Basic Education in Kenya: Focus on Strategies Applied to Cope with School-based Challenges Inhibiting Effective Implementation of Curriculum

*+1* John Aluko Orodho 1, Peter Ndirangu Waweru 2, Miriam Ndichu 3 and Ruth Nthinguri 4

*+1* John Aluko orodho,( lead and corresponding author<orodhojohn@yahoo.com> Department of Educational Management, Policy and Curriculum Studies, Kenyatta University, Kenya

2Peter Ndirangu Waweru, PhD Student, School of Education, Mount Kenya University, Kenya.

3Miriam Ndichu. PhD Student, School of Education, Mount Kenya University, Kenya.

4Ruth Nthinguri, Lecturer, School of Education, Mount Kenya University, Kenya.

Abstract

This study explored strategies applied to cope with challenges inhibiting effective implementation of basic education curriculum in Kenya. The study was framed by the constructivist theory. Convenience sampling was used to select a sample of 205 primary and secondary school teachers and employed mixed methods to collect and analyze data. It was found that despite the gains made in accelerated enrollment in , and quality of education since the launch of free primary education (FPE) and Free Day Secondary Education(FDSE) in Kenya at the national level, there still remain pockets within Kenyan geographical regions which have remained behind in attaining effective implementation of curriculum, resulting into low academic achievement. Among the key challenges affecting effective implementation of basic education include: insufficient physical facilities and instructional resources to cope with the exponential growth of student population resulting from the abolition of school fees and introduction of FPE and FDSE; inadequate teachers resulting in high teaching load prompting the use of ineffective teaching methods; Lack of motivation of the teaching force resulting into insufficient focus on the learner and thus creating little room for use of modern teaching techniques that require individualized teaching, amongst others. As a result, the coping strategies employed both at the Ministry of Education level; school level and teacher level have not been effective in ensuring the provision of equitable and quality education. Given the fast approaching deadline of 2015 for meeting the internationally agreed goals and commitments, the international development partners and other key education stakeholders should come forward and generously support educational development, especially the aspects that enhance effective implementation of basic education in Kenya, strictly in line with national priorities. In doing so, Kenya will not only be on track towards the attainment of the internationally agreed goals that appertain to education, but the attainment of quality EFA will be within reach.[309 words]

Key words: Basic education, School-based factors, Teacher classroom practices, Curriculum Implementation, Teacher professional development, Enhanced access and performance.

1. Introduction
1.1.1 Background to the study

Thirteen years have elapsed since the international community adopted the six Educations for All (EFA) goals at the World Forum held in Dakar, Senegal in April 2000(Republic of
Kenya/UNESCO, 2012). This broad Vision of education and the holistic approach to sector development was fully embraced by Kenya as a critical vehicle for realizing Vision 2030, the road map for development (Odhiambo, 2010; Gikondi et.al, 2010; Republic of Kenya/UNESCO, 2012). The Constitution of Kenya 2010 unequivocally promises all Kenyans unprecedented opportunity to capitalize on the progress made thus far in order to exploit the full potential of education for each and every child, youth and adult in the nation (Republic of Kenya, 2010, 2012). In addition, the Basic Education Act 2013 reiterates the fact that basic education which has been made free and compulsory in Kenya should be operationalized through the legal framework enshrined in the Act (Republic of Kenya, 2012). Both the Constitution 2010 and Basic Education Act 2013 guarantees and provides legal mechanisms of ensuring that every Kenyan citizen gets access to basic education and other economic and social rights that hinge upon the citizens access to, and performance in, education, as much as on the application of knowledge, attitude and skills gained through the educational experience (Republic of Kenya, 2010, Republic of Kenya/UNESCO, 2012; UNESCO, 2012; World Banks, 2012; Republic of Kenya, 2013).

As the post-2015 goal-setting process continues, education has increasingly been discussed as not only a development goal in its own right, but also as a key way of reaching other development goals (United Nations, 2013). And for good reason: a country that provides free access to quality education for all its citizens is far more likely to reduce poverty, promote economic growth, lower child and maternal mortality and achieve social inclusion (Rose, 2013; UN, 2013). The importance of education and learning is adroitly highlighted in the Recent Draft Executive Summary for the United Nations World We Want Post-2015 Global Consultation on Education positions education as both a human right and the foundation for development (United Nations, 2013).

Nonetheless, given the fast approaching deadline of 2015 and 2030 for meeting the internationally agreed goals and commitments related to education as stipulated by Education for All (EFA), and Vision 2030, respectively, governments that are signatory to these commitments seem to be panicking as they are expected by their citizens to take stock of their progress as part of accountability concerns regarding their promises (United Nations, 2013). In response to these concerns, the first ever EFA assessment undertaken jointly by the Government of Kenya and United Nations Educational, Scientific and Cultural Organization (UNESCO) in May 2010 revealed mixed results regarding Kenya’s attainment of the internationally agreed commitments and targets. On the positive side, it was established that strong political will and commitments, coupled with substantial and sustained allocation of the state budget to education sector, have translated into the development and implementation of major policies and programmatic interventions enabling the country to record progressive expansion of the sector (Republic of Kenya/UNESCO, 2012).

The major reforms and innovations in the education sector include: the implementation of Free Primary Education (FPE) and Free Day Secondary Education (FDSE), which have accelerated enrollment of students in both primary and secondary schools in the country (Republic of Kenya, 2012). There is little doubt that these innovations have led to the improvement of access, retention, equity, quality, relevance, and overall efficiency of the education sector at national level (Odhiambo, 2010, Republic of Kenya/UNESCO, 2012). Hopefully, at the national level, it can be concluded that Kenya is on track, and the achievement of EFA is within reach (Republic of Kenya/UNESCO, 2012).
On the other hand, the report also paints a negative picture as it laments that there still exist numerous challenges that need to be overcome in order to attain quality education for all children, youth and adults (Republic of Kenya/UNESCO, 2012). These include significant geographical disparities in access and achievement amongst the marginalized groups that constitute those living in informal urban settlements and ASAL regions; and absence of clear definition of life skills and lifelong learning, among others (Republic of Kenya/UNESCO, 2012). The negative finding touching on the geographic disparities in access and achievement among marginalized communities prompted this study. In the present study, therefore, we investigated the state of educational access and quality in a view to soliciting plausible reasons to explain the strategies being applied to cope with the current state.

1.1.2. The State of the Art Review
Several reasons have been advanced by researchers to explain the causes of students access and academic performance( ADEA,2003; Republic of Kenya/UNESCO,2012; UNESCO,2012; Republic of Kenya,1994; World Bank, 2012).These include school based factors , home-based factors , Government policy , and a combination of the three. Yet, the achievement of universal participation in education will be fundamentally dependent upon the quality of education available (Amadio, Truong, Ressler, & Gross, 2004; Brookings Institute, 2013; UNESCO, 2005a 2005b, 2012). Researchers and policy makers tend to concur that teacher effectiveness is a pivotal policy issue in education reforms aimed at improving quality (Carnoy, 2004; Gachichio & Gachoka, 2010; Republic of Kenya, 2010a). Research evidence shows that teachers are the most important of the school-related factors affecting student achievement through their effectiveness (Dryden-Peterson & Sarah 2011; King & Rice, 2003; King, 2011; Mckenzie & Santiago.; 2004; MoE /UNESCO, 2005; Muola,2010;Reche et.al.2012; Wasanga, Ogle & Wambua, 2011a, 2011b). Other, research evidence from teacher-effectiveness studies indicates that student engagement in learning is to be valued above curriculum plans and materials (Kinyanjui, 2011; Talber & McLaughlin, 1993; Wenglinsky, 2000; Wright, Horn & Sanders, 1997). Research on teacher effectiveness has yielded a wealth of understanding about the impact that teacher ability has on student growth. Nonetheless, an overview of recent literature on school- based factors, particularly teacher effectiveness reveals no commonly agreed upon definition of the qualities that an effective teacher should possess (Republic of Kenya/UNESCO, 2012). Most studies from developed countries, however, tend to emphasize qualities such as knowledge and organization of the subject matter, skills in instruction and attitudes that are useful when working with students (Cox, 2004; Gikondi et.at.2010; Oketch Ngware, 2012; Sammons, Hillman & Mortimore, 1995; Wasanga, Ogle & Wambua, 2011a, 2011b).

A substantial body of literature also indicates that there is some overlap among the various lists of teaching effectiveness qualities (Lewin & Staurt, 2003; Muola, 2010; Oketch Ngware, 2012; Talber & McLaughlin, 1993; Wasanga, Ogle & Wambua, 2011a, 2011b). Nonetheless, organization of course knowledge and content, clear communication with students, respectful, fair, and content driven interactions with students, concern for student learning, timely feedback; fair assignments, assessments, examinations, and grading are all viewed as important attributes. International reviews dealing with effectiveness of teachers indicate that selection and training of teachers are important means of performance of learning (World Bank, 2000). Teachers' qualification therefore tends to affect their behaviour positively, but policies to improve qualification of teachers in developing countries go unsupported (Wellingsky, 2000; World Bank, 2010, 2012). In many countries, teacher education programmes are of low quality and lack relevance to school needs (Mckenzie & Santiago, 2004; Republic of Kenya, 2010; Wasanga, Ogle & Wambua, 2011a). In Kenya the Commission on
alignment of education to the new constitutional dispensation in 2010 noted that current policy stipulates that a primary school teacher should be able to teach all the 7 subjects in the primary school curriculum (Republic of Kenya, 2010a, 2012a), and this could be another challenge to effective implementation of curriculum.

The team of experts counseled that two years of teacher training is not adequate for the teacher trainee to acquire mastery in subject content and skills of pedagogy in all the 7 subjects (Republic of Kenya, 2010c). These compromises the quality of teaching offered after the training. The curriculum at this level should also place more emphasis on child approaches in teaching so as to enhance both quality learning and motivation. Teaching in primary schools is currently dominated by transmission forms of teaching in which pupils are passive and expected to recall facts (Republic of Kenya, 2012a). Thus teacher effectiveness should also entail skills upgrading for teachers. However, this has not been the case as lack of adequate opportunities for in-service training has denied most practicing teachers the chance to enhance their skills beyond those acquired during their pre-service basic training (Republic of Kenya, 2010a, 2012b, 2013).

Research shows that effective teachers have more students in their class’s assigned tasks and in learning throughout the day (Taylor, Pearson, & Walpole, 1999; Kinyanjui, 2011). Classrooms in which engaged learning occurs have higher levels of student cooperation, student success, and task involvement (Kemp & Hall, 1992). Moreover, students achieve more when teachers employ systematic teaching procedures (Kemp & Hall, 1992). Teachers who have higher rates of communication with parents are viewed as more effective. Effective teachers are also shown to provide a variety of opportunities for students to apply and use knowledge and skills in different learning situations (Kemp & Hall, 1992). For the teachers to apply all these skills and strategies of effective teaching, they must be well motivated. However, the instruments to reward and motivate teachers are limited as there are limited opportunities for their career growth (Mckenzie & Santiago, 2004; Republic of Kenya/UNESCO, 2012). The introduction of FPE and FDSE brings new challenges that are likely to affect teachers’ effectiveness negatively (Republic of Kenya/UNESCO, 2012).

Availability of adequate and relevant teaching and learning resources is very crucial in enhancing teacher effectiveness. However, Kenya spends only 4.2% of the recurrent primary education budget on non-teacher salary inputs (World Bank, 2008). Yet the amount of resources available for non-teacher salary items is a crucial factor for teachers to be effective. Studies suggest that books and other learning materials are highly cost-effective complementary inputs in the learning process. Other factors that influence education quality include teacher motivation, development and supervision, system management and school maintenance (Galabawa, 2003). The supply of adequate and well trained teachers is a major determinant of quality of education. World Bank Development Report (2004) indicated the Pupil - Teacher Ratio (PTR) in Kenya to be around 30:1. However there are wide disparities in teacher allocation and distribution across provinces, districts and schools. According to the MOEST and UNESCO (2005a) study, Kajiado district had the highest PTR of 58:1 followed by Kisumu and Kwale with 44:1 and 42:1 respectively and Embu with the lowest PTR of 29:1 (Galabawa, 2003). These disparities have to be controlled and addressed for teachers’ effectiveness to be realized.

The introduction of FPE in 2003 resulted in an exponential growth in enrolment in primary schools (Galabawa, 2003). Enrolment in primary schools escalated from 5.8 million in 2002 to 7 million in 2003 and 7.2 million in 2004 (Republic of Kenya, 2012a). This may have compromised the quality of education in the country’s public primary schools. The large number of pupils in class and the
attendant teacher shortages may be affecting the quality of education by constraining teacher efforts in managing examinations, pupil discipline, teaching and learning resources and teaching methodology, (Kremer, Moulin, Namunyu, & Myatt, 1997 Wasanga, Ogle & Wambua, 2011b).

This may also be responsible for inadequacies in the teaching workforce, facilities and the overall teaching environment including declining teacher morale (Kigotho, 2004). The FPE admission policy which is not age-specific has resulted in many over-age pupils who find it difficult to follow school rules and obey teachers (Haussman et.al.2012; Gikondi, et.al.2011; MoE ' & UNESCO, 2005; Wasanga, Ogle & Wambua, 2011a). The resultant age variations in primary school classes may exacerbate challenges associated with classroom instructions. Teacher shortages are at the forefront of the challenges facing the education sector. In particular, optimal utilization of teachers, their equitable distribution and the provision of adequate numbers of teachers within the existing resource envelope, have emerged as the key challenges in the implementation of FPE policy.

According to a FPE assessment, teaching and learning have been compromised by large classes and shortages or teachers (Gachichio &Gachoka, 2010; MOEST & UNESCO, 2005a). Teachers give fewer assignments than before and they are not able to give individualized attention especially to slow learners and those with special needs. For quality education to be realized there is need to address these challenges and issues related to effectiveness, access, equity and quality (MOEST, 2005a; Oketch& Ngware, 2012; Wasanga, Ogle & Wambua, 2011b ;).

1.1.3 The Problem Statement

Despite the government's effort, basic education continues to experience many challenges relating to access, equity and quality (MOEST, 2005a; MOEST & UNESCO, 2005a; Republic of Kenya/UNESCO, 2012; World Bank, 2012). These challenges include: overstretched facilities; overcrowding in schools, especially those in urban slums; high Pupil-Teacher Ratios (PTRs) in densely populated areas; high cost of special equipment for children with special needs; diminished community support following their misconstrued role vis-a-vis that of the Government in the implementation of the FPE initiative; gender and regional disparities; increased number of orphans in and out of school as a result of HIV/AIDS; and other reasons such as internal inefficiencies (UNESCO,2005a , 2012;Republic of Kenya/UNESCO,2012). According to the 2005 and 2012 Education for All (EFA) Global Monitoring Report, the quality of education remains very poor in most sub-Saharan African countries, including Kenya. Performance of pupils in basic education in absolute terms is low and internal efficiency of education at this level requires policy intervention (Republic of Kenya, 2010a, 2012a).

Recent credible documents of the Republic of Kenya similarly underscore the fact that despite the gains in access and quality since the launch of FPE in the country, there still remains pockets within Kenyan schools in which performance has not improved and constantly remained below the national average for a host of reasons including those that are school-based (Republic of Kenya/UNESCO, 2012). The first ever Education for All (EFA) assessment in 2010 revealed that although Kenya had made significant progress towards the attainment of the goals during the first decade of the millennium, challenges related to the quality of education were still critical and needed concerted efforts between all education stakeholders to resolve ( Republic of Kenya/UNESCO, 2012).
1.1.4 Objectives of the Study
The study had two objectives, namely

1. To establish the current access and participation in basic education in Kenya

2. To assess the influence of the challenges inhibiting effective implementation of basic education in Kenya.

1.1.5 The Theoretical framework
This study was guided by the Constructivist Learning Theory as cited by Frosnot (1996). Dewey saw the need for public schools to be communities and to teach the skills for community in an increasingly industrial, urban, disaffected society (Frosnot, 1966). He also had insights on how children learn best derived from his own experience as an educator and from his interactions with outstanding teachers of the day. Best teaching for Dewey included physical activity as a necessary but not sufficient part of learning. The three scholars, Frosnot (1996), Richardson (2003) and Yilmaz (2008) contend that the theory can best be explained in terms of its relation to teachers interacting with the learners in a more active and reinforcing fashion. According to Books and Brooks (1993), the theory states that people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences. The theory is based on the claim that learners too, learn from their experiences as they interact with the phenomenon (Brunner, 1961). Bassey, Umoren and Udida (2003) similarly contend that the learning process requires adequate attention from the learners in order to assimilate and absorb what is being taught. People exhibit significant individual differences in the cognitive processing styles that they adopt in problem solving and other decision making activities. As far back as 1966, Brunner, one of the proponents of constructivist learning theory stated that a theory of instruction should address four major aspects: (i) predisposition towards learning (ii), the way in which a body of knowledge can be structured so that it can be most readily grasped by the learner (iii), the most effective sequences in which to present material to be learned, and (iv) the nature and pacing of rewards and punishments (Brunner, 1966).

According to Brooks and Brooks (1993), one of the first things a teacher must do when considering how to teach students is to acknowledge that all students do not learn in the same way. This means that if the teacher chooses only one style of teaching (direct instruction, collaborative learning, inquiry learning and so on), the learner will not be maximizing their learning potential. Brooks and Brooks (1993) add that much of the material used to educate learners at grade levels beyond primary school is largely text and lecture methods, which have significant limitations. They say that while reading is a very important learning mode, not all students learn effectively from reading. Some students respond better to visual and audio-visual stimuli of lecture but often get lost in the material or lose interest in the presentation. In this type of learning environment, students have limited opportunity to ask questions or may be uncomfortable asking questions in front of the class. Brooks and Brooks (1993) have provided the following as retention rates when using different learning media: lecture = 5%; reading = 10%; audio-visual = 20%; demonstration = 30%; discussion group = 50%; practice by doing = 75% and teaching = 90%. According to Brooks and Brooks (1993), teachers are very important especially as they use raw data and primary sources in addition to manipulative, interactive, and physical material during curriculum implementation.
From the foregoing and in the context of this paper the main school-based factors considered is the teacher who is at the centre of curriculum implementation by choosing the best instructional methods that foster effective learning. Thus, constructivism requires that we reflect on all aspects of the teaching in which we engage, as educators. We should examine our planning, our use of external standards, the materials we use, the environment in our classroom, our own attitudes and expectations, and especially, the needs of the students, whether they are children or teachers.

1.1.6 Methods and Materials
A cross-sectional survey of the perception of Kenya's primary school teachers on the levels of challenges introduced by the FPE initiative as well as the resultant effects on teacher effectiveness was conducted using a semi-structured questionnaire. The target population for this study included all public primary school teachers in Kenya. A convenient sample of 205 undergraduate and postgraduate teachers undertaking the school-based bachelor of education and masters of education degrees at Kenyatta University and Mount Kenya University was selected for the study. This sample is representative of Kenya's primary and secondary school teachers, as the programme draws students from all over the country. The sample comprised 55 from urban schools, 120 from rural/agricultural and 30 from ASALs or pastoralist schools, yielding a total sample size of 205. Only teachers from public primary schools were included after isolating those from secondary schools and private schools. The teachers were of different characteristics as shown in Table 1.

<table>
<thead>
<tr>
<th>Location/Sex</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>24</td>
<td>31</td>
<td>55</td>
</tr>
<tr>
<td>Rural/Agricultural</td>
<td>51</td>
<td>69</td>
<td>120</td>
</tr>
<tr>
<td>ASAL/Pastoralist</td>
<td>17</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>113</td>
<td>205</td>
</tr>
</tbody>
</table>

The semi-structured questionnaire included items for measuring the various variables. Part one of the instrument had statements that sought information on the main challenges inhibiting effective implementation of basic education curriculum in primary and secondary schools in Kenya. The second section solicited information regarding the current strategies being applied to cope with the challenges that constrain effective implementation of the curriculum. This instrument was pilot tested among 10 primary school based students enrolled at Catholic University of Eastern Africa (CUEA) undertaking undergraduate and postgraduate degrees in Education. This was to ascertain its the validity and reliability of the questionnaires. Based on the split-half technique, a reliability coefficient of .85 was obtained, and accordingly declared reliable for the task at hand (Brook, 2013).

2.0 Results and Discussion
2.1 Progress and Trends in Basic Education towards Achieving EFA Targets
The first task of this paper was to examine progress made in access and quality in basic education in Kenya. Access, equity, quality and relevance are fundamental characteristics that define and drive systems of education and training. In the design and implementation of education and training
systems, governments worldwide pay special attention to the four characteristics. However, this paper focused on issues of access to, and quality of basic education.

The study established that from 2000 to date, Kenya has made commendable progress towards achieving access, retention, equity and quality in basic education. Over the years, enrollment in primary schools has been steadily rising from 5.9 million (boys, 3 million, girls, 2.9 million) in 2000 to 7.2 million (boys 3.7 million, girls, 3.5 million) in 2005 to 9.4 million (boys 4.8 million, girls 4.6 million) in 2010 (Republic of Kenya/UNESCO, 2012). Transition rates over the same period have been slow, with very few children transitioning to secondary schools due to a variety of challenges. However, after the abolition of school fees in 2003 a positive trend has been recorded with transition rates increasing from 43.3% (boys 43.8%, girls 42.6%) in 2000, to 56% (boys 57.2%, girls 54.7%) in 2005, surpassing the set target of 70% by 2010 stand at 72%. The gender parity index was 0.98%, in 2008, in 2009 it was 0.96% and to 1.02% in 2010. GPI has improved and at national level, there is gender parity, but regional disparities still persist (Republic of Kenya/UNESCO, 2012).

The Gross Enrolment Ratio (GER) at primary level increased from 91.2% (92.7% and 89.7% for boys and girls respectively) in 1999 to 109.8% (109.8% and 109.9% for boys and girls respectively) in 2010. The Net Enrolment Rate (NER) increased from 68.8% (68.8% for boys and 68.8% for girls respectively) in 1999 to 91.6% (94.1% and 89.0% for boys and girls respectively) in 2007 to 92.5% (94.6% and 90.5% for boys and girls respectively) in 2008 and further to 92.9% (93.6% and 92.1% for boys and girls respectively) in 2009. However, in 2010 the NER dipped slightly to 91.4% (90.6% and 92.3% for boys and girls respectively). Despite this impressive performance, there still exists gender and regional disparities especially at the secondary and tertiary levels (Republic of Kenya, 2012a).

The number of secondary schools has increased from a total of 6,566 secondary schools in 2008 to 7,308 in 2009 against 26,666 primary schools over the same period. Enrolment grew from 1.18 million students in 2007 (639,393 boys and 540,874 girls) to 1,328,964 (735,680 boys and 593,284 girls) in 2008 and further to 1,500,015 (804,119 boys and 695,896 girls) in 2009 (Republic of Kenya/UNESCO, 2012). The GER for secondary increased from 27.3% (28.8% for boys and 25.7% for girls) in 1999 to 47.8% (50.9% for boys and 46.3% for girls) in 2010. The NER recorded an increase from 28.9% (29.8% for male and 27.9% for female) in 2008 to 35.8% (36.5% for boys and 35.1% for girls) in 2010, having progressively improved from 13.7% (13.5% for male and 13.9% for female) in 1999 (Republic of Kenya, 2012a, 2012c; Republic of Kenya/UNESCO, 2012).

Overall, it is noted that from the year 2000, there was an increase in the Gross Enrolment Rate at primary school level from 99.6% to 109.8% in 2010, indicating that the system may have either under-age or over-age pupils enrolled, or both. The Net Enrolment Rate indicates that there has been a steady increase since the baseline years 2000; however, the government did not achieve the target of 100% NER by 2010. However, the situation in secondary school level has not been as impressive. Since, 2000, secondary school enrolment has been below average. The secondary completion rate also increased, with over 90% of those enrolling in secondary school completing their education. In 2000, the GER was 25.55% (boys 26.6%, girls 23%), in 2005 GER increased slightly to 28.8% (boys 30.7%, girls 26.9%) and finally in 2010 to 47.8% (boys 50.9%, girls 46.3%). This could have been a result of the introduction of Free Day secondary Education in 2008. Net enrolment also increased slightly in 2000, from 14.1% (boys 13.9%, girls 14%) rising to
20.5% (boys 21.9%, girls 19.1%) in 2005, to 32.7% (boys 32.4%, girls 32.9%) in 2010 (Republic of Kenya/UNESCO, 2012).

2.2. Implementation Challenges and Coping Strategies

Although there has been marked progress towards realizing EFA goals through basic education in terms of increased access to education across the sector, retention of pupils, especially at the primary level and quality of the education provided across all basic education levels, remains a considerable challenge. In spite of continuing to receive the highest percentage of budgetary allocation over the last decade, especially since the launch of FPE and FDSE, quality remains a major issue across the entire spectrum of the education and training sector. The Government policy within the context of EFA and MDGs is to enhance access, equity, quality and relevance. However, this remains elusive at all levels of education and training. Nevertheless, primary and secondary school teachers have identified the critical factors that inhibit effective implementation of basic education curriculum and suggest mechanisms currently in place to alleviate the situation.

Figure 1 carries data which reveals that teachers perceive the introduction of FPE and FDSE to have brought with it challenges that are currently affecting effective implementation of curriculum in primary and secondary schools in Kenya. An examination of figure 1 reveals the various categories of challenges as perceived by the teachers. The challenges which were mentioned by a majority of teachers were ineffective teaching methods mentioned by 25.37 percent followed by high teaching load cited by 23.41 percent and inadequate instructional materials mentioned by 22.44 percent. The two reasons seem to be pointing in the direction of shortage of teachers to handle the large number of students as result of the upsurge in pupil enrolment due to the introduction of FPE.

Figure 1: Perceived challenges faced by primary school teachers under FPE education system
There are 199,623 primary school teachers and about 63,609 secondary school teachers. In Kenya, all teachers employed by the government are trained and certified to teach. Due to the employment embargo imposed on the government by the International Monetary Fund (IMF) in 1988, the government has generally avoided employing teachers apart from replacements for vacancies caused by natural attrition. This has led to school committees and boards of governors employing unqualified teachers as a source of cheap labour (Republic of Kenya/UNESCO, 2012). This finding is supported by earlier researchers who document that there is a critical teacher shortage due to a combination of factors such as retirement, death (especially from HIV/AIDS), dismissal and career change (Bennell, Hyde & Swainson, 2005; MOEST, 2005b; Njeru & Orodho, 2003; Njeru & Kioko, 2004).

Majority of the respondents, constituting 25.37 percent indicated that the effect of FPE on teacher's teaching/learning methodology is profound due to increased pupil-teacher ratio in both primary and secondary schools due to over-enrolment and the resultant overcrowding in classes. This has in effect impacted negatively on teaching as teachers are unable to create effective teacher/student interaction. As a result, teachers are increasingly unable to give personal attention. The Government of Kenya acknowledges that although the pupil teacher ratio at the national level may show that the country has achieved the recommended ratio of 45:1, there are still regional disparities in the Coast and North Eastern provinces, where the pupil teacher ratio can be as high as 53:2 and 63:1 in 2007 respectively (Republic of Kenya/UNESCO, 2012). Despite the efforts of the government to recruit teachers, the teacher shortage still persists. The national teacher shortage stands at 61,235 for both primary and secondary schools. Of these, 32,235 are for primary schools (Griffin, 2010; Kiamba, 2011; Republic of Kenya, 2011c).

To cope with this national teacher shortage and skewed distribution of teachers countrywide, the Government has put in place the demand-driven recruitment policy to address the uneven distribution of teachers and teacher shortages. However, due to the freeze on new recruitment, the commission has only been replacing teachers who leave the service through natural attrition. There is however, a growing need for more teachers to cope with higher demand following the implementation of free primary and free day secondary education, where the government provides for free tuition fees among other factors (Republic of Kenya/UNESCO, 2012). In 2010, in an effort to bridge the gap in teacher shortage, the government recruited 18,060 teachers on contract terms as a temporary measure to alleviate the teacher shortage (Republic of Kenya, 2011c). This move was vehemently resisted by the teachers unions, especially the Kenya National Union of Teachers (KNUT) and the Kenya Union of Post Primary Teachers (KUPPET). Due to this pressure, during the 2011/2012 financial year, these teachers were given permanent positions by the Teachers Service Commission (TSC) and promised more recruitment of teachers (Republic of Kenya/UNESCO, 2012).

Struggles to resolve the skewed distribution of teachers include conducting regularly teacher balancing initiatives by Teachers Service Commission in public educational institutions across the country. Theoretically, it is envisaged that the process which will be undertaken on a regular basis in order to achieve equitable distribution and optimal utilization of teachers. However, on the ground, the problem of disproportionate teacher distribution still persists in many primary and secondary schools across the country.
The task force that was set up in 2010 to align education to the new constitutional dispensation noted with concern that learning in primary schools is currently dominated by transmission forms of teaching and learning in which pupils are expected to recall facts for the purpose of passing examinations (Republic of Kenya, 2010). This examination oriented mode of teaching hampered the spirit of active involvement of learners in the learning process. According to Wasanga and Wambua (2011a) classroom in which engaged learning occurs have higher levels of student cooperation, student academic performance and lifelong learning and task involvement. Moreover, pupils achieve more when teachers employ systematic teaching procedures that involve provision of a variety of opportunities for students to apply and use knowledge and skills in different learning situations. It is, thus, imperative that for teachers to apply all these skills and strategies of effective teaching, they must be exposed to continuous professional development through in-service training in addition to commensurate remuneration. However, instruments to reward and motivate teachers in Kenya is limited as there are very scanty opportunities for teacher career growth and unattractive terms of service, especially the low employment packages compared to their counterparts in the civil service.

All respondents stated that significant age differences that are now common in public primary school classrooms present special challenges to both teachers and learners. This is due to the attendant emotional, physical and intellectual variations that have thrown the teachers' age-old teaching strategies into disarray. The introduction of FPE did not also take into account the special needs of handicapped children. There were no clear-cut policy/guidelines on the admission criteria to be followed while admitting students to the various classes. This loophole has seen unplanned children placement in especially lower classes of the primary schools. Some children in pre-unit were pulled to join standard one while some children were admitted to various classes with no nursery or pre-school education.

The respondents indicated that it is now not uncommon for teachers to take advantage of the high enrolment as an excuse for not performing and engage in other income generating activities outside the school in order to compensate for their low pay. Teacher motivation and commitment to duty is believed to be at an all-time low by the respondents due to the current economic constraints. The added workload causes strain and stress among teachers, while lacks of incentives and poor remuneration have combined to affect the teachers' commitment to duty. Trends in pupil discipline with the introduction of FPE are also worrying. The respondents indicated that new forms of indiscipline have emerged with the introduction of FPE due to the varied ages of pupils admitted in the various classes. Some join without any pre-primary, especially in the lower primary classes. Cases of big pupils especially boys bullying the young ones are on the increase.

It was further established that lack of instructional resources, cited by 22.44 percent of the teachers negatively affected effective implementation of basic education curriculum. They contended that the teaching and learning materials provided under FPE and FDSE are grossly inadequate. The delay in FPE and FDSE funds disbursement and the low level of the preparedness of school administrators to manage the funds are largely to blame for this. The facilities for school activities such as sanitary, classroom and sports facilities have been over-stretched in many schools.

The Ministry of Educations position is that the textbook/pupil ratio for lower primary has improved from one textbook for more than 10 pupils before 2003 to 1:3 by 2007, reaching 1:2 in 2008 and 2009. For upper primary, TPR has improved from 1:2 in 2007 to almost 1:1 in 2008 and 2009 for the majority of schools. However, these have weakened sharply since 2009, and small schools do not benefit from economies of scale, and have ratios far higher than this (Value for Money Audit
Report (2009). This confirms the teachers’ position that instructional resources are grossly insufficient. The Ministry of Education admits that, in fact, the budgetary allocation by the Government of Kenya through the Ministry for the sector is insufficient and this does impact negatively on the provision of resources such as textbooks, PTRs and Retention Rates are also affected (Republic of Kenya, 2010c).

The low morale of students and teachers, cited by 11.22 percent of the teachers, is another crucial factors inhibiting effective implementation of basic education curriculum in primary and secondary schools in Kenya. This finding is of paramount importance because for the teachers to apply the skills that promote effective learning, they must be well motivated. Within the introduction of FPE and FDSE it has become increasingly difficult to motivate teachers who are confronted with an ever escalating number of learners. The scenario has not been conducive to effective implementation of basic education curriculum. This finding is supported by earlier studies that established that motivate teachers have been found to enhance their effectiveness through opening opportunities for career growth (Mackenzie & Santiago, 2004).

To cope with the challenge regarding teacher morale the Teachers Service Commission (TSC) continues to review and implement schemes of service for various categories of teachers in order to ensure professional growth. There are three schemes of service currently in operation; a scheme of service for graduate teachers, a scheme of service for non-graduate teachers, and a scheme of service for technical teachers and lecturers (Republic of Kenya/UNESCO, 2012). However, in practical terms, the teachers are still a disgruntled lot because they do not receive remuneration packages commensurate to their work-load.

Finally, an attempt was made to find out which of these factors had significant effect on curriculum implantation. Table 1 carries data on correlation between some selected school-based challenges and perceived effect on curriculum implementation.

The study revealed a moderately positive and significant correlation between the motivation of the teacher and pupil motivation ($r = .347$) and teaching method ($r = .264$). There was a very weak positive significant correlation between large class size handled by individual teachers and administration of examinations ($r = .08$). In contrast, there was a strong inverse relationship between large teaching load and the selection of effective teaching method ($-.915$), and focus on individual learner while teaching ($-.699$). Similarly, there was a strong inverse relationship between adequacy of teachers and level of focus on individual learner ($r = -.502$). However, there were weak inverse correlations between large class size and effective teaching methods ($r = -.126$) and school physical facilities and teaching methods($r = -.0811$). There was no significant relationship between instructional resources and pupil motivation ($r = .00$) and relationship between adequacy of teachers’ and pupil motivation ($r = 0.00$).
Table 1: Bi-variate Pearson’s Product Moment Correlation Coefficient between the specific challenges to FPE implementation and specific aspects of teacher effectiveness

<table>
<thead>
<tr>
<th>Perceived FPE Challenges</th>
<th>Teaching method</th>
<th>Examination</th>
<th>Pupil Motivation</th>
<th>Focus on Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large class size</td>
<td>-0.126*</td>
<td>0.080</td>
<td>0.1</td>
<td>-0.699**</td>
</tr>
<tr>
<td>School Facilities</td>
<td>-0.216**</td>
<td>-0.273*</td>
<td>-0.3729</td>
<td>-0.093</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>-0.280*</td>
<td>-0.624**</td>
<td>0.000</td>
<td>-0.259*</td>
</tr>
<tr>
<td>Teaching load</td>
<td>-0.915**</td>
<td>-0.042</td>
<td>-0.000</td>
<td>-0.916**</td>
</tr>
<tr>
<td>Teacher Adequacy</td>
<td>-0.049</td>
<td>-0.037</td>
<td>-0.000</td>
<td>-0.502*</td>
</tr>
<tr>
<td>Teacher Motivation</td>
<td>0.264**</td>
<td>0.076</td>
<td>0.347*</td>
<td>0.177*</td>
</tr>
<tr>
<td>School Wastage</td>
<td>-0.0811</td>
<td>0.0160</td>
<td>-0.1359</td>
<td>0.0974</td>
</tr>
</tbody>
</table>

The results indicate that the extent of the challenge posed by inadequacy of learning resources was found to be inversely related to teacher effectiveness. Adequacy of teachers, in terms of teaching load was found to be related to effectiveness in examination management and individual focus on the learner, hence enhancing pupil discipline and control. There was no evidence from the study to show that adequacy of teachers is related significantly to the other aspects of teacher effectiveness such as pupil motivation during teaching and effective administration of examinations.

The challenge of availability and adequacy of teaching and learning resources was found to inversely affect perceived teacher effectiveness in use of teaching methods, use of teaching and learning resources as well as focus on individual learner, hence fostering pupil discipline and control. The study showed no evidence that the challenge posed by FPE through school wastage in terms of pupil absenteeism significantly influences teacher effectiveness.

The study further attempted to establish the association between the location of the school as the independent variable and its effect on teacher effectiveness as the dependent variable. The chi-square statistical technique was used to test the degree of association between the variables location of school and effect on effective curriculum implementation at $\alpha = .05$.

Table 1: Location of school and Effects of FPE on teacher effectiveness

<table>
<thead>
<tr>
<th>Location/Effect</th>
<th>Very Much</th>
<th>Much</th>
<th>A little</th>
<th>Not at all/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban schools</td>
<td>4</td>
<td>22</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Rural/Agricultural</td>
<td>16</td>
<td>26</td>
<td>47</td>
<td>31</td>
</tr>
<tr>
<td>ASAL/Pastoralist</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

$\chi^2 = 14.188, df=6$ at $\alpha = .05$ significant since $X^2$ critical = 12.592

Based on the Chi-square test ($\chi^2$-test), the study found a significant association between the location of the school and the levels of challenge factors perceived by teachers to affect teacher effectiveness in the implementation of curriculum under FPE. This indicates that the FPE initiative has significantly affected the quality and quantity of education in both rural, urban and ASAL/pastoralist primary schools Kenya in unequal proportions. Teachers of schools in urban and rural areas do not have similar perceptions of the effectiveness as a result of the introduction of the FPE programme. The characteristics of the teacher upon which significant differences in the FPE
challenges and perceived teacher effectiveness when investigated include gender, teaching position, teaching class (lower or upper primary), experience and qualification.

3. Conclusions and recommendations

Following the Jomtien Declaration of 1990 and the Dakar Framework of Action, 2000, the Government of Kenya has accelerated its efforts towards improving its education indicators with view to fulfill its commitments to Millennium Development Goals (MDGs) and Dakar Framework of Action on Education for All (EFA). Although, numerous inhibiting factors including structural and other systemic challenges have affected the pace, nonetheless, Kenya has successfully introduced policy reforms and launched key initiatives including FPE and FDSE to achieve internationally agreed goals in the sector of education. However, while policy commitments are strong at all levels of basic education, implementation is hampered number of bottlenecks, linked with internal and external dynamics. Kenya faces several key challenges in education that hamper effective implementation of basic education curriculum. Among the key challenges affecting effective implementation of basic education include: insufficient physical facilities instructional resources to cope with the exponential growth of student population resulting from the abolition of school fees and introduction of FPE and FDSE; inadequate teachers resulting in high teaching load prompting the use of ineffective teaching methods; Lack of motivation of the teaching force resulting into insufficient focus on the learner and thus creating little room for use of modern teaching techniques that require individualized teaching, amongst others. As a result, the coping strategies employed both at the Ministry of Education level, school level and teacher level have not been effective in ensuring the provision of equitable and quality education as expected by EFA and MDGs. The challenge of implementing FPE in the country has made the achievement of some specific MDG targets in education difficult. The Republic of Kenya/UNESCO (2012) findings tend to confirm the finding of this study that the substantial influx of student population after the introduction of FPE in 2003 and FDSE in 2008 has exacerbated the challenges inhibiting effective implementation of basic education curriculum.

It is thus recommended that any inter interventions to address the challenges highlighted in this paper should, therefore, focus on key variables that affect effective implementation of basic education curriculum. As a matter of urgency, the critical issue of teacher shortage as well as its skewed distribution in schools along geographic and historical basis should be addressed to correct the current overload of teachers. Schools should also be assisted to have adequate and appropriate physical and instructional resources to enable teachers enhance their teaching methodologies. The teachers should also undergo systematic and continuous staff development through Kenya Education Management Institute (KEMI), and be well remunerated through clearly laid down appraisal system and fairly implemented scheme of service to motivate them and enable them perform their roles more professionally.

Given the fast approaching deadline of 2015 for meeting the internationally agreed goals and commitments, the international development partners and other key education stakeholders should come forward and generously support educational development, especially the aspects that enhance effective curriculum implementation, strictly in line with national priorities. Investment in education sector will help improve quality of life of the people through improved awareness and lead to the creation of an all-inclusive literate, and development oriented society in Kenya. In doing
so, Kenya will not only be on track towards the attainment of the internationally agreed goals that appertain to education, but the attainment of quality EFA will be within reach.

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