictures	4	2.2	10	5.4	68	37.0	68	37.0	34	18.5
vi. Models and realia	4	2.2	18	9.8	56	30.4	84	45.7	22	12.0
vii. Radio	52	28.3	36	19.6	40	21.7	38	20.7	18	9.8

The results on Table 4 shows that the most commonly used instructional resource by teachers in Chepkorio Division was textbooks 152 (82.6%) followed by reference materials 90 (48.9%), charts and maps 54 (29.3%), shapes and geometry 38 (20.7%), pictures 34 (18.5%), models and realia 22 (12.0%) and lastly radio 18 (9.8%). The result confirms teachers’ utilisation of various forms of instructional resources to aid teaching

and learning processes in classrooms. In making comparison, radio was not used by 52 (28.3%) of teachers in primary schools in the division. The non-use of radio by 28.3% of teachers could be due to lack of electricity and radios in schools while some schools used to apply radio lessons for lower classes. The results are different from Onsare (2014) findings whereby it was found out that most of the audio and audio-visual cassettes available in schools were used to supplement the teaching of literature in secondary schools. Secondary schools receive bulk of allocation from the government making them to be in a position to purchase audiovisual media unlike in primary schools in this case. In United States, Darling-Hammond (2006) advice that audio and audio-visual cassettes should be developed to serve dual purposes for both literature and other skills like oral communication. This is likely to help schools cut down on expenses used in acquiring instructional resources.

The results further reveal that teachers relied on reference materials (48.9%) as the second most important resource in aiding teaching and learning process in classrooms. The third most utilised resource material were charts and maps, pictures, shapes and geometry, models and realia and lastly radio. On average, statistics shows that the utilisation of instructional resources was above average in majority of primary schools in Chepkorio Division. These findings are different from Onsare (2014) survey of Kisii Sub County where results on lack of variety of instructional resources are appalling, in that, more than 80 percent of teachers of English reported absence of these resources in schools. Copriady (2014) found out that lack of materials and apparatus undermines the efforts to provide a good Chemistry practical or experiment. To further determine the extent to which teachers improvised instructional resources to boost learning in classrooms. This was asked to answer the second research question. Teachers' responses are given in Table 5.

Table 5: Frequency of instructional resource improvisation

Rate of improvisation	Frequency	Percent
Never	2	1.1
Rarely	14	7.6
Sometimes	108	58.7
Always	60	32.6
Total	184	100.0

More than half 108 (58.7%) of teachers indicated that they improvise learning resources occasionally. Only, 60 (32.6%) of teachers admitted to be improvising learning resources always. The result shows that teacher level of improvising resources for classroom teaching is low. The study further sought to find out the relationship between teacher

instructional resource use utilisation and academic performance of pupils in their classrooms. The researcher computed average scores for teacher utilisation of instructional materials against academic measurement data which were in ordinal scale. A Karl Pearson correlation analysis was conducted to determine the direction and strength of the relationship. The results are given in Table 6.

Table 6: Instructional resource use and academic performance

		Instructional resources	Performance
Instructional resources	Pearson Correlation	1	.144
	Sig. (2-tailed)		.051
	N	184	184
Performance	Pearson Correlation	.144	1
	Sig. (2-tailed)	.051	
	N	184	184

Results shows that there exist positive relationship ($r=0.144$) between instructional resource use by teachers and performance of pupils in classrooms. This implies that teacher continuous use of variety of instructional resources rather than textbooks and reference materials alone would improve learners' academic attainment in primary schools in Chepkorio Zone. This finding is supported by Bishop (1995) who asserts that with a variety of resources, the schools can produce learners who are intellectually alert, able to explore and benefit from what their education environment offers them. In the study findings, the low correlation scores ($r=0.144$) is not related to inadequacy of instructional resources as revealed during head teachers interview whereby 5 out of 9 head teachers acknowledged that they had adequate instructional materials for teaching, 2 schools had instructional resources but on an average scale while 2 said that their instructional resources were inadequate to be used by all teachers to facilitate learning. The head teachers should supervise utilisation of instructional resource use by teachers in schools. This will aid in learners improving their knowledge and competencies with what is required in their curriculum.

5. Conclusion

The study found out that teachers utilised question and answer method, problem solving and demonstration as main method of teaching. The findings meant that teachers who used various teaching methods were able to post positive results in their classes than those who relied on one method of teaching. Responses from head teachers showed that basic instructional resources (textbooks and reference books) were

available and adequate in majority of primary schools in Chepkorio division. This implied that teachers who regularly alternated and improvised teaching aids while teaching were able to post positive good academic outcomes unlike those who relied on other conventional teaching aids.

5.1 Recommendations

The study makes the following recommendations based on the results of the study. To improve teachers' pedagogical approaches in teaching methods, in-service training is required. This will be facilitated through the ministry of education, schools and teachers themselves. In addition, the study suggests that there is need for constant supervision of teaching by quality assurance and standards officers (QASOs) to ensure effective teaching in classrooms. To improve teachers' utilisation and improvisation of instructional resources, the study recommends that head teachers should monitor and ensure teachers use variety of teaching aids in teaching since most schools were found to have the resources. Schools also need to invest in new educational media resources to match with other schools that use technology in classrooms in other areas of the county.

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