End Term Survey on Open Space Literacy (OSL) Project in Nairobi County, Kenya

Submitted to Plan International and SOS Children's Villages
By Women Educational Researchers of Kenya (WERK),
P. O. Box 10565-00100,
Nairobi, Kenya
Tel: +254 722 888 919/732 888 919
Email: info@werk.co.ke
Website: www.werk.co.ke
16th February 2016

Plan International Kenya/ SOS Children Villages,

P. O. Box 25196-00603, Nairobi, Kenya/
P. O. Box 40653-00100, Nairobi, Kenya.
Benson.Okinyi@plan-international.org: www.plan-international.org
Daniel.oloo@soskenya.org: www.sos-childrenvillageskenya.org

Table of Contents

Acknowledgements

We show appreciation to Plan international Kenya and SOS Children Villages for implementing the project and availing the research funds as well as mobilizing schools for the study. We would like to acknowledge the contribution of the following in the success of the study. The role played by the four lead researchers Dr Violet Wawire, Mr Jafred Muyaka, Dr Mary Otieno and Dr Rubai Mandela. We recognize the support of the research team leaders Flavian Waiswa, Barnabas Masakhalia and Brenda Namulanda and all the research assistants in the data collection process. Frida Mathembe's contribution in training of the team in Early Grade Literacy assessments skills cannot be overlooked. In addition, the valuable support from WERK secretariat led by Dinah Ogola and Jacinta Nduku is appreciated. The input of head teachers, teachers, BOM members and parents from the 30 schools in Nairobi that provided data for the project is appreciated. The data was also enriched by interviews from OSL program officers and project partners including the Ministry of Education (ICT department) and TAC tutors attached to the project.

List of Tables

List of Acronyms:

BECTA	:	British Educational Technology Association
BoM	:	Board of Management
FDGs	:	Focus Group Discussions
ICT	:	Information Communication and Technology
INGOs	:	International Non-Governmental Organizations
MoEST	:	Ministry of Education Science and Technology
KEMI	:	Kenya Education Management Institute
KESSP	:	Kenya Education Sector Support Programme
KICD	:	Kenya Institute for Curriculum Development
KISE	:	Kenya Institute of Special Education
OSL	:	Open Space Literacy Programme
SMC	:	School Management Committee
TAC tutors	:	Teachers Advisory Centre tutors
TSC	:	Teachers Service Commission
UNESCO	:	United Nations Educational Scientific and Cultural Organization
Plan	:	Plan International Kenya
PTAs	:	Parent Teacher Associations (PTAs)
SAGAs	:	Semi-Autonomous Government Agencies
SOS	:	SOS Children Village Kenya
SPSS	:	Statistical Package for Social Sciences

Executive Summary

This was an end term study designed to establish the status of indicators after the implementation of the OSL Project. The study was guided by the following objectives: i) Establish the status of the project indicators as outlined in the logical framework. ii) Compare the results of the project in the intervention schools compared to control schools. iii) Determine how well the project achieved expected results in regards to efficiency, relevance, effectiveness and sustainability. iv) Establish the state of partnership between Plan and implementing partners. v) Document any lessons learnt that may be useful in implementation of related future projects. vi) Make suggestions/recommendations on strategies to implement future OSL projects. To address these objectives, the end term study utilized quasi experimental design with the existence of a control group that was carefully matched with an intervention group of closely similar characteristics. A mixed method approach was used where both quantitative and qualitative research methods were combined to elicit data. A total of 30 public primary schools: 20 in Dagoreti region (15 intervention and 5 control schools) and 10 in Kamukunji (8 intervention and 2 control schools) participated in the study. A sample of 2,713 individuals was drawn from these schools. This included lower and upper grade pupils of balanced gender, teachers, Plan International Kenya staff and SOS Children Villages' staff, parents, community members, BOM/SMCs, OSL project officers, MOE officials, TSC officials, technology specialists, and TAC tutors.

On performance in English, findings revealed a significant difference in the average number of words that each corresponding class was able to read correctly between the baseline and end term surveys. Whereas at baseline, on average, Standard 1 could only read 10.9 words correctly, at end term (now in standard 2)[1] they read 39.74 words. The same improvement was witnessed in Standard 2 who moved from 18.36 to 41.50 words and Standard 3 who improved from 24.84 at baseline to reading 43.04 words correctly at end term survey. Overall, the performance in the intervention school was better (41.44 words) than that in control school (36.63 words). Girls correctly read slightly more words in English (44.80) than boys (42.08) as was the case at the baseline (Girls - 19.4813 and Boys - 17.193). There was a statistical significance in differences of means between Intervention and Control schools for Standard 2 performance in English. This trend in performance was also witnessed in Kiswahili. There was a significant improvement in the average number of words that pupils in intervention and control schools read correctly per minute. In intervention schools, it moved from 27.05 at baseline to 42.48 at end term compared to 24.337 words to 39.55 words of control schools. The performance was also better in intervention schools (42.48) than control schools (39.55).

On project relevance findings from the OSL project beneficiaries revealed that the project met their needs. Overall, there was a feeling that ICTs was relevant but not a prioritized need among most of the schools. Other priority areas identified by various BoMs, teachers, and head teachers included infrastructure like desks, classrooms, textbooks, bursaries for needy students, and supply of electricity.

On project efficiency, the results indicated that the OSL project was principally implemented in a cost effective manner in relation to the cost saving elements in the design. For example, the decision to train all teachers in the target schools as opposed to only those teaching lower primary and the use of cost effective stationary projectors instead of white boards did not only save the project money but also boosted the quality of the outcomes. Likewise, funds were saved by conducting a baseline study and

[1] Although the target Classes for the OSL project was Class 1, Class 2 and Class 3, at the end term evaluation there was a normal transition where Class 1 had moved to Class 2 hence the end term evaluation involved Class 2, Class 3 and Class 4.

piloting of the project before actual implementation to draw lessons for programming and addressing emerging challenges. However, due to delays in purchase of equipment and training of teachers, the OSL project was not completed on time as had been planned.

On project impact, the OSL project was observed to have brought about changes in the intervention schools. The intervention schools had appropriate ICT rooms and facilities which never existed before the project. Teachers who had never used computers had access to ICT devices. Most BOM members in these schools are now aware of their rights and responsibilities in the decision making processes of the school. The OSL project accrued some positive unintended outcome of giving the Government of Kenya and the Ministry of Education Science and Technology the opportunity to pilot the upcoming 'Digital Literacy Programme' in primary schools. The digital curriculum for teacher training and content for lower primary developed by Kenya Institute of Curriculum Development (KICD) were piloted on the OSL project providing lessons for future implementation of the programme.

On project sustainability, the study identified mechanisms that have been put in place to ensure ownership and sustainability of the OSL project beyond the project cycle. The ICT skills and knowledge on positive discipline and gender responsiveness in teaching given to teachers can be used beyond the project lifespan. The training of the BOMs on the OSL projects provided some measure of ownership and sustainability. This coupled by the fact that some BOMs have ICT as an item in their school development plans meaning that the ICT agenda will be sustained. The ICT champions and head teachers are viewed as additional points of sustainability of the OSL project given their critical role and participation in the implementation of the OSL project. The ICT programme 'Digital Literacy Programme in the country spear headed by the Ministry of Education Science and Technology where children will get lap tops and be exposed to digital content developed by the Kenya Institute of Curriculum Development will ensure sustainability.

To improve such programmes in future, the study recommends: 1) The need to strengthen monitoring and evaluation through designing special monitoring tools that would inform on the performance of all the involved project beneficiaries. The project implementation team and the Monitoring and Evaluation units to work closely to ensure that there is clarity on how various indicators and outcomes will be implemented and measured; 2) Given the willingness of parents to partner with teachers in improving literacy of their children, the project design to incorporate parents training and encourage their active participation in project activities; 3) Teachers need more training on preparation and use of lesson plans in teaching and the importance of integrating the learnt skills in their daily teaching and learning; 4) Instead of creating ICT rooms that require mass movement of pupils between lessons, a project of this nature needs to devise ways of encouraging integration of ICT in the regular classroom as much as possible as observed in some of the intervention schools in Kamukunji site. 5) The design of the project to put in place funding to allow implementation of some of the interventions in control schools after the project winds up.

1.0 Introduction

1.1 Background and Rationale

The value of integrating Information and Communication Technologies (ICTs) in education cannot be overemphasized. Globally, ICT has not only been utilized in educational settings as a source of knowledge, but also a medium to transmit knowledge and a means of interaction and dialogue. It is known to transform the classroom teaching by providing a wide range of exciting and rich media which if exploited appropriately by both educators and pupils ensures effective learning. The various forms of ICTs are able to process, store and retrieve information, stimulate new atmosphere where teachers, students and researchers interact and collaborate to learn new skills and solve complex problems (Berhane, 2012)2.

In an attempt to make Kenya a prosperous ICT-driven society, the government came up with the National and Communications Technology (ICT) Policy in the year 2006. This was followed by the Kenya's Vision 2030 of 2007 that was structured along three main pillars: economic, social and political governance to guide the country's development up to the year 2030. Information and Communication Technology is one of the sector plans drawn from the three pillars to steer the country towards economic empowerment. It is a sector on its own right and as an enabler of all other sectors. As an enabler for other sectors, it is seen to contribute to national development through creation of human resources. The country intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrialized economy.

The Ministry of Education Science and technology (MoEST) is mandated to operationalize the ICT policies by integrating ICT in teaching and learning to revitalize learning among children. Under the authority of the National Education Support Programme (NESSP), the MoEST ICT strategy, the Sessional Paper No. 14 of 2012 and the Education Act of 2013, MoEST has embarked on the journey of integrating ICT in curriculum delivery, that promises better and improved methods of educational content delivery, methodology and pedagogical skills as well as expanding the available teaching and learning knowledge base among teachers. Apart from the policy environment for ICT integration in Education in Kenya,

[2]Berhane, AradomTedla (2012). Understanding the importance, impacts and Barriers of ICT on Teaching and Learning in East African Countries. International Journal for e-Learning Security (IJeLS), Vol 2, Issues 3/4 2012.

other physical, cultural and pedagogical factors affect this process. These include lack of electricity, frequent power outrages, poor technical infrastructure, equipment maintenance and insufficient and inappropriate ICT infrastructure. Further, poor attitudes and lack of ICT skills among teachers, optional status of ICT within the curriculum and emphasis on teaching basic skills for software and information gathering cannot be ignored in the Kenyan context (Hennessy, 2010).

1.2 Overview of the OSL Project

In realization of the role played by ICTs in education, Plan International Kenya (Plan) and SOS Children's Villages (SOS) developed and implemented Open Space Literacy (OSL Programme) utilizing an integrated approach which involved student learning and teacher capacity building in ICT skills, combined with active community involvement, robust school governance, and the purposeful use of appropriate technology linked to the government plans to improve the teaching of literacy in some selected schools in the urban areas of Nairobi County Kenya (Dagoreti and Kamukunji areas). The OSL Project took a holistic approach to literacy by fully integrating the use of ICT and mobiles in the program design, content, execution, and post implementation sustainability. While the initial OSL focus is early Grade (1-3) literacy in Kenya, the intention is to scale it up across content areas beyond "reading and writing skills", age groups and geographical locations.

The OSL project which was implemented between November 2014 and January 2016 was created through a unique collaboration between regional specialists in education, technology, education policy and officials from the Kenyan government. The project began with the formation of a consortium of International Non-Governmental Organizations (INGOs) interested in improving literacy levels among children in primary schools in Kenya. This was followed by programme strategy development informed by expert advice and involvement from relevant government organizations including the MoEST ICT Department, Kenya Institute of Curriculum Development (KICD) and the Teachers Service Commission (TSC) to ensure ownership and relevance of the project. A baseline survey was then conducted in 30 target schools in Nairobi to identify the initial conditions of the key indicators of the project and how best to improve programme planning for effective implementation. The project logic mode, log frame and theory of change were improved and the monitoring, evaluation and research framework developed using the baseline findings. The project also involved piloting of the programme in two schools, one in each project site (Dagoretti and Kamukunji) to draw programing lessons for the main phase. The OSL pre-package for supporting learning included 5-7 laptops, interactive projector, mobile

phone for content creation, small loudspeakers, whiteboard and pointer pen, solar power (on need basis) to recharge the devices. Teachers, pupils, parents and community members were also to be given trainings and support according to the OSL approach.

1.2.2 Goals and Objectives of OSL

There were three beneficiary categories i.e. the Children, Teachers, and Parents and the Community. Accordingly, it established three different goals and objectives for these target beneficiaries and indicators of achievement.

Children:

Goal was to improve pupil literacy (reading and writing) in grades 1-3 in the intervention schools.

Specific Action Points:-

a) Provide access to quality digital educational content via suitable devices
b) Create new content to fill local language gaps.
c) Assess children regularly to mark their progress and evaluate the impact of the new methods.

Indicators of Achievement: -

a) Improved content quality/quantity;
b) Implementing of monitoring of children development and early intervention;
c) Improved capacity for self-directed and collaborative learning;
d) Improved student accountability.

Teachers:

The goal was to improve capacity of teachers to enable/support a learner-centered environment.

Specific Objectives:-

a) Coaching in facilitative and inclusive teaching methods
b) Classroom leadership and management,
c) Positive discipline,
d) Working with children with disabilities,
e) Gender sensitivity and use of ICT (tools and teaching integration).
f) Post training skills for teachers and new skills are supported and learning reinforced through voluntary reminders, advice, and support via SMS texts to teachers' mobile phones.

Indicators of Achievement: -

a) Improved quality of teaching;
b) Improved teacher capacity for early intervention.

Parents and Community:

The goal was to improve school governance for sustainable systems improvement in support of literacy outcomes.

Specific Objectives:-

a) Provide local community and parents' guidance and support to develop a School Management Plan that includes establishing and managing Parent Teacher Associations (PTAs) and Boards of Management (BOMs).

Indicators of Achievement:

a) Increased levels of resource mobilization;
b) Increased levels of parent involvement;
c) Increased levels of community monitoring

1.2.3 Expected Outcomes of the OSL Project

The main expected results for the Program were:

a) Pupils improve their literacy skills (reading and writing) in grades 1-3 in the intervention schools.
b) Pupils have access to and use high quality educational content (digital and non-digital) focused on literacy skills
c) Teachers are well trained and motivated and improve their capacity to enable/support a learner-centered environment (learner-centered teaching methods using digital and non-digital materials).
d) Communities and local stakeholders actively contribute to effective school governance and project sustainability.

2.0 OSL End Term Evaluation

2.1 Purpose of the Evaluation

As the implementation of the OSL project winds up, an evaluation of the project in form of an end term study was carried out by Women Educational Researchers of Kenya (WERK) to inform on efficiency, relevance, effectiveness and sustainability of the OSL programme. The end term evaluation also

provided the achievement of the project by comparing the intervention schools and control schools and highlighted the progress made between the baseline and end term. In addition, it gave practical recommendations for future implementations of similar projects by Plan International Kenya and SOS Children Villages.

2.2 Objectives of the End term Evaluation

i. Establish the status of the project indicators as outlined in the logical framework
ii. Compare the results of the project in the intervention schools compared to control schools
iii. Determine how well the project achieved expected results in regards to efficiency, relevance, effectiveness and sustainability.
iv. Establish the state of partnership between Plan/SOS and implementing partners (TSC, MoEST and the schools).
v. Document any lessons learnt that may be useful in implementation of related future projects
vi. Make a suggestions/recommendation on strategies to implement future OSL project

2.3 Literature Review

2.3.0 Introduction

As technology becomes more and more embedded in our culture, we must provide our learners with relevant and contemporary experiences that allow them to successfully engage with technology and prepare them for life after school. It is widely recognized that learners are motivated and purposefully engaged in the learning process when concepts and skills are underpinned with technology and sound pedagogy (Mwololo & Waema 2005). While other countries have reported up to 41% of integration of ICT to teaching and learning, the proportion remains substantially low in Africa, Kenya included. Integration aims at the use of ICT to support teaching and learning in the delivery of the various curricula to achieve improved education outcomes (KESSP, 2004).

To go back in time, the first commercial computer was launched only 60 years ago and the first microcomputers appeared in schools about 30 years later. Schools up to that time could mostly

be described as traditional, having changed little from the learning institutions of 100 years or so previously. But these first microcomputers were beginning to bring about gradual change in classrooms as recorded in a UNESCO publication; 'Developing Computer Use in Education' (1986). This time may be considered as a baseline; the beginning of the use of ICT in schools – termed the emerging stage (World Bank 2007)

Today, we see the linking of computers across the world. The year 1996 may be remembered as the year that the Internet made its initial, far-reaching impact, on learning institutions and on much of the rest of human activity. Today's web of computers and what we call ICT have since proliferated to such a degree that they impact on virtually every aspect of our daily lives. Our schools and teacher education institutions and the nature of learning and teaching are witnessing a paradigm shift brought about by the use of ICT. Schools have moved well beyond the emerging stage to what has been termed in another UNESCO publication the applying and infusing stages in their use and adoption of ICT (Farrell & Wachholz 2003).

2.3.1 Schools Policies on ICT adoption in teaching and learning: A global perspective

Policy and planning are important in identifying the aims of using ICTs in education as well as determining priorities and resources. It important to note that for policies to be implemented successfully, clear identification of key players needs to be done because their roles and responsibilities are crucial since they provide the leadership necessary for successful implementation of the policies and plans (Donnelley, 2007). Any school which needs to adopt ICTs in teaching and learning should put up a policy regarding the same. Donnelley (2007) established that key players in ICTs use in schools include teachers, the technical staff and school administrations. Important is the fact that policy makers need to resist the pressure to adopt the newest technology simply because they are hi -tech but rather their ability to be used and sustained.

BECTA (2004) pointed out that schools ICT policy need to adhere to the national ICT policy where it sets out the rationale for teaching and learning using ICT and to provide a broad balanced and challenging range of ICT opportunities for the students. When both teachers and

students utilize ICT technologies in schools, it should eventually effectively prepare them for future role in the society.

UNESCO (1995-2011) established that countries such as Australia, South Korea and Singapore have national ICT policies formulated by their Ministries of Education which were used in various primary schools. There are revelations that master plans to implement these policies in educational institutions had been put up as well as provision of adequate budgets to ensure effectiveness. A survey by UNESCO (1995-2011) further revealed that Cambodia and Bangladesh were considered beginners in ICT adoption in education with national policies, but not enough resources to implement their policies in educational institutions. There is therefore need for stake holders to be guided by the policies to ensure that ICTs resources and subsequent programs in the educational settings such as classroom innovations will be sustained to avoid purchase of ICT equipment without providing a strong educational purpose or goal for the use of the technology.

According to Ndidde (2000), the Ugandan National ICT policy of 2008 is a good example of a commitment to use ICTs in education. The policy spelt out how ICT should be developed for teaching and learning. The policy framework document recognized that Uganda would need to embrace the goal of lifelong education hence the need to use ICTs. The implementation of these policies in primary schools was still at its try out stages with a few schools having policies for ICT use.

In Kenya, the National ICT Education Policy contained in the Sessional paper No I of 2005 (Kenya, MoEST ICT in Education options paper, 2005) outlined ICT potentials in human resource development emphasizing its integration in teaching curriculum at all levels of education. This was to ensure capacity building in ICT skills for all players in the education sector. The Kenyan Vision 2030 also captured the necessary policy framework which practitioners could use to model ICT integration in teaching and learning in the country (MoEST, 2006). Despite the favorable government policy towards ICT use in education, issues of e-readiness such as infrastructure, computer literacy and competency in the use of the technology still needs to be

addressed by the government. As reported by Augustine (2013) Kenya's government's intends to implement a flagship project (Digital Literacy Programme) where all children joining class 1 will be provided with laptops before they join school. However, Augustine further noted that the government has put the burden of security of the laptops on parents and learners meaning that they will bear the cost of replacing them in case of loss or damage. At the piloting phase, the schools were reluctant to offer storage facilities because of the large numbers of the laptops involved. Questions were also raised about how students who live in poor conditions or in flood prone areas will secure the laptops from damage (For further information access http://www.standardmedia.co.ke/lifestyle/article/2000084770/6-000-primary-schools-picked-for-free-laptop-project?pageNo=2).

Global research indicates that use of ICT in teaching and learning in primary schools can make a difference in pupils learning. According to British Education Research Association (BERA, 2003) more substantial gains in pupil attainment are achievable where the use of ICT is planned, structured and integrated effectively. It is clear that there need to understand how ICT will bridge the existing gap in learning of literacy in Kenya if there will be any improvements in reading and writing among children. According to a study by British Educational Technology Association (BECTA, 2000) availability of ICT infrastructure was positively correlated to the pupils performance at Key Stage 2. This further highlights the need for providing adequate ICT facilities to schools if literacy improvements are to be realized through ICT.

Whereas it assumed availability of ICT infrastructure means proper access and use by pupils one of the surveys in Australia targeting primary schools found out that students used ICT in relatively limited ways (Research Digest, 2009).

The vital role of the teacher in use of ICT in teaching and learning was captured by Hogarth et al., (2006) when they observed that the gains in student learning when using ICT simulations were further enhanced when the teachers actively guided pupils through the ICT simulations. Despite the few studies evaluating use of ICTs in primary schools in Kenya, teachers' ICT incompetency and lack of infrastructure are cited as key impediments to integration of ICTs in

teaching and learning (Jepchumb, 2008 & Hennessy et al., 2010). A case study by Jepchumba (2008), on ICTs policies on integration in education in 5 urban and 5 rural primary schools in Kenya revealed that private schools seemed to have a clear policy on ICT use in education management but made no revelation on its use in teaching and learning.

2.3.2 Kenya ICT Integration in teaching and learning: An Overview

Kenya has made remarkable progress putting in place an ICT policy framework and implementation strategy, complete with measurable outcomes and time frames. The process has had the benefit of sound advice from officials and stakeholders and, perhaps more importantly, strong leadership from the office of the Permanent Secretary of the Ministry of Education Science and Technology. However, universal implementation is challenging given the lack of resources, national ICT infrastructure, and even electrical supply, particularly in the rural areas.

Kenya promulgated a National ICT Policy in January 2006 that aims to "improve the livelihoods of Kenyans by ensuring the availability of accessible, efficient, reliable and affordable ICT services." The national policy has several sections, including information technology, broadcasting, telecommunications, and postal services. However, it is the section on information technology that sets out the objectives and strategies pertaining to ICT and education. The relevant objective in this section states that government will encourage "…the use of ICT in schools, colleges, universities and other educational institutions in the country so as to improve the quality of teaching and learning."

The MoEST developed a Kenya Education Sector Support Program (KESSP) in 2005 that included ICT as one of the priority areas with the aim of mainstreaming ICTs into the teaching and learning process. The National ICT Policy embedded this intent as a national priority and provided the impetus for the ministry to develop its sector policy on ICT in Education. The MoEST moved quickly and, in June 2006, introduced the National ICT Strategy for Education and Training.

2.3.3 ICT Integration Challenges

ICTs integration in teaching and learning definitely needs change of attitude of the both teachers and learners to ensure effective utilization of the technology in a learning environment. Teachers who have a positive attitude towards ICT and perceive it to be useful in promoting learning will evidently integrate it in their lessons more easily those who have negative attitudes. This was affirmed by Hew and Brush (2007) that if teachers like a type of technology and believe that it is beneficial to them in their lessons, technology integration can be achieved more easily. Theng and Sim (2008) in their study on primary school teachers' adoption of ICTs, in Malaysia revealed that generally they had a reasonably positive attitude towards ICT adoption in teaching their lessons.

Theng and Sim (2008) also revealed that in United Kingdom, teachers showed positive attitudes towards possible contributions of ICT in learning but pointed out that this did not necessarily lead to adoption of these technologies in daily practice or improvement of teaching and learning.

According to Demirci (2009) teachers' attitudes were positive towards Geographic Information System (GIS) where most of them (76%) thought that GIS was an effective teaching tool for lessons in primary schools in Turkey. Andoh (2012) also established that teachers' feelings, knowledge and attitudes influence their acceptance of usefulness of the technology and integration into teaching in general in Ghanian educational institutions.

Attempts to set up basic ICT infrastructure in primary schools are almost negligible. The core problem is that Kenya lacks adequate connectivity and network infrastructure. Although a small number of schools have direct access to high-speed connectivity through an Internet service provider, generally there is limited penetration of the national physical telecommunication infrastructure into rural and low-income areas. Consequently, there is limited access to dedicated phone lines and high-speed connectivity for e-mail and the Internet. Even where access to high-speed connectivity is possible, high costs remain a barrier to access. As a solution

to these access problems, the MoEST hopes to leverage the e-government initiative of networking public institutions countrywide to facilitate connectivity for the educational sector.

The foregoing challenges necessitate the need for support for learning institutions and hence the OSL project which implemented ICT application in teaching and learning in primary schools in Nairobi's Dagoreti and Kamukunji areas for the last two years.

2.3.4 The OSL Project and ICT Integration in Teaching and Learning

ICTs infrastructure includes access to computers and the Internet, digital equipment, telecommunications, radio and television. For ICT integration in teaching and learning to be effective in any school, the infrastructure must be sound to ensure its sustainability. Any country's educational institution which needs to use ICT in teaching and learning requires technology facilities and infrastructure before any ICT -based program is launched. In this case therefore, there should be appropriate rooms or buildings available to house the technology, ensure proper electrical wiring, safety and security. Other basic requirements are the availability of electricity, ICT tools and other relevant resources. Various primary schools in Canada, had access to ICT equipment and educational software. Coupled with this was the availability of band width which led to improvement in teaching (Donnelly, 2007). However a survey done by Tinio (2002) on ICT use in public schools in Philippines, indicated that, a great percentage of these schools had power service although the irregularity in its supply still remained an issue. Bakar (2006) however revealed that in UK, the integration of ICTs in teaching and learning is carried out but not without the problem of erratic broadband.

In developing countries large areas are still without a reliable supply of electricity and telephone lines are only found in urban centres. Although Africa had a late start in the race to acquire ICT facilities but liberalization of the telecommunication sector in 1997 resulted in significant growth in infrastructure and access but mainly concentrated in the urban centres (Farrel, 2007). Lack of infrastructure in various schools in Tanzania was acknowledged in the Tanzanian ICTs Policy for Basic Education (Farrel, 2007). The importance of ICT in assisting

pedagogy was thus emphasized as the government of Tanzania grappled with infrastructure and ICT integration in teaching and learning.

The vision of the Government of Kenya is to facilitate ICT as a universal tool for education and training. In order to achieve this vision every educational institution, teacher, learner and the respective community should be equipped with appropriate ICT infrastructure, competencies and policies for usage and progress. It calls for recognition of the fact that ICT provides capabilities and skills needed for a knowledge-based economy. It also calls for transforming teaching and learning to incorporate new pedagogies that are appropriate for the 21st century hence the implementation of OSL project.

2.4 Methodology

2.4.1 End term Design

The overall design was quasi-experimental with the existence of a control sample/group that was carefully matched with an intervention group of closely similar characteristics. The identified indicators/variables were assessed and compared at a 5 per cent level of significance for attribution of the theory of change to the project activities/interventions. The OSL end term survey utilized a mixed method approach. Both quantitative and qualitative research methods were combined in eliciting data that could speak to the OSL project objectives. In particular, quantitative methods were prioritized to help establish the status of project indicators outlined in the logical framework and compared results of the project in intervention schools to control schools. Consequently, numbers, percentages and levels were computed where necessary. Qualitative methods were used to supplement quantitative methods. This was important to explore and understand the meanings that pupils, teachers, community members and other players ascribed to ICT integration as applied in the OSL project. Additionally, the qualitative approach lead to a better understanding of the partnership between Plan International Kenya/SOS Children Villages and implementing partners, helped to describe the lessons learnt and solicit suggestions on better practices. Combined quantitative and qualitative methods provided more evidence that led to better understanding of the OSL project.

2.4.2 Target Population

The overall target population for the OSL project was 30 primary schools: 20 in Dagoretti (15 intervention schools and 5 control schools) and 10 in Kamukunji (8 intervention and 2 control schools) as shown in Table 2.1. Particularly, lower grade boys and girls and male and female teachers in the target schools were of interest to this end term study. Other sources of information included relevant Plan /SOS staff, parents, community members, SMCs/PTA, OSL project officers, MoEST officials, TSC officials, technology specialists, and TAC tutors.

Table 2. 1: OSL End Term Evaluation Sample Primary Schools in Nairobi County, Kenya

Dagoreti Site				**Kamukunji Site**			
No	**Intervention**	**No.**	**Control**	**No**	**Intervention**	**No.**	**Control**
1	Ndurarua	1	Mbagathi RD	1	Harambee	1	Daniel Comboni
2	Toi	2	Kawangware	2	Rabai	2	Ushirika
3	Kinyanjui RD	3	Riruta HGM	3	Dr. Livingstone		
4	Mukarara	4	Gatina	4	Uhuru		
5	Mutuini	5	Dr.Muthiora	5	Kimathi		
6	Dagoreti Muslim			6	James Gichuru		
7	Riruta Satellite			7	Nairobi River		
8	Ruthimitu			8	Morrison		
9	Kagira						
10	ShadrakKimalel						
11	Jamhuri						
12	Joseph Kangethe						
13	Kabiria						
14	Nembu						
15	Kirigu						

2.4.3 Sample Size and Sampling Techniques

2.4.3.1 Sample of schools

The study adopted a census in which all the 30 schools (20 schools in Dagoreti and 10 in Kamukunji) were selected for the end term evaluation.

2.4.3.2 Sample of the Informants

For learner Literacy assessments (both in Kiswahili and English), 10 pupils (5 boys and 5 girls) in each standard 2, standard 3 and standard 4 were randomly[3] selected. At the time of the end term evaluation, the target Classes (1, 2 & 3) had transited to Classes 2, 3 & 4 respectively. This gave a total of at-least 30 pupils per school (15 boys and 15 girls). In total, 990 pupils; 495 girls and 495 boys were targeted for

[3]Random Selection involved use of Class registers where in each class, the research team requested for a class register, then listed boys and girls separately if it was not done, then they identified a k^{th} value for both boys and girls based on the population to guide the selection of the 5 girls and 5 boys to be involved in the assessment test. Replacement of the selected pupil was only allowed if the pupil was absent and in this case using the same method the next pupil using the same k^{th} value was picked. Teachers were not used to be selection of the pupils.

assessments (pupils who attempted EGRA adapted Literacy Tests). In addition, a further 795 pupils (421 girls and 374 boys) were given a child friendly semi-structured questionnaire.

Other key informants included: 26 head teachers purposively sampled, 101 teachers at lower primary school purposively selected, 163 parents randomly sampled, 33 BoMs/SMCs purposively sampled, 2 OSL Project Officers, 1 male Ministry of Education official who worked closely with OSL programme, 1 male technology specialists in the ICT department, and 1 female TAC tutors.

In some randomly selected 20 schools, Standard 4 pupils were involved in a child friendly mapping exercise where they were asked to draw and map out safe and unsafe places in their schools. After drawing, they labeled and discussed their work as an easier way of getting information. The table below gives a breakdown of the actual informants and the relevant instruments used for data collection.

Table 2. 2: Targeted and Actual Population, Sampling Techniques and Methods of Data Collection

Respondent	# Targeted	# Sampled	Sampling Technique	Data Collection Method
Head teachers	30	26	Purposive	Structured questionnaire
Teachers	120	101	Purposive	Structured questionnaire
Girls and Boys for Assessment	900	990	Stratified/ Random	Structured Test
Pupils Questionnaire	900	795	Random	Structured questionnaire
Mapping	1500	600	Purposive	Mapping
Parents/Community members (Male and Female)	80	163	Random /purposive	Parent structured Questionnaire
PTA/BoM	120	33	Purposive	FGD/ Group Interviews
TSC and MoE officials at county	6	2	Purposive	Interviews
OSL Programme Officers	2	2	Purposive	Interview
Technology Experts	2	1	Purposive	Interview
Total	**3660**	**2713**		

2.4.4 Data Collection Tools for the End Term Survey

For a holistic understanding of the value of OSL project as stated in the objectives, the study used a number of tools that allowed for triangulation hence validity of the findings. The tools used were (Annex 4):

a) Learner Assessment Tests

It was used to establish the Literacy levels (both Kiswahili and English) for pupils. These were adapted standardized EGRA tests for end term survey. The EGRA assessment tools have been approved as reliable and appropriate for measuring change both in English and Kiswahili. The data was collected and analysis done per cohort disaggregated along gender, class, and age. Other than the oral test, the tool

collected data on age of the pupil, gender and class which were important variables in contextualizing the oral test results.

b) School Questionnaire

This tool was used to collect school data from the office of the head teacher. It was a self-administered questionnaire with minimal guidance from the researchers. It was used to collect data on the basic information about the head teacher such as level of qualifications, gender, years of experience, the years spent in that particular school among others. In addition, data on school establishment, enrolment, transition, retention, teacher establishment, teaching and learning facilities, school attendance both for teachers and learners, learning environment, parents and community involvement in school management, availability and use of ICT infrastructure in school and OSL sustainability strategies within the schools also collected.

c) Teachers Questionnaire

This was a self-administered questionnaire with open and closed ended questions targeting the selected lower primary teachers. The tool targeted any teacher teaching lower primary. Teachers are identified as key in integration of ICT in teaching and learning. Therefore it was vital to understand their skills, competencies, and classroom practice on use of ICT to enhance learning. The basic information collected included qualification, gender, teaching experience, teacher attendance, number of textbooks available for their class and learning environment. The study also assessed the presence of any form of child abuse including verbal and physical. In addition, it collected data on their understanding of gender sensitive pedagogy, available ICT infrastructure, perceptions on use of technology in teaching, skills and competencies in use of technology for teaching and learning and the support they receive in use of ICT in teaching and learning.

d) Pupil Questionnaire (Standard 4-8)

Pupils' short questionnaire was administered to children in upper primary to collect information on their perceptions the quality of education they were receiving, their learning environment including presence or absence of child abuse, their involvement in school governance, awareness on their rights, gender equality practices, and level of use and maintenance of ICT infrastructure.

e) Parents Questionnaire

OSL project design envisaged a collaborative approach to the implementation of project activities. Parents were considered to participate in the implementation for ownership and sustainability purposes. This questionnaire therefore sought answers on: parents' perception on ICT integration in education, the status of their school's integration of ICT, their role in school governance, and support of the OSL project. In addition, parents' questionnaire looked for data on their role in school management including development of school development plans, project sustainability and readiness to volunteer as community resource people beyond the project lifetime.

f) SMC/BoM Focus Group Discussion

This collected data from SMCs/BoMS on their understanding of their role in school governance and the level of their engagements, their role in developing school management plan including allocation of priority areas, their understanding and level of acceptance of OSL project, participation in OSL project including activities that demand volunteering from the community.

g) Desk review

For a holistic understanding of the OSL project, there was need to analyze and review the following documents: OSL Project design and description documents, Baseline survey report, progress reports, International, Regional and National education and ICT policies, Legislations addressing ICT and Non-Governmental Organization reports on ICT integration. All these assisted in understanding the end term findings and their implications.

h) Classroom Observation

This tool elicited meaningful data concerning the general classroom learning environment, whether it was child friendly or not. In addition, it investigated whether teachers utilized facilitative inquiry based methods in teaching, their level of skills in application of ICTs as tools for facilitating teaching (use of interactive projectors), teacher's ICT literacy skills, fluency in reading and comprehension, level of awareness on gender equality, child rights, positive discipline and how they create safe learning environments.

i) School Walk About

The study utilized the school walk about method that involved researchers walking around the school to observe school processes relating to the study questions. In specific, the tool elicited data on ICT

infrastructure and use, pupil-teacher and pupil-pupil interactions and relationships, language of communication and general learning environment in the school.

Training of Research Team

There was a two day training workshop that took place on 10th – 11th January 2016 at Savelberg Hotel, Nairobi. It brought together 7 team leaders with each team having 3 Research Assistants. In total 28 gender-balanced team was trained. The minimum qualification for RAs was a Bachelors degree. The delivery of the training followed adult learning methodologies which included group work, role play, drama, plenary presentations and question and answer sessions. Moreover, the researchers were provided with a training guideline that included a code of conduct for researchers, an introductory statement for interviews and notes on conducting interviews. Each team spent a full day collecting data in a school for a maximum of five days.

Data Collection Process

Data collection at school level took 5 days starting from 14th January 2016 up-to 20th January 2016. At school level, the Research Assistants administered EGRA Literacy Tests to the randomly selected boys and girls in Standards 2-4 and also administered the questionnaire to the randomly identified pupils from Classes 4- 8. The team leader carried out FGDs with the BoMs, interviewed parents, head teacher, collected classroom mapping data with Class 4 pupils and lastly collected school walkabout data.

Interviews with the project officers and other partners (MOEST officials, TAC tutors and KICD) took place on the week of 27th January 2016. This was done by team leaders who interviewed, transcribed and submitted the data for data analysis.

2.4.5 Data Analysis

The study collected two types of data: qualitative and quantitative. The approach to the analysis of the two sets of data was different as described below:

2.4.5.1 Qualitative Data Analysis:

The qualitative data analysis was a continuous process right from the time of the field to the time the final report was written. Care was taken to ensure that every step of the analysis disaggregated data by gender and location and where possible by class. Generally, qualitative analysis involved:

- Preliminary analysis during fieldwork where researchers continuously analysed the data they came across to inform their course of action.
- There was an on-going analysis of each individual interview and observations conducted by the team, taking note of what was said and done by the male and female informants differently.
- There were key analytical questions based on the objectives of the evaluation for each FGD and interview from which each data transcript was analysed along.
- A debriefing meeting where researchers met after data collection for a sharing session was held
- Triangulation of data from various data sources was done to validate the information.
- Cross validation of findings by secondary sources was done.
- Comparative analysis was done for the two sites to draw similarities and differences in the selected intervention areas. In addition, the control schools and intervention school results were analysed for any differences and attribution.

2.4.5.2 Quantitative Data Analysis

The data was processed using Statistical Package for Social Science (SPSS). This was mainly descriptive. The inferential analysis investigated important relationships between selected variables. All these were interpreted and presented in graphical forms such as tables, graphs and charts. Given the many sources of data for specific indicators, the research team developed a data analysis matrix to guide the process of data analysis.

2.4.5.3 Ethical Consideration

The research team involved in the OSL project was trained and signed relevant documents including WERK Child Protection Policy that stipulated how to collect data from children. In addition, informants were briefed about the purpose of the OSL end term survey and asked for their consent. They were assured of the confidentiality of the data collected and informed of their voluntary participation. A certificate of consent was signed by the research team before any tool was administered. Consent for pupils was obtained from the parents through the head teacher.

2.4.5.4 Limitations of the Study

The OSL end term evaluation was done under the following methodological limitations:

- There were some data gaps at the school including lack of accurate records for dropouts and enrolments in most schools limiting the ability to compute drop-out and retention rates.

- Mobilization of parents, MoEST and TSC officials for participation in the study was a challenge and this may explain the few numbers that were reached in the evaluation.
- Due to other ongoing activities in schools at the time of the evaluation including Tusome training of teachers, parents and teachers meetings as well as TSC teacher evaluation, the evaluation programme was interfered with obliging the team to make return trips to some schools to ensure quality in the data collected.
- Time constraints were experienced in data processing and analysis due to the limited period allocated for the evaluation activity. To ensure quality of the process is maintained more data entry clerks and data analysts were engaged to meet the deadline set.
- The evaluations were conducted under constrained space limitations given the lack of rooms, other than classrooms, in schools to conduct activities including literacy assessments, interviews and fill questionnaires with parents, pupils and teachers. Researchers improvised by working outside under trees and using classrooms during break and lunch times when they were not occupied.
- Limited time allocated for interviews by some informants. In some incidences as minimal as 15 minutes which meant asking very few questions deemed very important hence affecting the quality of the data collected.

2.5 Results Findings and Discussion

2.5.0 Demographics and General School Findings

2.5.1 School Profiles

Open Space Literacy Project was implemented in public primary schools in Nairobi County-Kenya. The average school size was 984 pupils (Intervention school had 991 and Control- had 966 pupils). On average, each school had 21 teachers (Intervention, 18 and Control, 25).

School Drop-Out Rate

Data on school dropout was collected in 15 schools (8 intervention schools and 7 control schools). Other schools had poor records or the data was not available. From the 15 schools, the dropout rate for intervention schools was 0.8% (the rate was the same for both girls and boys). The control schools had a lower drop-out rate compared to intervention school (girls was 0.1 and boys was 0.2).

School Management Plans

According to the findings, 1 out of 10 intervention schools compared to 4 out of 10 control schools were running the school without an up to date school management plan. However, only 64.3% of intervention schools and 66.7% of control schools who had indicated to have an up-to date school development plan had a verifiable copy.

2.5.2 Head-Teachers Characteristics

- There were more male head-teachers (53.8%) than female head-teachers (46.2%) participating in the study. While the proportion of the female head-teachers was more in control schools the majority of the head-teachers in intervention schools were male as shown in table 2.3

Table 2.3: Gender of the Head-Teachers

	Intervention	Control	Total
Male	63.2%	28.6%	53.8%
Female	36.8%	71.4%	46.2%

- Majority of the head-teachers (73.1%) were over 46 years with only 15.8% between 36 - 40 years.
- All the head-teachers were highly qualified with at-least a minimum of diploma in Teacher Education (percentage with Diploma were 46.2%, Bachelors degree were 42.3% and Masters degree were 11.5%).
- Approximately 84.6 percent of the head teachers had served for more than four years as head teachers with a further 11.5 per cent having over ten years experience in their current posting.

2.5.3 Teachers Characteristics

- There were more female teachers (86%) than male teachers (14.0%).
- Majority of the teachers (29%) were over 46 years with over 73% of teachers above the age of 35 years as shown in figure 2.1

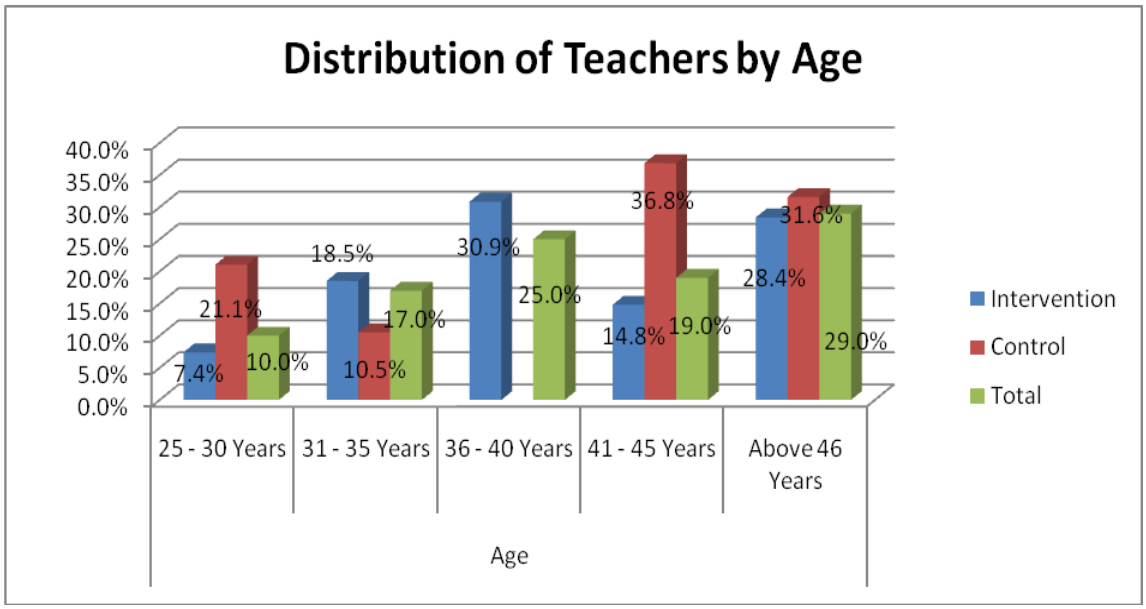

Figure 2.1: Age Distribution of the Teachers

- Majority of the teachers (98%) were professionally qualified (6% had masters degree, 29%, had degrees, 31% had diploma and 32% had certificate). These were highly experienced teachers with 69 percent having taught for over 10 years.
- Most of the teachers (64%) had served in their current school for over than 6 years.
- The average workload for the teachers was between 21-30 lessons per week with only 5 percent indicating a workload of over 40 lessons per week.

Teachers Utilizing Digital and Non Digital Learning Materials

According to the findings, 75% of male teachers and 72.5% of female teachers in intervention schools were utilizing digital and non digital learning materials for teaching. There was a marked difference compared to the percentage of teachers who reported using the digital and non digital materials at baseline. The values were 2.86% and 16.67% for male and female teachers respectively at baseline.

On average, 63% of teachers from the intervention schools were trained on the use of digital for monitoring pupils' progress. A further 57% reported utilizing learner centered digital materials for teaching and learning - in this case the laptop and interactive board. Similarly, the teachers appear to be using varied instructional methods/pedagogy which range from discussions, role play, group

work, question and answer to ICTs. However, it was difficult to ascertain this claim in practice during classroom observation since the methods were hardly applied. Teachers also opted for easy to choose option of 'somewhat" for those questions that expected them to rate their ICT skills. Their access of laptops stands at 77% among other ICT materials. The application of ICT pedagogy was minimal especially in some schools in Dagoreti regions, a contradiction to their reported views. However, the findings corroborate earlier findings by the British Educational Research Association who observed that it takes time to develop the skills necessary to use ICT effectively in teaching; an explanation sometimes for the low percentages of teachers utilizing ICTs in actual teaching.

The study also looked at the percentage of teachers practicing inquiry based facilitative methods. Majority of the male teachers (72.73%) and female teachers (85.94%) reported utilizing inquiry based methods in intervention schools compared to male (50%) and female (40%) in control schools. The implementation period of OSL project had seen an improvement in the number of teachers utilizing inquiry based facilitative methods at baseline and end term surveys. At baseline only 29.5% of male teachers and 41.67% of female teachers in intervention schools were using facilitative inquiry based methods while teaching.

2.5.4 Parents Characteristics

There were many female parents who participated in the study than male parents as shown in Figure 2.2.

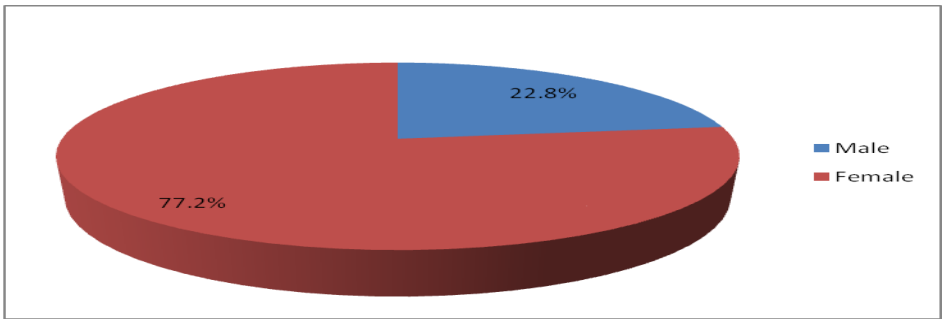

Figure 2.2: Gender of Parents

- Over than a half of the parents (53.4%) had been parents in the school for over than four years. Only 11.8 per cent of the parents had been parents in the school for less than a year. Therefore views were collected from parents who understood the school well.

- The attitudes of parents towards integration of ICTs in teaching and learning was positive with 67.2% reporting that they would like to see ICTs utilized in teaching and learning. However, 6.4% resisted use of ICT in teaching and learning. They cited the negative effects of ICTs like exposure of children to pornography, and radicalisation as reasons for their resistance.

- Most of the parents (66.2%) rated their children's skills in use of ICTs as either poor or fair. They believed most of them required training if they were to adequately and appropriately utilize ICTs in learning.

Involvement of Parents in School Governance

Whereas all the 20 BoMS in 20 of the 30 schools indicated that they had distinguished roles in school governance, there were differences in the achievement of the BoMs. Some clearly understood their roles and were actively involved in school management, others were newly constituted and did not understand their mandates (BOM FGD, Kamukunji School 8, 22/01/2016).

In all the schools visited none of the schools had a memorandum with parents on sustainability of OSL project. Despite 67.6% of head teachers reporting that the school community in the past 2 years had actively been involved in school management, there was no evidence of community volunteers working as resource people within the schools as had been anticipated within the project design. However, parents reported attending schools meetings when called upon, paying school levies for their children like school feeding programmes and school uniforms, and providing source of lighting for their children to do homework. Interviews with BOMs confirmed that parents attended school meetings and paid school levies.

> Let's say that there are not many students from the community but when teachers call for a meeting they come and advertise the school (good ambassadors of the school), he communicates with the community outside about the school, and pay for lunch for the children (BOM FGD, Kamukunji School 8, 22/01/2016).

2.5.5 Pupils Characteristics

The study documented characteristics of the assessed pupils. There were significant differences in school absenteeism between control and intervention schools. A child in control school was twice likely to miss school for more than a week in a year than a child in an intervention school (26.2% of children in Control schools and 14.7% in intervention schools had missed school more than a week). Pupils reported to have learning materials at home to assist them do homework as shown in Table 2.4.

Table 2. 4: Proportion of Children with Books at Home

Textbook	Type of School		Total
	Intervention	Control	
English Textbooks	64.8%	68.1%	65.5%
Kiswahili textbooks	57.1%	55.1%	56.7%
Maths Textbooks	59.6%	54.8%	58.6%
Other Textbooks (e.g. Science, S/S)	62.1%	57.8%	61.2%

The Table reveals that learning materials were more in communities' of intervention schools than control schools. Other than books, most of the pupils stayed with parents who could read and write. In intervention school, pupils reported that 93.7% and 93.0% of their mothers and fathers could read and write respectively. This trend was also reported in control school (mothers who could read were 93.4% and fathers were 92.2%). Literate parents are more likely to assist children education than their illiterate counterparts.

Pupils' ICT Management Skills

When asked about their ability to operate and how to maintain ICT infrastructure, most pupils reported very low skills. In intervention schools, only 17% of the boys and 13.9% of the girls reported to have the ability to maintain ICT infrastructure. The percentages were further lower in control schools (15.9% for boys and 12.4% for girls). This is worrying given that British Education Research Association and Research Digest (2009) observed that minimal access and low confidence in use of ICT in teaching and learning by pupils leads to low performance.

Gender Equality Practices

The findings revealed that 7 out of 10 pupils in intervention schools were not aware of gender equality practices and child friendly learning environment. There were no gender differences in the number of girls and boys aware of gender equality practices and child friendly schools (7 girls and 7 boys were not aware of the gender quality practices). Demands for gender equality and child friendly schools can only be made by pupils who are aware of aspects of gender equality and child friendly schools.

2.6: Learning Outcomes of Pupils in STD. 2-4 in the Target Schools in Nairobi County

The study investigated the Literacy performance of pupils in Standard 2 to Standard 4 in both the intervention and control schools. The Literacy levels (English and Kiswahili) were established using EGRA adapted Tests. The Tests had six sections in both English and Kiswahili as shown in Table 2.4.

Table 2. 5: Standardized EGRA Tests for Literacy

English			Kiswahili	
Letter Sound Knowledge	100 Letters		Ufahamu Wa Sauti Za Herufi	100 letters
Segmenting	10 words		Ufahamu Wa Silabi	50 syllables
Section A: English Vocabulary	8 body parts		Kutambua Maneno ya Kubuni	50 words
Section B: Words in Environment	6 words		Kutambua Maneno Halisi na ya Kubuni	20 words
Section C: Spatial Words	6 words		Section A: Kusoma Hadithi kwa Sauti	60 words
Invented Word Decoding	50 words		Section B: Ufahamu wa Hadithi	5 Questions
Section A: Oral passage Reading	66 words			
Section B: Oral passage Reading	5 Questions			
Sentence Reading and Compression	10 Questions			

The analysis involved establishing the average number of words that pupils could correctly read per minute and at comprehension level, the number of questions that the pupils could answer correctly.

2.6.1 Performance in English: Knowledge of Letter Sound

Overall, pupils in intervention schools were able to correctly read 41.44 words per minute compared to 36.63 words in Control schools as shown in table 2.6.

Table 2. 6: Performance in English per Class

	Intervention			Control		
Standard	Mean	N	Std. Deviation	Mean	N	Std. Deviation
Std 2	39.74	297	19.914	32.15	65	16.352
Std 3	41.50	340	21.010	37.24	97	20.569
Std 4	43.04	305	23.856	39.67	76	26.390
Total	41.44	942	21.664	36.63	238	21.739

The performance of pupils in intervention schools was better than those of corresponding classes in Control schools. Findings disaggregated by gender showed that the performance of girls was slightly better than those of boys both in intervention and control schools (See appendix x). In intervention schools, in Standard 3 the number of words read correctly per minute by girls was 43.53 compared to 39.47 of boys; in Standard 4 girls were able to read 43.11 words per minute compared to 42.95 of boys. However, in Standard 2, there was no gender difference in the performance with girls reading 39.26 words correctly compared to boys' 40.20.

Independent group t-test was used to compare Literacy means between Intervention and Control Schools. The test statistic per class was as shown in Table 2.7

Table 2. 7: Independent t-Test

		Levene's Test for Equality of		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence	
									Lower	Upper
Std 2	Equal variances assumed	1.846	0.175	2.839	363	0.005	7.486	2.637	2.301	12.671
	Equal variances not			3.214	108.97	0.002	7.486	2.329	2.869	12.103
Std 3	Equal variances assumed	0.173	0.678	1.777	443	0.076	4.205	2.366	-0.445	8.855
	Equal variances not			1.805	167.108	0.073	4.205	2.329	-0.394	8.804
Std 4	Equal variances assumed	6.148	0.014	1.313	383	0.19	4.049	3.084	-2.016	10.113
	Equal variances not			1.234	110.858	0.22	4.049	3.282	-2.454	10.552

The test statistic of Standard 2 was 1.846 with the corresponding two-tailed p-value of 0.005 which is less than 0.05. Therefore there is evidence that the difference in means is statistically significant. The values for Standard 3 and 4 revealed no statistical significance in the difference in means.

Summary

- There are significant differences in the average number of words that each corresponding class was able to read correctly between the baseline and end term surveys. On average, at baseline Standard 1 could only read 10.9 words correctly, at end term they could read 39.74. Standard 2 moved from 18.36 words to 41.50 words and Standard 3 from 24.84 words to 43.04.

- Despite the huge change in the number of words correctly read in the control schools at baseline and end term (18.372 and 36.63 words respectively), the performance in the intervention school was better (41.44 words) than those in control schools (36.63 words).

- Girls were able to read slightly more words (44.80) than boys (42.08). This trend was also established at the baseline where more girls in a minute (19.4813 than boys (17.193) were able to read words correctly.

- The findings relate to Uwezo studies on Literacy and Numeracy conducted annually in Kenya. According to Uwezo (2012) findings on Literacy, only 3 in every 10 pupils in Standard 3 nationally had attained reading fluency[4] in Kiswahili and English.

- Nationally, girls were better readers than boys except in arid areas.

[4] Reading fluency for the 2012 Uwezo was determined by ability of the child to read a paragraph at county level and a story at national level.

Pupils were also required to identify various sounds in 10 words. The findings revealed that on average, pupils in intervention schools performed better than their counterparts in control schools. Out of 10 words, pupils in intervention schools identified sounds correctly in 7 words compared to 6 in control schools (See Appendix xi). There were no gender differences in the performance.

In addition, pupils were asked to identify parts of their body, words in their environment and spatial words. The percentage of pupils who could identify all their body parts was slightly more in intervention schools (18.8%) than control schools (18.5%). Majority of the pupils (intervention 79.5% and control 78.9%) could identify over 5 body parts.

Lastly, pupils were given a story to read from which they were to answer 5 questions to test their skills in reading for comprehension . The correct responses were as shown in Table 2.7

Table 2.83: Correct Responses to Comprehension Questions

No. of Questions Correct	Intervention	Control
None	9.60%	13.50%
1	7.70%	12.70%
2	15.30%	16.80%
3	13.20%	11.90%
4	16.50%	11.10%
All 5 Correct	37.70%	34.00%
Total	**100.00%**	**100.00%**

The findings indicate that 4 out of every 10 pupils in intervention schools compared to 3 out of every 10 pupils in control schools could read and comprehend a story fully. However, in every 100 pupils, 10 and 14 could not either read or comprehend the story in intervention and control schools respectively. Over half of the pupils could read and comprehend the story (67.4% in intervention and 57% in control could answer at-least 3 of the 5 questions).

Performance disaggregated by class and gender was as shown in Table 2.8.

Table 2. 9: Performance of Pupils in English Comprehension by Gender and Class

Class		Question 1		Question 2		Question 3		Question 4		Question 5	
		Intervention	Control	Intervention	Control	Intervention	Control	Intervention	Control	Intervention	Control
Std 2	Boys	77.50%	65.20%	80.60%	94.40%	89.20%	66.70%	85.70%	83.30%	93.30%	16.70%
	Girls	77.40%	83.30%	66.00%	73.70%	73.30%	70.80%	80.60%	75.00%	95.50%	85.70%
	Total	77.40%	76.90%	72.30%	80.40%	80.50%	69.70%	82.70%	77.80%	94.60%	53.80%
Std 3	Boys	89.60%	91.80%	84.20%	93.60%	86.50%	76.30%	83.10%	87.50%	88.60%	88.90%
	Girls	87.00%	85.00%	86.00%	71.40%	80.70%	81.40%	81.00%	81.30%	84.40%	75.00%
	Total	88.10%	88.10%	85.20%	81.60%	83.10%	79.00%	81.90%	83.90%	86.10%	81.00%
Std 4	Boys	89.70%	88.20%	96.20%	100.00%	82.10%	80.80%	87.50%	87.50%	90.40%	95.20%
	Girls	92.40%	100.00%	93.10%	90.50%	84.40%	74.40%	87.10%	85.70%	84.90%	92.60%
	Total	91.20%	94.70%	94.50%	94.50%	83.30%	76.90%	87.30%	86.40%	87.30%	93.80%

The table reveals that there were no significant differences in the performance of boys and girls in the 5 questions. This was also the case during the baseline. Other than question 5, the performance of Standard 4 was better than other classes. Compared to baseline findings, there is significant improvement in the performance of both the intervention and control schools. For instance, on average, only 15 per cent of the pupils in Standard 1 in intervention schools gave the correct answer for question 1 at baseline. The percentage had moved to 77.4% at the end term. The same trend was observed in control schools where the percentage moved from 15% to 76.9%. However, across the 5 questions, there was no established trend in the performance of intervention and control schools.

2.6.2 Performance of Pupils in Kiswahili

Overall, pupils in intervention schools were able to correctly read 42.48 words per minute compared to 39.55 in control school as shown in Table 2.9.

Table 2. 10: Performance of Pupils in Kiswahili per Class

	Intervention			Control		
	Mean	N	Std. Deviation	Mean	N	Std. Deviation
Std 2	39.18	222	20.169	35.32	79	13.844
Std 3	41.56	255	19.539	39.09	113	23.079
Std 4	46.49	242	22.519	44.46	79	26.746
Total	42.48	719	20.966	39.55	271	22.256

On average, pupils were able to read 39.18, 41.56 and 46.49 words per minute in Standard 2, Standard 3 and Standard 4 respectively. On average, pupils in control schools performed slightly lower than their counterparts in intervention schools.

Pupils were also given a list of words from which they were to identify meaningful words (halisi) and others without meaning (kubuni). From the 20 words, 38.7 per cent (Intervention - 40.1% and Control - 35.1%) could classify over 16 words correctly. However, 0.3 percent of the pupils in intervention schools could not identify any of the provided words (check appendix xii).

Summary

- Between baseline and end term line, there was a significant improvement in the average number of words that pupils in intervention and control schools could read correctly per minute.

In intervention schools, it moved from 27.05 at baseline to 42.48 at end term compared to 24.337 words to 39.55 words of control schools. Like the trend established in English, the performance was better in intervention schools (42.48) than control schools (39.55).

- Standard 2 registered the most significant improvement from an average of 7.06 words correctly read per minute at baseline to 39.18 words. However, Standard 3 had the least improvement from 41.4 to 46. 49.

- Standard 2 registered the most significant improvement from an average of 7.06 words correctly read per minute at baseline to 39.18 words. However, Standard 3 had the least improvement from 41.4 to 46. 49.

- There was no significant difference in the performance of boys (48.94) and girls (50.30). The same trend was observed at the baseline.

Table 2. 4: Performance of Pupils in Kiswahili Comprehension by Gender and Class

Std		Question 1		Question 2		Question 3		Question 4		Question 5	
		Intervention	Control	Intervention	Control	Intervention	Control	Intervention	Control	Intervention	Control
Std 2	Boys	68.40%	75.80%	21.10%	25.00%	84.00%	84.40%	54.70%	59.40%	75.80%	75.00%
	Girls	75.00%	55.80%	19.70%	26.20%	84.60%	77.50%	56.10%	52.50%	72.30%	67.50%
	Total	72.10%	64.50%	20.30%	25.70%	84.30%	80.60%	55.50%	55.60%	73.80%	70.80%
Std 3	Boys	74.50%	66.00%	34.50%	48.00%	89.00%	89.80%	76.10%	67.40%	83.50%	81.80%
	Girls	73.60%	70.50%	42.10%	40.70%	87.90%	87.90%	67.40%	66.10%	81.00%	59.60%
	Total	74.00%	68.50%	38.80%	44.00%	88.40%	88.80%	71.30%	66.70%	82.10%	69.30%
Std 4	Boys	73.60%	68.60%	45.90%	50.00%	96.40%	91.20%	80.90%	75.80%	84.50%	81.30%
	Girls	78.00%	79.10%	47.00%	72.10%	97.00%	93.00%	80.30%	75.60%	78.80%	78.00%
	Total	76.00%	74.40%	46.50%	62.30%	96.70%	92.20%	80.60%	75.70%	81.40%	79.50%

Other than question 2, performance of pupils in intervention schools was generally better than that of control schools. The performance of Standard 4 in both control and intervention school was better than those of other classes. Overall, the performance of girls was slightly better than those of the boys. However, there was no established trend.

2.7 Project Relevance, Efficiency, Impact and Sustainability

2.7.1 Project Relevance

The OSL project design is relevant to Plan's Child Centered Community Development (CCCD) and CSP 2016-2020 because it puts the child at the center of the intervention. It aims to build the pedagogical capacities of the teachers and the learning environment in order to improve the literacy levels of children in the target schools. Also, data from the OSL project beneficiaries revealed that the project met their needs. The fact that the world was embracing ICT as a means to economic and social development was resounded by BOM members, parents and teachers. They said the project was not only timely in terms of exposing the teachers and children to ICT but that the use of ICT in teaching and learning was making the lessons more enjoyable, easy to prepare and evaluate leaving time for teachers to dedicate to improving literacy skills among the children in lower primary. This could explain tremendous improvement in performance of pupils in Standard 2. The project design to some level was effective in meeting the needs of the beneficiaries. It was flexible with regards to respecting the school timetable by scheduling the teacher training in the afternoon after lessons were complete d. Further, the design was altered to meet the needs of the schools for example by changing the set of equipment for schools to address their security and safety conditions. For instance, pupil and teacher furniture , books and stationary projectors were added on the list of infrastructure for the schools after discovering the poor state of furniture in the identified schools and vulnerability to theft by most schools. However, the short period set for the project cycle, limited involvement of some of the key school stakeholders (BoMs and parents) in the planning of the OSL project and lack of sound tools for monitoring and evaluation affected the OSL project relevance. Overall, there was a feeling that ICTs was relevant but not a prioritized need among most of the schools. Other priority areas identified by various BoMs, teachers, and head teachers included infrastructure like desks, classrooms, textbooks, bursaries for needy students, and electricity.

2.7.2 Project Efficiency

The results indicated that the OSL project was principally implemented in a cost effective manner in relation to the cost saving elements in the design. Consequently, it is our view that the results were achieved in the most cost effective manner possible compared to the alternative app roach which was in the initial plans. For example, the decision to train all teachers in the target schools as opposed to only those teaching lower primary and to use affordable stationary projectors instead of white boards did not

only save the project money but also boosted the quality of the outcomes. Related to this was the use of expertise from the MoEST in the infrastructure procurement to ensure quality and cost effectiveness in this process. Similarly, the use of ICT champions as technical support on the ground to address emerging maintenance issues with the ICT equipment was also a smart cost efficient measure for the project. Likewise, funds were saved by conducting a baseline study and piloting of the project before actual implementation to draw lessons for programming and avoid errors. The use of resources of commensurate with the results that are achieved in terms of improved literacy levels among lower primary school children in poor socio economic neighbourhoods in Nairobi. However, due to delays in purchase of equipment and training of teachers, the OSL project was not completed on time. Some of the key elements of the project had not been implemented in some schools. The project has ended when most schools had just had their equipment delivered meaning they have not had time to use them in teaching.

2.7.3 Project Effectiveness

The OSL project has achieved its main goal which was to improve the quality of literacy in Kenya through more efficient practices and use of ICTs. Specifically, the literacy skills of children, which was a key indicator of this success, in lower primary in the intervention schools have improved significantly. The average number of words correctly read moved from 27.05 and 18.033 in Kiswahili and English respectively at the beginning of the project to 42.48 and 41.44 at the end term. While this change cannot be fully attributed to the use of ICTs in teaching and learning as was originally planned given that half of the teachers (49.4%) were doing this, other intervention activities like the use of non-digital learning materials including text and story books and charts as well as use of positive discipline and gender sensitivity in learning were observed to be a contributory factors. Approximately, 97.4 per cent of the teachers in the intervention schools reported using positive discipline and gender sensitivity in learning. This was confirmed through classroom observation where teachers involved both boys and girls equally in the lessons. However, there were few incidences where teachers used corporal punishment to correct wrong behavior. BOM members training in participation in school management was evidenced by 64.3 per cent of schools who had copies of up-to date school development plans. In addition, the OSL project had positive perceptions among teachers and parents who saw it as a valuable project that has contributed to improvements in enrolments, attendance and literacy among pupils. The pupils in most schools were excited upon being shown the laptops and some had started using them and

others waiting to use them in the learning process. Once the ICT equipment begin to be used more extensively in the teaching learning process, more of the planned results including the use of digital materials to enhance learning will be witnessed. For specific details of project outcomes in line with project objectives for each group of beneficiaries including children parents and teachers please refer to logical framework attached as part of the Report.

2.7.4 Project Impact

The OSL project was observed to have brought about changes in the intervention schools. The intervention schools now have ICT rooms and facilities which never existed before the project. Teachers who had never used computers and other ICT devices are now able to do so. Teachers in the project are now equipped with ICT skills as a result of the training they have received on the OSL project. The teachers are also now aware of the undesirable effects of negative discipline and gender irresponsive learning environments and are now practicing the alternative approach. Most BOM members in these schools are now aware of their rights and responsibilities and now participating in the decision making processes of the school. The study indicated that 83% of the BOMs in intervention schools are now involved in school management as reported by the head teachers. Pupils are now not only aware of the benefits of using ICTs in learning having been sensitized about this on the OSL project, but have had their literacy skills improved on account of the project. The head teacher in 83% of the intervention schools reported that the literacy skills of children in the lower grades had improved in the course of the OSL project. The goals that have not been realized and need further consideration are the skills and practice of teachers integrating ICTs in the teaching learning process to further improve literacy skills among pupils and sensitization of parents on benefits of the OSL project to improve project ownership and sustainability. The OSL project accrued some positive unintended outcome of giving the Government of Kenya and the Ministry of Education the opportunity to pilot the upcoming ICT Integration in Primary Education (Digital Literacy project). The digital curriculum for teacher training and content for lower primary developed by KICD were piloted on the OSL project providing lessons for future implementation of the programme nationwide.

2.7.5 Project Sustainability

The study identified some mechanisms that have been put in place to ensure ownership and sustainability of the OSL project beyond the project cycle. The ICT skills and knowledge on positive discipline and gender responsiveness in teaching given to teachers can be used beyond the project life

depending on the interest they have in ICTs and retraining opportunities available in future. The training of the BOMs on the OSL projects provided some measure of ownership and sustainability. This coupled by the fact that some BOMs have ICT as an item in their school development plans meaning that the ICT agenda will be sustained. The ICT champions and head teachers are viewed as additional points of sustainability of the OSL project given their critical role and participation in the implementation of the OSL project. The literacy activities that are ongoing in the country spear headed by the Tusome project[5] are also a strong sustainability tool for the OSL project. A similar contribution is envisaged by the upcoming ICT school project by the Ministry of Education where children will get lap tops and be exposed to digital content developed by the KICD. The evaluation however identified challenges including lack of electricity and poor security conditions in schools, high turnover of lower primary teachers trained by OSL, lack of funds to maintain and replace the ICT devices by schools and negative attitudes of teachers towards ICT use that will affect continued integration in teaching and learning and the OSL agenda in general.

2.8 Community Participation

2.8.1 Role of Community and Local Stakeholders in School Governance and Project Sustainability

Close involvement of parents and communities in school activities is one key component that ensures effective school governance hence sustainability of school processes. According to Fullan (2001) the closer the community is to the education of their children, the greater the impact on child development and educational achievement.

The End term evaluation looked at the involvement of parents and the school community in school activities in addition to their contribution to the OSL project. The Board of Management (BOM) were involved in development of School Development Plans (SDPs). It is through the SDP that the school priority areas are highlighted and funds allocated. This was evident in various Focus Group Discussions (FGDs) with BOM members.

> Yes we have a 5 *year plan and a copy can be found with the head teacher. We have been able to plan and start a secondary school and an ECD center in the school. We plan to have more classes given the growing numbers of enrolments. ICT is an item in our plan because*

[5] An Early Grade Reading Programme whose aim is to improve the teaching and learning of English and Kiswahili in Class 1 and Class 2 led by the Ministry of Education Science and Technology and supported by Agency for International Development (USAID).

it is a government requirement that each school have a computer room and electricity (BoM member, School 10, Dagoreti Site, 18th January 2016).

Other than involvement in development of SDPs, parents through BOMs closely evaluated school activities. They monitored utilization of the available funds, reported existence of class committees made up of parents and BoM representatives that assessed class activities including and not limited to class performance, class attendance by both teachers and students, class infrastructure and the general school performance in national examinations. In fact some BoMs keenly analyzed performance of government employed teachers and those employed by Parents Teachers Association (PTA) and demanded explanations whenever there is low performance from any of the teachers.

My job is to ensure that the school is run well and to ensure that things are going on well. I am responsible for everything in this school that the school is run well, the children are okay, the food is delivered. There are those parents who have died I have to know; I have to know where the school has reached. It is good to know because when we know a parent has died we go ahead and encourage them because here at school we tell them that we are united. If they are bereaved and we cannot comfort them they cannot see how we are compassionate. (BoM, School 9 Kamukunji Site, 18th January 2016)

In fact, there have been changes and there is one thing that we have learnt, the PTA teachers and the government teachers, the classes led by the PTA teachers are doing well. TSC teachers classes are down and we are asking why? TSC teachers' classes are down! The PTA teachers' classes are up in fact I usually tell the head teacher your teachers are relaxing (BoM School 10 Kamukunji Site, 18th January 2016).

Our role as the committee is to deal with the problems in the school. Maybe there are parents who are not assisting the children, we are called upon. We have class representatives who walk around to find out the problems in their classes. When we meet each representative outlines the problems of their classes. The teacher also tells us how the class is and as a committee we try to solve it. If there are certain subjects that a teacher does not teach because they are lazy we usually talk and tell the headmistress. A particular teacher is not performing; well just know how you can deal with them to streamline them so that the pupils can perform well. If there are other problems, like in this school there are

a lot of wrangles because there are people (squatters) who have built houses within the school (BoM, School 9 Kamukunji Site, 18th January 2016)

Really, because we are the signatories I follow up when money is channeled to the account, the head teacher withdraws and brings it to the school I do follow up. If we are to pay for something I ensure we do, I follow up on other things that we need to do. He gives me a breakdown of how the money was used. Even if the money is less we use it for what the money can achieve that small project and the rest we can do next time. We do follow up. (BoM Member School 8, 22nd January 2016)

Whereas appropriate discharge of BOM's roles in school governance demands their members to have a clear knowledge of their functions, some BOMs indicated not to understand their mandates and scope of their work. In one of the BOMs interview, the Chairperson observed;

*To say the truth I do not know my role (sic) that is what I have been asking I want to know my role as the chairlady in the BoM because I do not know. I do not know what is going on and my role as the chairlady and what I need to follow up. I know a little bit of it I follow up on the little I know but I want to know more (*BoMs School 8, 22nd January 2016*).*

OSL project design envisaged that parents and BoMs were to be trained on their roles in school governance. According to one of the OSL Project Officers, the training was conducted by the Ministry of Education Science and Technology officials. She reported thus;

The first step was training them; they were part of the sensitization because they are parents. We had a special training with them on good governance. In fact, this training was done by the MoEST itself. They are the ones that deal with the policies on the governance of schools. They also took them through the policies, what is expected of them, child protection issues because these are the people who make all the decisions in the schools. And the policy, the Education Act we need them to understand that before they are able to understand governance, good governance of the school. They needed to understand the policies that are there. So they took them through a week of training. It was a whole day week of training the Ministry of Education and KICD were doing that meaning the ministry were handling the policy and KICD were handling the importance of ICT in school. That was a way for us getting support from them for the sustainability of that

project in that school. There are some things we needed them to support us with because we were not able to do like security issues. We wanted them to have a hand in the security to have a feel of the project. Not to be owned by us we wanted them to own the project. So all the security work you might have seen in the school was them. They are the ones who worked with the teacher to have the rooms secured. Some of them had to renovate the rooms. Some of them never had electricity; they had to do the wiring. Some of them had bills that had accrued and had not been cleared; they had to mobilize parents to raise money to clear those bills. That is how we were working with the SMC .

According to the implementing team, training of BoMs was one critical area to enhance sustainability. It was a strategy to have the support of the parents and the surrounding community to own and support the project past project implementation. Whereas the implementing partner mentioned security as an area where BoMs, the surrounding community and parents were to provide to schools, a number of schools opted not to disclose the OSL infrastructure to the parents and community for the same fear of insecurity. This was cited by head teachers in School 1, School 15 and School 19 (all in Dagoreti) during the informal conversations with the research team.

Members of BoMs reported minimal involvement in implementation of OSL project activities in their schools. When asked about OSL project, members indicated being briefed by the head-teachers on OSL project activities. Some of the excerpts include:

Heard about it from the head teacher when he heard that it was being implemented in the school. He said the computer room was to be used to store the ICT devices. He is informed that the Government gave 60,000/- for preparing the room to ICT room. He is of the view the funds were not enough? (Interview with BoM member, School 10 Dagoreti, 18th January 2016

We knew about the project because the head teacher told us and teachers were trained at Kenya Science Teachers College. Our involvement in this project is that w allowed this room to be renovated specifically for the project (BoM School 11, 25th January 2016)

There is a strong belief among researchers that direct involvement of parents in close monitoring of classroom activities of their pupils, educational visits, parental involvement in learners' educational development within the home, those who spare time to hear their children read, those who read to

their children and provide access to books at home positively contribute to their children's learning (Nana, Milondzo and Alex, 2009). Parents form key partners in improving the learning outcomes of pupils. However, OSL project did not directly engage parents in their project activities but reached them through BOMs. When asked project activities which they felt they did not do well; one of the project officers noted thus;

> *This is one area we didn't do perfectly because we were to reach out to parents when we were doing the first meetings, sensitization, to sensitize parents the importance of integrating ICT in the schools, positive discipline amongst children, how they should participate in the children's development. But along the way in the implementation project we didn't engage parents much we ended up engaging the BOMs. The parents were only involved when we were doing the inception of the project. That is when we sensitized them on what the project was about in the school and what we expected from them and what they needed to do. Along the way we lost them. We didn't work with them directly*

2.8.2 Partnership between Plan and Other Implementing Partners

The success of a project of this magnitude requires successful partnerships and relationships among individuals and organizations with various expertise and specialization. Interviews and FGDs with partners revealed how they cooperated in playing crucial roles in the design and implementation of the OSL project. They included OSL Project officers from Plan International Kenya and SOS Children Villages, school support structures such as curriculum support officers at the zonal levels (formerly known as TAC tutors) and MOEST officials. In addition, semi-autonomous government agencies (SAGAs) namely Kenya Institute of Curriculum Development (KICD) which is the national and official curriculum development agency, Teachers Service Commission (TSC), Kenya Education Management Institute (KEMI) and Kenya Institute of Special Education (KISE) also played key roles. At the school level, the BOM/SMC, teachers, Parents/community and pupils participated in project activities.

The role of each and every partner in the OSL Project cannot be overemphasized. An OSL project officer at Plan International recounted how they partnered with SOS to foresee the activities of the project from the design stage to implementation including monitoring. Reportedly, the two organizations not

only co-funded the project but also communicated about the project frequently and organized and attended workshops together without major challenges.

The MoEST, TSC, KICD among other partners participated in training teachers and BOM on literacy, positive discipline, ICT integration and school governance among other areas of focus. The BOM worked together with parents and the community in ensuring that the necessary infrastructure for storage of ICT devices was in place and secure. Teachers played the crucial role of teaching pupils how to read and write using the equipment from the project as well as knowledge and skills gained from the training.

Interviews and FGDs with various partners revealed that the relationship among them was cordial as exemplified by the following argument:

> I may say we had a very cordial relationship because I never found anything wrong with how we were working. And if it would not have happened that way you know maybe we may not have worked well and even the teachers found them (Plan and SOS) being good (TAC Tutor – Dagoreti 05/02/2016).

Informal conversations with Head teachers and teachers in both Dagoreti and Kamukunji schools revealed how they related well with OSL Programme officers from Plan International and SOS CV who often visited their schools.

Overall, the partnerships and relationships in the OSL Project were not devoid of challenges. A part from a few OSL project officers, other partners such as curriculum support officers and MoEST officials, though willing to fully support the project, were also in full time employment. Consequently, they had to often divide their time between OSL project activities and their regular duties. This meant that the officers could only be found at specific times, something that caused delays in implementation of project activities. This was however not considered by other partners as a major set-back to the project.

Reportedly, the partnerships in the OSL Project were reflective of the gender inequalities that often interplay in relationships within the wider society. According to the SOS CV Project officer:

> Yes gender came in. In children gender did not come out. But in parents' sensitization, more female than male turned out. For the BOM, it was more of male than female. Apart from one school, all the lower primary teachers were female. Only Class 3 had a male teacher. It was evident that more boys than girls were interested in issues to do

> with technology. You could see in a class that there were boys who could operate the equipment... The teacher would ask, 'who wants to do this?' and a boy would stand to do it. We need to do more to ensure equality.

Project officers from Plan and SOS CV, BOM and teachers alike perceived younger partners, especially teachers and parents, in their 20s to early 40s as more co-operative and easier to work with in the project activities. Notably, ICT was associated with the younger generation.

In some schools, the BOMs that had been trained to participate in the OSL project completed their terms and gave way to new leaders before the end of the project. In one of the intervention schools in Kamukunji, the new BOM demonstrated little understanding and ownership of the project. They felt the project belonged to the previous BOM and seemed reluctant to seek information on the same from other partners as captured in the excerpt below:

> When the computer people were coming we were not in the Board, but right now when they come in as far as am concerned I will have to follow up. But for that time it was not followed up by the then Board. I do not know what was happening before. That is according to me. But as from now if anything comes from SOS, anything that will be happening in school, I will be there to follow up (BOM FGD, Kamukunji School 8, 22/01/2016).

An OSL Project officer from SOS CV saw a possibility of some teachers who were trained in the project leaving in the near future as a result of retirement and other factors. This may necessitate regular training of more teachers in future to promote sustainability of the project. While teachers were important partners in the OSL Project, the nationwide teachers' strike that took most of the third term of the year 2015 saw them spent several weeks out of school, hence causing delays in the implementation of the project activities.

A few teachers who seemed reluctant integrating ICT in teaching argued that unlike some of their colleagues who had a head start, they lacked basic ICT skills they needed prior to the training on ICT integration. Consequently, they did not feel confident practicing and applying the skills learnt in the OSL project.

While not all parents in the intervention schools had been trained in OSL project, it became apparent that many had the willpower to work with other partners in improving literacy of their children as it was observed in one of the intervention schools in Kamukunji:

> I walk into the next class and am told this is Class three. Three ladies are busy assisting the teacher to arrange children and supervise classwork. I come to learn from the teacher that these are some of the parents who have come to school to be interviewed in the on-going evaluation of the OSL Project. They reached the school early and decided to assist the teacher with her work since this is a large class. I admire the way the three are working together with the female teacher in a friendly and orderly manner (School Walkabout, School 23, 21/01/2015).

The parents' willingness to co-operate was also seen in their efforts to mobilize resource towards securing ICT rooms and other infrastructure that were key to ICT adoption in teaching. In addition, the SOS Project officer commented thus: 'we had young parents doing community sensitization, others from age 20, 30 to early 40s. They went talking to parents so that they can come for the meetings'.

Reportedly, the county government and local leadership willingly worked with other partners in regard to the sustainability of the project through donating steel doors or grills for the security of computer rooms and building perimeter walls. In some schools, 'Zuku', a leading East African business group providing affordable entertainment and communication services to the middle class, provided internet that supported the project.

3.0 Lessons Learnt, Conclusion and Recommendations

3.1 Lessons learnt for future related projects

1. Piloting of the project activities before actual implementation provides an opportunity for understanding the components of the project better. This promotes effectiveness and efficiency. For instance, piloting of OSL project helped in determining the nature and number of ICT infrastructure provided to the intervention schools, improved effectiveness and saved on related costs.

2. It is important to work on the attitude of the partners before the implementation of any ICT related project. It came out clearly through informal conversations with stakeholders of the OSL

project that teachers with a positive attitude were more willing to learn and participate fully in project activities.

3. Sufficient time is necessary for proper implementation of a project of this nature due to the number and nature of activities involved as well as unexpected interruptions in school programmes as seen with the national teachers' strike. It was clear that some project activities could have yielded better results if they were given sufficient time for implementation.

4. Involvement of parents directly than targeting BOMs alone in future projects of this magnitude will have more impact on participation of parents in school governance.

5. While creation of ICT rooms in schools was cost effective and well informed by the OSL pilot study, it led to mass movement of pupils from classrooms to specific classes that had ICT infrastructure for ICT integration in lessons. This was time consuming given the few minutes that a single lesson is given in primary schools.

6. There was a tendency for teachers integrating ICT in education in some of the schools visited to work without lesson plans.

3.3 Recommendations

1. The study established that monitoring and evaluation of OSL project was not adequate. There is the need to strengthen monitoring and evaluation processes of such future projects through provision of more staff and designing of special tools that would inform and fill in the performance of all the targeted beneficiaries and project activities.

2. The study established that there were low numbers of pupils who were aware of child friendly schools, gender equality practices and relevant skills in ICT infrastructure. Although it was expected that teachers after training were to train their pupils, it is clear that the approach did not work. We recommend that in future Plan International Kenya and SOS Children Villages should have some activities directly targeting the pupils. One suggestion could be ensuring that teachers organize at-least one workshop for pupils in every intervention school.

3. In order to save on time and improve the adoption of ICT in improving literacy, there is need to provide technical support to staff in the intervention schools. In some cases teachers failed to use the equipment with the assumption that they were faulty when it could be the teachers who lacked appropriate skills to operate the equipment.

4. Whereas the project targeted BOMs for training as a way to reach to parents, there is a need for the project to directly involve parents. Given the willingness of parents to partner with teachers in improving literacy of their children, one of the project activities could be training parents and encouraging them to actively participate in project activities.

5. The study found some of the teachers integrating ICT in teaching without prepared lesson plans. There is the need for the trainings to emphasize on preparation and use of lesson plans in integration of ICTs in teaching and learning.

6. While creating ICT rooms in schools is cost effective, a project of this nature needs to devise more strategies that would encourage integration of ICT in the regular classroom as much as possible as it was observed in some of the intervention schools in Kamukunji. This would minimize mass movements of pupils between lessons and encourage teachers to utilize ICT equipment regularly. However, care should be taken not to fully replace the traditional methods of teaching such as the use of the chalk and chalkboard with ICT since the traditional methods still have their own value in teaching and learning.

7. With availability of funding, it would be prudent to have some interventions implemented in control schools in future, given that most of them face similar challenges to those in the intervention schools.

8. Despite efforts made to involve BOMs of selected schools in crucial stages of the project such as design, some BOMs were merely informed about the project and the role they were expected to play. In future, efforts should be made to involve as many BOMs as possible in the design and implementation of the project so as to promote ownership and increase acceptance of the project on the ground.

7. There is need for more partnerships to improve on funding for securing more laptops considering the large population of pupils observed in intervention schools.

REFERENCES

Andoh, C.B. (2012). Teachers Adoption and Integration of Information and Communication Technology

Angeli, C & Papastasiou, E.C. (2008). Attitudes and Knowledge Level of Teachers in ICT.

Assefa, T & Rogers P.C .(2008). ICT Integration in the Classroom in sub Saharan Region.

Bakar, A.Z and Samwel J.R. (2006). Utilization and Integration of ICT Tools in Promoting English Language Teaching and Learning

BECT (2000). A preliminary Report or the DfEE on the Relationship between ICT and Primary School Standards , Coventry: BECTA

Becta. (2003). What the research says about interactive whiteboards. Coventry: British Educational Communications and Technology Agency

BECTA (2004) .What the researchers say: Using ICT in Geography.

Country Profiles: Africa. 2006. DIFD. http://www.dfid.gov.uk/countries/africa/kenya.asp

Davis, F.D. (1989). Perceived usefulness, Perceived Ease of Use and Acceptance of Information Technology. *MIS Quartely*, 13 (31), 319-340.

Demirci, A. (2009). How do Teachers Approach New Technologies: Geography Teachers Attitudes towards Geographic Information Systems (GIS),

Donneley, R.R. (2007). Improving Scottish Education; ICT in Teaching and Learning,

Farrel, G. Glen & Shark (2007). Survey of ICT and Education in Africa.

Farrell, G.M. and C. Wachholz, eds. 2003. ICT in Education: Meta-survey on the Use of Technologies in Asia and the Pacific." UNESCO. www.unescobkk.org/index.php?id=1225

Fullan M (2001). *The New Meaning of Educational Change* (3rd ed.) New York: Teachers College Columbia University

GOK (2005). Sessional Paper No. I of 2005. Apolicy Framework for Training and Research. Ministry of Education.

GOK (2006). National Information and Communication Technology Strategy for Education and Training. Ministry of Education, Kenya.

Hew, K. F., & Brush, T. (2007). Integrating Technology into K-12 Teaching and Learning: Current Knowledge Gaps and Recommendations for Future Research. *Educational Technolog Research and Development,* 55, 223–252.

Hennessy, S et al (2010). Developing the use of ICT to enhance Teaching and Learning in East Africa: A Review of Literature. DFID

Hogarth, S., Bennett, J., Lubben, F., Campbell, B.,& Robinson, A. . (2006). ICT in science teaching: Technical report. In Research Evidence in Education Library. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London

Jepchumba, K.H. & Gakuu C.M. (2008). Closing the chasm: Are secondary schools using ICT effectively to deliver curriculum contents?

Mwololo Waema, T. "A Brief History of the Development of An ICT Policy In Kenya," in At The Crossroads: ICT Policy Making In East Africa. 2005. IDRC. www.idrc.ca/openebooks/219-8/#page_25 ."National ICT Policy." 2006. Ministry of Information and Communications. http://www.information.go.ke/docs/ICT%20Policy.pdf

Ndidde, A., Lubega J., Babikwa D. & Baguma G. (2009). National ICT policies and pedagogical integration of ICT in Ugandan Education institutions;

Pachler, N. (1999). 'Theories of Learning and ICT', In: M. Leask & N. Pachler (Eds)

Research Digest (2009). The use of ICT in schools in the digital age: what does the research say? https://www.qct.edu.au/publications/Periodical/QCTResearchDigest2009-4.pdf

Thenglau, B. & Sim C, (2008). Exploring the Extent of ICT Adoption Among Secondary School Teachers in Malayisa

UNESCO (2008. Competency Standards for Teachers.

APPENDIX

Appendix x: Performance of Pupils Disaggregated by Class and Gender

		Intervention			Control		
		Mean	N	Std. Deviation	Mean	N	Std. Deviation
Class 2	Boys	40.20	152	20.120	35.00	28	15.051
	Girls	39.26	145	19.753	30.00	37	17.158
	Total	39.74	297	19.914	32.15	65	16.352
Class 3	Boys	39.47	170	21.333	36.60	48	20.176
	Girls	43.53	170	20.544	37.86	49	21.138
	Total	41.50	340	21.010	37.24	97	20.569
Class 4	Boys	42.95	147	22.647	32.21	38	24.280
	Girls	43.11	158	25.000	47.13	38	26.605
	Total	43.04	305	23.856	39.67	76	26.390
Total	Boys	40.80	469	21.381	34.75	114	20.496
	Girls	42.08	473	21.946	38.35	124	22.768
	Total	41.44	942	21.664	36.63	238	21.739

Appendix xi: Performance Disaggregated by Gender and Class

		Intervention			Control		
		Mean	N	Std.	Mean	N	Std.
Class 2	Boys	5.98	152	4.359	5.86	28	3.100
	Girls	7.19	144	5.019	5.82	34	2.181
	Total	6.57	296	4.723	5.84	62	2.613
Class 3	Boys	6.68	170	5.234	6.34	47	2.697
	Girls	6.58	165	4.768	6.29	48	2.183
	Total	6.63	335	5.002	6.32	95	2.438
Class 4	Boys	7.82	147	5.236	4.81	37	3.463
	Girls	7.06	157	5.557	5.46	37	3.313
	Total	7.42	304	5.408	5.14	74	3.381
Total	Boys	6.81	469	5.012	5.71	112	3.112
	Girls	6.93	466	5.118	5.90	119	2.589

	Total	6.87	935	5.063	5.81	231	2.850

Appendix xii: Correct Words Identified

Darasa			Aina_Shule		Total
			Intervention	Control	
Class 2	Boys	1 - 5 Words	3.1%	3.0%	3.1%
		6 - 10 Words	17.5%	15.2%	16.9%
		11 - 15 Words	53.6%	51.5%	53.1%
		16 - 20 Words	25.8%	30.3%	26.9%
		Total	100.0%	100.0%	100.0%
	Girls	1 - 5 Words		2.2%	.6%
		6 - 10 Words	13.8%	17.8%	14.9%
		11 - 15 Words	56.9%	60.0%	57.7%
		16 - 20 Words	29.3%	20.0%	26.8%
		Total	100.0%	100.0%	100.0%
	Total	1 - 5 Words	1.4%	2.6%	1.7%
		6 - 10 Words	15.5%	16.7%	15.8%
		11 - 15 Words	55.5%	56.4%	55.7%
		16 - 20 Words	27.7%	24.4%	26.8%
		Total	100.0%	100.0%	100.0%
Class 3	Boys	1 - 5 Words	3.6%	2.0%	3.1%
		6 - 10 Words	18.2%	17.6%	18.0%
		11 - 15 Words	30.0%	47.1%	35.4%
		16 - 20 Words	48.2%	33.3%	43.5%
		Total	100.0%	100.0%	100.0%
	Girls	None	1.4%		1.0%
		1 - 5 Words	.7%		.5%
		6 - 10 Words	17.4%	30.2%	21.3%
		11 - 15 Words	38.9%	38.1%	38.6%
		16 - 20 Words	41.7%	31.7%	38.6%
		Total	100.0%	100.0%	100.0%
	Total	None	.8%		.5%
		1 - 5 Words	2.0%	.9%	1.6%
		6 - 10 Words	17.7%	24.6%	19.8%
		11 - 15 Words	35.0%	42.1%	37.2%
		16 - 20 Words	44.5%	32.5%	40.8%
		Total	100.0%	100.0%	100.0%
Class 4	Boys	1 - 5 Words	1.8%		1.4%
		6 - 10 Words	8.3%	14.3%	9.7%
		11 - 15 Words	39.4%	45.7%	41.0%
		16 - 20 Words	50.5%	40.0%	47.9%
		Total	100.0%	100.0%	100.0%
	Girls	1 - 5 Words	.8%	4.5%	1.7%
		6 - 10 Words	9.8%	11.4%	10.2%
		11 - 15 Words	45.5%	27.3%	40.9%
		16 - 20 Words	43.9%	56.8%	47.2%
		Total	100.0%	100.0%	100.0%
	Total	1 - 5 Words	1.2%	2.5%	1.6%
		6 - 10 Words	9.1%	12.7%	10.0%
		11 - 15 Words	42.7%	35.4%	40.9%
		16 - 20 Words	46.9%	49.4%	47.5%
		Total	100.0%	100.0%	100.0%
Total	Boys	1 - 5 Words	2.8%	1.7%	2.5%
		6 - 10 Words	14.6%	16.0%	14.9%
		11 - 15 Words	40.5%	47.9%	42.5%
		16 - 20 Words	42.1%	34.5%	40.0%

			100.0%	100.0%	100.0%
	Girls	None	.5%		.4%
		1 - 5 Words	.5%	2.0%	.9%
		6 - 10 Words	13.8%	21.1%	15.8%
		11 - 15 Words	46.6%	41.4%	45.2%
		16 - 20 Words	38.6%	35.5%	37.7%
			100.0%	100.0%	100.0%
	Total	None	.3%		.2%
		1 - 5 Words	1.5%	1.8%	1.6%
		6 - 10 Words	14.1%	18.8%	15.4%
		11 - 15 Words	43.9%	44.3%	44.0%
		16 - 20 Words	40.1%	35.1%	38.7%
			100.0%	100.0%	100.0%

Annex 4: End Term Tools

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

BOM FGD Guide (Control School)

COUNTY _____ SCHOOL _____
VENUE_____

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are carrying out an Endline Evaluation for the OSL program. We would be happy to hear your views regarding this program as members of BoM in this school. This will help us understand and document the program's achievements, progress and challenges as well as recommendations for improvement.

Please allow us to interview you and record the conversation both manually and electronically as we proceed. You have a right to participate or not, skip any question or stop the interview at any point. The information you give us will remain confidential, that is, your name or other identification will not be reported along with your answers to the question. This interview will take approximately 1 hour. Feel free to ask any question at any stage of the interview.

Do you agree to participate in the study?
YES ☐ Signature of Informant: _____ (Informed consent given)
No ☐

TIME: START OF FGD_____

SECTION A

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

Tool 8: Class Observation Tool

SECTION A

COUNTY_____ VENUE_____

Date of Observation_____/____/ 2016

Name of Observer

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR_____ SIGN_____ DATE_____

Date……

School……. Class……

TIME: Start of Observation:_____

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

Tool 7: Interview for the Technical Expert

SECTION A

COUNTY VENUE

Date of Interview / / 2016

Name of Interviewer

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR SIGN DATE

Start of Interview:

Expertise……Period on the project……

Age…… Gender……

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

Tool 5: Interview for the Program Officer

SECTION A

COUNTY VENUE

Date of Interview / / 2016

Name of Interviewer

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR SIGN DATE

Start of Interview:

Designation …… Period with Plan……

Age…… Gender……

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

Tool 6: Children Mapping Tool

SECTION A

COUNTY VENUE

DATE OF VISIT / / 2016

DATA COLLECTORS

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR SIGN DATE

Date……

School……. Class……

Age…… Gender……

TIME: Start of Mapping:

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

Tool 10: Parent Interview

SECTION A

COUNTY _____ VENUE_____

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are carrying out an Endline Evaluation for the OSL program. We would be happy to hear your views on the program as a parent in this school. This will help us understand and document the Program's achievements, progress and challenges as well as recommendations for improvement.

Please allow us to interview you and record the conversation both manually and electronically as we proceed. You have a right to participate or not, skip any question or stop the interview at any point. The information you give us will remain confidential, that is, your name or other identification will not be reported along with your answers to the question. This interview will take approximately 1 hour. Feel free to ask any question at any stage of the interview.

Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Informed consent given)
No ☐

TIME: START OF INTERVIEW_____

Tool 12: Questionnaire for Parents (Control)

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. As the parent of the school we will be grateful to hear your inputs as they will help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Certifying that informed consent has been given by respondent)
No ☐

TIME: Start Time _____

SECTION: A

01	County	*1 Nairobi [__]*
02	Locale/Site	*1 Buruburu [__] 2 Dagoretti [__]*
03	Name of the School	
04	No of children in the school	
05	Leadership role	
06	Parent occupation	

07 Gender?

1 Male [_] 2 Female [_]

08 How many years have you been a parent in this school?
1 Less than a year [_] 2 One- 3 years [_] 3 Four-5 Years [_] 4 Six-10 [_] 5 Over 10 years [_]

Tool 12: Questionnaire for Parents

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. As the parent of the school we will be grateful to hear your inputs as they will help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Certifying that informed consent has been given by respondent)
No ☐

TIME: Start Time _____

SECTION: A

01	County	*1 Nairobi [__]*
02	Locale/Site	*1 Buruburu [__] 2 Dagoretti [__]*
03	Name of the School	
04	No of children in the school	
05	Leadership role	
06	Parent occupation	

07	Gender?
	1 Male [_] 2 Female [_]

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

Tool 11: Partners' Interview

SECTION A

COUNTY _____ VENUE_____

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are carrying out an Endline Evaluation for the OSL program. We would be happy to hear your views as a partner in this program. This will help us understand and document the Program's achievements, progress and challenges as well as recommendations for improvement.

Please allow us to interview you and record the conversation both manually and electronically as we proceed. You have a right to participate or not, skip any question or stop the interview at any point. The information you give us will remain confidential, that is, your name or other identification will not be reported along with your answers to the question. This interview will take approximately 1 hour. Feel free to ask any question at any stage of the interview.

Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Informed consent given)
No ☐

TIME: START OF INTERVIEW_____

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

BOM FGD Guide

COUNTY _____ SCHOOL _____ VENUE_____

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are carrying out an Endline Evaluation for the OSL program. We would be happy to hear your views regarding this program as members of BoM in this school. This will help us understand and document the program's achievements, progress and challenges as well as recommendations for improvement.

Please allow us to interview you and record the conversation both manually and electronically as we proceed. You have a right to participate or not, skip any question or stop the interview at any point. The information you give us will remain confidential, that is, your name or other identification will not be reported along with your answers to the question. This interview will take approximately 1 hour. Feel free to ask any question at any stage of the interview.

Do you agree to participate in the study?
YES ☐ Signature of Informant: _____ (Informed consent given)
No ☐

TIME: START OF FGD_____

OPEN SPACE LITERACY (OSL) PROGRAM

ENDLINE EVALUATION 2016

Tool 9: School Walkabout Tool

SECTION A

COUNTY _____ VENUE_____

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

NO	NAME	GENDER	TELEPHONE	SIGNATURE
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

TIME: START OF WALKABOUT_____

SECTION B

Instructions

1. Ask for permission to walk around the school, observe what is there and converse with the people you meet.
2. Ask the head teacher to accompany you or assign you someone to walk around with you.
3. Use the free flowing observation technique to observe the school and the area around it.
4. Record, in active voice, what you can see, hear, smell and feel.
5. Carryout informal on-going conversations with the people you meet within and around the school about what you can observe to seek clarification and gain a good understanding of the same.

Tool 3: Questionnaire for Children (Control)

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. We would like to hear your inputs as pupils to help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Sign on behalf_____ (Certifying that informed consent has been)
No ☐

TIME: Start Time _____

SECTION: A

01	County	*1 Nairobi [__]*
02	Locale/Site	*1 Buruburu [__] 2 Dagoretti [__]*
03	Name of the School	…… Intervention [ ] Control [ ]
04	Year Joined school	
05	Leadership role	
06	Parent occupation	

07	Gender?
	1 Male [_] 2 Female [_]

Tool 3: Questionnaire for Children

DATE OF VISIT __ __/__ __/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. We would like to hear your inputs as pupils to help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Sign on behalf_____ (Certifying that informed consent has been)
No ☐

TIME: Start Time _____

SECTION: A

01	County	*1 Nairobi [__]*
02	Locale/Site	*1 Buruburu [__] 2 Dagoretti [__]*
03	Name of the School	…… Intervention [ ] Control [ ]
04	Year Joined school	
05	Leadership role	
06	Parent occupation	

07	Gender?
	1 Male [_] 2 Female [_]

Questionnaire for Head Teachers (Control Schools)
Tool 1

DATE OF VISIT __ __/_01_/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. As the head of the school we will be grateful to hear your inputs as they will help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Certifying that informed consent has been given by respondent)
No ☐

TIME: Start Time _____

SECTION: A

01	County	*1 Nairobi [__]*
02	Locale/Site	*1 Buruburu [__] 2 Dagoretti [__]*
03	Name of the School	
04	Type of school	1 Intervention [ ] 2 Control [ ]
05	Year of Establishment	
06	Designation	
07	Telephone	

08	How old are you?	

Questionnaire for Head Teachers
Tool 1

DATE OF VISIT __ __/_01_/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. As the head of the school we will be grateful to hear your inputs as they will help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Certifying that informed consent has been given by respondent)
No ☐

TIME: Start Time _____

SECTION: A

01	County	*1 Nairobi [__]*
02	Locale/Site	*1 Buruburu [__] 2 Dagoretti [__]*
03	Name of the School	
04	Type of school	1 Intervention [ ] 2 Control [ ]
05	Year of Establishment	
06	Designation	
07	Telephone	

08	How old are you?	

Teachers Questionnaire (Control)
Tool 2

DATE OF VISIT __ __/__01__/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. As the teacher of this school we will be grateful to hear your inputs as they will help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Certifying that informed consent has been given by respondent)
No ☐

TIME: Start Time _____

Section A: Demographic Data

1	**County**	***1 Nairobi [__]***
2	**Locale**	*1 Buruburu [__] 2 Dagoretti [__]*
3	**Type of School**	*1 Intervention 2 Control*

4	How old are you in full years? *< 25 [__] 25-30 [ ] 31-35 [ ] 36-40 [ ] 41-45 [ ] above 46 [ ]*
5	Gender? *1 Male [_] 2 Female [_]*
6	What is your highest qualification 1 Certificate [__] 2 Diploma [___] 3 Degree [__] 4 Masters [__] 5 Others (specify) _____

Teachers Questionnaire
Tool 2

DATE OF VISIT __ __/__01__/ 2016

DATA COLLECTORS

No	Name	Gender	Telephone	Signature
1.				
2.				

CLUSTER COORDINATOR _____ SIGN_____ DATE _____

Introduction

My name is _____ and my colleague is _____ from the Women Educational Researchers of Kenya (WERK). We are conducting the endline Evaluation for the Open Space Literacy (OSL) project. As the teacher of this school we will be grateful to hear your inputs as they will help us document success stories, challenges and progress on the OSL Project.

We will be taking notes and recording the conversation as we proceed, thus you have a right to participate or not. All information you provide will be kept anonymous, that is, your name or other identification will not be reported along with your answers to the questions. You can also stop the interview at any time or skip any of the questions that you do not want to answer. The interview will last about 1 hour.

If you have any question you can ask at any stage of the interview
Do you agree to participate in the study?
YES ☐ Signature of Interviewee: _____ (Certifying that informed consent has been given by respondent)
No ☐

TIME: Start Time _____

Section A: Demographic Data

1	**County**	***1 Nairobi [__]***
2	**Locale**	*1 Buruburu [__] 2 Dagoretti [__]*
3	**Type of School**	*1 Intervention 2 Control*

4	How old are you in full years? *< 25 [__] 25-30 [ ] 31-35 [ ] 36-40 [ ] 41-45 [ ] above 46 [ ]*
5	Gender? *1 Male [_] 2 Female [_]*
6	What is your highest qualification 1 Certificate [__] 2 Diploma [___] 3 Degree [__] 4 Masters [__] 5 Others (specify) _____