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Exploring Utilization of Instructional Materials among Public Lower Primary Schools in Four Selected Counties in Kenya

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Abstract

Instructional materials have remained important in enhancing quality education and are associated with student learning. Yet little is known about how teachers use instructional materials to help pupils learn. Utilization of instructional materials to enable pupils' master literacy and numeracy in competitive global economy needs to be rethought. This paper examines utilization of instructional materials as a strategy to improve pupil's literacy and numeracy skills among public lower primary schools in Kenya. The study used cross sectional survey design. Study was carried out in four selected Counties in Kenya: Kitui, Muranga, Narok and Migori. A sample of 68 head teachers and 68 teachers were selected using probability sampling procedures. Four instruments were utilized: interview schedule, questionnaire, classroom observation schedule and a checklist. The results show adequacy of instructional materials and pupil textbook ratio vary across the public schools. Teacher's use of instructional materials improved pupil's literacy and numeracy skills through lesson preparation and giving exercises. The study recommends the need to provide adequate instructional materials.

Key words: *Primary Education, Utilization, Instructional Materials, Literacy Skills, Numeracy Skills.*

1.0 Introduction

Instructional materials have remained important in enhancing quality education particularly in Sub Saharan Africa (SSA) (Fredriksen, Brar and Trucano, 2015; Jamieson and Byrne, 2008; Verspoor and Wu, 1990; Jeanne, 1994). Regardless of all the changes and education reforms in Organization for Economic Co-operation and Development (OECD) countries, textbooks are still a mandatory source of knowledge in the teaching process (Tufekcic, 2010). Globally, what pupils learn is the core priority of post 2015 on quality education, which instructional materials play crucial role (UNESCO/UNICEF, 2013). Children being in school are not enough, but learning something there is imperative, which instructional materials play significant part (GCE, 2015; Archer, 2012; Greaney, 1998).

The world today is a knowledge based economy, thus a focus on development of basic skills is vital as it lay foundation to enter into the economic world and they are also requirements of EFA (Education For All), Millennium Development Goals (MDGs) and 21st century goals for learning (Talbot, 2015; UNESCO, 2014; World Bank, 2003; Lockheed and Verspoor, 1991). The Dakar framework for action and Global Partnership Education (GPE) focus has been on improving all aspects of quality education so that recognized and measureable learning outcomes in literacy, numeracy and essential skills are achieved (UNESCO, 2010; Leyendecker, 2008).

Focusing on utilization of instructional materials which contain knowledge content that pupils are expected to learn; can improve opportunities of 130 million children who are in school to read, write or do basic mathematics (UNESCO, 2014; Verspoor 2005; Jeanne, 1994; Postlethwaite, 2004). Therefore, emphasis on quality education learning in post 2015, which textbooks plays significant part, prompted this study to examine utilization of instructional materials as a strategy in improving literacy and numeracy skills among public lower primary schools in four selected counties in Kenya.

2.0 Methodology

This study used cross sectional survey design to investigate teacher’s views on utilization of instructional materials in improving pupil’s literacy and numeracy skills. The study was carried out in sampled lower public primary schools in four selected counties of Kitui, Muranga, Narok, and Migori (Republic of Kenya, 2002).

3.0 Results and Discussion

3.1 Instructional Materials Received in Schools

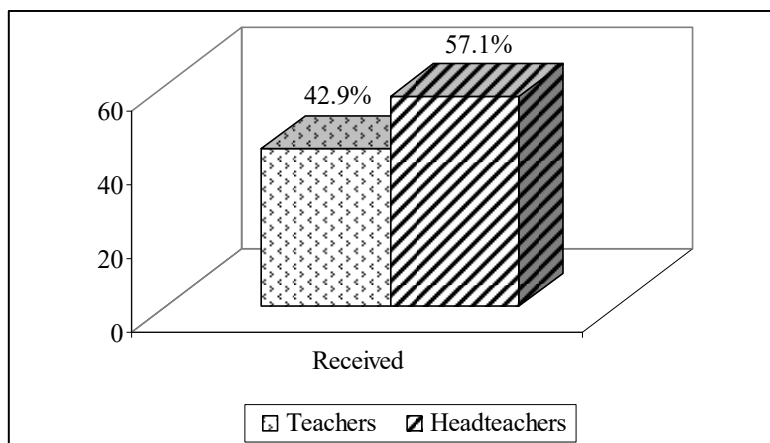


Figure 1: Instructional materials received in schools

About 42.9% of teachers and 57.1% of head teachers had received English and Mathematics textbooks (Figure 1) in their schools. Scrutiny of the received English and Mathematics instructional materials from classroom observation indicated that all were approved by Kenya Institute for Curriculum Development (KICD). Further, from the checklist all the sampled public primary schools had received instructional materials. The received instructional materials in primary schools indicates its importance in facilitating learning process for both pupils and the teachers.

2.2. Adequacy of Instructional Materials in Schools

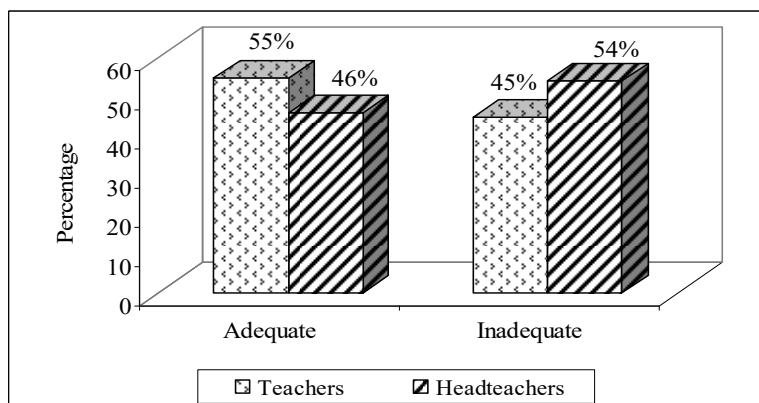


Figure 2: Adequacy of instructional materials in schools

More than half 55% of teachers said that instructional materials are adequate compared to 46% of headteachers. However, 54% headteachers and 45% teachers respectively pointed out that literacy and numeracy instructional materials were inadequate. Teachers and headteachers observation is supported by classroom observation that found one school with one English textbook available for English lesson. Another classroom observation during English

and mathematics lesson noted that about 17% of schools had over forty pupils against ten or less literacy and numeracy instructional materials.

Inadequacy of instructional materials in schools is far from the required ratio of 1:3 for lower public primary schools. Inadequacy of instructional materials observed in this study supports UNESCO (2014) finding that found reading and mathematics textbooks for pupils in public primary schools in most African countries are insufficient. Thus effort to achieve lower primary pupils' textbook ratio is still far from being achieved.

2.3 Mathematics and English Ratio by District

The standard textbooks ratio accepted for lower public primary schools in Kenya 1:3.

Table 1 Mathematics and English ratio in the four districts

District	English textbook ratio	Mathematics textbook ratio
Muranga	1:3	1:3
Kitui	1:3	1:3
Migori	1:4	1:4
Narok	1:4	1:4

Pupils' literacy and numeracy textbooks ratio vary (Table 1). Headteachers interviewed, except in Muranga, county pointed out that pupils enrolment has overstretched instructional materials received. Headteachers emphasized that instructional material received have not matched enrolment of pupils. Other challenges noted by headteachers are presence of significant number of torn instructional materials which has not been replaced or repaired.

Scrutiny of literacy and numeracy textbooks ratio from classroom observation revealed literacy and numeracy textbooks ratio in Kitui, Migori and Narok ranging from 1:4, 1:5, 1:6, 1:8, 1:9, 1:10 and 1:20 forcing pupils to share during learning process. Kitui, Migori and Narok counties with pupils' literacy and numeracy textbooks ratio above 1:3 from classroom observation indicates that demand for literacy and numeracy textbooks are still wanting; an indication that pupils' development of literacy and numeracy skills may be impeded. Textbooks ratio of 1:4 to 1:20 is far from meeting pupils' demand that requires lower pupils to have textbooks ratio of 1:3 to utilize the textbooks.

The inadequacy of instructional materials concurs with UNESCO (2010) Lockheed and Verspoor (1991) that found instructional materials in developing countries are limited; which is detrimental to learning. World Bank (2003) finding that instructional materials in developing countries fail to reach schools could be the case in schools that are faced with inadequate instructional materials.

Mismatch of instructional materials with pupil enrolment impedes acquisition of skills to move to another level. Research reveals 60% of pupils worldwide gain skills to move to the next level, but in SSA only 25% of pupils gain basic skills to move to the next level. Therefore, the schools that have inadequate instructional materials may have less pupils acquiring literacy and numeracy skills. Therefore, the ratio of instructional materials indicates that pupils' access to instructional materials is a challenge and can impede teachers' efforts to develop and improve pupils' acquisition of literacy and numeracy skills; which has been pointed at by UNESCO (2003); Lockheed and Verspoor (1991) and World Bank (2003).

2.4 Teachers’ views on ways instructional materials utilized improve pupils’ literacy and numeracy skills

Table 2: Teachers’ views on ways instructional materials utilized improve pupils’ literacy and numeracy skills

Teachers’ views on ways instructional materials utilized improve pupils’ literacy and numeracy skills	n	Teachers%
· Used for lesson preparation to enhance presentation for pupils understanding making pupils give correct responses and do exercise and examination correctly	39	59
· Used for guiding pupils to copy literacy and numeracy exercises on their exercise books to improve on spelling and organization hence do exercises and examination correctly	15	23
· Given to pupils to read and do simple arithmetic on their own to enhance knowledge retention hence improve pupils reading and peer learning	9	14
· Used for observation and proofing examples in literacy and numeracy to determine pupils’ acquisition of skill developed making pupils use familiar concepts	3	4
Total	66	100

About 59% of teachers pointed out that instructional materials used for lesson preparation to enhance presentation of content for pupils understanding making pupils give correct responses and do exercises and examination correctly (Table 2). Other 23% of teachers pointed out that instructional materials were given to pupils to copy literacy and numeracy exercises on their exercise books to improve on spelling and organization.

All the headteachers interviewed agreed that teachers utilize instructional materials as reference materials to prepare English and Mathematics content and to give pupils exercises. About half of the headteachers emphasize that teachers interact with instructional materials to select content and examples that can be illustrated in the blackboard for pupils’ easy understanding. The finding supports the Republic of Kenya (2005) rationale for investing in instructional materials to enable teachers to deliver curriculum using appropriate reference textbooks.

The classroom observation support teachers’ responses on ways literacy and numeracy instructional materials were utilized. In a Mathematics lesson, a teacher demonstrated a few examples of addition with carrying on the blackboard and later copied exercises on the blackboard and pointed out on pupils to work out on blackboard. The teacher moved around to mark while reminding pupils to skip two lines and organize their work. In another classroom observation during English lesson, individual pupils were engaged in observing pictures, naming and doing individual exercises, after a few examples had been done using the English textbook. From the observation guide, pupils’ previous literacy and numeracy exercises had been organized.

About 14% of teachers utilized instructional materials by giving to pupils to read and do simple arithmetic on their own to enhance knowledge retention thus support the objective of textbook provision, which requires pupils to use the material on their own (Republic of Kenya, 2005).

The teachers who view utilization of instructional materials improve pupils literacy and numeracy when pupils read or do simple arithmetic concurs with assessment done in Uganda and Ghana, which found pupils’ learning improving in literacy and numeracy skills due to utilization of textbooks provided (UNESCO, 2010). This concurs with a study that found increasing of pupils access to textbooks daily classroom activities is a key factor in improving pupils’ literacy levels (Postlethwaite, 2004).

Lockheed and Verspoor (1991) found availability of instructional materials having positive effects on pupils’ learning. However, Verspoor (2005) argues that essential instructional materials are necessary but not a sufficient condition for learning. Therefore teachers’ ability to utilize of instructional materials is an indication that teachers have understanding of content, knowledge of teaching methods, presentation and assessment skills which are crucial during teaching and learning process to enable pupils’ acquire literacy and numeracy skills.

2.5 Challenges teachers face in utilizing instructional materials

Challenges teachers face when utilizing instructional materials to enable pupils acquire literacy and numeracy skills vary.

Table 3: Challenges teachers face in utilizing instructional materials

Strategy	Challenge	n	Teachers %
Instructional materials	Inadequate	39	59.1
	High pupils enrolment	18	27.3
	Inadequate funds	5	7.6
	Pupils differences	4	6.0
Total		66	100

Inadequacy of instructional materials in schools was noted by 59.1% of teachers (Table 3). Inadequacy of instructional materials was also observed where literacy and numeracy instructional materials were shared among pupils and the teacher writing exercises on blackboard.

Headteachers interviewed pointed out that instructional materials received in school were still far less from meeting pupils’ demand except in Muranga county. The inadequacy of instructional material as a challenge also supports (Jeanne, 1994) which found teachers not utilizing instructional material due to its insufficiency. Therefore, inadequacy of literacy and numeracy instructional materials for primary curriculum can be an impediment to improving pupils’ basic skills (Republic of Kenya, 2005; Leyendecker, 2008; Lockheed and Verspoor, 1991). The inadequacy of instructional materials can frustrate teachers’ efforts in improving pupils’ skills due to much time wasted writing pupils exercises on blackboard.

Table 4: Way forward for utilizing instructional materials

Way forward	Teachers	
	n	%
-Providing adequate instructional materials	25	38.0
- Organizing regular teachers in-service courses	22	33.3
- Grouping pupils where there is high class size	10	15.1
- Ensuring every pupil attend school	8	12.1
-Sensitize parents on importance of education	1	1.5
Total	66	100

Table 4 shows that (38.0%) (25) teachers said that adequate instructional materials should be provided. Teachers pointed that adequate instructional materials will enable each pupil to have access to and practice often the skills developed to improve.

3. Conclusion

From the study findings it can be concluded that teachers pointed out that in-service training was useful for different reasons: majority of teachers who attended the in-service training benefited in mastery of literacy and numeracy content, improved their lesson preparation, and improved their teaching methods and improvisation of teaching materials. Teachers found utilization of instructional materials improving pupils’ literacy and numeracy skills in varied ways: This is for instance teachers used instructional materials as reference material. Further, it can be

concluded that teachers faced various challenges in improving pupils' literacy and numeracy skills: teachers found mainly that high pupils' enrolment witnessed since FPE introduction has been a challenge encountered in efforts to improve pupils' learning in literacy and numeracy skills. Finally, teachers suggested various way forward to improve pupils literacy and numeracy skills: Teachers found mainly that adequate instructional materials should be provided to enhance teaching and learning processes and provision of regular in-service training need to be organized to enable teachers to be up dated on teaching and learning process.

4. Recommendations

The study recommends the need for adequate provision of instructional materials to be utilized by teachers and pupils' accordingly during teaching and learning process. There is need to investigate cases of severe shortage of textbooks in some schools. Also there is need to have extra funds that will cater for replacing and repairing instructional materials. The torn instructional materials should be replaced immediately to ease cases of inadequacy on instructional materials, thereby enabling pupils and teachers utilize.

Regular in-service training should be organized by MOE and be made compulsory for all teachers to attend. This is because; teachers will be updated on teaching and learning process that is crucial in improving pupils' literacy and numeracy skills. The MOE should institutionalize in-service training that target all teachers to avoid non attendance by teachers to improve teaching and learning process. In regard with majority of teachers using teacher centred teaching methods and few teachers being able to improvise teaching methods, more in-service training should be organized by MOE to help teachers to acquire skills of using learner centred teaching methods and of improvising teaching and learning materials to enrich learning resources.

The government should ensure that more teachers are recruited to ease large class size experienced. Similarly, more classrooms should be established or renovated where possible. The bill of rights implemented to make learning compulsory should be adhered to curb pupils' absenteeism. Proper interventions should be utilized where possible to reduce pupils' absenteeism. Parents need to be sensitized on the importance of pupils' regular attendance to school.

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