Table of Contents

List of Figures and Tables

List of Appendices

List of Abbreviations

BoM	Board of Management
CADVES	Capacity Development Project for a Village-Based Sustainable Primary Education Strategy
CBC	Competency-Based Curriculum
CDF	Constituencies Development Fund
CSO	Curriculum Support Officer
DEO	District Education Office
FPE	Free Primary Education
GLMi	Global Link Management institute
KCPE	Kenya Certificate of Primary Education
KES	Kenya Shillings
MoE	Ministry of Education
NCPWD	National Council for Persons with Disability
NGO	Non-Governmental Organization
PDM	Project Design Matrix
PTA	Parent Teacher Association
SACMEQ	The Southern and Eastern Africa Consortium for Monitoring Educational Quality
SDGs	Sustainable Development Goals
SDP	School Development Plan
SMC	School Management Committe
SMS	Short Message Service
SNE	Special Needs Education
SNS	Social Networking Service
TPAD	Teacher Performance Appraisal and Development
TSC	Teacher Service Commission

1. Project Overview

1.1 Background of the CADVES Project

While education has been one of the top priorities in Kenya since independence in 1963, inequality in educational opportunities persisted. The average growth rate of enrollment at the primary, secondary, and tertiary levels between 1963 and 1995 were 5.7%, 9.5%, and 13.5% respectively. With a combined effort of the government policy to expand education and the community-based self-help approach known as *harambe*, the literacy rate increased from 20% to 77% between 1960 and 1995. Nevertheless, as the costs other than teachers' salaries were born by parents and communities, there was a resource gap in education between the rich and poor regions. The cost-sharing policy between 1989 and 2002 worsened this trend, excluding the poor, disabled, and girls. As of 1997, the national survey showed that the tuition fee in the urban schools was four times as much as that of rural schools and that the gap of private cost of education between the poor and non-poor was four times in urban areas and two and half times in rural areas (Nishimura, 2011). Furthermore, the districts with higher poverty rate had more pupils who dropped out of school due to economic reasons (Lloyd, et al. 2000). In 2000, the survival rate at primary level was 10 percent higher in the areas with major ethnic groups than others. Moreover, the survival rate of the poor was 68% while that of the rich was 87% (Nishimura, 2011). Such inequality was also related to the results of the primary leaving examination results, known as Kenya Certificate of Primary Education (KCPE), thus determining further perpetuation of unequal educational opportunities.

In 2003, the political change brought Free Primary Education (FPE) policy in Kenya. The central government abolished school fees and started to provide all public schools with the capitation grant to cover textbooks and running costs of schools. As a result, the enrollment rose by 22% in the first year alone, and the net enrollment increased from 64% to 76%, then to 84% in 2012 (UNESCO Institute of Statistics, various years). However, this brought a new challenge in Kenya whereby parents were concerned about lowered quality of public school education and transferred children to private schools. Between 2002 and 2005, the number of private schools increased by 38% while that of public school was 1.6% (Nishimura & Yamano, 2013). Household asset and years of mother's education are known to affect school choice in favor of private school, while household assets more severely affected girls than boys in Central and Western Kenya in 2004 and 2007 (Nishimura & Yamano, 2013). In 2004, among the top 100 pupils in KCPE, 97 were enrolled in private schools (Sawamura, 2006). In sum, while the FPE policy expanded educational opportunities, disparity between public and private schools became more apparent than before. Disparity based on disability, poverty, and gender also persisted under FPE.

Despite its intention to expand educational opportunities in 2003, the government froze new recruitment of teachers. As a result, the pupil-teacher ratio increased from 36.5 in 2004 to 56.6 in 2012 (UNESCO Institute of Statistics, various years). The UWEZO's household learning assessment results showed that 70% of children between ages 6-16 in 40,000 households did not

perform at the grade 2-level in reading and mathematics. The SACMEQ learning assessment also showed that performance of 6th graders in math and science dropped after the FPE policy (Atuhurra, 2014).

Under such circumstance of learning crisis, there has been a movement in East and West Africa that questioned expert dependence in educational evaluation and advocated for community involvement in seeking quality of education. Since 2009, a regional NGO (UWEZO) has conducted the household-based learning assessment with community volunteers. On a positive note, there were some volunteers who became tutors and opened private schools after witnessing poor learning performance in their community in different regions in Kenya. Nevertheless, information sharing on the UWEZO assessment results at the community level was insufficient due to limited means and capacity and hence did not lead to a movement for quality improvement of school education in Loitokitok, Kajiado County (Nishimura, 2019). Furthermore, despite parental strong aspiration for education, majority were illiterate and unable to oversee their children's learning at home. Moreover, the UWEZO assessment targeted out-of-school children and alerted their low performance. Thus, the challenge resides in enrolling and re-enrolling out-of-school children and accelerating their learning opportunities.

In Loitokitok, where the majority are the Maasai ethnic group with pastoral lifestyle in the vast yet scarcely populated semi-arid land of 6,356 ㎢ with the population of 130,000, educational expansion delayed historically with the estimated illiteracy rate of 65%. It is only since the 2000s when people's aspiration for education boosted due to environmental degradation and government's resettlement policy, which induced a high demand for education to seek employment opportunities. Such momentum for education was unfortunately coincided with the time of freeze of teacher recruitment. Thus, despite having a half of the population in absolute poverty (UWEZO 2012), communities had no choice but hiring teachers for themselves under the FPE policy. As shown in Table 1, schools employed a half or more teachers for themselves to meet the needs. While communities played a large role in teacher employment and school management, parents and communities were not able to obtain information and analytical skills on quality of education in this area. Under such circumstances, both economic and educational disparity were likely to persist, coupled with an increase of dropout due to declined quality of education and the economic burden as experienced in the other parts of Kenya in the 1970s.

Table 1 Teacher Deployment and Cost of Schooling in 8 Schools in Loitokitok in 2015

Schools	A	B	C	D	E	F	G	H
Number of Pupils	300	550	415	450	758	313	130	184
Number of Teachers	10	15	13	11	24	7	8	10
Employed by Community (%)	6 (60.0)	2 (13.3)	5 (38.5)	7 (63.6)	5 (20.8)	4 (57.1)	5 (62.5)	6 (60.0)
Fees Collected Per Pupil Per Term (Kshs.)	360	120	180	300	100	300	900	1050

The Loitokitok Sub-County is the region with serious challenges in educational opportunities and performance. There were 80 public primary schools where 34,387 pupils (17,363 boys and 17,024 girls) were enrolled as of 2016. Among them, 1,358 (698 boys and 650 girls) had disabilities. Government teachers were 700 (400 male and 300 female) and the pupil-teacher ratio was 49. As of 2012, the rate of out-of-school children was 13.5% as compared to the national average of 9.1% (UWEZO, 2012). The repetition rate was 14% for boys and 17% for girls, while 30% of boys and 35% of girls dropped out of school before completing the primary cycle. The UWEZO learning assessment in 2012 revealed that only 61.7% of 3rd graders could read one paragraph in Kiswahili while only 58.6% could handle subtraction in mathematics. The mean KCPE score in 2014 remained low at 254.9 out of 500.

The two researchers in Japan, Jun Kawaguchi (University of Tsukuba) and Mikiko Nishimura (International Christian University), together with the UWEZO coordinator for Loitokitok, conducted a research on the impact of UWEZO assessment and community participation in schools from 2013 to 2015 and identified four needs in educational opportunities and quality improvement in Loitokitok as follows:

Needs 1 (Improving Capacity for Education Data Analysis):

The UWEZO household-based learning assessment data had been collected locally yet sent to Nairobi directly without analysis and sharing of the data at the local level due to lack of local capacity. The data shared at community was limited to the league table by county with no area-based information such as general learning performance and performance by gender, disability, age, etc. School and communities had no base for educational planning and thus, data sharing and analytical capacity were necessary for deepening understanding of the educational needs and planning for school improvement.

Needs 2 (Activating Information Sharing at Community Level):

The capacity to interpret the education data and connect it to school improvement strategies is essential skill when sharing the available data with communities. More critical and analytical thinking were required to deepen understanding of the roles and responsibilities of community to reduce the gap between the education policy and actual implementation of the government and to come up with their own strategies to tackle the problems. Furthermore, it was noted as an important intervention to encourage illiterate parents to monitor children's learning.

Needs 3 (Improving Early Grade Education):

Early grade learning is a big challenge when the mother tongue and the instructional language of school are not the same. In Kenya, learning materials and pedagogy in local languages are not offered in schools and left to the local efforts. Learning difficulty in early grade's reading and mathematics induced repetition and dropout and hence improvement of educational quality at this level was essential.

Needs 4（Promoting Enrollment of Children under the Difficult Circumstances）:

As of 2012, 1.06 million children were not enrolled in primary school in Kenya. One third of out-of-school children in the world are estimated to have some kind of disability (World Bank 2003). In Loitokitok, disability and health of children as well as child labor such as taking care of animals and household chores were likely to result in non-enrollment. Given only a few schools assigned for special needs in the region, the local alternatives to cater for diverse needs and disabilities were essential. There were needs to develop the means for awareness rising for learning opportunities of children under the especially difficult circumstances and institutional collaboration among schools such as rotational advising of trained teachers on special needs education and joined class for different kinds and levels of disabilities.

1.2 Purpose and Expected Outcomes of the CADVES Project

Against the background outlined in the previous section, the project was proposed to aim at expanding opportunities for quality education in 30 villages in Loitokitok Sub-County of Kajiado County. The name of the project was decided jointly by the Kenyan and Japanese staffs as **Capacity Development Project for a Village-Based Sustainable Primary Education Strategy (CADVES)**. The project was implemented as a bilateral assistance project funded by the Japanese Ministry of Foreign Affairs for the period of 3 years from 31 March, 2017 to 30 March, 2020. The project adopted an approach that creates the condition whereby communities themselves analyze their situation in education and seek solution by obtaining sufficient information and capacity. Although schools and communities had already begun their own initiatives such as employment of teachers and unique efforts for quality learning improvement, the overall situation in the area was that the learning assessment that had information on learning performance and family background was only shared by local education officers and some head teachers and there was no widely shared communication on quality of education in communities. The CADVES project aimed at breaking such stalemate and establishing the system that activate interest and spontaneity of communities in education and link them to quality of education.

Overall Goal

The ideal situation to be achieved in three to five years after the end of the project was that opportunities of quality education would be expanded to all children in 30 villages in Loitokitok. The target schools are mostly located in remote areas from the District Education Office with low performance in KCPE and high repetition and dropout rates. By obtaining continuous educational opportunities, it was hoped for children to increase their chance to break the vicious circle of poverty and to increase resilience to survive the pastoral life under the influence of environmental degradation and famine. The measurement indicators for this goal include repetition and dropout rates of 30 schools.

Project Goal

The goal of the project at the end of the project was to expand opportunities of quality early

grade education in 30 schools in 30 villages in Loitokitok. Many literatures suggest that quantity (access) and quality of education are not in the trade-off relation, but mutually complementary in the long run. In other words, to provide quality education ensures sustainable access to education, hence leading to the overall goal. In more concrete terms, those who could not catch up with learning in early grades due to obstacles of language, etc. will become more eager to learn and continue learning by additional support: similarly, those who had to give up learning due to disability and other difficulties will be able to enroll in school if the environment of school becomes more inclusive. The indicators for the project goal were set as the repetition and dropout rates in early grades, quality of lessons based on teacher and lesson evaluation, the number of pupils with disabilities and under the difficult circumstances.

Outputs of the Project

Four output areas were identified and activities were planned for each output. Please see the Project Design Matrix (PDM) in Appendix 1 for the detailed project design.

Output 1: Improvement of Capacity for Educational Data Analysis and Sharing

Local project staff's capacity for educational data analysis is indispensable for utilizing the existing data such as UWEZO's household learning assessment. Local staffs who are familiar to the data collection process of UWEZO, with a strong network with communities and schools, are currently entrusted with data collection alone. Local staff should earn analytical skills so that they can grow a sense of ownership and more rigorously contribute to improvement of quality in schools with the local communities based on evidence obtained by data analysis and its sharing.

Indicators for Output 1 include test results, the number of text messages sent to parents on the education data, and the number of the project homepage viewers that show the data analysis results.

Output 2: Increase of Community Participation in School Management

It is essential for communities to share information on the results of learning such as UWEZO data and to discuss quality of education and eventually to come up with solutions to various educational issues. Understanding the roles and responsibilities and coordinating and cooperating with one another to pursue their roles are also important. The project aims at the situation whereby community can share information on educational opportunities and quality and discuss counter-measures against the issues raised by the information. As a means to achieve it, all schools were encouraged to develop a school development plan (SDP).

The indicators for Output 2 include establishment of SDPs, the number of implemented activities, and the amount of contribution to school by parents and community.

Output 3: Improvement of Early Grade Learning Environment

Improvement of quality of early grade education is essential for achieving the project goal. Transition from Maasai to Kiswahili and English is a tough challenge for early graders. By

providing teacher training to strengthen reading in Kiswahili and mathematics abilities, the project will encourage teachers' motivation, improve pupils' continuous learning abilities, and reduce repetition and dropout.

The indicators for Output 3 include development of workbooks for remedial lessons in reading and mathematics, teachers' self-confidence and satisfaction level, and the pupils' test scores.

Output 4: Improvement of Learning Opportunities for Children under the Difficult Circumstances

There is no estimated number of out-of-school children in Loitokitok. Thus, the project will form the working group by zone and identify the number of out-of-school children. With ethical consideration, we will grasp the accurate statistics in collaboration with communities. These activities will involve many stakeholders including local leaders, head teachers, and parents and the stakeholders will analyze the reasons for out-of-school situation and plan strategies to remove such barriers at school and community levels.

The indicators for Output 4 include the main stakeholders' awareness level, the number of activities that focus on expanding opportunities for out-of-school children, and the number of identified out-of-school children enrolled in school.

Reference

Atuhurra, J. F. & Matsumoto, T. (2014). Does community involvement improve pupils' learning achievements? Assessing the impacts of Free Primary Education in Kenya. GRIPS working paper mimeo.

Lloyd, Cynthia B., Mensch, Barbara S., and Clark, Wesley H. (2000). The effects of primary school quality on school dropout among Kenyan girls and boys. *Comparative Education Review, 44*(2), 113-147.

Nishimura, M. (2011). Social structure of education and poverty in Kenya. In Yamanouchi, K. (Ed.), *Sociology of international cooperation in education*, pp. 181-194. Kyoto: Minerva, Inc.

Nishimura, M. (2019). Community participation in school governance: The Maasai community in Kenya. *Prospect, 47*(4), 393-412.

Nishimura, M. & Yamano, T. (2013). Emerging private education in Africa: Determinants of school choice in rural Kenya. *World Development, 43*, 266-275

Sawamura, N. (2006) Exam-oriented school education: The current situation of primary education in Kenya. *International Cooperation in Education, 9*(2), 97-111. (In Japanese).

UNESCO Institute of Statistics. (various years). Education Database.

UWEZO Kenya (2012). *Are our children learning?* Annual Learning Assessment Report. Nairobi: UWEZO.

World Bank (2003). Education NOTES Education for All: Including children with disabilities. Washington, D.C.: The World Bank.

2. Improvement of Capacity for Educational Data Analysis and Sharing

The first intended output was improved capacity of the local staff for educational data analysis and sharing with the community. As shown in Table 2, we developed statistical skills of the local staff and used multiple means of media to share information. Section 2.1 describes the conducted activities, followed by achievement in Section 2.2, challenges in Section 2.3, and lessons learnt in Section 2.4 in this output area.

Table 2 Output and indicators for educational data analysis and sharing

Output	Indicators	Means of Verification
Educational data analyzed by local staffs are broadly shared to community	**1st year:** - All local staff taking the training acquire statistical analytical skills	- Skill tests - Frequency of information analysis - The number of teachers who joined SNS group
	2nd year: - More than 3 types of data are uploaded on their website. - Half of the designated communities browse and implement their activities with the data. - There is an intensive information sharing and discussion on SMS and SNS groups.	- Skill tests - The number of uploaded data - The number of HP viewers and the number of parents who came to community meeting. - The implemented activity record - The number and frequency of discussion done at SNS group - The number of SMSs sent to parents - The number of parents communicate to GLMi
	3rd year: - More than 5 types of highly analysed data are uploaded on their website. All the designated communities browse and implement their activities with the data. - There is an intensive information sharing and discussion on SMS and SNS groups.	- Skill tests - The Number of uploaded data - The number of HP viewers and the number of parents who came to community meeting - The implemented activity record - The number and frequency of discussion done at SNS group - The number of SMSs sent to parents - The number of parents communicate to GLMi

2.1 Activities

We have implemented the following activities on data analysis and sharing.

1st year:
GLMi set up statistical software (STATA) to analyze education data in 2017. Using a baseline

survey and learning assessment data we collected in 2017, Tetsuya Yamada, Education Specialist of CADVES, conducted a series of training for Kenyan staff on basic concepts of statistics. The Kenyan staff have applied basic concepts in statistics (e.g. mean, standard deviation, normal distribution, hypothesis testing, and bivariate analysis) to data analysis on baseline survey and learning assessment.

2nd year:
GLMi set up a home page (https://www.glminstitute.org/cadves/) (See Figure 1). To inform school and zonal information to school management and community people, we uploaded 12 types of educational data that includes learning assessment results and information related to special needs education (SNE). In addition to the home page, we decided to add a new information-sharing scheme through text messages (SMS).

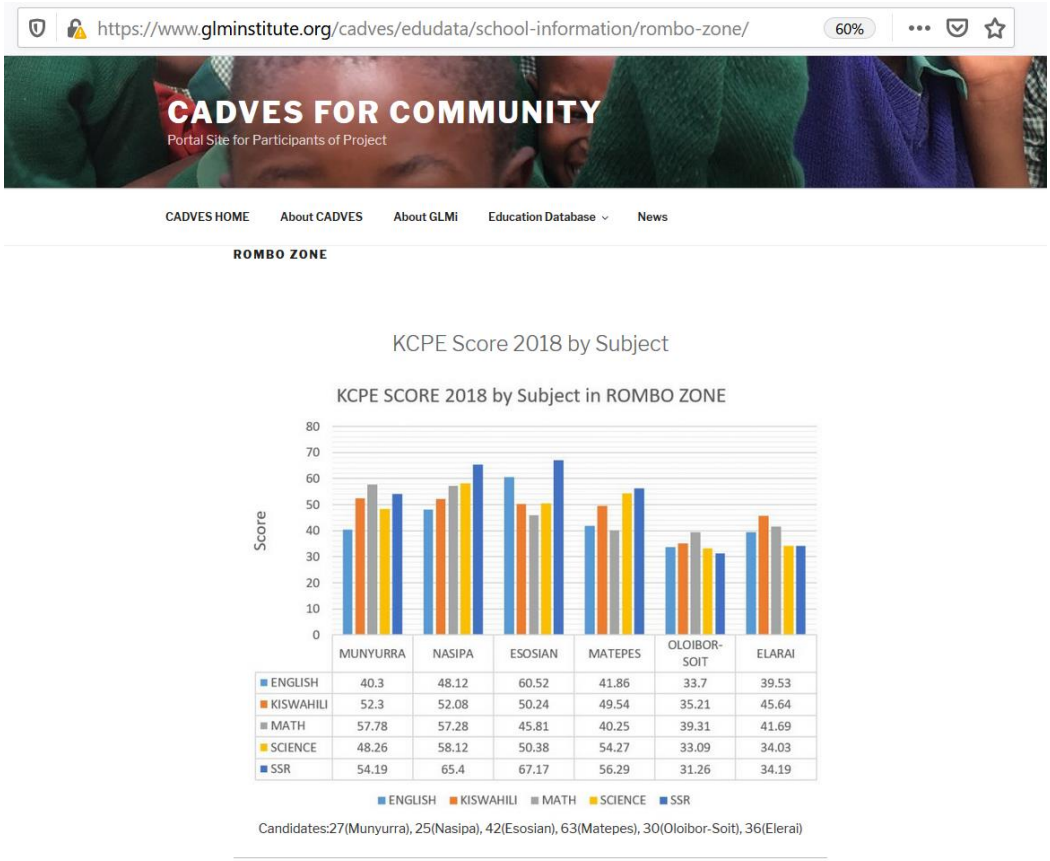
Since many parents just have basic cell phones, we realized that information sharing through text messages directly to parents would be more effective than expecting them to access to our homepage. GLMi utilizes a text message system called Echo Mobile to send information to parents (https://www.echomobile.org/). 74 messages were sent to 1,945 parents from April 2018 to March 2019. Examples of text messages are shown in Figure 2 (See all the delivered messages in Appendix 6). To see the impact of information sharing on parents' awareness and behavior change, GLMi conducted a baseline survey in March 2018 and collected endline data in January 2020

In addition to information sharing through homepage and text messages, GLMi set up WhatsApp group for early grade teachers (53 members), head teachers (38 members) and 5 geographical zones (117 members) respectively to strengthen information sharing on good practices and common challenges (See Figure 3).

3rd year:
Tetsuya Yamada conducted an advanced statistical training to one Kenyan staff on education statistics, using Methodological Guidelines for Education Analysis. Volume 1 (https://www.globalpartnership.org/content/methodological-guidelines-education-sector-analysis-volume-1) and the STATA statistical analysis. He acquired an advanced statistical skill and applied it to educational data analysis on learning assessment and monitoring data. In March 2020, Tetsuya conducted a statistics training to an officer at the DEO office.

GLMi continued to send text messages to 2,216 parents. 42 messages were sent from April 2019 to 15th February in 2020. In the third year, text messages were scheduled to send at 12:00PM on Saturdays when many parents come to the market in Loitokitok and Kimana.

To strengthen information sharing in an attracting way, GLMi uploaded three video clips on school management, early pregnancy, and remedial lessons on our website (See Figure 4). The video links were shared through SMSs and WhatsApp groups. A video was also used to enlighten parents during community meetings in February 2020.



(https://www.glminstitute.org/cadves/)

Figure 1 Example of a GLMi homepage

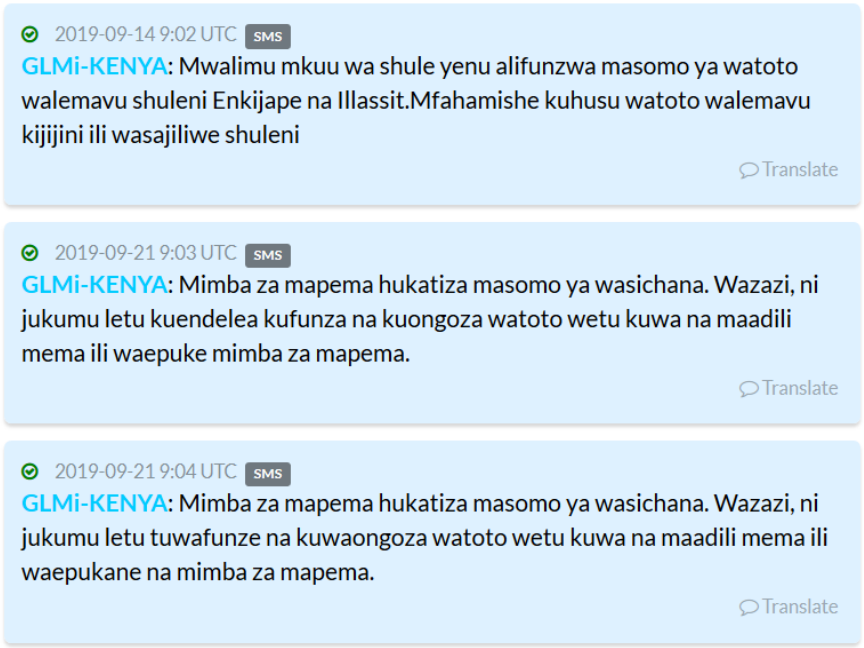
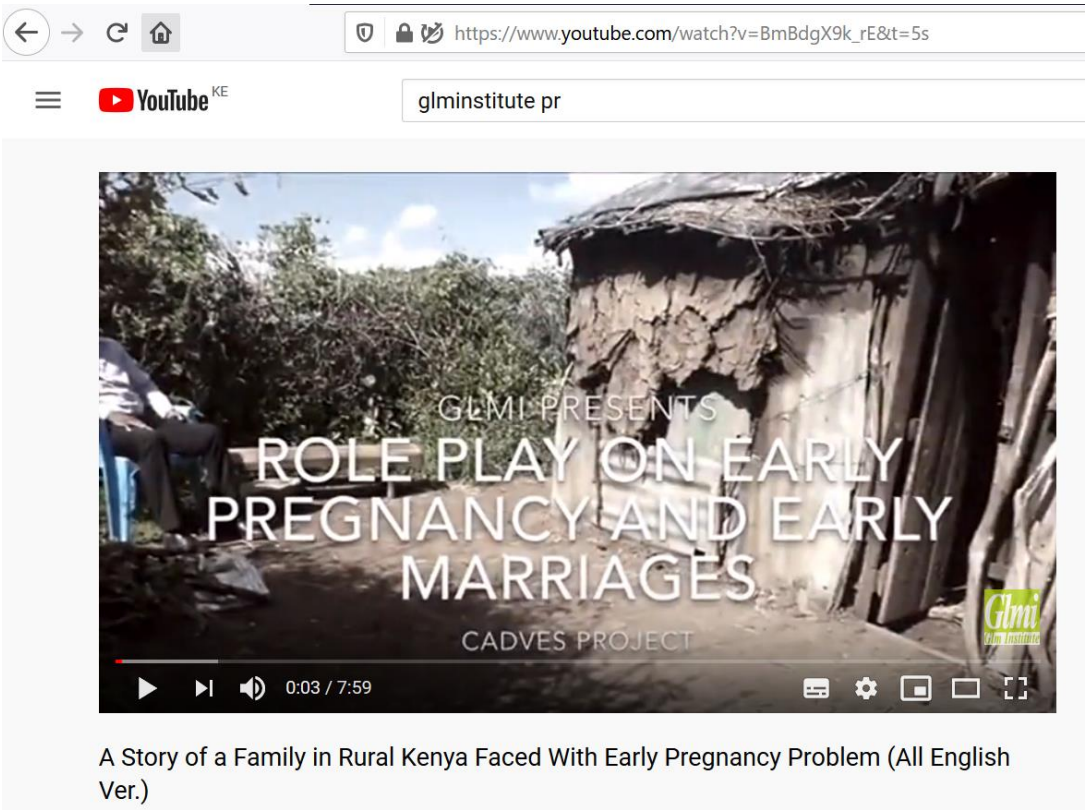


Figure 2 Example of Text messages

Figure 3 Example of WhatsApp messages



(https://www.youtube.com/watch?v=BmBdgX9k_rE)

Figure 4 Example of an enlightening YouTube video

2.2 Achievement

Local staff gained basic statistical knowledge to understand education data. One Kenyan staff learned several STATA commands. Now, he can instantly calculate the average and the standard deviation of the learning assessment results by school. Also, he can easily create a graph for chronological data, using a STATA command. After he learned the concept of repetition and dropout and knew that the transition rate in upper grades in primary schools is not high in Loitokitok, he voluntarily analyzed the transition rate of Grade 7 and 8. The data were shared with each school and headteachers realized the issue of the transition in upper grades due to early pregnancy and low learning performance. After 6 schools (i.e. Iltilal, Olorika, Samai, Elangata-Enkima, Meshanani, and Olgulului) realized the alarming situation of early pregnancy, they organized community meetings to discuss the solution to prevent early pregnancy.

The page view count on the home page was 1,468 from April 2018 to 16th February 2020. There were 289 page views on the education database. In addition to that, video viewers for three videos uploaded on YouTube were 126 as of 16th February 2020. Furthermore, a video about early pregnancy was shown to 93 parents who have no internet access in an early pregnancy prevention meeting at Iltilal primary school on 13th February 2020.

2,216 (40%) out of 5,538 parents in 30 schools received information via SMS and 116 messages have been sent between May 2018 and 15th February 2020. Parents received information on the KCPE mean scores of their schools, the number of and reasons for out-of-school children, and their monitoring roles of learning.

All parents who attended the community meetings from April 2018 to February 2020 received information in a Maasai language. Since some parents do not have a phone or cannot read the message, oral information sharing by GLMi staff became a good forum to receive information. At the meeting, GLMi showed posters about graphs of the learning assessment result of early grade learners and out-of-school children by reason in 30 schools.

1,283 messages have been exchanged on WhatsApp groups as of 17th February 2020. Text messages were effective in disseminating information on GLMi's events and sharing good practices and challenges. Particularly, early grade teachers shared a good pedagogy practice that they acquired during our early grade teacher training. Some teachers even shared their photos and videos for their lessons, which motivated other teachers. That communication encouraged other teachers to implement a new teaching technique which are promoted under the new curriculum.

73 activities about remedial lessons, early pregnancy and out-of-school children and special needs education at 30 schools were planned in School Development Plans (SDPs) based on information sharing and 63 activities (86%) have been implemented in 2019.

2.3 Challenges

Although we strengthened information sharing through home page and text messages, we faced two major challenges: illiteracy and network. First, most parents could not grasp information shared on our website and by SMS due to illiteracy (NB: The literacy rate is 44% in 30 schools). GLMi encouraged pupils to read messages to parents during the monitoring visit since illiterate parents also have cell phones. However, pupils' involvement was limited in practice. Second, some parents did not receive a text due to their area network coverage. It turned out that the network did not reach out the interior part of Loitokitok sub-county. To overcome this challenge, we set up a text message on the market day either on Tuesday or Saturday when parents are likely to be in the area that have internet access.

We also faced a complaint about the content of a text message. After sending the KCPE mean score of a school to parents, a deputy headteacher called us to claim that GLMi incited parents. The school had dropped the KCPE mean score in that year. Although the KCPE mean score had been already available in public, negative information caused some conflict of interests.

The competency of data analysis and basic statistics is another challenge in Loitokitok. It was difficult for many to understand statistical concepts. GLMi trained school leaders on the analysis of available school data during the Governance and Leadership training. However, many of them had difficulty to analyze data. It seems that not many people residing in Loitokitok can currently understand basic statistics and give evidence-based suggestion based on data analysis. That is why people had difficulty to utilize data for further improvement. People in the community are happy if KCPE mean scores rise at their schools and even celebrate teachers with the donation of goats. In contrast, they are disappointed if scores drop and often blame teachers. However, their actions stop at the point of the celebration or blaming. Parents do not know further analysis, such as comparison with other schools, subject analysis, and candidate numbers. Because of this situation, people do not know why scores improved or dropped and what are the future improvement.

The over-emphasis of school KCPE mean score without further detailed analysis misleads people in the community to accurately understand the school situation. One head teacher shared the story that parents at his school pressured their children to repeat Grade 7 if their performance is low. According to him, parents do not want children to be a KCPE candidate since they would negatively affect the school mean score. He further shared with us that those children tend to drop out.

GLMi should have put more emphasis on the school-level capacity building of data creation and analysis during the regular monitoring beyond the staff training and one-time seminar. However, to conduct in-depth capacity building in the ground, the number of schools (30 schools) was huge.

2.4 Lessons Learnt

Information sharing through text messages and WhatsApp should be carefully planned. The assumption that parents can receive and read text messages may result in ineffective communication and information sharing. Before choosing the medium of information sharing, it is important to collect data about the network coverage, the literacy level, and means to read out for illiterate parents. The appropriate medium, the target group and frequency and timing of information sharing are essential. We realized that information sharing through SMS and WhatsApp should be done on the major market days.

Information sharing through text messages needs careful socio-cultural consideration. It was actually effective for educated parents in terms of raising more accurate awareness of education. Many educated parents were aware of our messages and they agreed on the message we sent. However, there is a big gap between the awareness and the actual action. The accurate awareness does not necessarily lead to the action, especially collective actions to improve a school's condition. This could be because the Maasai community tends to make a decision about community matters based on consensus through meetings. An individual in a community may not take an action like the contribution to schools if there is no consensus or shared recognition by a community. To enhance the community collective action in schools in Loitokitok, a community meeting may be the best medium to share information and to obtain consensus on collective actions rather than individual-based information sharing through text messages and WhatsApp group messages. However, the WhatsApp group is still effective to share information with target groups for a specific purpose (e.g. the headteachers' group and the lower grade teachers' group to discuss common issues). As a matter of fact, there exist so many WhatsApp groups for different purposes in Kenya. As schools are sparsely located in the vast land in Loitokitok, sharing good practices can encourage and motivate schools. Also sending information on the training opportunities and surveys can save time to visit all schools.

3. Community Participation in School Management

The second intended output was increase of community participation in school management. As shown in Table 3, we have developed School Development Plans (SDPs) with community participation for all target schools in Loitokitok. Section 3.1 describes the conducted activities, followed by achievement in Section 3.2, challenges in Section 3.3, and lessons learnt in Section 3.4 in this output area.

Table 3 Output and indicators for community participation in school management

Output	Indicators	Means of Verification
Community's participation in school management increases	**1st year:** - School development plans are formulated in all the designated schools.	- School development plans' documents of 30 schools.
	2nd year: - More than 6 meetings are yearly organized in all the designated schools.	- Monitoring reports. School records. Observation.
	- School development plans are formulated in all the designated schools.	- School development plans' documents of 30 schools for 2nd year.
	3rd year: - More than 2 activities proposed by community are implemented in all the designated schools.	- Monitoring reports. Questionnaire for head teachers. - The amount of parental contribution (financial/non-financial) in 3rd year - The number of activities implemented
	- School development plans are formulated in all the designated schools.	- School development plan documents of 30 schools for 3rd year.

3.1. Activities

Before we initiated the project, we identified key stakeholders to activate community participation, namely, head teacher, chair of Board of Management (BoM), chair of Parents and Teacher Association (PTA), and Chief, a government administrative officer in charge of all development sectors including education, health, agriculture, etc. at a village level who is appointed locally. These key stakeholders played a major role in community meetings and the process of SDPs.

1st year:
GLMi conducted the Governance and Leadership Training in July 2017, inviting headteachers, Board of Management (BoM) chairs, and Chiefs from 30 target schools. Professor Mikiko Nishimura explained the philosophy of a GLMi project, the concept of SDPs, the success story of SDP implementation in West Africa. GLMi staff developed training materials based on the analysis of UWEZO household learning assessment results as well as the GLMi's baseline survey and the early grade learning assessment. Pointing out that community participation in

school management does not lead to the improvement in learning outcomes opened-up the discussion of how community participation would connect to improve learning outcomes. The participation rate of school leaders was 99%.

2nd year:
GLMi intensified the monitoring of SDPs' implementation at the school-level (See an example of an SDP in Figure 5). In July and August 2018, GLMi conducted zone-based Governance and Leadership Training at 5 schools, inviting headteachers, BoM and PTA chairs and Chiefs from 30 schools. Based on the learning assessment result and the status of out-of-school children, participants discussed their revised SDP plans. The participation rate of school leaders in the training was 92%.

3rd year:
GLMi continued to monitor the implementation of SDPs at each school. In August and September 2019, we conducted the five zonal training sessions at 5 schools. Since SDPs were inclined to be a wish-list and planned by only a few school leaders, GLMi emphasized the importance of data analysis and involving all stakeholders of school in the planning and implementing process of SDPs. GLMi staff performed a drama to demonstrate the clear message on the importance of active participation of all stakeholders. The participation rate of school leaders in the training was 97%. In March 2020, GLMi conducted a CADVES reflection seminar for school leaders. The participation rate was 97%.

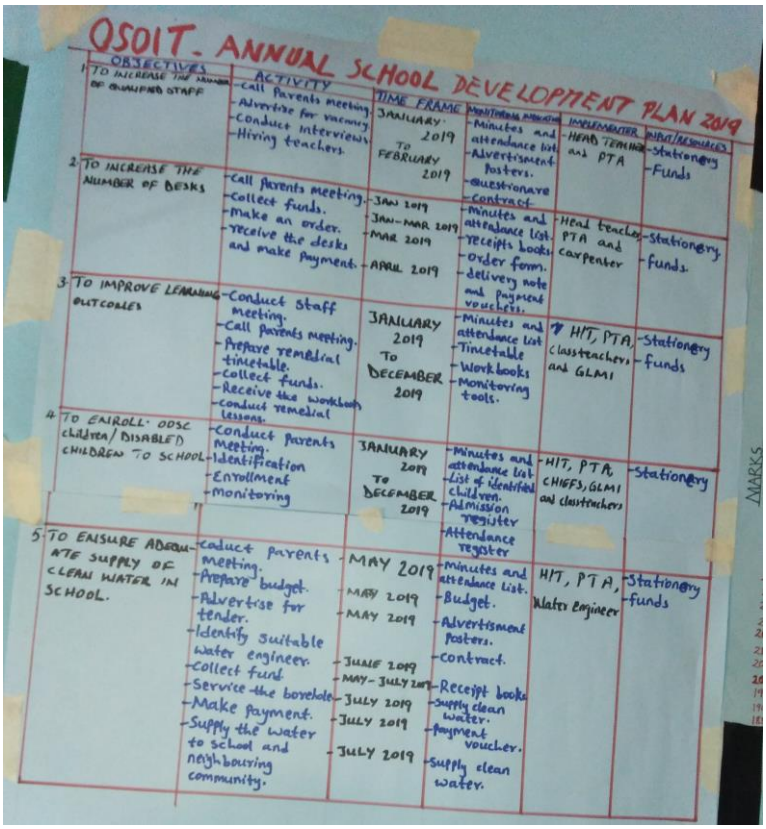


Figure 5 Example of SDP

3.2. Achievement

All 30 target schools developed annual SDPs. The average number of community meetings to discuss school matters is 5.03 from April 2018 to March 2019 and 3.8 from April 2019 to December 2020.

The average number of implemented activities per school is approximately 4, exceeding our target. Figure 6 shows the details of the planned and implemented activities on 2019 SDPs by 30 schools in Loitokitok. In 2019, 164 activities were planned on SDPs at 30 schools and 122 activities were implemented with the implementation rate at 74.4%. The implementation rate improved remarkable during September-November 2019 from about 50% as of August 2019. In the training in August, school leaders reviewed their SDPs and revised their plans based on their assessment on priority and feasibility with community ownership.

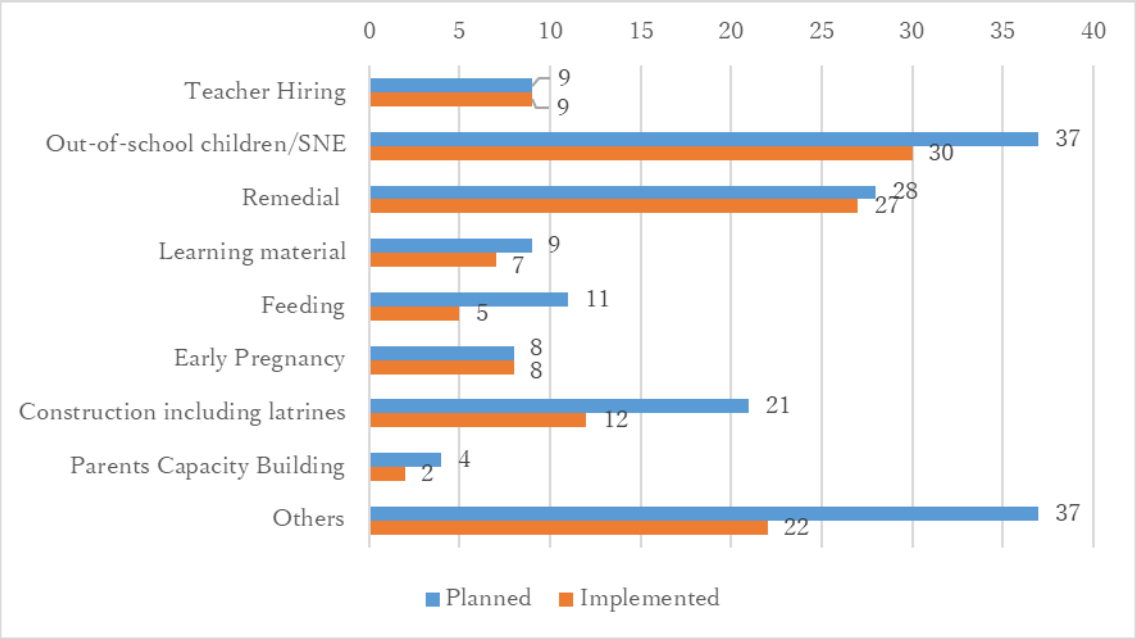


Figure 6 Number of planned and implemented activities in SDP 2019 in 30 schools

Finally, in 2019, community contributed at least 1,314,650 KES to implement activities on SDPs in 30 schools. This calculation is not limited to financial contribution, but includes human resource contribution. If parents voluntarily contributed labor work, we calculated their contribution as labor costs. Since some schools did not disclose the information on parental contribution, the estimated amount is still conservative and likely to underestimate the actual cost.

There are many good practice for implementing SDP. Olkaria School mobilized 345,000KES for a community-based construction project in 2019. Each parent contributed 1,500KES or bricks for building a classroom. Eventually 230 parents supported this initiative. Osoit School

prepared the monthly plan from September 2018 to August 2019 in addition to SDP as in Figure 7. Because of this monthly plan, Osoit implemented all planned activities in 2019.

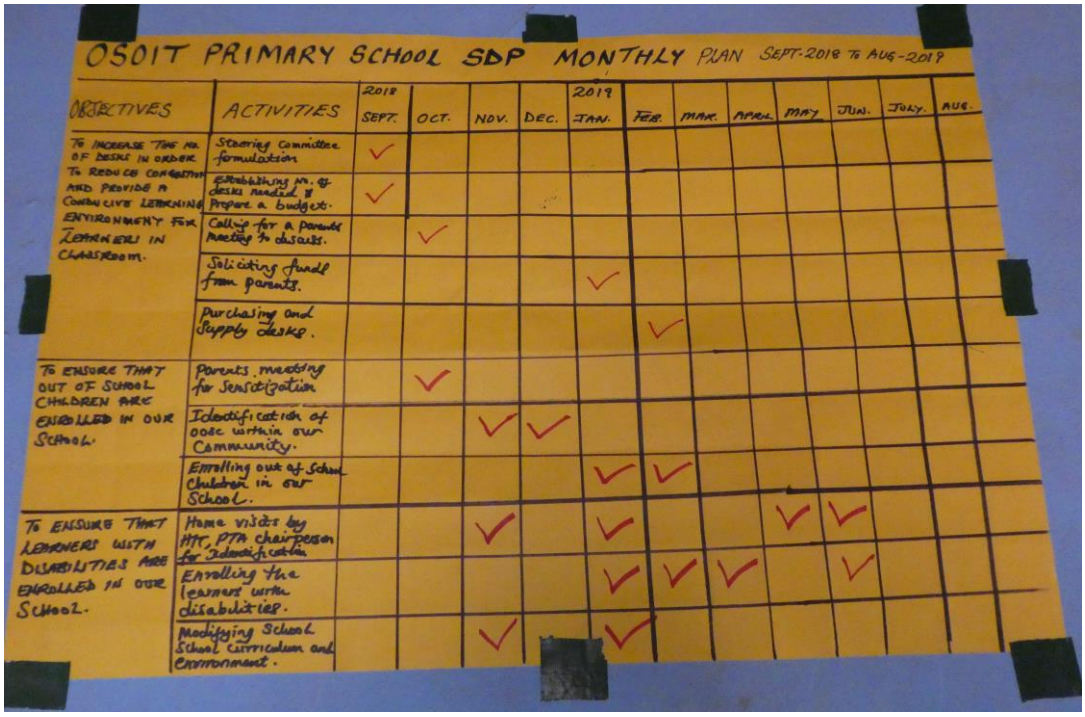


Figure 7 Example of Project Operation

Osoit Primary discussed with parents and started parents-supported remedial lessons for Grade 1 and 2 in 2019. Each parent contributed 150KES per pupil per term for sustaining remedial lessons.

The zonal training was effective to smoothly organize the workshop. In the first year, all participants came to Loitokitok. The number of participants was over 100, so some participants in the back side did not focus on the training. The zonal training overcame the issue of attention and encouraged active participation. GLMi outreached to their community and invited nearby school leaders in 5 zones.

3.3. Challenges

School leaders tend to list activities that they wish some donors may bring in SDPs, such as classroom construction and school feeding. Those activities mostly failed to be implemented because the stakeholders simply waited for external donors without even requesting. It was hard for school leaders to develop a realistic and achievable SDP. One of the reasons is that they are used to be given by donors without their commitment. Although we explained frequently that GLMi is not a donor and different from donation-oriented traditional NGOs, some people did not change their deep-rooted donor-dependent mentality. When we visited one school in 2017, the first word the head teacher asked us was, “What can you do for us?”

The donor-dependent perception affected the activeness of holding community meetings. We believed that a community meeting is a drive for activating discussion and collaboration for implementing a SDP. GLMi members joined many community meetings for SDP planning in 2017 and early 2018 because some schools and parents expected a donor project from us if they develop SDP. Even a large number of parents participated in the meeting. However, once they knew that GLMi did not come for donation, they did not organize a meeting just for monitoring and evaluating of SDP. Sometimes, they called us for a meeting; however, there were always other important agendas, such as collection of money for PTA teacher hiring. Then, the SDP was not seriously discussed at community meetings. Because of this situation, a few school leaders are likely to plan and implement SDP without sharing the planning and monitoring process with parents at community meetings. Consequently, parents did not fully own SDP in some schools.

Even the perception towards community meetings in many cases was not positive in reality. Some parents did not positively participate in community meetings because they knew that the community meetings were held to ask parents for “money”. Once parents have this perception, they do not consider meetings as important and even are likely to be absent from the meetings. Further, male and old people tend to dominate the meeting. Although women join the meeting, it is rare for them to speak up. In Maasai culture, husbands are considered to have the decision-making power. Thus, women knew that the decision is eventually made among men although they discussed. This perception by women affects their attendance to community meetings.

GLMi faced the difficulty to discuss finance affairs, which are critical for transparent and active community-based school management. Each school receives the capitation grant for running a school and this grant can be even mobilized for activities on SDP. Some schools listed the amount of the capitation grant by type of activities on notice boards, but most of schools did not disclose their amount in public. Since the school finance can be a bit sensitive area, it was difficult for us to discuss finance which can be mobilized for school development activities from their existing funding source.

Likewise, GLMi could not intervene human affairs. Kenya’s Basic Education Regulation in 2015 prompted a change in structure, resulting in the conversion of School Management Committees (SMCs) to the Board of Management (BoM) and the upgrading of the minimum qualification for the BoM membership to a high school education graduate. Because of this change, community people who used to be active in supporting schools became out of the school management. If schools had difficulty in finding educated members from its community, they selected people from Nairobi or young people who recently graduated. There were several issues we faced for the above change. Schools which have members from far places had difficulty in organizing BoM meetings. In one school, previous SMC members and current BoM members were in a conflict and the school management did not work. In addition, there was a conflict by old and young BoM members due to the different age-set to which they belong.

The project significantly delayed in 2017 due to the presidential election and re-election. This prevented school leaders from organizing SDP planning meeting in 2017. Further, the Ministry of Education banned any gathering in the school compound in the 3rd term of 2018. This significantly reduced the number of parents' meetings and prevented many schools from reviewing SDP implementation before planning a new SDP.

3.4. Lessons Learnt

It was not easily understood that school leaders need to allocate a plenty of time to the analysis of school issues and community capacity before developing SDPs. Some can list activities without thinking about their school issues, capacity, and feasibility. When planning fails, no implementation will follow. When SDPs are planned outside the available resources, the implementation depends on external donors. Planning is often based on perceptions of some stakeholders without shared evidence. For example, one school obtained a fund from an external donor for construction of a dormitory for the purpose of preventing the girls' early pregnancy in that area. However, even after the construction project, the early pregnancy case persisted in that community. In fact, most early pregnancy cases happened during the school break (October-December). Because boarders go back home during the school break, the dormitory was little help to protect girls from early pregnancy. In addition, the dormitory was not fully used because parents could not afford to pay for food and other costs. School leaders should not get used to such a project implementation without clear objectives and evidence. The purpose of the project was to build capacity of school leaders to analyze their issues and plan with evidence-based achievable goals. If external donors approach to school leaders, they should align their intervention with what they can offer with their SDP. Donors will be surely convinced if they can show organized evidence and its analysis.

During the project, the cases of early pregnancy increased in 2019. The lack of teachers still persisted in the area. Activities which addressed these emergent needs were likely to be implemented. The activities for preventing early pregnancy were planned in 8 schools and all schools held urgent meetings and discussed rules and way forwards. Further, school-based activities were relatively easily implemented in the areas of remedial lessons and enrolment of out-of-school children and special needs children. These activities did not require much external assistance and simply required consensus in the community. These initiatives made a great impact on addressing education quality and equity in schools.

In contrast, the implementation rate of school construction projects and feeding program was low. The initial costs for these projects are too high for schools to implement without external donor support. The feeding program is effective to prolong learning time of children in school and 8 schools implemented a community-based feeding program in 2018. However, it may be hard for some schools to sustain as parents have difficulty in donating money or food consistently across the year due to poverty, famine, and other socio-economic factors. Therefore, we witnessed that the schools which initiated a community-based feeding program had to stop for some terms due to inability for parents and community to generate resources for it.

Why do we need SDP? As stated above, some activities, such as teacher hiring and urgent meeting on early pregnancy can be implemented without SDP. If head teachers have a great leadership, they can implement some activities without the SDP as in a written form. Nevertheless, the SDP is encouraged to be developed at the school-level for following third reasons. First, it works as a reminder. Some head teachers shared with us that the written SDP reminds school leaders to know what to do. People may forget to implement although they have a passion to do something in the beginning of a year. Further, it creates a transparent atmosphere in school management. Community people and stakeholders know what are school needs and their roles. Lastly, SDP can tell the extent of actions community can do and cannot. If external actors, such as DEO, Constitutencies Development Fund (CDF) office and aid agents know the level of commitment by community, they may be convinced about the remaining areas they can support.

To effectively utilize SDP for community-based school development, SDP should be shared with stakeholders throughout the process of planning, implementing and monitoring. If school leaders consider parents as a small donor, parents do not actively participate in activities. Ensuring transparency in the process of planning and implementing a SDP is also critical to get a support from parents. When school leaders ask parents for a financial support, they should clearly explain why they need money and how the issue is important compared to other priorities. Further, they should clearly explain costs by its type, purpose, and unit costs divided by the total number of parents.

4. Improvement of Early Grade Learning Environment

The third intended output was improvement of early grade learning environment. As shown in Table 4, we produced early grade workbooks in Kiswahili and mathematics and conducted early grade teacher training sessions in both subject for three years. Section 4.1 describes the conducted activities, followed by achievement in Section 4.2, challenges in Section 4.3, and lessons learnt in Section 4.4 in this output area.

Table 4 Output and indicators for early grade learning environment

Output	Indicators	Means of Verification
Learning environment for lower grade children improves	**1st year:** - Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.	- Existence of teaching materials in Swahili and math. - The number of distributed materials.
	- Adult literacy classes are held at 30 schools	- The number of parents who come to monitoring - The number of books checked by parents
	2nd year: - Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.	- Existence of teaching materials in Swahili and math. - The number of distributed materials.
	- Workbooks in Swahili and math for lower grades are used in remedial lessons at each school.	- Observation of remedial lessons. - Monitoring tools of remedial lessons. - Pre and Post tests for remedial lessons - GLMi learning assessment
	- Adult literacy classes are held at 30 schools	- The number of parents who come to monitoring - The number of books checked by parents
	3rd year: - Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.	- Existence of teaching materials in Swahili and math. - The number of distributed materials.
	- Workbooks in Swahili and math for lower grades are used in remedial lessons at each school. - The number of students who acquire class 2 learning level increases to 70%.	- Observation of remedial lessons. - Monitoring tools of remedial lessons. - Pre and Post tests for remedial lessons - GLMi learning assessment (Jun&Oct)
	- The number of teachers for lower grade in all the designated schools who can teach with confidence increases by 50%.	- Questionnaire for teachers. - Observation of classes
	- Adult literacy classes are held at 30 schools	- The number of parents who come to monitoring - The number of books checked by parents,

4.1. Activities

Three years of activities were planned and implemented as follows:

1st year:
GLMi conducted a baseline survey in May 2017. The survey result showed that there are more needs for Kiswahili than those for Kimaasai, the language for Maasai ethnic group. This was mainly because the ethnic distribution of pupils in 30 schools was more mixed than expected and the usage of Kimaasai may face some issue of equity. Head teachers are also ethnically mixed and had reservation to enhance education of Kimaasai as s/he will not be able to supervise. The low performance of Kiswahili was also found at the baseline learning assessment conducted in June 2017. Therefore, we decided to change the focus from Kimaasai to Kiswahili learning.

In July 2017, we conducted an Early Grade Teacher Training in Mathematics and Kiswahili with perfect attendance of two early grade teachers in 30 schools. We introduced play-based activities to promote active learning in classrooms. From September to December 2017, we developed workbooks in Mathematics and Kiswahili for Grade 1 and 2 with technical support from Dr. Nagisa Nakawa in Mathematics and Ms. Mary Silole in Kiswahili. From January 2018, workbooks were distributed to all Grade 1 and 2 students at 30 schools and utilized in the after-school remedial lessons. Besides, GLMi briefed parents how to monitor their children's learning in 11 schools that frequently held community meetings: Other schools held meetings on parental monitoring in May 2018 onwards.

2nd year:
GLMi conducted a learning assessment in June 2018 and did not find much improvement in pupils' performance in both Mathematics and Kiswahili, albeit a slightly better performance in Mathematics. Therefore, we analyzed the areas in which students faced difficulty in each subject and addressed their challenges during the Early Grade Teacher Training. The Kiswahili training addressed syllable, the composition of letters, as the most challenging area for pupils. The Mathematics training emphasized the concept of numbers as a weak area and demonstrated how to teach grouping and number concepts with a plenty of play-based activities. Since the Ministry of Education implemented a Competency-Based Curriculum (CBC), both Kiswahili and Mathematics trainings were based on this new curriculum. The participation rate in the training was 98%.

Workbooks were distributed to all Grade 1 and 2 students in 30 schools every term. Each pupil received one workbook so that they can fill in the blank and do autonomous learning in and after remedial lessons. GLMi monitored the remedial lesson implementation and pedagogy. In October, we conducted a learning assessment in 10 schools that were underperforming to see the impact of remedial lessons in 2018 and found that the performance improved. Revision was made on Workbooks based on the Kenyan curriculum, learning assessment results, and feedback from teachers.

3rd year:
GLMi conducted a learning assessment in June 2019 and saw the substantial improvement of Mathematics. In August 2019, we conducted a lesson study workshop for early grade teachers. A lesson study is an internationally widely practiced Japanese method to improve pedagogy. In lesson study, teachers observe and discuss the lesson implementation and find alternative teaching methods (See Appendix 21). A lesson study does not cost if implemented at the school-level and teachers can continuously improve pedagogy with their peer teachers through the mutual observation and reflection process. In the first lesson study in the training, teachers were attentive to learn new pedagogies from one another. To create culture of lesson study at the school-level, we had a lesson study workshop again in February 2020. The participation rate for both lesson study workshop was 82% and 94% respectively.

Workbooks were continuously distributed to all Grade 1 and 2 students in our 30 target schools. GLMi staff continuously monitored remedial lesson implementation. In 2019, we awarded 10 and 25 best teachers from 30 schools in the 2nd and 3rd term of 2019 based on remedial lesson implementation and pedagogy they had utilized from our training. The criteria we used are the progress of remedial lessons, the implementation of play-based teaching methods and the relationship with pupils in a classroom. In the training in August 2019, we emphasized that the problem occurs due to the lack of understanding and exercise of Syllabi. To overcome this issue, GLMi prepared exercise books for children to practice writing Kiswahili words, compositing letters.

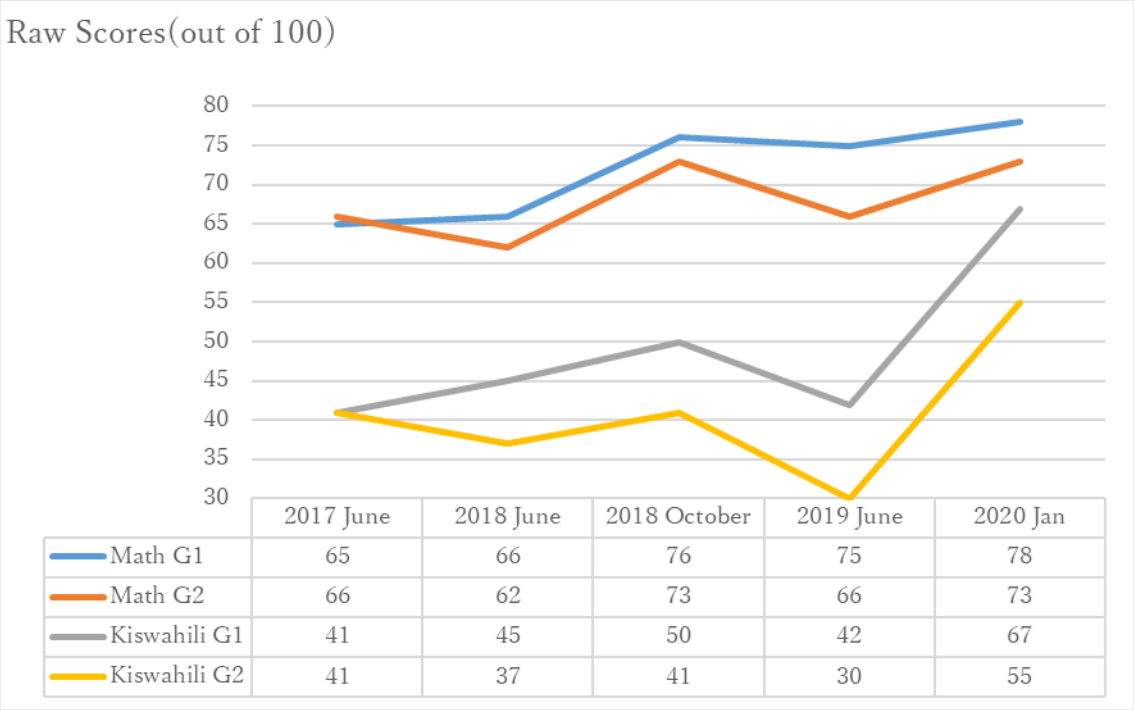
As an end-line learning assessment, we tested Mathematics and Kiswahili abilities in January 2020. Idea books were produced and distributed to target schools to make pedagogical examples readily available at hand of teachers. CDs of the workbook data were also distributed to schools in February and March 2020 for their future use.

4.2. Achievement

Figure 8 shows the trend of learning assessment scores for Mathematics and Kiswahili for Grades 1 and 2 in 30 target schools in Loitokitok. Students improved performance in both Mathematics and Kiswahili. Scores in October 2018 and January 2020 were higher than ones in June of the same year since we conducted assessment in the end of the year. Nevertheless, mathematics scores were always in an upward trend and maintained the high performance. Before, common mistakes were confusion of operation signs of addition (+), subtraction (-), multiplication (×), and division (÷) (e.g. 16-9=169, 2×5=7). However, those mistakes reduced thanks to the emphasis of the exercises on workbooks and play-based activities implemented by teachers after training.

On the other hand, Kiswahili scores were stable and even dropped in June 2019 as shown in Figure 8. However, it rose significantly in January 2020. This was thanks to the introduction of exercise books GLMi distributed in October 2019 that enabled pupils to work during the recess.

Many children faced difficulty to write in a correct spelling before (e.g. wtoto for watoto), but they improved writing this syllable combination after the practice on the exercise books.



	2017 June	2018 June	2018 October	2019 June	2020 Jan
Math G1	65	66	76	75	78
Math G2	66	62	73	66	73
Kiswahili G1	41	45	50	42	67
Kiswahili G2	41	37	41	30	55

Figure 8 Raw scores of learning assessment by grade and subject in 30 schools

Note: 10 schools are selected only for October 2018. Students at Grades 2 and 3 were tested in January 2020 to see the end-line data for their previous grades. Kiswahili questions which are out of a new curriculum are removed from our analysis.

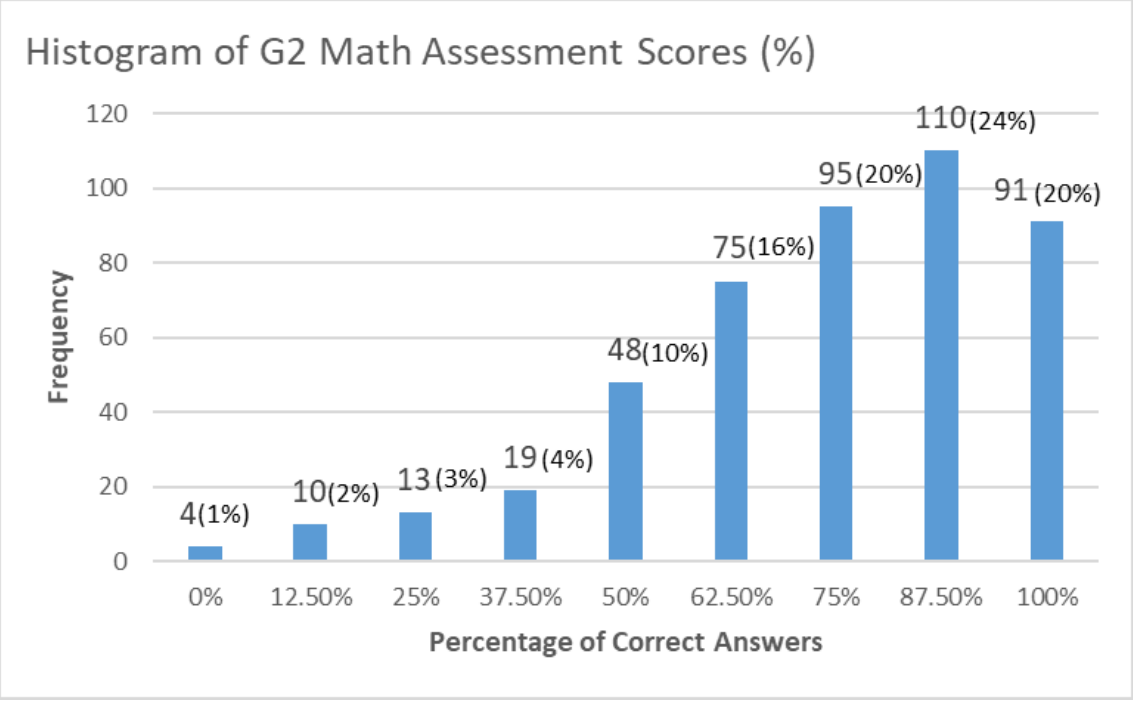


Figure 9 Histogram of G2 Mathematics learning assessment in 30 schools in 2020

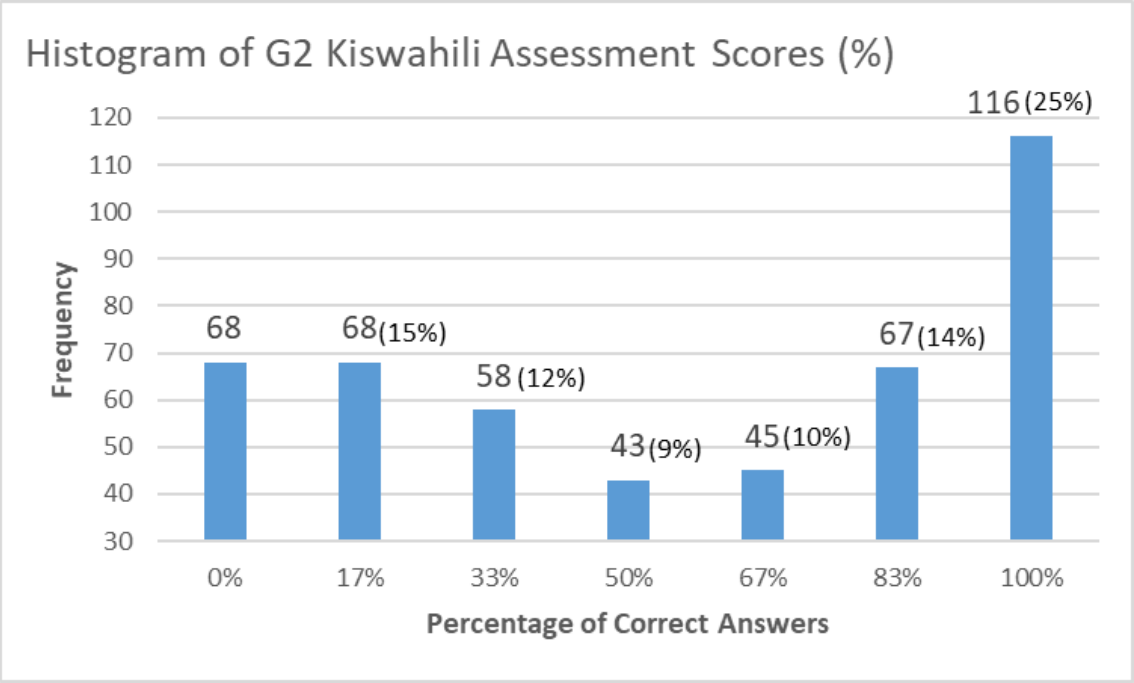


Figure 10 Histogram of G2 Kiswahili learning assessment in 30 schools in 2020

Figure 9 and 10 show the distribution of mathematics and Kiswahili scores for Grade 3 children in 30 schools in January 2020. The shape of the mathematics graph (Figure 9) looks favorable because many got higher marks and few lower marks. If we set the pass mark as 60%, 80% of students met the target for mathematics. In contrast, the situation is slightly different for the Kiswahile outcome. There is a gap in performance between performing and underperfming students. Although 25% of students received a perfect score, there were still underperforming students who received 0 or 1 correct answers. Less than a half of students met the pass mark of 60%.

Our analysis of UWEZO household learning survey datasets in Loitokitok in 2014 revealed that only 34% and 40% of children aged 7 to 13 in Loitokitok met the Grade 2 Mathematics and Kiswahili level respectively. Our learning assessment for Grade 2 were not exactly the same as UWEZO. Especially, our Kiswahili assessment was a little challenging focusing more on writing despite the fact that UWEZO focused on reading.

After the lesson study workshop in 2019, 27 (50%) out of 54 participants implemented play-based activities which they learnt during the training. This is thanks to the lesson study workshop in August 2019 which enhanced teachers' intrinsic motivation for teaching.

The confidence level of teachers regarding their own teaching measured between 1 and 5, with 5 being very confident, improved from 3.63 to 4.93 in mathematics and 3.76 to 4.97 in Kiswahili in three years. Since the initial confidence level was significantly high, we couldn't achieve the increase by 50% which we initially targeted. Nevertheless, we observed that they were confident in applying new pedagogical ideas to their classes after the series of training over the past three years.

Lastly, parents' monitoring ability has significantly improved. While the number of parents who

checked their children's workbooks for remedial lessons was 1,190 in the 2nd year, the number amounted to 1,734 towards the third quarter of the 3rd year. The number of parents who came to observe remedial lessons has also increased from 565 to 815 between the same periods. Parents improved their monitoring ability after GLMi staff emphasized the monitoring role of parents in remedial lessons during the community meetings and sent several text messages for parents to monitor children's works.

4.3. Challenges

GLMi faced an issue of ownership for remedial lessons. Despite the fact that GLMi based their intervention on evidence that pupils who performed well in the UWEZO test had attended remedial lessons, it was not easy for teachers to absorb the idea that they should voluntarily contribute their time and effort for remedial lessons especially for early grade learners. Remedial lessons had been common for upper grades before the KCPE. While they conducted remedial lessons with the given workbooks, some teachers vocally stated that they were working for "GLMI remedial lessons." This was particularly occurred after we introduced tokens to teachers. Although we explained that a remedial lesson was a community-owned activity and tokens were just for appreciation, teachers worked for us, not for community. After we stopped tokens in January 2019, some remedial teachers refused to continue remedial lessons. GLMi explained to head teachers that remedial lessons do not sustain with tokens once GLMi terminates the project. Almost all head teachers understood why we needed to cut tokens. However, it took time for teachers to accept the idea and to become active again. We are concerned that remedial lessons would not sustain after GLMi terminates the project unless teachers and school leaders embrace the needs to secure children's learning time.

A lesson study workshop successfully created culture of lesson study in schools after facing some teachers' attitudinal issue, and yet the outcome of the lesson study is yet to be determined. As stated above, the lesson study does not cost at the school-level; however, whether the lesson study is implemented in school depends on a head teacher. If a head teacher takes it positively, s/he can allocate time for lesson study. Currently, there is a lesson observation practice under the Teacher Performance Appraisal and Development (TPAD) implemented by the Teachers Service Commission (TSC). Although both lesson observation under TPAD and lesson study introduced by Dr. Nagisa Nakawa emphasize observation of lessons, the former aims to evaluate performance of teachers whereas the latter aims purely "improvement" of pedagogy with the spirit of learning each other. Some teachers who are used to TPAD lesson observation were likely to justify their teaching to raise their assessment result. In contrast, the lesson study does not assess teachers per se but discuss their pedagogy with an improvement-oriented discussion. Lesson demonstrators can learn from comments by observers and the observers can also learn from the demonstrators. Although there is an active atmosphere of remedial teachers to implement the lesson study, its implementation depends on the school-level initiative by each head teacher.

Compared to mathematics, we could not take an appropriate measure to improve Kiswahili performance by the third year. We had learning assessment every year and analyzed the result.

However, there was nobody inside and outside the organization who could interpret that result in a meaningful way and proposes the clear pedagogy to tackle students' challenges under the new curriculum. The Kiswahili training for the first year was done by our staff, but the training contents were not related to Kiswahili contents but to professional records. The training for the second year was about the concept of syllables not about the improvement of pedagogy per se. In the last year, Mitsue Hiromoto proposed the idea of exercise books for tacking the issue of correct spelling. Then, the performance improved suddenly after the introduction. Compared to mathematics, we could not utilize learning assessment analysis to improve Kiswahili workbooks. Nebertheless, schools will be able to use exercise books and workbooks for continuous early grade learning.

4.4. Lessons Learnt

To start remedial lessons, it is a challenge for any organization to obtain an approval from school management and community. Even when community and school management understand the needs, they may face resentment from teachers as remedial lessons is not their mandate. If teachers do not embrace the necessity, teachers work for the organization not for their pupils, school, or community. Stakeholders should clearly understand the role of the organization, the school and community and increase commitment to what they aim at achieving even if that means that teachers need to stretch their time and effort. It is interesting, however, that there was a different degree of receiving the idea of remedial lesson. Some teachers were enthusiastic, while others were reluctant or even resentful. We are not yet certain about factors that affected a variation of their attitudes. Head teacher's leadership and encouragement by District Education Office (DEO) were effective in implementing the remedial lessons.

If we had a chance to restart CADVES, we would not have planned tokens in remedial lessons which significantly affected the sustainability. In the first year, we would have massively sensitized schools, community and DEO office if they would take the idea of remedial lessons positively. If they had agreed, we could have specified the role of each actor. We could have asked people, "GLMi can support workbooks, monitor quality of remedial lessons and organize a teacher training based on the challenges we find in the monitoring. Do you want to do remedial lessons? What are the role of each stakeholder?" Such dialogues would have been useful.

The lesson study-style teacher training is effective for implementing a new pedagogy. Since teachers, especially ones hired by parents are lacking practical in-service teacher training, they are happy once they learn a new knowledge from a training. However, the issue is an implementation. Since the traditional lecture-style teacher training makes teacher listen only, they tend to forget what they learn when they go back to their work place. In contrast, the lesson study-style teacher training enables some teachers to demonstrate their lessons in front of children and other peer teachers. The discussion is practice-oriented and even an alternative pedagogy a facilitator introduces is convincing to teachers since that pedagogy directly addresses the challenges demonstrators have. If this culture persists at the school-level, teachers can voluntarily improve quality of teaching with peers without any financial cost. The lesson

study is not for assessing and blaming teachers but for encouraging peer-learning among teachers.

As a local NGO, GLMi had a dilemma between being a partner with community to implement evidence-based intervention and being fair to all 30 schools. With such a variety of teachers' attitude and head teachers' leadership, we could have selected to work with communities who were willing to take this intervention. However, if we do so, our intervention may have expanded disparity between pupils with reluctant teachers and those with willing teachers. In addition, time was a constraining factor. As much as we wished we could wait for the community to be ready and select any intervention, our project period of three years was fixed. Balancing between readiness to work and the actual needs was a tough challenge. Nevertheless, one school that was reluctant to join remedial lessons was finally convinced to do it after a head teacher of the neighboring school talked to the newly replaced head teacher of that school. The new head teachers' initiative, together with TSC and DEO's decision on deployment of head teacher with commitment and peer effect of head teachers all contributed to the success of remedial lesson implementation.

5. Improvement of Learning Opportunities for Children under the Difficult Circumstances

The fourth intended output was improvement of learning opportunities for children under the difficult circumstances. As shown in Table 5, we intended to improve learning environment for children under the difficult circumstances, especially focusing on out-of-school children and children with special needs so that they are able to enroll. Section 5.1 describes the conducted activities, followed by achievement in Section 5.2, challenges in Section 5.3, and lessons learnt in Section 5.4 in this output area.

Table 5 Output and indicators for learning opportunities for children under the difficult circumstances

Output	Indicators	Means of Verification
Activities for improving the learning opportunities of children under difficult circumstances are implemented	1st year: - The number of out-of-school children is confirmed in all the designated villages. - 80% of each community recognise the problems about out-of-school children.	- Survey lists of out-of-school children. - Interviews for BoMs, community and teachers.
	2nd year: - Action plans for including out-of-school children are formulated.	- Action plans
	- Resource rooms are constructed in 2 designated schools.	- Resource rooms
	3rd year: - 20% of out-of-school children confirmed by each community go to school.	- School Record. - Case study of those students who enrolled
	- 2 resource rooms are constructed in other 2 schools. Teaching is implemented for the disabled children at 2 schools with resource rooms.	- Resource rooms

5.1. Activities

This area of intervention was the most challenging in the CADVES Project. The issue of inclusive learning environment for all is of a paramount importance as outlined in the Sustainable Development Goals (SDGs) (2016-2030), and yet it involves various socio-cultural factors that affects the status of out-of-school children and children with various physical, mental, and socio-economic challenges. What we put importance in this regard is that we reach out a wide range of stakeholders in the community and school. The most important key stakeholders were identified as Chiefs, head teachers, Chairs of Board of Management (BoM) of schools, and Chairs of PTAs. The networks with various community members across different sectors beyond education were noted as essential to tackle the issue of out-of-school children.

1st year:
In July 2017, GLMi had a training session on out-of-school children in the Governance and Leadership Training for Chiefs, head teachers, BoM Chairs, and PTA Chairs of 30 schools in Lotokitok. Dr. Jun Kawaguchi, an inclusive education specialist from Japan discussed the critical concepts such as disability and inclusiveness. During the training, 30 schools formed working groups to work for out-of-school children and discussed strategies to identify out-of-school children including children with disabilities. After the training, GLMi staff followed the progress of actions for out-of-school children in each school. As a result, 29 schools created lists of out-of-school children in their community. School leaders from one school claimed that there were no out-of-school children in the community. At the end of the 1st year, 72.6% of school leaders (head teachers, Chiefs, BoM and PTA chairs) were aware of the issue for out-of-school children in their community as they collected the number of out-of-school children and took some action for out-of-school children at the school-level.

GLMi also conducted a needs-assessment in 30 villages in Loitokitok where 30 schools were located. Illasit and Enkijape primary schools were identified as the core centers for improving inclusive learning environment for children with hearing and mental disabilities. Enkijape had a special unit for children with hearing disability and Illasit had a temporary unit for mentally challenged children. The needs assessment proposed to construct two resource rooms in these schools and to expand the dormitories at Enkijape and renovate for children with hearing disability so that they can also accommodate children with hearing disabilities in 30 villages. This intervention extended our target schools from 30 to 32 schools.

2nd year:
In August 2018, GLMi also had a session on out-of-school children during the Governance and Leadership Training. GLMi staff had discussed action plans for out-of-school children in each school so that school leaders could come to the training with the list of out-of-school children with reasons for non-enrollment and possible action. After participants analyzed the reasons for enrollment, 29 schools finalized their action plans and those were incorporated in SDPs. One school had a strong pride that their community is educated and no out-of-school children existed. However, some teachers shared the drop-out case due to the early pregnancy. Thus, GLMi summed up and passed the data to the school for their further action.

In November 2018, resource room constructions were completed in Enkijape and Illasit primary schools. The dormitories for both boys and girls were renovated and a dormitory for girls was extended. Auto-scopes and audiometers were supplied at Enkijape for teachers to assess the hearing level. In 2019, a hearing assessment room was set up at Enkijape to assess hearing ability of children with audiometers.

3rd year:
In July and September 2019, GLMi conducted five study tours for head teachers, special needs education (SNE) teachers, community leaders, and parents to visit Enkijape and Illasit primary schools with a special unit. Teachers of 30 schools observed the resource rooms and dormitories,

as well as the special needs class lessons, and discussed with SNE teachers to learn about SNE and to refer children with such needs to be transferred or to enroll in the two schools from the respective 30 schools and villages. 85 participants joined the tour to both schools. They learnt that the disability is not a curse and special needs children can learn as other children with appropriate assistance in an inclusive environment. They observed the lesson in the SNE unit and learned the ways of identifying disabilities of pupils and the teaching techniques for SNE depending on the type of disability (See Appendix 24 and 25 for further information).

After the study tour, we learned that the registration under National Council for Persons with Disabilities (NCPWD) is the first step for special needs children to enroll in school and the hurdle for many parents to do so. Once children are registered with NCPWD, schools can receive subsidies to sustain their school fees at the SNE unit. However, before the registration, it turned out that they must be assessed by doctors. Working with CSO-SNE officers in Loitokitok, 5 voluntary doctors from Loitokitok hospital and community leaders, GLMi reached out to 30 schools for free assessment for special needs children for 18 days in November and December 2019. Hearing, visual, physical, mental and epileptic conditions of children were assessed by each expert.

After the series of training and assessment, GLMi followed up the SDP implementation for out-of-school children and special needs children in 30 schools. All 30 schools have created action plans for out-of-school children and 27 schools actually implemented activities for including them. Particularly, many early pregnancy cases were reported as high-risk cases of complete dropout in many schools in Loitokitok in 2019. Thus, 8 schools added plans to curb early pregnancy and all 8 schools implemented actions.

5.2. Achievements

1140 out-of-school children were identified and 371 (32.5%) children came back to school with community efforts. Since out-of-school children are not easily captured at once, each school continuously updated their list and followed them up. At Ilchalai School in 2018, the head teacher wrote a letter addressing to an Area Chief. He used teachers from Ilchalai community to update the list of out-of-school children. The Area Chief acted on this issue and 4 out of 16 girls came back to school in 2018. Eventually 40 out of 116 children came back to the school between 2017 and 2020. In Enkijape School and Illasit School, 15 and 6 special needs children have newly enrolled after GLMi constructed resource rooms and dormitories respectively.

In Illasit School, 5 mentally challenged pupils were shifted to Grade 1 in 2020. Previously, mentally challenged pupils used to repeat learning at their special unit, not transiting to a normal education setting. However, 5 pupils were judged to be ready to study within a normal classroom. Such diagnosis-based transition and integration of pupils with special needs into normal classrooms is a significant achievement as they used to learn at the same learning level every year as a separate system with no bridge between SNE and normal classes. SNE teachers were motivated to teach in the SNE units and also learned the new teaching techniques (play-based activities) after they joined our Early Grade Teacher Training in the third year when

we officially increased our target schools from 30 to 32. One teacher developed a visual teaching material with locally available resources after she joined a lesson study training (See Appendix 30). A visual material was effective to teach mentally challenged pupils.

As for the assessment of special needs children, GLMi assessed 199 children. Out of 199, 113 special needs children are under the process of registration as of February 18 2020 (See Appendix 26 for a detailed report). Before there were no data about children with special needs. After the sensitization at the community level, the study tours and the SNE medical assessment, 122 children with special needs were identified as out-of-school.

Schools which were faced by many cases of early pregnancy organized an urgent community meeting. At the meeting in June, 2019, Olorika School set up a rule for girls not to attend a night church during the school break. The head teacher analyzed why the early pregnancy happened during the school break and identified that the way back from the night church was a risk for girls to meet boys. He coordinated well with church pastors and community leaders and decided a concreate action plan. Iltilal school organized a stakeholder meeting on 13th February, 2020 after the school identified that 7 girls who got pregnant were out-of-school in July 2019. The meeting concluded that Iltilal would form a steering committee for early pregnancy. When this team finds the early pregnancy case, it informs to an area chief. If no action is taken, it further sends the letter to the sub-office of the Department of Children's Services, Ministry of Gender, Children and Social Development. Also, people agreed the following rules for early pregnancy cases in Iltilal community.

- Boys who impregnate girls must take care of a baby.
- Girls go back to school after they deliver a baby.
- Parents will be sent to the police if they hide the case.
- Health club was formed at Iltilal School to talk to girls.
- Parents are not encouraged to buy mobile phones for primary-school pupils.
- Night church activity is banned in Iltilal community.
- Community abolished young girls to sell milk in the shopping center in the night time.
- Girls are banned to shave their hairs in the night time.

Column: A story of a girl with hearing disability who started a school

Seleyian Lenkai is a girl with hearing disability who is from an Essosian community. She was enrolled in Pre-Primary 2 of Enkijape Primary school in 2019 and stays with other peers at the dormitory during the school term.

GLMi's story with her dates back to November 2018. When GLMi was conducting a needs assessment for special needs education in 30 target schools, Mitsue Hiromoto met an active mother who has a severe physically challenged child in Esosian community. She shared with us that she knew other children with special needs in her community. Mr. Francis Kiarie (CSO-SNE officer-Rombo) and Ms. Esther Kiarie (Head teacher at Esosian Primary) coordinated with her and arranged a tour to look for children with special needs in the area of Esosian and Nasipa.

When Mitsue first arrived at Seleyian's place, she realized that Seleyian lives in a simple Maasai manyatta. She was shy. She didn't express herself to us. Despite her shyness, she seemed to be curious about the visitors who are new to her. Since she did not know how to communicate with them, she just followed them with silence. Surrounding people were worried about her because her curiosity might lead her to follow unknown adults who may do something wrong to her in the near future. During the visit, Seleyian and her grandmother showed their eagerness to schooling. After the visit, her father visited Esosian Primary school and told Ms. Kiarie that he would enroll Seleyian in Enkijape. He managed to send her to Enkijape in 2019. Since Seleyian is from a poor family, one mother in Esosian community who enrolls another child with hearing disability in Enkijape sometimes took Seleyian to Enkijape at the beginning of a term instead of her father.

As the pictures below show, she improved her social skills after she enrolled in school. After she enrolled in Enkijape Primary school, she became lively. She learnt how to express her feeling with peers and teachers with a sign language. GLMi staff were surprised with her attitude change. Whenever they visited the special unit, she greeted with them with a smiley face. Every day, she is exploring a new world with her new language and learning what is right and wrong. Education equips children with not only cognitive skills but also social skills which can enrich her life with lively human interaction as well as prevent a risk in her life.

5.3. Challenges

It is not easy for stakeholders to embrace the idea that all children, regardless of disability and gender, have a right to education. Awareness of SNE is especially low in Loitokitok. Many children with special needs are regarded as curse or shame and hidden in their Maasai boma and community people do not often know much about their existence. Although GLMi has been trying to identify the names of special needs children in 30 villages since 2017, it is still not possible to find all of them. Our assessment of children on special needs in 2019 revealed that there still exist many children with special needs in 30 villages. Parents brought their children with a hope that they would get some help for the registration with school and something more from GLMi. Whenever we met parents whose children were assessed, they told us that they had been waiting for Muzungu ("foreigners") to come back to help their children.

Although 371 out of 1140 out-of-school children came back, there are still 903 out-of-school children in 30 villages in Loitokitok. Out-of-schooling is a dynamic process and some children would drop out due to several reasons. The case of out-of-school children by reasons in 30 schools is shown in Figure 11. As the Figure shows, reasons for being out-of-school are not available for 248 children, leaving a space for school leaders to get more data to take action for it. The child labor including cattle grazing is still a common practice hindering children from attending school. It is a common practice in a traditional Maasai family that one pupil is assigned to take care of cattle and never goes to school. The identified children with special needs increased in 30 schools thanks to data collection through the SNE study tour, SNE medical assessment and collective action by local leaders. Although identifying children with special needs is a great step, this can also show that education for children with special needs is not prioritized by community in 30 schools. Furthermore, early pregnancy is a big issue during the school break between October and December. Some schools had difficulty in curbing early pregnancy although the head teacher requested assistance from community stakeholders. Sometimes, they are silent on the issue because they are directly and indirectly related to the case.

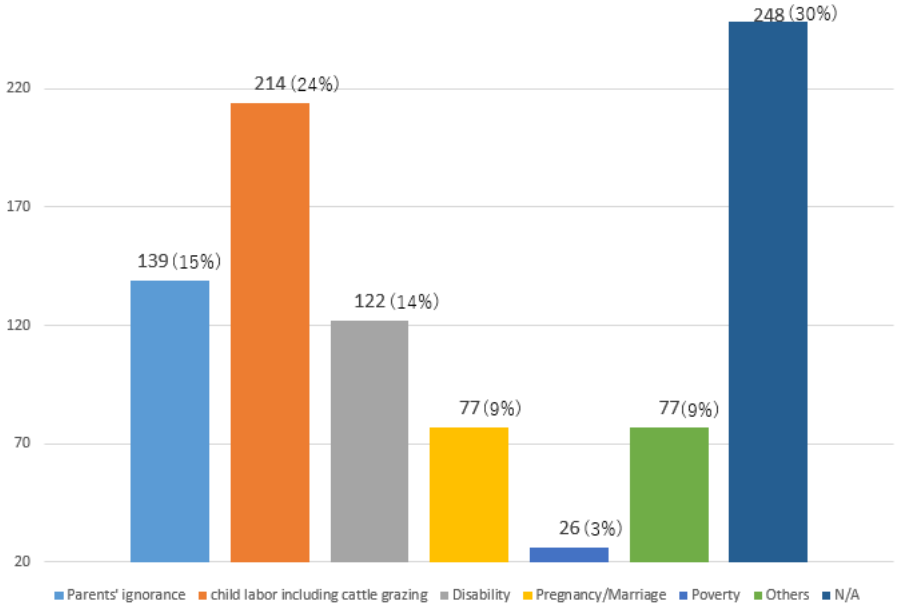


Figure 11 Out-of-school children by reasons in 30 schools in Loitokitok

During the medical assessment tour, we faced difficulty in identifying the type and severity of disability. GLMi Kenya collected the lists of children with special needs inside and outside school through SNE teachers or representative teachers. However, the information on the lists was wrong when we assessed disability because a disease is considered to be disability for some schools. For example, children judged as “mild” visual disability by teachers had only infectious disease which could be treated at a nearby dispensary. To our surprise, “headaches” and “stomachaches” were also listed as disability at a few schools. Although some teachers were trained for SNE, most of them did not have enough knowledge on how to differentiate disabilities and diseases.

It was also not clear how medical doctors judge disability. For example, mono eye was not identified as disability in visual assessment. Thus, registered visually disabled children are limited. On the other hand, children having one foot is registered under physically challenged. We realized categorizing disability was not uniform and the assessment sometimes tended to be subjective by doctors except for the hearing assessment. The children with hearing disability were required to submit an audiology report for registration.

The coordination of construction projects was difficult. The process was complex and the interest of many stakeholders interfered, which made the coordination hard. We did not discuss with school management and head teachers about their commitment and maintenance plan far in advance. Thus, school stakeholders expected us to do everything, putting themselves as a mere beneficiary. No clear action was taken so far to mobilize audiometers for hearing assessment and fill the capacity of dormitories at Enkijape. Although a construction project is a first step to create an inclusive environment, major action on utilizing and maintaining buildings would need to be rigorously taken by the school management. Concequently, a construction project in two schools are on their way to produce cost-effective outputs yet.

The definition of inclusive education is still vague and is rarely implemented on the ground in Loitokitok. The Kenyan government is advocating inclusive education practice as “every learner with disability to be enrolled in regular classroom together with his or her peers without disabilities” (MoE 2018 p.5). However, schools and teachers are not ready to accommodate those children. When Mitsue Hiromoto went to school to observe a classroom, she asked a classroom teacher who was trained in SNE, “Who are children with disability?” A teacher asked children, “Who have disability?” At that time, Mitsue wondered if this teacher can implement “Inclusive Education” because she even did not know who children with special needs were in the class. If Inclusive Education is the Kenyan educational policy, all teachers should have basic knowledge on how to identify and accommodate children with each special need in the normal classroom.

Although capacity and resources are obvious obstacles, the critical issue may be serious commitment of teachers and school leaders to inclusive education. The school leaders often dropped the discussion on “inclusive environment” and “children with disabilities” in planning a good learning environment or outcome in SDPs. More mechanisms would be required for

those who are hidden or have weaker voices to raise them through community participation.

5.4. Lessons Learnt

Constructing resource rooms for special needs children plus dormitories was an effective way to expand access and to ensure a good learning environment for children with disability. A study tour to special units was also effective to open eyes of stakeholders of other surrounding schools and those in 30 villages on an alternative way of the best possible way of inclusive education/SNE at the local level. “Seeing” was better than “listening” to understand the importance of SNE. The study tour gave a chance for participants to see how children with disabilities are able to learn. The study tour also gave them a chance to socialize with children with special needs, which may lack in their community due to stigma.

The dormitories and resource room alone are not panacea for inclusive learning environment. To realize inclusive learning environment, all stakeholders should embrace the right of children and truly welcome children with disabilities in the school and home environment. Mr. Fredrick Haga, (Director of SNE-MoE) suggested school management to ensure students in normal classes in Enkijape School learn sign languages for understanding each other. The school management should immediately think about the way to create an inclusive learning environment together with the DEO office. We also witnessed that some parents who have those children in Enkijape Primary school did not come to pick them up. Teachers had to send them off to their home. The continuous awareness raising and proactive measures at both school and community levels are necessary for all stakeholders to understand and appreciate a role of SNE.

The construction project gave us a good lesson. Given that the trusted head teacher who has been our partner for a long time and who has gone through a discussion on improving the learning environment with us was transferred to a different school just before the construction began. Vested interests at all levels interfered the construction project in one way or the other, blocked the ways of quality construction. The process of construction was complex and at times confusing. Furthermore, careful planning meetings with school leaders and community are critical to have a quality and sustainable project. Stakeholders should discuss the following points in advance and agree in a written form.

> What can community do during the construction process?
> Are there any locally available resources they can help (e.g. water and stoners)?
> How do school leaders recruit children to enter the dormitory?
> What is the cost structure for maintenance?
> Who is the responsible person to take care of dormitories and how do you hire him/her?
> How do you maintain the building in a good standard?
> What is the plan for security (e.g. hiring a watch person)?

Another important lesson that we learned is that health of children is a serious issue. The assessment of children with special needs revealed that many children who were brought to the assessment were not disabled but simply maltreated of their curable diseases. The problem was

that as children's curable disease are left untreated, making parents believe that their children were disabled. Teachers and community leaders should explain about the importance of children's health care. Since it is not realistic to post a school nurse, current teachers should gain basic knowledge to judge the type and severity of disability. Introducing an eye-test chart is one simple way to check eye sight in school (See an example in Figure 12). For hearing ability, teachers can crap hands from back side of children to confirm their hearing status. If schools are willing, they can invite some nurses from the nearest dispensary for a health check-up. If teachers can identify preventable disease in an early stage, the disease can be cured and can avoid the disability caused by the sickness.

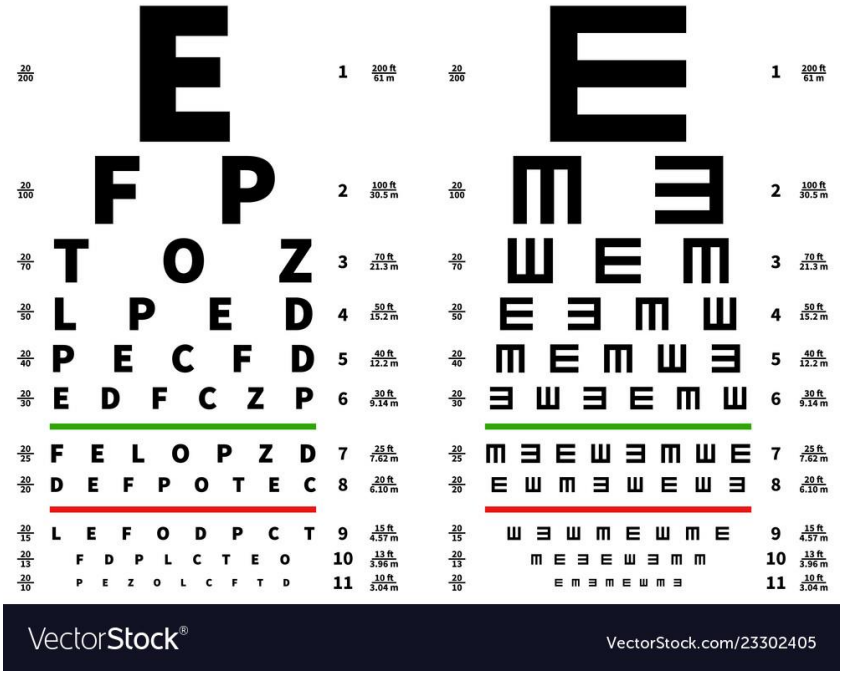


Figure 12 Eye Test Chart
(https://www.vectorstock.com/royalty-free-vector/eyes-test-chart-vision-testing-table-ophthalmic-vector-23302405)

Moreover, we realized that the voice of parents who have children with special needs was powerful. When they joined the study tour, they emphasized how education for those children was critical for the future of those children and even for community. Other participants seemed to be convinced by how SNE was critical and to have changed their perception. When community works on children with special needs, they should form a group, including children with special needs and their parents. Their voices and representation tend to be neglected even in the action meant for them. David Werner, an American community worker with persons with special needs left the key message, "Nothing about us, Without us" (Werner 1998). People should not decide and act without them. Children with special needs and their parents are main actors for realizing inclusive society.

Lastly, we learned that working on SNE needs selfless love and passion. Sometimes, we need to face a harsh and painful reality, such as the severity of disability and stigma in local community. However, passion and love can give a chance to enroll children with special needs in schools. Some people asked allowance to be paid when they joined the SNE study tour and brought children for medical assessment only within their villages. As the examples above show, some people may consider their own benefits, forgetting why we do this activity without passion and love for the very children.

References

Ministry of Education (2018). Sector Policy for Learners and Trainees with Disabilities.

Werner, D. (1998) Nothing About Us Without Us: Developing Innovative Technologies For, By, and With Disabled Persons. Palo Alto: Healthwrights.

6. Reflection of experts and partners

This chapter presents voices of reflection on CADVES project from experts and partners who contributed to the project over the past three years. Experts include Dr. Mikiko Nishimura, a Project Manager, Dr. Jun Kawaguchi, an Expert in inclusive education, Dr. Nagisa Nakawa, an Expert in Mathematics education, and Ms. Mary Silole, an Expert in Kiswahili education. Partners include Mr. Frederick Haga, the Ministry of Education, Mr. Laban Siwilli, District Education Officer, Loitokitok Sub-County, Mr. Patrick Kureko Nang'unin, Teacher Service Commission, Loitokitok Sub-County, and Mr. Charles Masangira, Chair of GLMi Kenya and Illarametak Mpusel.

6.1. Reflection of experts

Reflection of CADVES project as a project manager

Mikiko Nishimura
Project Manager, CADVES
Professor, Sociology of Education, International Christian University, Japan

The project started in March 2017 by two Japanese researchers, including myself, who were conducting a research on the role of community in primary education between 2013 and 2015 with a local partner NGO, Illarametak Mpusel. We were investigating how the UWEZO household-based leaning assessment activated a community movement for quality of primary education in Kajiado County. Although we could not witness a bottom-up movement stimulated by the UWEZO assessment, the research ended with a nice surprise. We found various community initiatives at the school level, including employment of teachers, collaborative organization of mock exams among several schools, self-help activities of parents to take care of pupils' health and follow-up of children who have been absent in neighborhood, improvised dormitories for girls, and collective fund raising for high achieving pupils with economic needs to pursue secondary education (Nishimura, 2019). Such unique efforts at the local level were striking to me especially because my past research had revealed that the Free Primary Education (FPE) policy in 2003 resulted in passive attitude of parents as they thought that the government would take care of *everything* in primary education (Ogawa & Nishimura, 2015). Another trigger for this project was the shortfall of the UWEZO survey that we found on the ground: that is, the survey lacked a component of analysis and sharing of the assessment results at the very local level that could potentially activate discussion on quality of education. As Illarametak Mpusel was the coordinating body of the UWEZO data in Loitokitok, Kajiado County, we discussed the possible mechanisms to make this assessment more meaningful for empowering community to tackle the learning crisis on the ground.

After a couple of trials, we finally obtained grant from the Ministry of Foreign Affairs of Japan and started the CADVES project in March 2017. One of the difficulties that we faced in convincing a donor agency in Japan was that we did not intend to transfer technology or any technical input from Japan, which made a donor ask questions like "why are you doing this?" or

“why does Japan need to do this?” I tried to explain that we will become a catalyst whereby community people themselves will be the initiators and experts to solve the problem as they have already practiced it. The only thing that needs assistance from this end was the mechanism that brings the ideas and data together to articulate the local education issues for collective solution.

I faced another irony in Loitokitok that once we initiated a donor-funded project, people’s way of seeing us has changed from a collaborative researcher (just a curious foreigner) to ‘a donor’ who has money and something to give. This transformation of my positionality to them caused a lot of problems on our way. Passion that was initially shared with collaborators was somehow lost or hidden; local communities expected to be served rather than to do things together as a partner; and a lot of vested interests came to interfere and overtook our project objectives. When such crisis happened, however, those who saved the project were also our Kenyan colleagues. Mr. Laban Siwilli, Sub-County Director of Education of Loitokitok and Mr. Patrick Kureko Nang'unin, Curriculum Support Officer/Special Needs Education of TSC wholeheartedly shared the objectives of the project, to improve learning environment for pupils in Loitokitok, and restlessly supported the project throughout the period and especially so at the time of difficulty. Despite our Japanese policy of not paying any per diem or honoraria for government officers, both of them contributed their time and stretched their mandates to work for the project even on the weekends. Later in the final year, Mr. Joseph Mushyoka, Sub-County Director of TSC, joined this partnership relation with incredible level of commitment. Our shared mission bonded us together to work for the future generation of children in Loitokitok.

As for the outcomes of the project, we have achieved our goal to a great extent as discussed in the previous sections. Blessed with the committed staffs both from Kenya and Japan, we fulfilled all the project activities. Most of our target schools had high spirit to work with us in developing their school development plans, identifying and enrolling out-of-school children, and implementing remedial lessons in reading and mathematics. As a result, our 30 schools identified as many as 1,140 out-of-school children, out of whom 371 (32.5%) were enrolled in school. Twenty-one children were enrolled in Enkijape and Illasit primary schools after we constructed resource rooms for children with hearing and mental disabilities.

The remaining challenges reside in heath of children, gender issues, and further mobilization for out-of-school children especially with severe disabilities. In the course of registering out-of-school children with special needs, we found out that 86 out of 199 children whom parents thought of disability were not actually disabled but simply sick due to maltreatment of diseases. The children’s health issues should draw more attention to ensure learning opportunities. We could not either tackle the high incidence of early pregnancy especially in the last year of the project. Gender issues were also apparent in school meetings where mothers who attended the school meetings did not have decision making power at home as well as on school matters in parents’ meetings, making school decision difficult. Finally, the level of awareness for learning opportunity of children with special needs is still on the way whereby the idea of truly inclusive learning environment is still difficult to imagine at the school level. Many

identified children with disabilities are awaiting the opportunity for registration in special schools. Further efforts to accommodate children with disabilities should be required at household, school, district, and central levels with all stakeholders involved.

I do wish that our efforts made together with local people in Loitokitok will continue to thrive with the same spirits which we shared throughout the project. Albeit with shading differences among the local partners, we felt that we worked towards the project goal with passion and unity. With distinguished leaders at the local district education offices, I am sure that local leaders will uphold SDP to find local solutions to educational and social issues. I personally look forward to visiting schools as a researcher and educator in the years to come.

Finally, I woud like to express my sincere gratitude to the current project staff, Mitsue, Tetsuya, George, Janet, Joseph, Joan, Brian, and Paul for their untiring efforts to make this project a success. Despite challenges and stalemate we faced during the project, Mitsuya, Tetsuya, George, and Janet especially have demonstrated a great team work with a strong commitment to our work for children and community in Loitokitok. I admire their perseverance and professional accomplishment.

Reference

Nishimura, M. (2019). Community participation in school governance: The Maasai community in Kenya. *Prospect, 47*(4), 393-412.

Ogawa, K. & Nishimura, M. (Eds.) (2015). *Comparative analysis on universal primary education policy and practice in sub-Saharan Africa: The cases of Ghana, Kenya, Malawi, and Uganda*. Rotterdam, Boston, and Taipei: Sense Publishers.

Reflection on a three-year project by GLMi Kenya

Jun Kawaguchi
Assistant Professor, University of Tsukuba

I was in charge of the quality improvement of special needs education in this project. I have got an opportunity to work on a survey with Prof. Mikiko Nishimura and the staff of a local NGO, Illaramatak Le Mpusel. In the survey, I heard of how parents thought of disability and teachers' opinions on the educational situation. This survey made me have a passion and feel a huge social significance to the project. Indeed, I was one of the founders of the project. However, the project faced a lot of difficulties at the beginning and there were challenges even after the embarkation of the project. Those experiences sometimes made me think that I should not have implemented the project.

Having said that, thanks to the prime effort and dedication to the project from the staff, this three- year project is coming to an end successfully. I sincerely appreciate the contribution of all members involved in the project. Especially, Ms. Mitsue Hiromoto and Mr. Tetsuya Yamada even worked hard on huge tasks. My deepest thanks and apology should go to these two members. Besides, the project team allowed my student, Mr. Takumi Odaira, to work as an intern and to go through realities in Africa. He must not have expected such difficult internship.

The project has seen monumental outcomes thanks to all the contributions made. As for my part, the confirmation of out-of-school children and the quality improvement in enrollment and special needs education would be the remarkable outcomes. However, the paramount outcomes must be the fact that stakeholders in the target areas had lively discussions on the quality of special needs education, and put the ideas into action in close cooperation with each other. Lots of people always gathered at the seminar and workshops regardless of where they live, and in the discussions, participants brought various ideas on the quality improvement in special needs education. I felt that these opportunities themselves had significance and I honestly believe that those sincere discussions will lead to further action. Special needs education requires understanding from a community and dedication of teachers. Even if an expensive equipment is prepared in a school, good education will not be there without willingness for inclusion in the community. In this sense, it is important that community people, who prepare an inclusive environment, are keen on special needs education and show a positive attitude to cooperate.

In conclusion, not only is the project coming to an end but also it is commencing the new phase. The real outcomes would be the network nurtured by the project or attitudes of inclusion toward disabilities. Even after the end of this project, I wish local stakeholders all succeed in their further way and I again realized that I should keep indirect support to them for the rest of my life as a researcher.

Outcomes and challenges remained in the mathematics activities

Nagisa Nakawa
Assistant Professor, Kanto Gakuin University

My assignment was to enhance mathematical capacities for teachers and students, followed by the project outcome 3: Learning environment for lower grade children improves. During the project implementation, I was mainly engaged in making a questionnaire for teachers and children, producing workbooks for mathematics, planning workshops for teachers to enhance their pedagogical capacity, and monitoring lessons.

While I was in Japan, I spent much time for producing workbooks. We produced 1 mathematics textbook in 2017 and 3 textbooks annually in 2018 and 2019. The mathematical concept in the workbooks was based on Prof. Erich. Ch. Wittmann's ideas: playing, subitizing, a group of 5 and so on in their project, called mathe 2000 (Wittmann & Müller, 2012; 2009a; 2009b). It was also licensed by Ernst Klett Verlag GmbH, a German textbook company to permit us to use these concepts for the workbooks. Our intention for the workbook production was to propose a number of playing activities to enhance children's basic numeracy and geometrical skills. Especially our focus was to prevent children from counting numbers. For young children, counting helps them understand the concept of numbers; on the other hand, if they continue to count all the time, it hinders their numeracy skills. For that reason, we emphasised the question of letting children identify a number size for a certain quantity by a glance. Our effort, I believe, led children to have performed better than before the project started. I strongly hope that teachers encourage children not to count and to look at the concrete objects in a structured way.

I visited Loitokitok for five times in July, 2017, February 2018, August 2018, August 2019, and my final visit is planned in February 2020. In my first visit, I facilitated a workshop for teachers to show new play-based mathematics curriculum and pedagogy, focusing on numbers, counting, subitizing and comparisons in measurement. We prepared for the hands-up materials that teachers use by their hand. Those materials were very crucial for them to offer an opportunity to experience enjoyable mathematical activities on their own. And then, teachers could understand the importance of the opportunity making for children in such a play-based environment. I also had a chance to visit a few Maasai families and children to understand the situation they live within the communities, which really helped me understand the circumstances where teachers worked and lived.

In my second visit in 2018, I monitored several mathematics lessons in Loitokitok and offered some pedagogical advice to teachers. Some of the teachers really worked so hard. For instance, one teacher taught more than 70 children in a class with a play-based method, which seemed very difficult to conduct with. I was glad to have seen the teachers who participated in the previous workshop and who utilized the skills they learned through the previous workshop. I was also offered an opportunity to have visited some of the pre-primary classes to understand how the connection between pre-primary and primary education was.

In my third-time visit in August, 2018, I extended my lecture which was held one year before and introduced concrete pedagogical ideas on numbers, shopping activities and origami folding (paper folding). We had group discussions for these pedagogical ideas and teachers developed teaching plans. We selected the best ones from each group. The remaining challenge, on the other hand, was the practical aspect: how they would teach.

In my fourth visit in August 2019, I, under the extensive support of our local staff, conducted lesson study activities with each small group of teachers, ranging 12-20 of them, for the consecutive four days. Lesson study activities started among teachers in Japan and was a good tool for teachers to learn each other in a practical manner. Zambia, one of the Sub-Saharan African countries also started it as a professional development activity as a country (Zambia Ministry of Education, 2007), and it is a well-known professional development activity at a school level in the world (Stigler & Hiebelt, 1999). Teachers prepared a lesson plan and we selected two good lessons based on their lesson plan sheet before the lesson study started. We further asked two teachers to conduct a demo-lesson implementation on the day for the workshop. We invited the children and set up the real classroom for the implementation. During the lesson, other teachers were encouraged to watch the interactions attentively between teachers and children. After the demo-lesson, teachers in each group had a discussion on the implemented lesson and had a summary. After all, I gave some pedagogical perspectives to think more in-depth from the mathematical education perspective. The themes we selected for the four days were: numbers, shopping activities, measuring volume and so on. These discussions were very fruitful, and we shared many difficulties and their solutions. I was especially glad to have seen the high potential teachers with excellent skills in delivering mathematics lessons.

Overall, the project contributed qualitative aspect of mathematics education. I still see the challenges in the lesson flows and consistent relationship between lesson objectives and activities for quality mathematics lessons. I expect that these practices among teachers will be one of the excellent examples for teachers' professional development in Kenya in the future and that the Kenyan teachers will continue these kinds of practices among them. I really show my appreciation for the local staff, as well as the other specialists involved in the project, teachers, and children.

References

Stigler, J. W., & Hievert, J. (1999). *The Teaching Gap: Best Ideas from the World's Teachers for Improving Education in Classrooms*. New York: Free Press.

Zambia Ministry of Education. (2007). *School-based Continuing Professional Development (SBCPD) Through Lesson Study Implementation Guidelines 3rd Edition*. Zambia Ministry of Education.

Wittmann, Ch. E., & Müller, N, G. (2012). *Das Zahlenbuch 1*, Ernst Klett Verlag GmbH.

Wittmann, Ch. E., & Müller, N, G. (2009a). *Das Zahlenbuch Spiele zur Frühförderung 1*, Ernst Klett Verlag GmbH.

Wittmann, Ch. E., & Müller, N, G. (2009b). *Das Zahlenbuch Spiele zur Frühförderung 2*, Ernst Klett Verlag GmbH.

A reflection report of CADVES Project

Mary Silole
Deputy Head-Master, DEB Primary School
Board Member, GLMi Kenya

Background of Kiswahili remedial lesson activities for lower grade children

The CADVES project believed that the early grade learners in this target school had difficulty in two areas;
(1) Kiswahili reading
(2) Mathematics.
The difficulty was attributed to the fact that the two subject were taught in different language: English & Kiswahili and not their mother tongue which was the language of communication in their locality.

Kiswahili in Kenya is a second official language for communication. As a subject it is taught from primary to the university. Kiswahili as a subject in Kenya is compulsory and nationally examined from Grades 1-8 and form 1-4. It is therefore important the skill of reading and writing this language be acquired, at the early grade by all learners which was not the case according to UWEZO assessment Report.

CADVES identified four needs in educational opportunities and quality improvement in the target schools. The need number three (**improving early grade education**) indicate that difficulty in reading in early grade induced repetition and drop out and therefore improvement of quality education at this level was paramount.

It is in line with these needs that a remedial lesson was initiated in the 30 schools of Loitokitok to improve the educational quality in the area. To achieve and meet this need the project engaged a number of stake holders in various activities.

Activities of CADVES in Kiswahili remedial workbook

1) Developing of a Kiswahili Remedial workbook
2) Induction of the workbook before they are supplied to schools
3) Field visit for remedial lesson observation.
4) Teachers Training and facilitation of remedial lesson.

Development of Kiswahili remedial workbook

As an expert of Kiswahili, I was given an opportunity to develop a Kiswahili remedial workbook for Grades 1 and 2. I found these to be a good experience and a moment of giving back to my community. At first I felt that I should be paid highly as an author for these works and I was in to negotiate a good scholarly remuneration. At some point it came to my realization that “This is my community I am involved in and that I had a duty of giving back to her. This is where I got the impetus to work under very tight schedule alongside my duties to develop and produce **Kiswahili Kitabu cha mazoezi Gredi ya kwanza na pili**. I developed these workbooks on termly basis.

Field visit for Kiswahili remedial lesson observation

As a Kiswahili expert I had a chance in the first year to visit two regions to observe how Kiswahili remedial lesson were conducted. In every region I visited two schools where I managed to observe both grades during remedial lesson. The beginning was very impressive despite the much work that was noted with the introduction of CBC at the same time. It is in these forums that the challenges of one teacher monitoring remedials in two grades or in two streams was highlighted. As a result, I recommended for two teachers in the remedial if we were to be realistic and relevant to the projects goal and need.

Facilitation of teacher training workshop and induction of the workbook

I facilitated the induction of the workbook for every term to familiarize the implementers with the content of the term, and the continually of the content as per syllabus and curriculum design. These gave the teachers an understanding that the remedial workbook is not a substitute of the course book nor a duplication of *Tusome* books but a supplementary of both. The climax of it was the end year training workshop, where 60 participants from the 30 schools congregate for 3 days to share among other, the strengths and weakness of the Kiswahili remedial.

Through the Kiswahili remedial analysis, I have learnt that:

(1) Schools that were 100% Maasai children had poor performance in Kiswahili in Grade 2 because at Grade 1 teachers concentrated on mother tongue and helping reading for the learners as opposed to schools with children from mixed communities; and
(2) Removal of the token of the teachers stabilized the progress and the intended outcome in the middle of the second year.

Strength of CADVES IN Kiswahili remedial

1. Monitoring of remedial lesson from the beginning of the project to determine the level of implementation in terms progress and pedagogy kept the program going
2. Networking in the 30 schools where sharing experiences, pretests, and test among other issues related to remedial were made possible and teachers could see what is happening in other schools.

Weakness of CADVES in Kiswahili remedial

(1) Absenteeism in schools orchestrated by removal of feeding program by government.
(2) Transitions of mother tongue to Kiswahili has interfered the foundation of Kiswahili in Grade 1 hence poor performance in Grade 2.

In a nut shell, the CADVES project has had its share of contribution to the improvement of quality education in the target school. The relevant issues were addressed in the four needs but the three years were too minimal given that there was destabilization in between. The true success and failures could be outlined clearly if the project could undergo two phases. All the same the community has a duty to water these seed that was planted by CADVES to ensure its growth, sustainability, survival and continuity.

6.2. Reflection of stakeholders

Reflections of the CADVES Project

Frederick Haga, OGW
Director, Special Needs Education
State Department for Early Learning and Basic Education
Ministry of Education

As a key stakeholder in the education of learners with disabilities and other special needs, I wish to reflect on the CADVES Project that was implemented in Loitokitok Sub-county of Kajiado County which ends in March 2020. I was to a great extent, involved and participated in the project in several ways, ranging from direct and remote consultations with the Project coordinating team, actual visits to the project site, and facilitating linkages with relevant Governmental institutions such as the National Council for Persons with Disabilities.

The Project aimed at addressing some of the key gaps being observed in the education of learners with special needs in Kenya. Issues of access, equity, quality and relevance were identified as some of the barriers in the provision of education services to the said group.

The approach the Project adopted, of involving the local community and empowering them through Leadership and Governance trainings, was a sure way of reaching them and therefore impacting on their attitude towards children with special needs. In Kenya, low levels of awareness by local communities towards children with disabilities is a key hindrance to effective service provision.

I was present at the opening ceremony of the Dormitories and the Resource Centres at Enkijape and Illasit Schools in 2018. It was powerful! Such forums connect with the local population and the event provided a perfect opportunity to sensitize the community regarding the rights of children with disabilities to education, and the support available from the Government.

As a Government officer with the responsibility of promoting the policy and practice of inclusive education for learners with special needs, I consider the Project's approach towards placing such children in regular schools most admirable. The Sector Policy for Learners and Trainees with Disabilities (2018), which was launched by the President of the Republic of Kenya himself, clearly articulates provisions of offering education services to learners with special needs in general school setting. Interventions such as physical modification for accessibility, resources such as auditory equipment for functional hearing assessment and the promotion of Kenya Sign Language are some of the strategies outlined in the said policy, interventions that the Project undertook. This demonstrates that the Project was in line with Government policy and plans, as well as the provisions of the Constitution of the country.

The study tours and capacity building initiatives targeting head teachers, teachers and the local community, in addition to the Leadership and Governance trainings to the wider school

communities brought to the fore not just the importance of education, but also the critical role the entire school community can play in ensuring their children, including those with disabilities, get quality education.

I particularly admired the manner in which the Project reached out to the local community to empower them with a view to making the initiative sustainable.

I believe the Project has brought positive change to the Maa community in Loitokitok, including other Kenyan communities settled in the sub-county, and left that society better in terms of providing education services for learners with disabilities. The lessons learned can be adopted for scale-up not just by the Government, but also by other non-state actors in the provision of quality education services for learners with disabilities in Kenya and across developing countries.

Reflection of CADVES Project Achievement in Loitokitok Sub-County, Kenya

Siwilli Laban
Sub-County Director of Education
Loitokitok Sub-County

Our Loitokitok subcounty education offices do appreciate the good working partnership with GLMI on the CADVES project. The project has impacted positively in the 30 schools where it is being implemented and all this is courtesy of the cooperation. GLMI has contributed so much in terms of resources and capacity building.

1. Classrooms and resource centres which are well equipped had been built in some schools. This also includes construction and/or improvement of dormitory facilities.
2. Donation of an acoustic cube and an audiometer for assessing learners with hearing disability.
3. Capacity building of schools community members, headteachers, teachers and schools managements on schools development plans.
4. Sensitization of communities and identifying and assessing learners with special needs and placing out of schools children.
5. Remedial teaching of learners in the lower grades to improve on reading skills.
6. Study tours of stakeholders to model schools with SNE resource centres.
7. Schools needs assessments and surveys.

All these intervention through partnership has contributed to improvement in school enrollment, retention, attendance and reading capabilities. This eventually had been attested in the numerous monitoring visits in the project schools.

As a ministry we acknowledge the role played by GLMI and that we shall keep on monitoring whatever had been started in the project schools as we also plan on the same model to roll out similar programs in other schools in the sub county. The impact of the project in our schools is big and that individual homesteads have been enlightened on matters of children with special needs. As a Ministry of Education, we welcome all organisations and other private partners and stakeholders on promotion of education standards.

We look forward for continued working together with GLMI even as CADVES winds up this project.

Teachers Service Commission report on GLMi Project 2017-2020

Patrick Kureko Ole Nang'unin
CSO/SNE, Teacher Service Commission
Loitokitok S/County

Project activities:

As a department in special needs education (SNE), the project did quite recommendable work towards learners and persons with disabilities. During Asano's time the department was involved in identifying learners with special needs both in and out of school in the thirty (30) schools. Parents were sensitized and educated on identification, assessment and placement of learners with special needs. A lot of positive attitudes was realized among the community members.

Activities related to special needs education:

A number of activities and support were done to our two schools, with special units by the GLMi project headed by Dr. Mikiko Nishimura and locally administered by Ms. Mitsue Hiromoto working hand in hand with the ministry of education (MOE) headed by Mr. Siwili Laban and Teachers Service Commission (TSC) headed by Mr. Stephen Musyoka.

The two schools are:

1. Enkijape Special Unit for Hearing Impairment (H.I)
2. Illasit Special Unit for the mentally handicapped (M.H)

In Enkijape special Unit for (HI), a girls' dormitory was constructed, boys dormitory was also renovated and a resource room was constructed where learners with hearing impairment are taught here. In Enkijape Unit for the dea an audiometer installed. Our learners don't travel far areas to seek for hearing test.

In Illasit Primary School Unit for M.H a resource room was constructed and equipped with furniture and learners are very comfortable and appreciate the support.

Special needs education (SNE) study tour:

The project was able to facilitate bench marking of H/tr, DHT, BOM chair, PTA chair, Chief, parent and SNE teacher from the thirty-two (32) schools to Enkijape Unit for the deaf and Illasit Unit for the Mentally handicap. The stakeholders involved developed a positive attitude towards education for learners with special needs. This was done from 10th- 12th Sept 2019

Recommendation/Conclusion

1) That the activities offered to our targeted schools created quite a good learning environment.
2) Dropout rates were addressed in our schools.
3) Learners with special needs were catered for.
4) More schools could have been targeted.

5) Provision of audiometer machine and acoustic room is a step forward to cater hearing test of learners.
6) That GLMi being led by Mitsue Hiromoto facilitated registration of over 113 learners with NCPWD in the months of Nov & Dec 2019.
7) High enrollment to special unit has been noted e.g. Illasit Unit for M.H and Enkijape Special unit for H.I

I wish GLMI long life and hope they may extend their agreement to continue supporting our schools.

The two directors, Ministry of Education and Teachers Service Commission have enabled the project to offer all the services to our schools by giving them moral support.

GLM Institute and the CADVES Project

Charles Masangira
Chairman, GLMi Kenya

In the year 2014-2015, Dr. Mikiko Nishimur and Dr. Jun Kawaguchi through Illaramatak le Mpusel and Uwezo Kenya came to Kenya and participated in the assessment that was aimed at identifying the gaps in Education especially of the lower grade children and what solutions were available. The outcome of the numerous surveys led to the development of the CADVES programme.

When the project started, the approach was different from what the community were used to. There was more of partnership and community driven process as opposed to donor-beneficiary relationship. This took time for the community to grasp but continued emphasis in every meeting, forum, session and meeting enable the community to understand that they have a role in shaping the future of their children.

The project had training sessions to build the capacity of the leadership within the community where the 32 primary schools were. The leadership included the chiefs, the chairs of the Board of Management and Parent Association, and the Head teachers of the 32 schools.

Capacity building sessions were also built to the teachers who conducted remedial lessons to the lower grade children. The training on Kiswahili and Mathematics was simplified making it possible for teachers to teach with ease. Books were also availed to make the process a success. Continuous monitoring of the project by the GLMi Japan, Staff in Kenya, the Board, the Ministry of Education and other stakeholders motivated people involved in the project to do their best. Sacrifices were done and at times making painful decisions in order to ensure that the project succeeds.

Today, we celebrate all the achievements. Some of the key achievements are;

1. Positive identification and placement of out of school children especially those with special needs
2. Referrals to the special needs children for medical intervention
3. Prioritization of lower grade learning in schools
4. Capacity development to the communities, their leaders and the school fraternity
5. Support in development of the SDPs in schools
6. Mentorship and support of teachers and learners
7. Information sharing to stakeholders through social media especially Whatsapp.

These and many others make GLMi outstanding in its development record. We will miss the partnership, we will miss the project we will miss the good time we shared together. We believe that this partnership and these projects will be continued and sustained.
God Bless You All.

7. Conclusion

The final chapter presents our evaluation of the project purpose and recommendation for the way forward.

7.1. Project Goal of CADVES and Evaluation

CADVES has a project purpose: Opportunities of quality primary education for lower grade children under difficult circumstances are expanded in 30 schools of 30 villages in Loitokiok. To evaluate this project purpose, we used several indicators including repetition and dropout rates in lower grades, quality of classes conducted in target schools, the number of enrolled children with disabilities and poverty.

Repetition and dropout rate in lower grade

The repetition rate for Grades 1 and 2 in 30 schools decreased from 8% (257 pupils) in 2018 to 6% (212 pupils) in 2019 to 0.03 % (1 pupil) in 2020. The 100% transition policy adopted by schools partly explain the significant drop from 2019 to 2020; however, the fact that pupils who understood their grade level before promotion to the next grade increased after our intervention on remedial lessons. Thus, CADVES made a significant impact on transition to the next grade with learning proficiency.

The dropout rate for Grades 1 and 2 in 30 schools also decreased from 1.2% (40 pupils) in 2018 to 0.7% (24 pupils) in 2019 and 0.7% (25 pupils) in 2020. Our continuous emphasis of the right to out-of-school children and especially those with disabilities have gradually been embraced by school and community leaders, albeit with a variety of reaction and level of leadership and commitment especially with regard to early pregnancy.

The quality of classes

The quality of classes improved after lower grade teachers went through remedial lessons and lower grade teacher training. 27 (50%) out of 54 remedial teachers implemented a play-based pedagogy in their lessons after they joined a lesson study workshop in 2019. This achievement is amazing for teachers in Loitokitok who lack the opportunity to learn practical pedagogy under the Competency-Based Curriculum (CBC). Out of 27, 7 teachers implemented a new pedagogical method and material at their remedial lessons. Some developed syllable cards and measurement items, and others prepared a shopping goods corner for shopping activities in mathematics remedial lessons.

The number of enrolled disabled children and poor students

Apart from pupils enrolled in Enkijape and Ilasit, the number of children with special needs in schools increased from 206 in 2018 to 294 in 2019 to 330 in 2020. This is thanks to the effort of awareness raising in the community and differentiating special needs children and children who take time to follow the class. The number of enrolled students who live under poor conditions of shelter, nutrition, and clothing are stable from 1,070 in 2019 to 1,064 in 2020 according to head teachers.

As discussed earlier, information sharing through several channels successfully improved the awareness of parents. Parents received education information about KCPE mean scores, out-of-school children, their monitoring roles of study and ongoing education issues such as the early pregnancy and low performance in lower grades. The shared information was analyzed by GLMi staff who are equipped with statistical skills.

Second, community-based school management was strengthened through the planning and implementation process of SDPs. In 2019, 164 activities were planned on SDPs in 30 schools and 119 activities (72.6%) were implemented. The achievement was obtained because school leaders understood that SDPs are not wish-lists and should be realistically planned based on locally available resources with an achievable target in a year. Over 1 million KES was mobilized to implement activities in 30 schools in 2019, which showed that community is an indispensable partner in schools in Loitokitok.

Third, the early grade learning improved significantly as our learning assessment result showed. Mathematics scores for Grades 1 and 2 have been in an upward trend since 2017. While the test score of Kiswahili dropped from 2018 to 2019, the emphasis of syllable at training and the writing exercise on exercise books during the school break enabled scores to dramatically rise. This success proves that increasing learning time through remedial lessons and homework for early grades can improve basic numeracy and literacy. The pupils' success was also owing to the improved capacity and frequency of parents to monitor children's learning at home and to visit remedial lessons in school.

Fourth, issues on out-of-school children and special needs children were well-addressed. Over 30% of identified out-of-school children were enrolled in schools now by untiring follow-up efforts of local leaders. Twenty-one pupils with disabilities started to enroll in Enkijape and Illasit primary schools after the construction projects. The number of enrolled special needs children substantially increased in 30 target schools. The awareness of SNE improved through a five-day-long study tour to Enkijape and Illasit schools. The assessment for special needs children identified 113 special needs children who are currently under registration of NCPWD. All in all, these combined efforts enabled children with special needs in Loitokitok to gain an opportunity to learn. A further step would be required to sustain such opportunity by creating inclusive learning environment for *all* children with local and external resources. A school alone may not be able to tackle such challenge, but collective action at zone and sub-County level will be expected to emerge. The detailed output with statistics for four project components discussed above is summarized in Appendix 2.

The initial assumption of the project is that once data and information are shared at local level and discussed based on data, it would encourage community-based action and improve quality and equity of education. This was partially proved, albeit with nuanced complexities. Information sharing was not easy to reach out to community people. Although educated people recognized our information well, information did not reach to the majority of people due to their

illiteracy and network. Community meetings were more effective in sharing information in community. Nevertheless, it is also difficult to determine a causal relationship between information sharing and community-based action. There is a possibility that parents may not lead to their collective intervention if information is shared individually through SMSs and SNSs. Individually-confined messages would induce community actions only if there is further immediate discussion with other community members. Community meetings may be more ideal channels to encourage community-based action through information sharing.

Information indeed could negatively affect collective action. Negative information may lead to parental action of exiting from that school and transfering their children to other performing schools once they know the poor school situation. Here, accurate information, such as school performance has a potential to discourage a parent if the performance declines. As one deputy head teacher claimed, sharing KCPE mean score at his school would be regarded as inciting community. Our panel data analysis on parents' surveys shows that parents who had accurate information on their child's educational performance at the baseline contributed less to school at the end line. This finding suggests that the parents who received such information were disappointed with school performance in this regard and diverted their financial resource to other aspects that may specifically affect their children.

According to the assumption of school-based management of the World Bank (Bruns, Filmer & Patrinos 2011), informed parents can act rationally to improve school by engaging with schools and governments. However, the rational choice from the parents' point of view may not be a community action to improve that school but to transfer their children to other schools. In this sense, the accurate information may not lead to intended community action. We should further understand the mechanism of how community works for collective school improvement action and how information can help community action. Currently, information technology (IT) is a buzz-word and people are willing to implement a project featured by IT. However, our project intervention on information sharing through SMSs and SNSs impies that information is not a panacea. Without knowing how people behave and how information influences people in a particular cultural context, it does not seem to produce the expected outcome.

Reference

Bruns, B., Filmer, D., & Patrinos, H. A. (2011). *Making schools work: New evidence on accountability reforms*. Washington, DC: The World Bank.

7.2. Overall Challenges

As discussed in the analysis of each project component, "dependency-syndrome" was a major hindrance for us to build capacity of stakeholders. We intended to become a catalyst for a change at the school-level not as a donor to give something. However, many people still have a strong perception that NGOs come to help them. This deep-rooted perception led them to see GLMi as the same NGOs or foreigners who give something for free. Some people on the ground

changed the perception towards us during the project period. For example, Mr. Patrick Nang'unin (CSO-SNE officer) always share with us that GLMi is different from other NGOs and serious on capacity building not donation. However, the donor-mentality has persisted for many stakeholders. Some schools welcomed us in the first year for expecting something; however, their enthusiasm became weaker once they realized that they would not receive tangible benefits from us.

However, this dependency-syndrome is not limited in the community but within GLMi. The capacity building of local staff was a critical bottle-neck; however, ex-Kenyan staff did not fully understand their role. Further, there was a mentality that Loitokitok team (staff working in Loitokitok) works only for coordination and logistics not for substantial part of the project. This was called as "Specialist-dependency syndrome". When we had a training in the 1st year, ex-Kenyan staff disappeared from the training venue and talked outside, letting specialists facilitate the training session. They did not actively involve in or learn contents but were satisfied with a position as a mere mediator. This mentality is also part of the reason why we could not implement an appropriate measure to improve Kiswahili performance until the 3rd year as discussed before. In the end of the 2nd year, we had to change the staff structure due to their poor performance and its internal conflict.

If we had aimed cultivating the ownership mind of CADVES project components, we should have planned carefully in every part of a project. Tokens should not have planned if we aimed the community-based remedial lessons. We should have discussed with Enkijape and Illasit School about community contribution and maintenance plan before the construction started. Even a single Powerpoint slide during the training should have been paid attention not to mislead people. Loitokitok team should have been briefed carefully about the goal and philosophy of CADVES well before the project started, until they would embrace them.

Further, the management structure was not clear within GLMi. Initial members who developed CADVES from Japan and Kenyan sides always repeated a strong word, "Let us work together and help together". However, this word blurred the responsibility of each actor within the organization. Since two professors were the major actors who created a project, Loitokitok team tended to depend on them without deeply thinking about project contents by themselves. In contrast, members in Japan trusted Loitokitok team as professional NGO workers. Since they believed that they developed CADVES together with Loitokitok team, they thought that staff in Loitoktok would manage a project well. Thus, their involvement was limited in the 1st year and they assumed their role as a specialist not as a manager. Within a Loitokitok team, Tetsuya Yamada was the last stronghold to be responsible for project components. Initial staff always said, "Let us work together"; however, that word meant they do not need to accomplish their task because others would eventually help out. It was difficult for the Chief Administrative Officer in Kenya to decide the project management matter. The Project Manager was in Japan and the responsibility of each actor was not clear in the beginning. The banal slogan "Let us work together" blurred the responsibility and increased a workload for a specific person in the end.

Lastly, it was a little too ambitious to implement 4 project components at 30 schools which geographically scattered within three years. It is true that our monitoring planning was weak in the beginning. We could have visited several schools in one day and could have collected data over phones without visiting schools. Although we improved the efficiency of monitoring from the 2nd year, there were many things to do. We discussed many things, collected several data and monitored from the morning to the later evening in one school. The monitoring continued for about two months and staff easily became tired. Even during the monitoring work, we had to prepare for training, conduct learning assessment and data analysis, and sort out internal governance issues. Even with this tight schedule, we could visit one school for only twice per term, which was not sufficient to monitor the effective implementation.

7.3. Way Forward

GLMi Kenya implemented CADVES between 2017 and 2020. CADVES stands for Capacity Development Project for a Village-Based Sustainable Primary Education Strategy. As the above name shows, the main aim of the project was to do "capacity building" of education stakeholders. As Dr. Nishimura mentioned in the previous section, our role was to become a catalyst of a positive change in schools. Unlike traditional NGOs, GLMi did not aim to "donate" something to schools, which would eventually discourage the ownership of stakeholders at the school-level. Since our ultimate goal was to develop a village-based sustainable primary education strategy for the CADVES project components, it is imperative for us to discuss a sustainable way forward for each project component.

As our project showed, information sharing is essential for parents to feel ownership to a school. Holding a community meeting is a key to share information directly with community. Even that simple opportunity can create an atmosphere to act collectively. Each school has a plenty of data on learning performance, out-of-school children, and budget. School leaders should analyze the school data well before the community meeting. The information should be transparent and shared in an easy way that the least educated parents can understand. School leaders should collect the voices from all stakeholders especially women and parents with children with disabilities since men tend to dominate the discussion in 30 villages. GLMi created the WhatsApp groups for head teachers, remedial teachers, and geographical zones, respectively. Those groups will be able to continuously use these platforms to share good practice and exchange beneficial information.

School Development Plans (SDPs) are planned for the purpose of implementing community-based school activities with evidence-based objectives. SDPs are mainly composed of community-led action. SDPs can also be an effective communication tool for schools to convince external organizations such as other schools, DEO's office, local NGOs, and Constituencies Development Fund (CDF) to collaborate for the same objectives. SDPs can inform how much community can do with their capacity and how much schools should collaborate among one another and with external organizations. As we all learned, SDPs should not be used as wish-lists that are rarely implemented. If plans are not implemented, stakeholders

do not consider SDPs as important and SDPs will remain only in the head teacher's shelf. To avoid such situation, school leaders should carefully and constantly diagnose school issues based on available data and identify community resources with stakeholders. Starting from identified issues and prioritize actions which can be implemented with a reliance on locally available resources will be a good starting point for great achievement. School leaders should prioritize school-based activities (e.g. remedial lessons and actions for out-of-school children) that they can quickly start at the school-level and give a direct impact on learning. Community might have had the perception that a community meeting pushes a lot of pressure on their shoulders to generate money for school. To avoid this negative attitude on community contribution, school leaders should involve as many parents as possible from the planning process of SDPs to generate the sense of ownership and responsibilities. If they own SDPs, they will think what they can do.

Early grade learning should be continuously emphasized as a school improvement priority. This is because early grade learning is a foundation of a further learning. As our project showed, pupils can retain and transit to the next grade in schools if early grade learners have a high standard of learning level. School leaders should make continuous efforts to increase learning time. As our experience showed, increasing learning time does not cost much and yet significantly improved the learning outcome. While changing the learning environment and teaching methods cost and take time, increasing learning time can be done with a small effort and commitment of stakeholders. Giving exercise by using our workbooks and exercise books can prolong their learning time. Homework will be effective during the school break from October to December. Early grade teachers in 32 schools were already trained and are ready for demonstrating and facilitating lesson study. School leaders are the ones who can create time for lesson study practice at the school level. The lesson study does not require any external assistance. If new teachers want to learn a play-based pedagogy, the idea books that we provided are the reference to learn Mathematics and Kiswahili pedagogy. A provided CD that contains all learning materials will enable schools to print Grades 1 and 2 workbooks if they so wish or simply use them when they come up with questions to pupils for homework.

The continuous awareness creation of out-of-school children and special needs children is a key to sustain and further improve learning environment in 30 villages. Some parents do not consider child labor as a big issue. Other parents think special needs children are unable to learn. Some others think that early pregnancy is the responsibility of mothers and that pregnant girls should drop out of school. Those perceptions should be eliminated by the action of school leaders. The role of a chief in each village is vital since the issue of out-of-schooling needs an active leadership at the community level. Visiting Enkijape and Illasit is one way to learn how SNE is implemented. A role model of special needs children who are educated in Enkijape and Illasit can give a talk on the importance of SNE to the rest of schools. Girls who went to high school and universities from the same village can come back and talk to girls and boys about future opportunities that they may not want to miss by early pregnancy or early marriage. Such collaborative activities are hoped to grow and to be shared further in 30 villages. Since GLMi invested substantial financial and human resources to construct resource rooms and dormitories

in Enkijape and Illasit School, the school leaders should create a maintenance and utilization plans. The Sub-County Education Offices in Loitokitok should supervise the implementation of those plans. Especially, stakeholders should think about how an audiometer for hearing assessment and two dormitories will be utilized fully by children with hearing disability.

At the final CADVES reflection seminar in March 2020, school leaders together with Sub-County Education Officers reflected the above 4 project components and discussed their way forward. School leaders understood the importance of implementing SDP with community ownership. The Sub-County Director of Education understood the effectiveness of SDP and promised to monitor SDP in the whole sub-county. Learning from success case in other schools, many school leaders realized the urgent needs of implementing school development action when they go back to their community.

NGOs are not always there to help or something that one can just wait for them to come. An NGO like GLMi did not only have short-term goals which can be easily obtained by donation, but foresaw a long-term goal with local ownership and initiative. GLMi had a long-term goal for school leaders to improve educational quality and equity issues by having ownership on school management. Those leaders were to be surrounded by informed community members who were ready for active involvement in school matters. That is why GLMi tried to be a catalyst rather than an implementer of a project. We believe that we have done capacity building as a catalyst and cultivated the ownership mind in 32 schools in 32 villages in the past three years. We introduced activities which would not cost and require a big donor outside community. Now, it is time for school leaders to continue with the knowledge and heart gained by a CADVES project under the supervision of Loitokitok Sub-County Office of the Ministry of Education. Although GLMi terminates the CADVES project, individual relationships will remain. Wherever we are, we are connected through SNS and all the beautiful memories and wonderful time shared together will last forever with successful practices that we jointly created and challenges we faced and solved together as the CADVES team.

Wish you all the best.

Appendix

Appendix 1 Project Design Matrix (PDM)

1. Project Title/Duration	Capacity Development Project for a Village-Based Sustainable Primary Education Strategy (CADVES)
2. Name of Organization	**GLMi Kenya**
3. Target Group	**30 schools in 30 villages in Loitokitok sub-county**

Project Summary	Indicators	Means of Verification	Important Assumptions
(Overall Goal) Opportunities of quality primary education for all children are ensured in 30 schools of 30 villages in Loitokitok	・Repetition rate for Grade 1-8 in 30 schools ・The number of out-of-school children enrolled in 30 schools	・School Record at the District Education Office and at schools	
（Project Purpose） Opportunities of quality primary education for lower grade children under difficult circumstances are ensured in 30 schools of 30 villages in Loitokitok.	・Repetition and dropout rate in lower grade	・Interviews to teachers	
	・The quality of classes judged by teachers and course evaluation	・Observation of classes ・HT and peer monitoring format	
	・The number of enrolled disabled children and poor students	・School Data ・The reason why children were out-of-school	
（Output）			
1. Educational data analyzed by local staffs are broadly shared to community	**1st year:** All local staffs taking the training acquire statistical analytical skills	・Skill tests, Frequency of information analysis ・The number of teachers who joined SNS group	
	2nd year: More than 3 types of data are uploaded on their website. Half of the designated communities browse and implement their activities with the data.	・Skill tests ・The number of uploaded data. ・The number of HP viewers and the number of parents who came to community meeting. ・The implemented activity record	
	There is an intensive information sharing and discussion on SMS and SNS groups.	・The number and frequency of discussion done at SNS group ・The number of SMSs sent to parents. ・The number of parents communicate to GLMi	
	3rd year: More than 5 types of highly analysed data are uploaded on their website. All the designated communities browse and implement their activities with the data.	・Skill tests. ・The Number of uploaded data. ・The number of HP viewers and the number of parents who came to community meeting. ・The implemented activity record	
	There is an intensive information sharing and discussion on SMS and SNS groups.	・The number and frequency of discussion done at SNS group ・The number of SMSs sent to parents. ・The number of parents communicate to GLMi	
2. Community's participation in school management	**1st year:** School development plans are formulated in all the	・School development plans' documents of 30 schools.	

increases	designated schools.		
	2nd year: More than 6 meetings are yearly organized in all the designated schools.	・Monitoring reports. School records. Observation.	
	School development plans are formulated in all the designated schools.	・School development plans' documents of 30 schools for 2nd year.	
	3rd year: More than 2 activities proposed by community are implemented in all the designated schools.	・Monitoring reports. Questionnaire for head teachers. ・The amount of parental contribution (financial/non-financial) in 3rd year ・The number of activities implemented	
	School development plans are formulated in all the designated schools.	・School development plans' documents of 30 schools for 3rd year.	
3. Learning environment for lower grade children improves	**1st year:** Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.	・Existence of teaching materials in Swahili and math. ・The number of distributed materials.	・ Books are delivered on time. ・ Schools have feeding program ・There are active teachers.
	Adult literacy classes are held at 30 schools	・The number of parents who come to monitoring ・The number of books checked by parents	
	2nd year: Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.	・Existence of teaching materials in Swahili and math. ・The number of distributed materials.	
	Workbooks in Swahili and math for lower grades are used in remedial lessons at each school.	・Observation of remedial lessons. ・Monitoring tools of remedial lessons. ・Pre and Post tests for remedial lessons ・GLMi learning assessment	
	Adult literacy classes are held at 30 schools	・The number of parents who come to monitoring ・The number of books checked by parents	
	3rd year: Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.	・Existence of teaching materials in Swahili and math. ・The number of distributed materials.	
	Workbooks in Swahili and math for lower grades are used in remedial lessons at each school. **The number of students who acquire class 2 learning level increases to 70%.**	・Observation of remedial lessons. ・Monitoring tools of remedial lessons. ・Pre and Post tests for remedial lessons ・GLMi learning assessment (Jun&Oct)	
	The number of teachers for lower grade in all the designated schools who can teach with confidence increases by 50%.	・Questionnaire for teachers. ・Observation of classes	
	Adult literacy classes are held at 30 schools	・The number of parents who come to monitoring ・The number of books checked by parents,	
4. Activities for improving the learning opportunities of children under difficult circumstances are implemented	1st year: The number of out-of-school children is confirmed in all the designated villages. 80% of each community recognise the problems about out-of-school children.	・Survey lists of out-of-school children. ・Interviews for BoMs, community and teachers.	

	2nd year: Action plans for including out-of-school children are formulated.	・Action plans.	
	Resource rooms are constructed in 2 designated schools.	・Resource rooms	
	3rd year: 20% of out-of-school children confirmed by each community go to school.	・School Record. ・Case study of those students who enrolled	
	2 resource rooms are constructed in other 2 schools. Teaching is implemented for the disabled children at 2 schools with resource rooms.	・Resource rooms	
（Activities） **1st year** 1-1. Train local staffs to acquire statistical skills, PCM and school management planning 1-2. Train local staffs to use statistical software 1-3. Set up SNS groups for lower grade teachers and head teachers, and promote discussion **2nd year** 1-3. Promote discussions at SNS groups for lower grade teachers and head teachers 1-4. Set up SMS groups and provide information to community 1-5. Train local staffs to create websites 1-6. Set up environment to share educational data 1-7. Analyze and publish educational data **3rd year** 1-3. Promote discussions at SNS groups for lower grade teachers and head teachers 1-4. Send SMS to community 1-8. Train local staffs to conduct high quality analysis 1-9. Publish high quality educational data 1-10. Communities expand activities based on educational data **1st year** 2-1. Develop materials for “governance and leadership training” 2-2. Implement “governance and leadership training” 2-3. Hold community meeting 2-4. Formulate SDPs in 30 schools	Inputs		（Pre-conditions）

2nd year and 3rd year 2-1. Develop materials for “governance and leadership training” 2-2. Implement “governance and leadership training” 2-3. Hold community meeting 2-4. Formulate SDPs in 30 schools 2-5. Monitor implementation of SDPs **1st year** 3-1. Develop manual teaching materials for “early grade teachers” 3-2. Implement “early grade teachers training” 3-3. Develop work books in Swahili and Math 3-4. Monitor quality of lower grade education **2nd year and 3rd year** 3-1. Develop manual teaching materials for “early grade teachers” 3-2. Implement “early grade teachers training” 3-3. Develop work books in Swahili and Math 3-4. Monitor quality of lower grade education 3-5. Implement remedial lessons 3-6. Evaluate educational quality & identify issues 3-7. Revise work books **1st year** 4-1. Form working groups 4-2. Implement workshops about out-of-school children 4-3. Investigate the number of out-of-school children and disabled children 4-4. Conduct needs assessment for resource rooms **2nd year and 3rd year** 4-2. Implement workshops about out-of-school children 4-4. Conduct needs assessment for resource rooms 4-5. Working groups analyze the investigation result and set up action plans for out-of-school children and disabled children 4-6. Select schools for resource rooms/dormitory, extend and renovate rooms and set up materials and supplementary educational aids 4-7. Working groups implement action plans and monitoring		

Appendix 2 PDM evaluation with achievement of indicators

1. Project Title/Duration	Capacity Development Project for a Village-Based Sustainable Primary Education Strategy (CADVES)
2. Name of Organization	**GLMi Kenya**
3. Target Group	**30 schools in Loitokitok sub-county**

<table>
<tr><th>Project Summary</th><th>Indicators</th><th>Achievement</th><th>Challenges</th></tr>
<tr><td>（Project Purpose）
Opportunities of quality primary education for lower grade children under difficult circumstances are ensured in 30 schools of 30 villages in Loitokitok.</td><td>・Repetition and dropout rate in lower grade (Grade 1 and 2) at 30 schools</td><td><table><tr><td></td><td>2018</td><td>2019</td><td>2020</td></tr><tr><td>Repetition Rate</td><td>8% (257 pupils)</td><td>6% (212 pupils)</td><td>0.03% (1 pupil)</td></tr><tr><td>Dropout Rate</td><td>1.2% (40 pupils)</td><td>0.7% (24 pupils)</td><td>0.7% (25 pupils)</td></tr></table></td><td rowspan="3"></td></tr>
<tr><td>・The quality of classes judged by teachers and course evaluation</td><td>27 (50%) out of 54 remedial teachers implemented a play-based pedagogy in their lessons after they joined a lesson study workshop in 2019.
10 and 25 teachers were awarded for their excellent pedagogy in the 2nd and 3rd term 2019.</td></tr>
<tr><td>・The number of enrolled disabled children and poor students</td><td><table><tr><td>30 schools</td><td>2018</td><td>2019</td><td>2020</td></tr><tr><td>Disabled children</td><td>206</td><td>294</td><td>330</td></tr><tr><td>Poor students</td><td>-</td><td>1070</td><td>1064</td></tr></table></td></tr>
<tr><td>（Output）</td><td></td><td></td><td></td></tr>
<tr><td rowspan="3">1. Educational data analyzed by local staffs are broadly shared to community</td><td>1st year: All local staffs taking the training acquire statistical analytical skills</td><td>GLMi staff learned basic education indicators.
GLMi staff applied the knowledge to analyze learning assessment and baseline survey data.</td><td rowspan="3">Illiteracy and network coverage</td></tr>
<tr><td>2nd year: More than 3 types of data are uploaded on their website. Half of the designated communities browse and implement their activities with the data.</td><td>GLMi homepage was set and 12 types of data were uploaded. 1009 page views were confirmed from April 2018 to March 2019.</td></tr>
<tr><td>There is an intensive information sharing and discussion on SMS and SNS groups.</td><td>The SMS platform is opened and 74 messages were sent to 1945 parents.
967 parents received information directly from GLMi staff during the community meeting from April 2018 to March 2019.

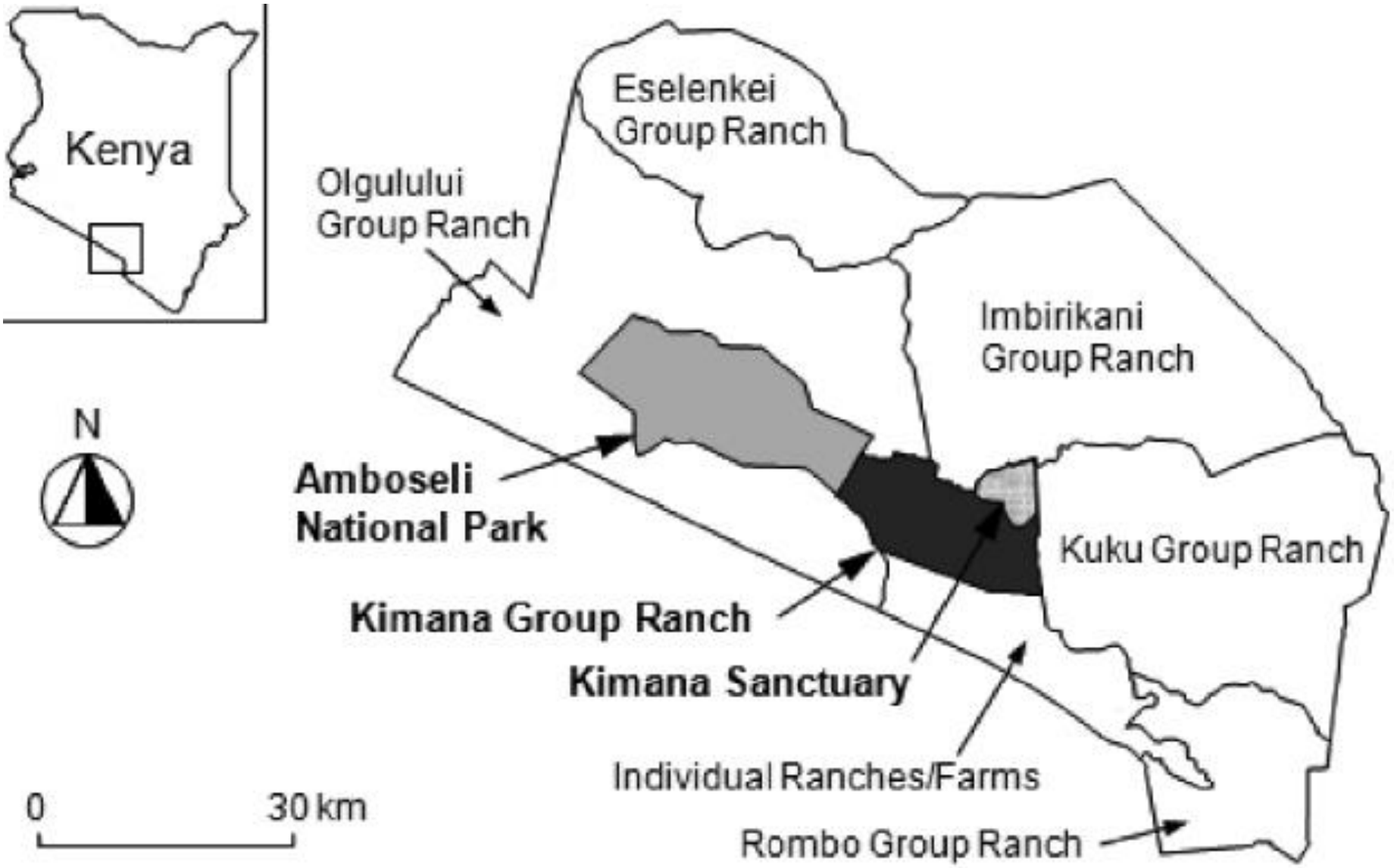
If we assume all figures above are unique, 71% of parents received information (The total parents is 5515 in March 2019).

923 messages were shared on WhatsApp groups and 755 out of them were done at the</td></tr>
</table>

		Early Grade Teacher group.	
	3rd year: More than 5 types of highly analysed data are uploaded on their website. All the designated communities browse and implement their activities with the data.	In addition to 12 highly analyzed data, 3 videos were uploaded on the home page. **459** additional page views were confirmed from April 2019 to February 20 2020. Also there were **126** page views on videos uploaded on Youtube. **93** parents at Iltilal watched a video at the community meeting. 73 activities were planned based on information sharing and 63 were implemented (86%). 471 parents received information directly from GLMi staff during the community meeting from April 2019 to February 20 2020.	
	There is an intensive information sharing and discussion on SMS and SNS groups.	**2216** parents received 42 additional messages from April 2019 to 15th February 2020. If we assume that parents who received text messages, came to community meeting, and visited home pages are unique, in total **5341** parents received information out of 5538 parents (**96%**). 360 additional messages were shared on WhatsApp groups from April 2019 to 17th February 2020.	
2. Community's participation in school management increases	**1st year:** School development plans are formulated in all the designated schools.	All 30 schools developed SDPs in 2018.	SDPs tends to be a wish-list which is rarely implemented. Community meetings were negatively captured by parents (meetings for pesa).
	2nd year: More than 6 meetings are yearly organized in all the designated schools.	On average 5.03 meetings were organized from April 2018 to Match 2019.	
	School development plans are formulated in all the designated schools.	All 30 schools developed SDPs in 2019.	
	3rd year: More than 2 activities proposed by community are implemented in all the designated schools.	On average 3.97 planned activities on SDP were implemented at each school in 2019. 119 activities out of 164 planned activities were implemented. The implementation rate is 72.6%. In total, at least 1,242,300KES were locally mobilized to implement SDP activities at 30 schools.	
	School development plans are formulated in all the designated schools.	All 30 schools developed SDPs in 2020.	
3. Learning environment for lower grade children improves	**1st year:** Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.	All pupils at Grade 1 and 2 received workbooks for term 1 2018.	Remedial lessons and lesson study would not be sustained.
	Adult literacy classes are held at 30 schools	GLMi organized meetings for parental monitoring ability at 11 schools.	

<table>
<tr><td></td><td>2nd year: Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.</td><td>All pupils at Grade 1 and 2 received workbooks for term 2 and 3 in 2018 and term 1 in 2019.</td><td></td></tr>
<tr><td></td><td>Workbooks in Swahili and math for lower grades are used in remedial lessons at each school.</td><td>Remedial lessons were implemented from term 1 2018 onwards.</td><td></td></tr>
<tr><td></td><td>Adult literacy classes are held at 30 schools</td><td>1190 parents checked remedial workbooks and 565 parents visited remedial lessons at 30 schools.</td><td></td></tr>
<tr><td></td><td>3rd year: Workbooks in Swahili and math for lower grade teachers are developed and distributed to each school.</td><td>All pupils at Grade 1 and 2 received workbooks for term 2 and 3 2019 and term 1 2020.</td><td></td></tr>
<tr><td></td><td>Workbooks in Swahili and math for lower grades are used in remedial lessons at each school.
The number of students who acquire class 2 learning level increases to 70%.</td><td>Remedial lessons were implemented from term 1 2019 onwards.
There was an improvement in students' learning performance in math and Kiswahili for Grade 1 and 2. 80% of Grade 3 students met the mathematics pass marks whereas 49% of them met the Kiswahili pass marks (see Figure 9 and 10).</td><td></td></tr>
<tr><td></td><td>The number of teachers for lower grade in all the designated schools who can teach with confidence increases by 50%.</td><td>Confidence level of early grade teachers out of 5 points
<table><tr><td></td><td>Before</td><td>After</td></tr><tr><td>Mathematics</td><td>3.63</td><td>4.93</td></tr><tr><td>Kiswahili</td><td>3.76</td><td>4.97</td></tr></table>The confidence level improved; however it did not increase by 50% because the initial confidence level was quite high.</td><td></td></tr>
<tr><td></td><td>Adult literacy classes are held at 30 schools</td><td>1734 parents checked remedial workbooks and 815 parents visited remedial lessons at 30 schools.</td><td></td></tr>
<tr><td>4. Activities for improving the learning opportunities of children under difficult circumstances are implemented</td><td>1st year: The number of out-of-school children is confirmed in all the designated villages.
80% of each community recognise the problems about out-of-school children.</td><td>29 schools created a list of out-of-school children.
Over 70% of school leaders were aware of the issue for out-of-school children in their community.</td><td rowspan="5">It is unclear if community can sustainably follow-up out-of-school children and special needs children after CADVES.</td></tr>
<tr><td></td><td>2nd year: Action plans for including out-of-school children are formulated.</td><td>29 schools finalized their action plans on out-of-school children on SDPs.</td></tr>
<tr><td></td><td>Resource rooms are constructed in 2 designated schools.</td><td>Resource rooms were constructed at Enkijapa and Illasit. Dormitories were built at Enkijape.</td></tr>
<tr><td></td><td>3rd year: 20% of out-of-school children confirmed by each community go to school.</td><td>32.5% of out-of-school children started to enroll at school (371 out of 1140).</td></tr>
<tr><td></td><td><s>2 resource rooms are constructed in other 2 schools.</s> Teaching is implemented for the disabled children at 2 schools with resource rooms.</td><td>Teaching was implemented at Enkijape and Illasit. Their teachers joined the early grade teacher training and learned a new pedagogy.</td></tr>
</table>

Appendix 3 Map of Loitokitok sub-county



(https://www.tandfonline.com/doi/abs/10.1080/10871209.2011.531516?journalCode=uhdw20)

Appendix 4 List of schools and current head teachers

NUMBER	SCHOOL	Zone	NAME
1	Olchorro	Amboseli-Kimana	Merin Medoti
2	Paranai	Amboseli-Kimana	Leah King'ori
3	Imisigiyo	Amboseli-Kimana	Isaac Sintako
4	Amboseli	Amboseli-Kimana	Joyce Nanatia
5	Oldonyo Oiborr	Amboseli-Kimana	Joseph Nkonkat
6	Enkongu Narok	Amboseli-Kimana	Kennedy Karsalei
7	Eluai Nalepo	Entonet-Lenkisim	Paul Mulolo
8	Olgulului	Entonet-Lenkisim	Jackson Sempetta
9	Meshenani	Entonet-Lenkisim	Karanja Mbita
10	Osoit	Entonet-Lenkisim	Moi Lolkinyiet
11	Ilchalai	Imbirikani	Martin Musili
12	Olbili	Imbirikani	Samuel Kutata
13	Otiasika	Imbirikani	Stephen Saidimu
14	Inkisanjani	Kuku	Esther Mutua
15	Loormeuti	Amboseli-Kimana	Jackson Mwaherombe
16	Orkaria	Kuku	Patrick Kyengo
17	Iltilal	Kuku	Ronald Mogusu
18	Moilo	Kuku	Ledama Ntilalei
19	Samai	Kuku	Christopher Ngare (Deputy)
20	Munyurra	Rombo	Javan Kango
21	Nasipa	Rombo	Joseph Mulinge
22	Esosian	Rombo	Esther Kiarie
23	Matepes	Rombo	David Tiges
24	Oloibor Soit	Rombo	Kipetuan Lempusel
25	Elerai	Rombo	Elijah Tumpes
26	Olorika	Imbirikani	Francis Kasyoka
27	Elangata Enkima	Kuku	Zacharia Mumo
28	Olanti	Imbirikani	Paul Saru (Deputy)
29	Iloirero	Entonet-Lenkisim	Julius Sarinke
30	Shilishili	Imbirikani	Josphat Nina
31	Illasit	Rombo	Peter Sanka
32	Enkijape	Imbirikani	Mathias Muli

Information as of 25th February 2020

Appendix 5 List of current teachers conducting remedial lessons

No	School	Teacher 1	Teacher 2	Teacher 3
1	Olchorro	Pauline Nabulu	Lucy Wilson	-
2	Paranai	Isack Njoroge	Parkepu Miaron	-
3	Imisigyo	Ann Namunyak	Peter Munyi	-
4	Amboseli	Leah S Somoire	Pauline Nduku	Mercy Naleku
5	Oldonyo Oiborr	Hilder Kerubo	Emily Pesi	-
5	Oldonyo Oiborr	Jane Muthoni	Janet Muthome	-
6	Enkong'u Narok	Beatrice Naserian	Fridah Kirimi	-
7	Eluai-Nalepo	Samuel Kirui	Madam Caroline	-
8	Olgulului	Faith Saitoti	Jennifer Nzuki	-
9	Meshenani	Ann Leturesh	Cecilla Parsae	-
10	Osoit	Jonathan Sairiamu	Magdalene Muthama	Esther Kasaro
11	Ichalai	Mary Kambua	Jones Kibaki	-
12	Olbili	Nelly Naserian	Dorcas Jonah	-
13	Oltiasika	Grace Kisokon	Tajiri Benja	-
14	Inkisanjani	Rose Naserian	Lornah Reson	-
14	Inkisanjani	Rosa Kerubo	Hellen Sheillah	-
15	Loormeuti	Sylvia Kisheiyan	Felistus Mueni	-
16	Orkaria	Rodah Mwende	Beth Kinuthia	-
16	Orkaria	Ruth Yiasi	Sylvia Kisheiyan	-
17	Iltilal	Daniel Mbaria	Leah Terian	-
18	Moilo	Erick Soinkei	Josephine Lalaito	-
19	Samai	Thomas Soinkei	Isack Shapashina	-
20	Munyurra	Ruth Wambui	Tabitha Naisoi	-
21	Nasipa	Christine Makau	John Kimani	-
22	Esosian	Jacinta Mumo	Mary Kagwara	-
23	Matepes	Margaret Kuria	George Mokaya	-
23	Matepes	Moffat Mwando	Josphat Kabiru	-
24	Oloibor Soit	Margaret Lemunke	Jenifer Tipape	-
25	Elerai	Salome Sintoiya	Janet Juma	Susan Nankinyi
26	Olorika	Simon Ndung'u	Ezekiel Korrompoi	-
27	Elang'ata Enkima	Jeremiah Keneti	John Mayiani	-
27	Elang'ata Enkima	George Melau	Daniel Kimotho	-
28	Olandi	Gladys Naisanti	Joseph Meroe	Veronica Asranga
29	Iloirero	Emily Kurare	Josephine Mamaai	-
30	Shilishili	Kenana Saidimu	Kelvin Manyeki	-

Information as of 25th February 2020

Appendix 6 List of text messages

Date	Theme	Message
2020		
February 29th (Sat)	Community and SNE	Some parents are waiting for GLMi to rescue disabled children in your community. We have done a medical assessment for disabled children last year but we are not the donor. How can community enroll children with disabilities at school? GLMi iliwezesha kuangaliwa kwa watoto walemavu na madaktari muhula uliopita.Je,wazazi watawasajili vipi watoto wao walemavu shuleni bila kutegemea mdhamini?
February 22nd (Sat)	Early Grade Teachers Lesson Study	Your early grade teachers joined the lesson study training on 14-15th. Your teachers learned how to improve their teaching skills at the school-level together with their peers. They will improve their pedagogy at your school. Walimu wa darasa la kwanza na pili walijiunga na mafunzo ya kukuza ujuzi wao wa kufunza darasani hapa Loitoktok mwezi huu ili watoe mafunzo bora shuleni mwenu.
February 15th (Sat)	Tackling Early Pregnancy	Iltilal girls are bright but many losing education opportunities due to early pregnancy. This is why Iltilal organized a parents-led meeting to tackle early pregnancy on 13th February. If community is serious, you can curb early pregnancy in your community. Wazazi wa kijiji cha Iltilal wamefanya mkutano wiki hii kujadiliana kuzuia mimba za mapema kwa wasichana.Wanakijiji wakishirikiana wanaweza zuia janga hili.
February 8th (Sat)	Learning Assessment Improvement	GLMi conducted a learning assessment for grade 1 and grade 2 children in January this year. Results show that Kiswahili and Mathematics performance has improved significantly. What do you think has caused this? GLMi waliwapa mtihani wanafunzi wa darasa la 1 na 2 January mwaka huu.Matokeo yanaonyesha Kiswahili na Hesabu zimeboreka sana.Je,ni nini kimesababisha haya?
February 1st (Sat)	Parents Monitoring Remedial Lessons Video	GLMi staff also created a role play video about the parents' monitoring role on remedial lessons. Are you leaving the school responsibility to only teachers? You as parents can contribute to improving your pupils' performance at home/community/school. https://youtu.be/9RN6WRaA1AM GLMi waliunda video kuangalia vile wazazi watafuatilia masomo ya ziada ya wanao shuleni wakishirikiana na walimu.Tazama video hapa https://youtu.be/9RN6WRaA1AM
January 25th(Sat)	Curbing Early Pregnancy Video	GLMi created a role play video about the early pregnancy and marriage. Ealy pregnancy case happended a lot last year. The case normally happens during the long school break. How can you prevent?https://youtu.be/BmBdgX9k_rE GLMi iliunda video kuhusu mimba za mapema shuleni kufuatia ongezeko la kesi hizo mwaka uliopita.Tutazizuia vipi?Tazama video hapa. https://youtu.be/BmBdgX9k_rE
January 18th (Sat)	Doctors assessment from Kijabe at Loitoktok hospital	A doctor from Kijabe Mission hospital will be in Loitoktok on 27th January from 9AM for assessment of disabilities. Adults will pay 1000 for checkup while it will be free for children. Madaktari kutoka hospitali ya Kijabe watakuwa hospitali ya Loitoktok tarehe 27 January kuanzia saa tatu.Watu wazima watalipa 1000 ilhali watoto hawatalipishwa.

January 11th (Sat)	Improving Learning Performance in Term 1 2020	The new term has just begun. Have you checked the termly result of pupils on report books the last term? Based on the evidence of learning performance, what can you do for this year? Muhula mpya umeanza.Je,umeangalia matokeo ya shule ya mwanao ya muhula uliopita kwenye vitabu vya ripoti?Je,utafanya nini mwaka huu kulingana na matokeo hayo?
January 3rd (Fri)	School KCPE mean scores to all schools	Results for KCPE in the year 2019 for Olchorro Primary School in the yaer 2019 was 227.85. The number of candidates was 52. The score increased by 27.6 points from the year 2018 score which was 200.25 Matokeo ya KCPE mwaka wa 2019 shule ya Olchorro ilikuwa 227.85. Idadi ya wanafunzi ilikuwa 52. Iliongezeka kwa alama 27.60 kutoka mwaka wa 2018 iliyokuwa 200.25
2019		
December 28th (Sat)	School opening and new term education goals	Is your pupil ready to go back to school? Have they done the homework? Since a new year will start soon, parents can discuss children's educational goal for this year. Je, mwanao yuko tayari kurudi shuleni? Amemaliza kazi ya ziada ya shule? Unaweza zungumza na mwanao jinsi ataboresha kiwango cha elimu yake mwaka huu unafuata.
December 21st (Sat)	Prevention of Early Pregnancy	Early pregnancy case is likely to happen at night church during a festive season. Christmas is almost there. As a parent, how can you prevent your daughter and son from involving early pregnancy? Kesi za mimba za mapema huongezeka wakati wa kesha kanisani. Krismasi imekaribia. Je,wazazi watasaidia watoto wao vipi ili wasijihusishe na mimba za mapema?
December 14th (Sat)	Community & SNE	GLMi took 126 forms for registration at the national council for persons living with disabilities. As parents, how can we assist in promoting special needs education without depending on a donor? GLMi waliwezesha fomu 126 za watoto walemavu walioangaliwa kupelekwa wizara ya afya kusajiliwa.Je,tutasaidia vipi masomo ya walemavu bila kutegemea wadhamini?
December 7th (Sat)	Writing practice exercise	We gave writing exercise books to children to practice writing Kiswahili words during the holidays. As parents we should follow up to ensure writing is taking place. Tuliwapa wanafunzi vitabu vya kuandikia wajifunze kuandika maneno ya Kiswahili wakati wa likizo.Sisi kama wazazi tunafaa tuhakikishe watoto wanaendelea kuandika
November 30th (Sat)	SNE Registration	Next week we will continue to mobilize a doctor from 2nd December to check mental, physical and multiple disability cases among children in your schools. Bring disabled children to school. Wiki ijayo tutatembea na daktari mashuleni kuanzia Desemba 2 kuangalia watoto wenye ulemavu wa kiakili, kimwili na mengine. Leteni watoto wenye ulemavu shuleni.
November 23rd (Sat)	SNE Registration	Next week we will mobilize a doctor to check mental, physical and multiple disability cases among children from 25th November in your schools. Bring disabled children to school. Wiki ijayo tutatembea na daktari mashuleni mwenu kuangalia watoto wenye ulemavu wa kiakili,kimwili na mengine kuanzia Novemba 25.Leteni watoto walemavu shuleni.

November 16th (Sat)	SNE Registration	This week we have been able to assess children with visual impairment. Next week we plan to assess hearing impaired children at Enkijape primary school. Tumeweza kuwachunguza wanafunzi wenye shida ya macho wiki hii. Tunapanga kuwachunguza wanafunzi wenye shida ya kusikia wiki ijayo shuleni Enkijape.
November 9th (Sat)	SNE Registration	Once Special Needs Education Children register for disability, they can get benefits from government such as assistive devices and school fee. GLMi will start registration starting next week. Wakati watoto walemavu wataandikishwa na serikali,watapata manufaa kama vifaa vya usaidizi na karo ya shule.GLMi watawasaidia kujiandikisha kuanzia wiki ijayo.
November 2nd (Sat)	Curbing Early Pregnancy	Schools have closed for the long holiday. Let us curb early pregnancy. Let us educate our children on abstinence and good morals so that they can succeed in education. Shule zimefungwa na likizo ndefu imeanza.Tuzuie mimba za mapema.Tuwafunze watoto wetu maadili mema na kutojihusisha kimapenzi likizoni ili wafaulu masomoni.
October 26th (Sat)	Writing practice exercise books	Parents, please check Kiswahili words writing practice homework for your grade 1 and grade 2 children every day. This will help improve their writing skills. Wazazi,tuangalie kazi ya ziada ya watoto wa darasa la kwanza na pili kuandika majina ya Kiswahili kwa vitabu kila siku.Hili litakuza ujuzi wa kuandika.
October 19th (Sat)	Early Pregnancy Consultation	Schools will close next week. Have you talked to your child regarding good morals and behavior so that we can reduce early pregnancy cases during this long holiday? Ask for consultation on 0756503291 Shule zitafungwa wiki ijayo.Je,umeweza kumzunguzia mwanao kuhusu maadili mema ili tupunguze kesi za mimba za mapema likizo hii ndefu?Tuulize ushauri 0756503291
October 12th (Sat)	Kiswahili Learning Performance	Pupils are not performing well in Kiswahili especially when it comes to writing. We as parents are supposed to ensure that they write two Kiswahili words ten times in a day in their exercise books to improve writing skills. Wanafunzi hawafanyi vizuri katika Kiswahili haswa kuandika.Wazazi,tuhakikishe wanaandika maneno mawili ya Kiswahili mara kumi kila siku kwa vitabu wakuze ujuzi
October 5th (Sat)	Kiswahili words writing practice	We are approaching the end of 3rd term. Have you been following up on the writing practice homework of your children? Have you been putting the tick marks? It is good to follow up on the education of your children. Hii ni tamati ya muhula wa tatu.Je,mnazingatia masomo ya ziada ya watoto?Je,mnatia sahihi kwa vitabu vya masomo ya ziada?Ni vyema kufuatilia masomo ya mwanao.
September 28th (Sat)	Culture and OOSC	Our culture is great but we should not let it come in between our children and their education. Everything has its time. A lot of boys missed school during the recent 'Eunoto' culture celebrations. Tamaduni zetu ni nzuri ila ila tusiruhusu ziadhiri masomo ya watoto wetu. Kila jambo na wakati wake. Wavulana wengi walikosa shule wakati wa sherehe za Eunoto.

September 21st (Sat)	Early Pregnancy	Early pregnancies usually cut short the education of the affected girls. It is our duty as parents to continue educating and showing direction to our children on good morals so that they may escape early pregnancies. Mimba za mapema hukatiza masomo ya wasichana. Wazazi, ni jukumu letu kuendelea kufunza na kuongoza watoto wetu kuwa na maadili mema ili waepuke mimba za mapema.
September 14th (Sat)	SNE Study Tour	Your school head teacher attended a study tour in Enkijape and Illasit to learn about SNE and inclusive education. Do you have an OOSC in your community who is disabled? If so, could you inform the head teacher of your school so that they can be enrolled? Mwalimu mkuu wa shule yenu alifunzwa masomo ya watoto walemavu shuleni Enkijape na Illassit.Mfahamishe kuhusu watoto walemavu kijijini ili wasajiliwe shuleni
Aug 31st (Sat)	Holiday homework	Schools will reopen on 2nd September 2019. Has your child completed the homework he was assigned by the teacher during the break? Have you also discussed how he can improve his academic performance during 3rd term? Shule zinafunguliwa tarehe 2 September. Je,mwanao amemaliza kazi ya ziada aliyopewa wakati wa likizo na mwalimu? Pia,atajiinua vipi kimasomo muhula huu wa tatu?
Aug 6th (Tue)	Report book	The 2nd term has just over. Have you checked the termly result on report books? Discuss how pupils can improve their learning next term. Also, what can they continue to learning during the break period? Je,umeangalia matokeo ya shule ya mwanao wakati muhula wa pili umeisha?Mnaeza zungumza vile atafanya vizuri muhula ujao na pia kujisomea wakati huu wa likizo.
July 27th (Sat)	Updated out-of-school children	We found out 977 out-of-school children in your 30 schools in Loitokitok. 223 pupils cannot come due to child labor including cattle grazing.83 were due to disability and 78 were due to early pregnancy. The case of early pregnancy is high this year.
July 19th (Sat)	Current SDP info.	Remember your school has school development plans. What activities were already done to improve schools? How is the progress of implementation? Do not dream. Prioritize what activities community can collectively do.
July 11-12th (Thr-Fri)	Study tour information (past/future)	Washikadau wa shule ya Olchorro walitembea shuleni Illasit na Enkijape Juni nne kujionea jinsi mafunzo ya watoto walemavu yanaweza tekelezwa shuleni Olchorro . Washikadau wa shule ya Shilishili watatembea shuleni Illasit na Enkijape September kujionea jinsi mafunzo ya watoto walemavu yatatekelezwa shuleni Shilishili. 1. Olchorro school leaders visited Enkijape and Illasit on 4th July to study special needs education (SNE) practice. They learnt SNE skills which can be applied in the normal education setting and decided the way forward to include SNE children in Olchorro to schools. 2. Esosian school leaders visited Enkijape and Illasit on 2nd July to study special needs education (SNE) practice. They learnt SNE skills which can be applied in the normal education setting and decided the way forward to include SNE children in Esosian to schools.

July 6th (Sat)	Gender inequality for SNE enrolment	398 boys out of 556 SNE children are in schools in Loitokitok. Are SNE girls are hidden at home? Or Are boys' SNE education prioritized to enrolment? Wavulana 398 kati ya watoto 556 walemavu Loitoktok wamesajiliwa shuleni.Kuna wasichana walemavu wamefichwa kijijini ama wavulana wanapewa kipaumbele masomoni?
June 29th (Sat)	SDP availability	Do you know that your school has a school development plan? This plan is not to receive donor or CDF outside fund, but to mobilize human and financial resource within your community. Ask school leaders about what plan your school has. Shule ya mwanao kuna mpango wa kimaendeleo.Si wa kupokea msaada bali ni wa kuhamasisha wazazi kuchangia maendeleo ya shule.Je wajua mpango wa shule ya mwanao ?
June 22nd (Sat)	Parents are important stakeholders	Are parents powerless? No. If parents cooperate together, you can achieve something together with other parents even if the contribution per parent is small. Parents are the biggest stakeholders. Je,wazazi wanao uwezo? Ndio. Wakishikana pamoja wanaweza kufikia jambo muhimu hata kama mchango wa kila mmoja ni mdogo. Wazazi ndio washikadau wakubwa.
Jun 18th (Tue)	Check the exercise book during the mid-term excess	Wazazi,angalieni vitabu vya watoto likizoni hili fupi.Je,wameandika kwa hati inayofaa na mwalimu akaweza kusahihisha wamepata jibu? Wazazi. Check the exercise book of children during this mid-term. Did they write in a proper handwriting? Did they get a correct mark from teachers?
Jun 8th (Sat)	Continuous learning during the break	Wanafunzi wengi husahau walichofunzwa wakati wa likizo.Je,wazazi watafanya nini ili wanafunzi wasisahau mafunzo wakati huu wa likizo fupi? Some teachers said that children forget what they learnt during the break. How can parents ensure that children can retain what they learnt during the coming mid-term recess?
June 6th (Sat)	Early pregnancy meeting (Olorika only)	Kesho tarehe 7 kuna mkutano wa wazazi shuleni Olorika kuzungumzia mimba za mapema kwa wasichana.Mtaalam wa kijinsia wa GLMi atakuja.Mnaalikwa saa tatu asubuhi. Tomottoe Olorika primary school has a parent meeting about the early pregnancy case. Please come to school at 9am. GLMi gender specialist will join the meeting.
Jun 1st (Sat)	Moilo parents decided to purchase report book	Wazazi wa wanafunzi wa Shule ya Msingi ya Moilo wamenunua vitabu vya ripoti ili kuangalia matokeo ya wanao mwisho wa muhula.Je,umenunulia mtoto wako muhula huu? Moilo parents decided to purchase report books for their children to check the end-term mark. Do you purchase report books for this term?
May 25th (Sat)	OOSC info at each school	There are 67 out-of-school children at Olchorro primary school community. Out of that 15 came back to school. Do you know what other out-of-school children doing now? Can we enroll them?
May 18th (Sat)	What message is effective to your community?	What kind of education message do you think is effective to your community? Or what information do you want to know? Share your thoughts to us. 0756503291

May 11th (Sat)	Disability is not inability. Enroll them	Tulipata watoto wanne walemavu wamefichwa bomani karibu Kimana mtaani. Ulemavu sio kutoweza.Usihukumu hawawezi soma.Waandikishe shule yenu au shuleni Enkijape. We found out 4 disabled children are hidden at boma near Kimana. Disability is not inability. Do not judge that they cannot study. They can. Enroll them at your school or Enlijape.
May 4th (Sat)	How can we enroll disabled children?	Watoto 200 kati ya 1200 waliyokuwa wamewacha shule walirudi japo watoto walemavu ni wachache. Masomo ni haki ya kila mtoto, tuwape haki yao. 200 out of 1200 out-of-school children in our target school came back to school thanks to the school initiative. However, disabled children were unlikely to come back. How can we best provide learning opportunities for them?
Apr 27th (Sat)	What do you act after receiving information?	GLMI imekuwa ikiwafahamisha kuhusu elimu kupitia ujumbe mfupi (sms) na tofuti. Je munaweza fanya nini kutokana na ufuhamu huu? toa maoni. 0756503291 GLMi has been sending information via SMS and HP. What can you act, utilizing information presented to you? Share your thoughts 0756503291
Apr 20th (Sat)	Aim for a new term	Heri ya pasaka, shule ziko karibu kufunguliwa. Je mtoto wako analengo yapi muhula ujao, tusherikishe malengo hayo. 0756503291 Happy Easter. The school is almost starting. Does your child have goal to achieve at school? Share their goal with us.
Apr 13th (Sat)	Check your child result?	Mzazi uliona matokeo ya mtoto wako? Fuatilia ili ujuwe kama anafanya vyema kimasomo. Tusipuuze ni wajibu wako. Parent did you see your child's results? Follow-up so that you can know his/her progress. Let us not ignore its our responsibility
Apr 6th (Sat)	Let us know the performance of children and advice them to keep discipline	Wakati huu wa likizo tufuatilie matokeo ya watoto wetu, na tuwape mawaidha ili wadumishe nidhamu. Parents during this vacation let us know our children performance and advice them to maintain discipline
Mar 30th (Sat)	Support learning at home. You are the first teacher	Shule ziko karibu kufungwa. Mzazi zingatia matokeo ya mtoto wako. Pia mtoto anahitaji muda wa kosoma nyumbani Parents school are almost closing, support your children while at home to continue with learning process. Remember you are the first teacher
Mar 23rd (Sat)	Focus on what disabled children can do	Mzazi wa kipekee ni yule ambaye hukuza vipaji vya watoto wake bila ubaguzi wa maumbile. Ni haki ya watoto wote kupata elimu.
Mar 16th (Sat)	You have the right to visit your school to monitor	Ni haki ya mzazi kufika shuleni ili kufuatilia maendeleo ya elimu ya mtoto wake.

Mar 9th (Sat)	Disabled have the right to learn	Kila mtoto mlemavu ana haki ya kusoma bila kujali hali ya ulemavu wake. Walete shuleni ili waweze kuendeleza uwezo wao kupitia elimu.
Mar 2nd (Sat)	Bring SNE children to school	Ni haki ya mtoto mlemavu kupata elimu chukua hatua mpeleke shule kama vile Enkijape na Illasit.Tuache kuwaficha nyumbani.
Feb 23rd (Sat)	Remedial info is on our website	Taarifa kuhusu masomo ya ziada ipo kwa tovuti ya Glmi. Tazama jinsi gredi la 1 na 2 wanavyo fanya vyema katika mitihani yao. http://u0u1.net/iFvw
Feb 12th (Tue)	Suggestion on the website	Tovuti (website) yetu ina taarifa kuhusu shule yako. http://urx.red/PBe4. Je kunayo taarifa yoyote unayotaka kuhusu shule yako? Wasiliana nasi. 0756503291
Feb 5th (Tue)	Feedback about the actions taken after SMS	Baada ya kuhamazishwa na GLMi kupitia ujumbe wa SMS, hebu tufahamishe kupitia SMS hatua ulizozichukua kuimarisha elimu kupitia 0756503291
Jan 29th (Tue)	Feeling about workbooks	Je mzazi wa shule 30 chini ya mradi wa Glmi, umeona umuhimu wa vitabu vya masomo ya ziada kwa wanafunzi wa gredi la 1 na 2. Tuma jibu lako kwa namba 0756503291.
Jan 23rd (Tue)	HP publication	Tuvuti ya GLMi unaweza pata taarifa ya shule yenu kama vile nambari ya watoto wenye ulemavu na watoto ambao mbado hawajajiunga na shule. http://urx.red/PBe4
Jan 15th (Tue)	End-line survey Some will be interviewed	Kesho tutakuwa na utafiti kuhusu sms ambazo sisi hutuma kwa wazazi. Tunaomba tushirikiane. Kwa maswali yoyote unaweza tuma ujumbe kwa nambari hii: 0704203632
Jan 8th (Tue)	Include everyone to the meeting for a new term	Mkutano wa muhula wa kwanza utafanyika shuleni. Je washikadau wote watahudhuria na kushiriki kwenye majadiliano? Pamoja tuboreshe msingi wa shule.
Jan 1st (Tue)	Happy New Year Enrol a child on time	Heri ya mwaka mpya. Shule inafunguliwa Kesho! Mahudhurio mazuri shuleni ni muhimu kwa mafanikio. Tafadhari watoto wahudhurie shule Kesho!
2018		
Dec 25th (Tue)	Christmas Encourage pupils for study	Heri ya X-mas! Kwa vile wanafamilia wengi wanakusanyika leo, wajaribu kuhamasisha watoto wako kwa ajili ya masomo yajayo. Heri ya mwaka mpya!
Dec 18th (Tue)	Remedial Improvement	Mwaka huu masomo ya ziada ya darasa la 1 na la 2 yalikuwa vyema katika shuleni kwenu. Lisaa limoja kufunza masomo ya ziada ni muhimu kwani huimarisha masomo.
Dec 11th (Tue)	KCPE 2018	Matokeo ya KCPE mwaka wa 2018 shule ya Iloirero ilikuwa 262.32. Idadi ya wanafunzi ilikuwa 18. Iliongezeka kwa alama 22 kutoka mwaka wa 2017 iliyokuwa 240.32.
December 4th (Tue)	Whose voice is missing? Women and Youth	Ni sauti ya nani ambayo haisikiki kwenye mikutano ya shule? Sauti ya kina mama na vijana haitiliwi maanani. Ni muhimu kutilia maanani maoni ya kila moja.

November 27th (Tue)	How many days did children lose by absenteeism? Enroll on 2nd Jan.	Je unajua ni siku ngapi mwanao alipoteza kwa kutohudhuria masomo mwaka huu?Kuhudhuria vizuri huleta matokeo mema masomoni.Hakikisha atahudhuria kutoka 2/1/2019.
November 20th (Tue)	KCPE result came out Boys and girls have different strength	KCPE 2018.Kwa jumla wasichana walifanya vyema katika English,Kiswahili na Kenya sign language.Wavulana walifanya vyema kwa Maths,Science,Social studies and R.E.
November 17th (Sat)	Give us feedback	GLMi ingependa kupata wazo lako kuhusu jumbe tunazotuma. Tafadhali tuandikie jumbe la wazo lako kwa nambari 0704 203 632. Tafadhali usipige simu hii.
November 13th (Tue)	Learning should be continuous during the break. Learning time with material	Je wanao wanajihusisha na masomo wakati wa likizo. Ni vyema wao kupata muda kidogo ili kusoma kujikumbusha waliosoma wakati wa shule.
November 10th (Sat)	Aware of position and marks for checking the learning situation	Hujambo.Je,wafahamu alama na nambari ya mwanao katika darasa muhula uliopita?Hili ni jambo muhimu ili kujua kama mwanao amepanda ama kushuka katika elimu.
November 6th (Tue)	Early Pregnancy happens during the break	Je wajua mimba za mapema hupatikana msimu huu wa likizo ndefu? Mimba ya mapema hukatiza masomo ya wasichana na kuathiri maisha yao ya baadaye.
November 3rd (Sat)	How much did you join the decision-making process?	Je umehudhuria mkutano wa wazazi shuleni mwaka huu? Je ni uamuzi upi umechukua? Je Shule yako inamikakati ipi ya maendeleo? Have you attended the parent meeting this year? Which actions did you take? Which actions have you for development of school?
October 31st (Wed)	KCPE is taking place. Aware of school mean score?	Hujambo mzazi.KCPE ilianza jana.Tafadhali ombea watoto wanaofanya mtihani ili wafanye mtihani vyema.Je?wafahamu alama ya KCPE ya shule yako mwaka uliopita?
October 27th (Sat)	Learning takes place at home	Je? Unafanyaje ili kuhakikisha mwanao anapata nafasi nzuri ya kusoma nyumbani?kusoma inafanyika shuleni na pia nyumbani.Hakikisha pia anapata vifaa vya kusomea.

October 24th (Wed)	Check position and mark on Report book	Mzazi mwisho wa muhula umefika na mwanao ataleta ripoti ya mwisho wa mwaka. Je? Wafahamu alama au nambari yake katika darasa?
October 21st (Sun)	BoM role in education	Bodi ya shule (BOM) wanajukumu la kuimarisha elimu, kuajiri walimu, kuweka nithamu, kupeana mawaidha na kuhifadhi rasilimali ya shule.
October 16th (Tue)	BoM role in authorization	Bodi ya shule (BoM) imepewa mamlaka ya kupanga,kujadili na kuidhinisha bajeti na hela za shule ili kupeana ripoti kwa afisi za elimu katika Kaunti.
October 13th (Sat)	BoM role in finance	Je, wafahamu kuwa kamati ya shule iko na jukumu kadha, kati yao ni kusimamia vizuri akaunti ya shule, kutafta hela za kufanya miradi shuleni n.k.
October 9th (Tue)	KCPE score for each school	Ex. Matokeo ya KCPE mwaka wa 2017 shule ya Shilishili ilikuwa 253.15.Idadi ya wanafunzi ilikuwa 20.Iliongezeka kwa alama 50.84 kutoka mwaka wa 2016 iliyokuwa 202.31
October 6th (Sat)	Awareness of KCPE score	Ni msimu wa mtihani wa darasa la nane(KCPE). Je,wafahamu matokeo ya shule yako mwaka uliopita 2017. Je? Matokeo ilikuaje kulingana na mwaka wa 2016?
October 3rd (Wed)	Com. Feeding has started at some school	Wazazi wa darasa la 1 na la 2 shule za Matepes,Osoit,Olorika na Olbili wanachangia chakula shuleni.Je? Kuna jambo wazazi wanaweza tekeleza ili kuendeleza shule?
October 1st (Mon)	Benefit of education	Je?Wajua kuwa elimu ni mchakato wa kujifunza au kupata maarifa,ujuzi,maadili,imani au tabia.Hakikisha mwanao anapata elimu bora ili apate faida hizi maishani.
September 25th (Tue)	Publicity of HP and FB	Hujambo.Tafadhali tembelea tuvuti yetu - http://cadves.glminstitue.org/ - ama Facebook - https://web.facebook.com/glminstitutekenya/ - ili upate habari zaidi.
September 22nd (Sat)	School-age enrolment is a right of pupils	Je wajua ni haki ya kila mtoto kupata masomo. Hakikisha watoto wenye umri wa kwenda shule wanaudhuria shule tupende watoto wetu bila ubagusi wa maumbile
September 19th (Wed)	Parents' monitoring	Hujambo.Tuko muhula wa mwisho wa mwaka.Je? umeweza kufuatilia masomo ya mwanao kuanzia muhula wa kwanza.Tafadhali fuatilia ili kujua kama kuna jambo angehitaji.
Sep 16th (Sun)	Workbook check mark	Je watoto huleta vitabu vya marudio nyumbani? Hakikisha kwamba unatiki kwenye kisanduku cha kitabu hicho kuonesha mnafuatilia masomo ya ziada ya watato.
Sep 11th (Tue)	Parents involved in SDP process?	Ni nini haswa jukumu la mzazi katika kutekeleza mipangilio ya shule. Je? Mipangilio ya shule inategemea ufadhili wa nje?
	Olbili MTG reminder	(Olbili only) wazazi wa Olibi wa darasa 1 na 2 kesho watakuwa na mkutano na sisi tutafuatilia mkutano wenu tuone kama mtatimiza ahadi zenu. Kila mzazi ahudhurie mkutano huu.
Sep 10th (Mon)	Munyurra nyumba kumi reminder	Kwa wazazi wa Munyura. Unakumbushwa kupeana idadi ya watoto walio nje ya shule kwa mwalimu mkuu kabla ya jumatano.

Sep 8th (Sat)	Include OOSC into SDP?	Je, shule yako ilifanya marekebisho kwenye mpango wa maendeleo ya shule?Kila shule itakuwa na mikakati kuhusu watoto walemavu na walioko nje ya shule katika SDP
Sep 7th (Fri)	Munyurra nyumba kumi OOSC initiative	Wazazi na viongozi wa nyumba kumi munyurra tunawahimiza mufuatilie watoto amboa hawahuthurii shule. Kisha muwasilishe majina yao kwa mwalimu mkuu.
Sep 4th (Tue)	Visit class 1 and 2 and sign for attendance	Wazazi wanapoenda shuleni kuangalia masomo ya watoto. Wajiandikishe majina kwa mwalimu wa darasa tujue jinzi mnavyo fuatilia masomo ya ziada ya darasa 1 na 2.
Sep 1st (Sat)	✓ on remedial workbooks	Watoto wanapoleta vitabu vya masomo ya ziada nyumbani. Angalia kurasa zenye wamesomeshwa na jadiliana nao kisha tiki✓kwa upande wa kulia.
Aug 28th (Tue)	Workbooks arrival. Monitor at home/school	Vitabu vya masomo ya ziada za darasa la 1 na la 2 zimefikishwa kwa shule zote. Ni jukumu lako kufuatilia masomo ya mtoto wako akiwa shuleni na nyumbani.
Aug 28th (Tue)	Children report for a new term?	Je,? Mwanao ameripoti shule kwa muhula wa tatu? Siku,saa na dakika yoyote ni muhimu kwa masomo.
Aug 25th (Sat)	Ready for comm. mtg?	Shule zitafunguliwa jumatatu wiki ijayo. Shule nyingi zitakuwa na mkutano wa wazizi mwanzo wa muhula huu wa tatu. Je uko tayari kuhuthuria?
Aug 22nd (Wed)	What can parents do? Ex.	Unaweza kufanya nini kama mzazi kuboresha masomo ya mtoto wako? Mfano kuhudhuria mikutano ya wazazi, kuangaria kazi ya ziada na kutembelea mwalimu wa darasa.
Aug 18th (Sat)	Tchers learnt play-based activity. How can you do?	Walimu wa darasa la 1 na 2 waliweza kutambua njia mbadala wa kuhusisha mchezo wa maneno na waduka kama njia ya mtoto kujua kusoma kiswahili na hisabati. Walimu watazingatia hii michezo kama njia moja ya kusomesha wanafunzi muhula huu wa 3. Je wewe kama mzazi unaweza kufanya nini ili kuboresha masomo ya mtoto wako?
Aug 14th (Tue)	Teacher training plan	Glmi wiki hii itakuwa na mkutano wa walimu wa darasa la 1 na la 2. Watawajulisha zaidi kuhusu masomo ya ziada pindi shule zinapofunguliwa. Mtajadiliana nao.
Aug 12th (Sun)	Lack of monitoring is a cause of a drop in assessment	Chanzo cha matokeo kushuka ni kutofuatilia jinzi watoto wanafunzwa. Je wewe hufuatilia masomo ya ziada ya mtoto wako wakati yuko shuleni na anapo kuja nyumbani?
Aug 7th (Tue)	Why result drop after remedial?	Matokeo ya hisabati na kiswahili ya darasa la 2 yalishuka chini! Unadhani kwa nini matokeo yalishuka chini hata baada ya kutekeleza masomo ya ziada kila siku?
Aug 5th (Sun)	GLMi assessment score dropped	Tuliweza kufanya majaribio kwa masomo ya Hisabati na Kiswahili kwa darasa la 1 na la 2 katika mwaka wa 2017 na 2018 katika shule yako.Matokeo ya yalishuka chini
July 29th (Sun)	GLMi governance training content	Katika mkutano wetu wa GLMi na walimu wakuu, viongozi wa shule na chifu wiki ijayo, tutajadiliana kuhusu matokeo ya masomo ya watoto wasiofika shuleni ilahali umri wao ni wa kuwa shuleni na mipango ya maendeleo za shule zetu. Na kisha watawaelezea matokeo ya mikutano.

July 25th (Wed)	Discuss with ppl who come to training	Tutawaalika walimu wakuu, chifu na viongozi wa shule katika mkutano wetu wa GLMi Kenya. Wao pia watawashirikisha kwenye mambo tutakayo jadili kuhusu shule zetu.
July 21st (Sat)	School age enrollment is key	Utafiti unabainisha kuwa watoto walio na umri mkubwa hufanya vibaya kwa elimu. Mpeleke mwanao shuleni akifika umri wa kwenda shule. GLMi-Kenya
July 18th (Wed)	Illiteracy is not a problem, awareness is	Asilimia sabini na tano ya wamama Loitokitok hawana elimu. Kupuuza masomo ni tatizo kubwa! Wazazi amboa hawana elimu wanaweza zingatia masomo ya watoto wao pia.
July 15th (Sun)	Discuss with yr pupils in the weekend	Je wikendi wewe hufanya nini? Wikendi ni siku nzuri ya kuzungumzia masomo ya mtoto wako. Jua jinzi mtoto anaendelea shule! Waulize maswali kuhusu masomo yao!
July 10th (Tue)	The number of feeding improves learning	Chakula tatu kwa siku huku Loitokitok si kila familia inaweza kula. Lakini kwa utafiti watoto wanao kula mara tatu kwa siku, wanafanya vizuri kwa masomo. (UWEZO)
July 7th (Sat)	Feeding is not common in LTK	Asilimia 60 ya watoto katika Loitokitok ndio wanapata chakula mara tatu kwa siku.Chakula ni muhimu kwa kujenga akili na mtoto kufuatilia masomo darasani.(UWEZO)
July 4th (Wed)	UWEZO survey in Kajiado central/LTK	Asilimia 70 ya wanafunzi wa darasa la 3 uko kajiado ya kati wanaweza fanya kiswahili ya darasa la 2 ilhali asilimia 30 ndio wanaweza fanya hivyo kajiado kusini
June 30th (Sat)	Ed is an investment	Elimu huleta busara katika maisha ya binadamu. Somesha mtoto wako awe mtu wa maana katika jamii. GLMi Kenya
June 28th (Thr)	Matepes good practice in filing	Wazazi wa shule ya Matepes wameweza kuhifadhi kazi ya wanao nyumbani ili kufuatilia jinsi wanavyoendelea shuleni.Je,unafanyaje ili kuimarisha masomo ya mwanao?
June 23rd (Sat)	Ed is an investment	Elimu ndiyo urithi bora ambayo mzazi anafaa kumpa mtoto wake. GLMi Kenya
June 20th (Wed)	✓ and × mark on workbooks	Mzazi unajua kuwa unaweza fuatilia kazi ya mwanao. Alama ya ✓ inaonesha amepata jibu na alama ya × inamaanisha amekosa jibu.
June 16th (Sat)	Ed is the key to success	ELIMU NI UFUNGUO WA MAISHA BORA GLMi Kenya
June 11th (Mon)	Talk with your child at home	Hujambo mzazi. Je unaongea na mwanao kuhusa masomo.Wekendi ndio nafasi nzuri ya kuongea na yeye kuhusu masomo.Anza na swali lolote la masomo. Asante
June 6th (Wed)	Raise your voice	Ni muhimu kufahamu kwamba wewe ni mshirika muhimu katika shule yetu. Tujiunge kwenye mikutano ya shule pamoja ili tuweze kuinua hali ya masomo katika shule yetu
June 2nd (Sat)	Community ownership	Hamjambo. Nani anamiliki shule yenu? Shule ni yenu kama wazazi. Kama wazazi wanamiliki na kujihusisha na mambo ya shule, basi shule itabadilika kuwa nzuri.
May 30th (Wed)	Check HW at home	Unafahamu ya kwamba mwanao ako na kazi ya ziada baada ya shule? Hii inasaidia mwanao kuelewa vyema aliyosoma shuleni. Tafadhali angalia mwanao amepewa kazi gani

May 22nd (Tue)	Discuss and visit school	Mzazi. Je unataka kujua hali ya masomo ya mwanao? Unaweza kutembelea shule. Utapata nafasi ya kuzungumza na mwalimu wa darasa na kujua hali ya masomo ya mwanao
May 19th (Sat)	Learning time at home	Mzazi hujambo Je, uko na wakati wa mtoto kusoma nyumbani.Masomo sio shuleni tu bali pia nyumbani.
May 15th (Tue)	Mark and position of children	Hujambo mzazi. Je, unafahamu alama na nambari ya watoto wako katika darasa muhula uliopita? Mtoto wako hupokea ripoti kutoka kwa mwalimu wa darasa kila mwisho wa muhula. Kama bado hujaiipokea tafadhali uliza mwanao au tembelea shule. Asante. GLMi Kenya. 0704203632
May 15th (Tue)	Paranai reminder	Mwalimu mkuu na shirika la GLMI Kenya inawatangazia mkutano ya wazazi wa shule ya Paranai siku ya jumatano tarehe 16.5 saa nne kamili. asanteni
May 9th (Wed)	Olgulului mtg reminder	Mwalimu mkuu na shirika la GLMi Kenya inawatangazia mkutano wa wazazi wa shule ya msingi ya Olgulului siku ya Alhamisi tarehe 10.5.2018 saa nne asubuhi
May 8th (Tue)	Introductory message	Hujambo kutoka GLMI Kenya, shirika lisilo la kiserikali. Tumekusajili ili kupokea jumbe fupi kuhusu masomo katika shule yako.

Appendix 7 Analysis format on education data

1. Data	2. Problem Analysis	3. Potential actions to be taken	4. Feasibility of actions	5. Objectives and Activities

Appendix 8 SDP Format

Objectives	**Activity**	**Time Frame**	**Monitoring Indicator**	**Implementer**	**Input/Resource**
1.	1.1 1.2 1.3	1.1 1.2 1.3	1.1 1.2 1.3	XX XX XX	XX XX
2.	2.1 2.2 2.3	2.1 2.2 2.3	2.1 2.2 2.3	XX XX XX	XX XX
3.	3.1 3.2 3.3	3.1 3.2 3.3	3.1 3.2 3.3	XX XX XX	XX XX

Appendix 9 Learning Assessment Questionnaires

Questionnaire for pupil at Grade 1- Mathematics

**For this level, teacher should explain the meaning of the question verbally but do not tell the answers.*

Gender: Boy ( ) Girl ( ) Age (..... years)

Name.....

School.....

Choose the right answer for each calculation. Please mark one choice.

(Example) 5 – 2=

Answer. ☐ 2 ☑ 3 ☐ 7

(1) 5 + 3=

Answer. ☐ 2 ☐ 8 ☐ 53

(2) 7 – 3=

Answer. ☐ 4 ☐ 10 ☐ 73

(3) 7 + 6=

Answer. ☐ 1 ☐ 13 ☐ 76

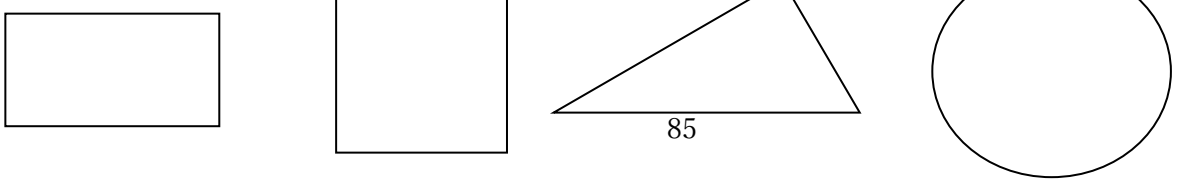
(4) 16 – 8=

Answer. ☐ 8 ☐ 24 ☐ 168

(5) How many mangoes can you see here? Write the number.

Answer. mangoes

(6) Write a tick for rectangle.



Questionnaire for pupil at Grade 2- Mathematics

**For this level, teacher should explain the meaning of the question verbally but do not tell the answers.*

Gender: Boy ( ) Girl ( ) Age (..... years)

Name.....

School.....

Choose the right answer for each calculation. Please mark one choice.

(Example) 5 – 2=

Answer. ☐ 2 ☑ 3 ☐ 7

(1) 5 + 7=

Answer. ☐ 2 ☐ 12 ☐ 57

(2) 17 – 9=

Answer. ☐ 8 ☐ 26 ☐ 179

(3) 100 – 86=

Answer. ☐ 14 ☐ 76 ☐ 186

(4) 36 – 19=

Answer. ☐ 7 ☐ 17 ☐ 55

(5) 2 x 4=

Answer. ☐ 6 ☐ 8 ☐ 24

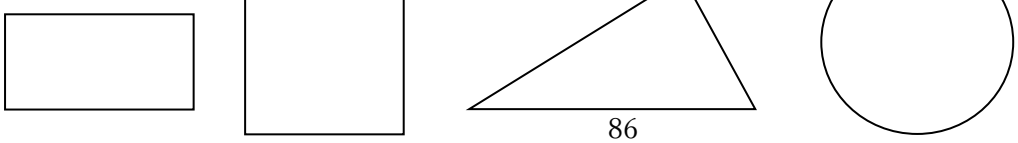
(6) 7 x 4=

Answer. ☐ 11 ☐ 28 ☐ 74

(7) How many mangoes can you see here? Write the number.

Answer. mangoes

(8) Write a tick for square.



Jaribio la Mtihani Darasa la Kwanza- Kiswahili

Mwalimu afafanue swali bali asipeane jibu

Jinsia: Mvulana ( ) Msichana ( ) Umri: (……)

Jina……

Shule……

Sehemu ya A: (Wingi)

Andika Kwa Wingi

1. Mtoto _____

2. Kiti _____

3. Kiatu _____

Sehemu ya B: Kuunda maneno

Unda maneno

4. baab _____

5. zame _____

6. ocho _____

Sehemu ya C: Kinyume (Omitted from the analysis)

Andika Kinyume

~~7. Mama~~ _____

~~8. Simama~~ _____

~~9. Cheka~~ _____

Jaribio la Mtihani Darasa la Pili- Kiswahili

Mwalimu afafanue swali bali asipeane jibu

Jinsia Mvulana ( ) Msichana ( ) Umri (……..)

Jina……

Shule……

Sehemu ya A: Kuandika Kwa Wingi

Andika wingi wa sentensi zifuatazo.

1. Ndege huyu ni mnono.

_____

2. Twiga huyu ni mrefu.

_____

3. Simba huyu ni mkali.

_____

Sehemu ya B: Kukanusha sentensi (Omitted from the analysis)

Kanusha sentensi zifuatazo.

~~4. Mwanafunzi anaandika~~

_____

~~5. Mama atafua nguo.~~

_____

~~6. Mtoto anakimbia.~~

_____

Sehemu ya C: Kinyume (Omitted from the analysis)

Andika kinyume cha maneno haya

~~7. Fungua~~ _____

~~8. Rahisi~~ _____

~~9. Nyepesi~~ _____

Sehemu ya D: Kujaza mapengo

Tumia huu, hii, hili, hizi, hiki, huyu kujaza mapengo.

10. Mtoto _____analia.
11. Jino _____ linauma.
12. Nyumba _____ zitauzwa.

Appendix 10 Program of Governance and Leadership Training 2017

Governance and Leadership Training Program

Date: Tuesday, 4 July and Wednesday, 5 July 2017
Venue: Kilimanjaro Hotel, Loitoktok, Kenya
Participants: 89 Head teachers, BoM Chairs, and Area Chiefs from 30 Schools
Facilitators: Mikiko Nishimura, Jun Kawaguchi, and Tetsuya Yamada

Schedule:

DAY 1

8:30-9:00 Registration

9:00-9:30 Opening of the Training

- ✓ Remarks from DEO
- ✓ Explanation of the purpose and schedule of the training
- ✓ Introduction of project members

9:30-15:00 Session on Participatory School Management

9:30-10:30 Presentation on participatory school management by Mikiko Nishimura

- ✓ Issues of community participation in school management
- ✓ Participatory school planning and monitoring & evaluation

10:30-11:00 Presentation on UWEZO and Baseline survey data by Tetsuya Yamada

- ✓ Statistical overview of UWEZO data
- ✓ Statistical overview of the baseline survey data
- ✓ Some implications for Loitoitok

11:00-11:15 Coffee Break

11:15-11:30 Explanation on the Group Work

11:30-13:00 Workshop on school planning

- ✓ Group work by school zone to share good practices

13:00-14 :00 Lunch Break

14:00-14:30 Sharing of Group Work

14:30-15:30 Group work by school

- ✓ Develop some ideas of planning items for School Development Plan

15:30-1700 Session on Inclusive Education

15:30-16:30 Presentation on Inclusive Education by Jun Kawaguchi

16:30-17:00 Q&A and Explanation on the session on Day 2

DAY 2

8:30-9:00 Registration

9:00-12:00 Session on Inclusive Education (Continued)

9:00-11:00 Task Force group work on challenges and strategies for including out-of-school children

11:00-12:00 Sharing of group work

12:00-13:00 Lunch Break

13:00-14:30 Wrap Up and Way Forward

- ✓ Summary of activities and outcomes
- ✓ Confirmation of tasks ahead and roles and responsibilities of each participant
- ✓ Confirmation of schedules

14:30-15:00 Closing

- ✓ Remarks by DEO
- ✓ Remarks by Mikiko Nishimura

Appendix 11 Presentation Documents of Governance and Leadership Training 2017

CADVES

Capacity Development for Village-Based Sustainable Primary Education Strategy

Participatory School Management

6 July, 2017

Mikiko Nishimura
GLMi Institute
International Christian University

1

What is CADVES?

- A small scale project for 3 years between March 2017-March 2020 funded by the Ministry of Foreign Affairs of Japan
- Implemented by GLM Institute Japan and Kenya through a NGO partnership
- Proposed by NGO workers in Kenya and researchers in Japan based on a 3-year long research on community participation in school and inclusive learning
- Project Members: 3 Kenyan and 5 Japanese

2

What are we going to do in CADVES?

- **Overall Goal:** Opportunities of quality primary education for lower grade children under difficult circumstances are expanded in 30 schools of 30 villages in Loitokitok.
- **Four Focus Areas:**
  1. To build capacity to analyze education data at community level
  2. To promote information sharing on primary education at community level
  3. To improve learning environment of lower grade education
  4. To promote recognition on learning opportunities for children under difficult circumstances

3

How are we going to do it?

- Evidenced-based School Planning
- Community-based Open Discussion on School Planning
- Joint Monitoring and Evaluation of School Plan at Community Level
- Partnership between YOU as the major actors and US as facilitators

What CADVES does not do:

- Financial assistance
- Infrastructure development

4

- Have you ever heard of UWEZO learning assessment?
- What is the percentage of children aged 6-16 who can perform at the level of Grade 2 in math, Kiswahili, and English in Loitokitok?
- Is there any relation between mathematics and Kiswahili test scores?
- Which are related to children's math test scores?
  - Age, Mother's education, Wealth, Meals per day, Extra lessons, Preschool, Never enrolled in school

5

Purpose of the Governance and Leadership Training in 2017

- To share information on UWEZO survey in Loitokitok and baseline surveys on school and learning assessment of 30 schools
- To promote discussion on learning based on evidence
- To strengthen collegiality and network among the major actors to collectively act for improving learning opportunities in 30 villages

6

Expected Outcomes of the Training

- **Rough draft of Annual School Development Plan (SDP)** during the training
- **Community meetings** to be held in September-October 2017 to share information obtained in this training
- **SDP** (Oct. 2018-Dec. 2018) to be completed by the end of October, 2018
- **Implementation and monitoring** of SDPs (Oct. 2018-)
- **Presentation on progress of SDP** in July 2018 (tentative)

7

What is the problem?

- **Learning crisis** – only 30-40% of children are learning at Grade 2 level
  - ✓*How can we improve children's learning?*
- **Weak link** between community participation and learning
  - ✓*How can we make use of collective wisdom?*
- **Paradoxical Dichotomy** of Central Control and Local Control over the FPE policy
  - ✓ *How can we create a collaborative environment and not blame each other?*

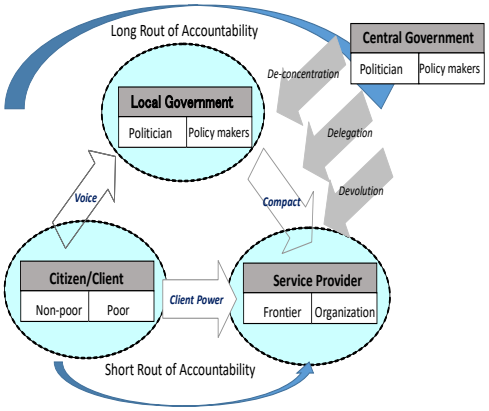
8

Policy expectation

- *"Public preparedness for devolution is very key and effective participation as envisaged in the Constitution will depend to a large extent on the level of citizen understanding as regards to their roles and responsibilities"* (Department of Education, 2013: 258)
- *"improved coordination, accountability and increased community/stakeholder participation in planning, implementation, management and governance of education at all levels" as one of the challenges* (Republic of Kenya, 2013: 34).

9

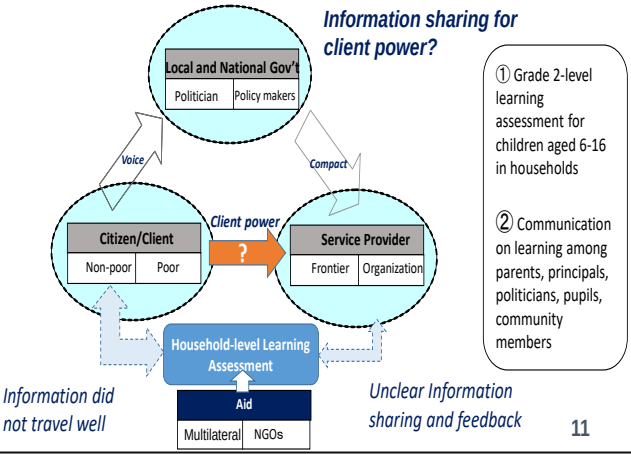
Accountability Framework



Source : World Bank (2003) World Development Report, p. 188 (Figure 10.3).

10

UWEZO Household Survey

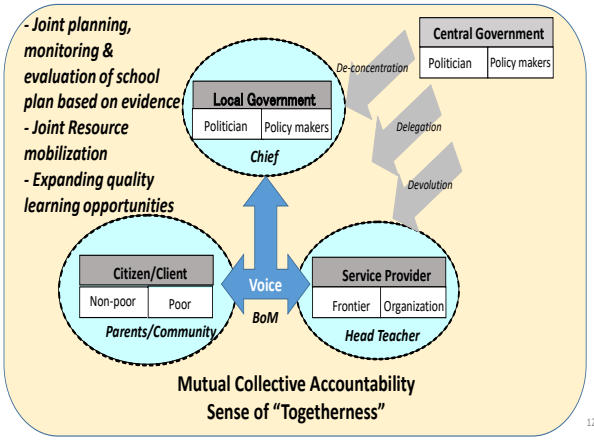


① Grade 2-level learning assessment for children aged 6-16 in households

② Communication on learning among parents, principals, politicians, pupils, community members

11

CADVES



12

Expected Impacts of Community Participation in School Management

- Promotion of democratic participation of local stakeholders
- Resource mobilization of parents and community
- More effective utilization of resources
- Improvement of school environment
- Quality improvement of education as a results of efficient use and management of resources
- Improvement of pupils' learning performance (e.g. repetition, dropout, test score)

13

In reality, many countries faced problems

- Upward accountability > Downward accountability of the local government
- Passive attitude and behavior of individuals
- Organisational culture of schools
- Disparities among schools
- Local politics: Partial participation and political interference

14

Equity Concern

- Who are community members?
- Do ALL community members participate?
- Is school environment equitable and inclusive enough?
  - ✓Do we analyze the attendance and learning trends by gender?
  - ✓Are remedial lessons organized in the time slot and ways in which they are accessible for ALL?
  - ✓Do we have information on out-of-school children in the village?
  - ✓Do we have any counter-measure against non-enrollment of children with disability and those under difficult circumstances?
  - ✓Are those countermeasures serving diverse needs?

15

How far are we?

- 22 (73%) schools have BoM members approved.
- 16 (53%) schools have an Annual School Plan.
- 27 (90%) schools collect money from parents to hire teachers.
- 27 (90%) schools meet with parents at least once a term or more.
- 19 (63%) schools have active or very active community participation in school management.
- Average KCPE mean score of 28 schools in 2016 was 250.25 whereby 13 schools had the mean score of above 250 and 2 schools had the mean score of above 300.

16

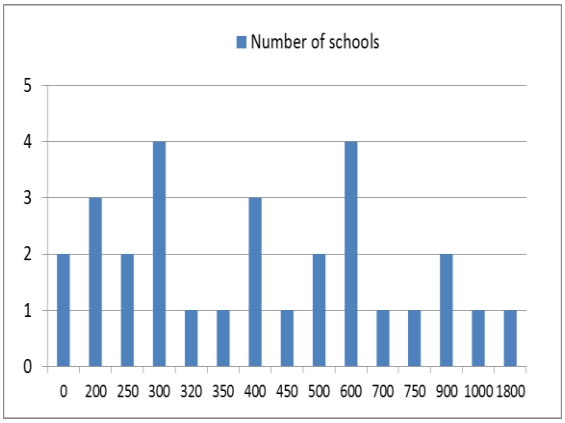
What is the role of BoM?

–The Items drawn from the Survey (Number of schools)

- Financial management (25)
- Planning and implementation of school development projects (23)
- Monitoring academic performance (13)
- Capacity development and supervision of school (12)
- Teacher recruitment and monitoring (11)
- Networking with stakeholders (10)
- Infrastructure development (9)
- Moral support (8)
- Guidance and Counseling (8)

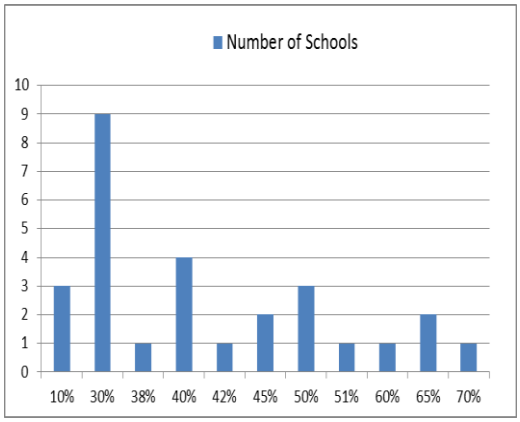
17

Financial Contribution to Hire Teachers (Kshs.)



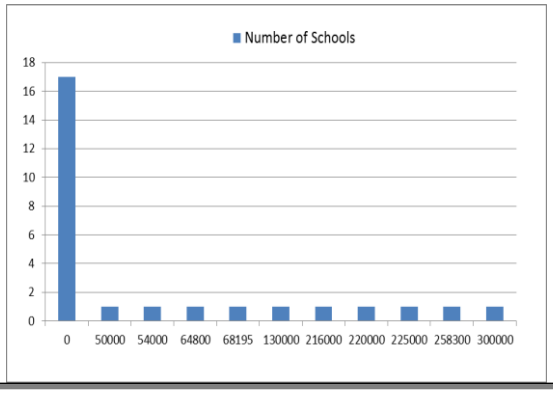
18

Percentage of parents who are NOT able to pay



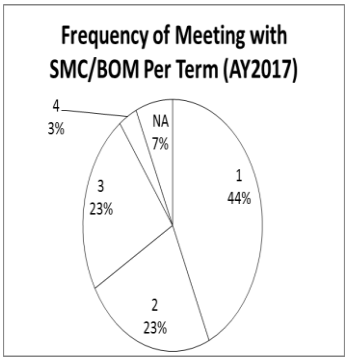
19

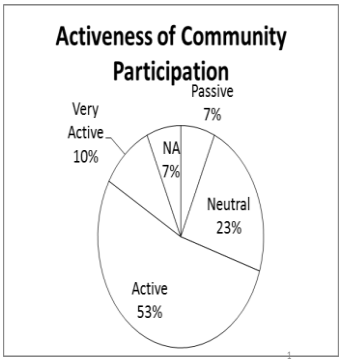
The amount of money PTA contributed to school in total in FY 2016 other than money for hiring teachers



20

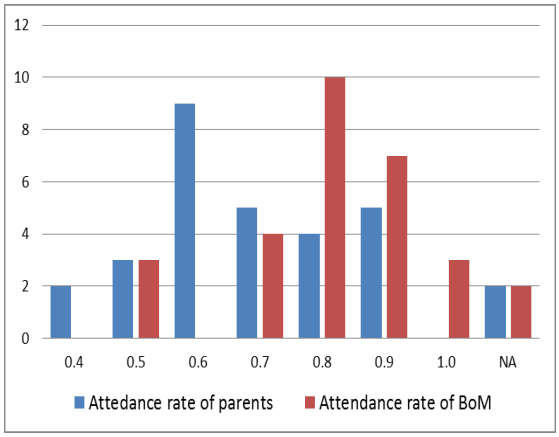
Frequency of SMC/BoM Meeting and Head Teachers' Perception of Activeness of BoM





1

Attendance Rate of SMC/BOM and Parents



2

Participation and Contribution

- A moderate positive correlation (α<.05, r=.45-.46)between the attendance rate of SMC/BoM/parents and head teachers' perception on activeness of community participation
- A moderate positive correlation (α<.1, r=.34) between the attendance rate of parents and parental contribution to hire teachers
- **No correlation** between the attendance rates in meetings and availability of school plan
- **No correlation** between the attendance rates in meetings and financial contribution to school other than hiring teachers

3

Participation, Contribution, and Learning Outcome

- **NO CORRELATION** between KCPE mean score (2016) and:
  - The attendance rates of parents and BoM members in meetings
  - Financial contribution to school
  - Head teacher's perception on activeness of community participation
  - Parental financial contribution to school for hiring teachers
  - Percentage of parents who are not able to pay
  - PTA's financial contribution other than for hiring teachers

4

Parents and Community are interested in learning outcome…

Content of discussion	With parents			With community		
	UWEZO-OPS school	Non-UWEZO-OPS school	Total	UWEZO-OPS school	Non-UWZO-OPS school	Total
Academic performance of pupils	49 (98%)	36 (84%)	85 (91%)	38 (76%)	26 (60%)	64 (69%)
Attendance of pupils	46 (92%)	30 (70%)	76 (82%)	27 (54%)	21 (49%)	38 (41%)
Behaviour of pupils	41 (82%)	34 (79%)	75 (81%)	31 (62%)	22 (51%)	53 (57%)
Quality of education	21 (42%)	15 (35%)	36 (39%)	15 (30%)	13 (30%)	28 (30%)
School activities	15 (30%)	15 (35%)	30 (32%)	26 (52%)	20 (47%)	46 (49%)
Financial and physical contribution of parents	15 (30%)	9 (21%)	24 (26%)	13 (26%)	7 (16%)	20 (22%)
Financial and physical contribution of community	-	-	-	21 (42%)	6 (14%)	27 (29%)
School finance	9 (18%)	6 (14%)	15 (16%)	12 (24%)	6 (14%)	18 (19%)
Parental participation in education	-	-	-	11 (22%)	4 (9%)	15 (16%)

Teachers are positive about collaboration..

"Parents and community members are able to discuss the quality of education"

	Strongly agree	Moderately agree	Do not know	Moderately disagree	Strongly disagree
UWEZO-OPS schools	43%	39%	7%	4%	7%
Non-UWESO-OPS schools	49%	25%	10%	8%	8%

"Parents and community members should participate in educational activities at school"

	Strongly agree	Moderately agree	Do not know	Moderately disagree	Strongly disagree
UWEZO-OPS schools	71%	17%	4%	4%	4%
Non-UWESO-OPS schools	56%	20%	13%	3%	8%

"How do you feel if parents and community members frequently come to school to discuss teaching and learning?"

	Willing to collaborate	Feel happy but somehow burdensome	Do not know	Not comfortable with sharing information	Not comfortable at all
UWEZO-OPS schools	85%	11%	4%	0%	0%
Non-UWESO-OPS schools	72%	20%	0%	3%	5%

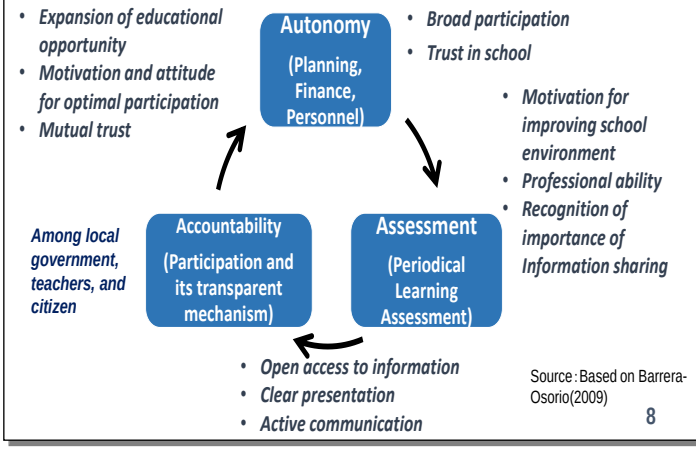
6

Why is there no correlation among participation, contribution, and learning outcome?

- What are meetings for?
- How do you set the school goals and plan projects?
- Do you have common understanding of school goals?
- Do all stakeholders share reliable data?
- Is discussion in the meetings based on evidence?
- Do all stakeholders understand and agree to their roles and responsibilities?
- Are there any good practices that led to learning outcome?

7

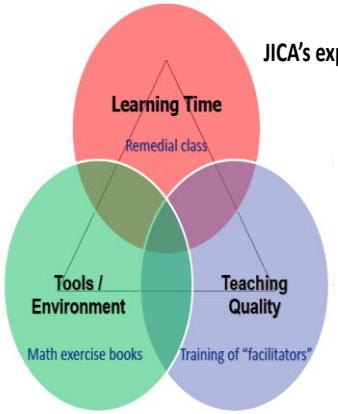
What makes learning better?



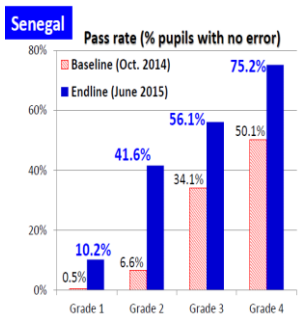
Source : Based on Barrera-Osorio(2009)

8

What makes learning better?– Cont'd



JICA's experience in remedial lessons in Senegal



Source: Kunieda, N. (2017). Can Community Participation Contribute to the Improvement of Learning Opportunities and Quality? Paper presented in the GLMi Seminar on 26 May 2017. Tokyo.

What do we need to include in School Development Plan?

- Objectives
- Activities
- Time frame for each activity
- Monitoring indicators
- Implementer
- Input/Resources (i.e. financial, physical, and human resources)

10

Annual School Development Plan (October 2017-December 2018)

Objectives	Activity	Time Frame	Monitoring Indicator	Implementer	Input/Resource
1.	1.1 1.2 1.3	1.1 1.2 1.3	1.1 1.2 1.3	XX XX XX	XX XX
2.	2.1 2.2 2.3	2.1 2.2 2.3	2.1 2.2 2.3	XX XX XX	XX XX
3.	3.1 3.2 3.3	3.1 3.2 3.3	3.1 3.2 3.3	XX XX XX	XX XX
X	X.1	X.1	X.1	XX	XX

1

Example

Objectives	Activity	Time Frame	Monitoring Indicator	Implementer	Input/ Resource
1. Early grade learners will improve their test scores	1.1 To develop a remedial lesson plan 1.2 To select a facilitator 1.3 To conduct remedial lessons 1.4 To conduct continuous assessment	1.1 July-Aug.2017 1.2 August 2017 1.3 Sept.2017-Dec. 2018 1.4 Sept. 2017-Dec. 2018	1.1 Remedial lesson plan 1.2 Attendance record of remedial lesson 1.3 Results of learning assessment	BoM, early grade teachers, a community volunteer teacher/ facilitator	Tusome and Pride workbooks Community volunteers Teachers
2. Adult literacy class for overseeing children's learning at home	2.1 To develop an adult literacy class plan 2.2 To select a facilitator 2.3 To develop learning materials 2.4 To conduct adult literacy class 2.5 To assess how parents oversee children's learning	2.1 July-Aug. 2017 2.2 August 2017 2.3 Sept. 2017 2.4 Oct. 2017-Dec. 2018 2.5 Oct. 2017, Mar. 2018, Sept. 2018	2.1 Adult literacy plan 2.2 Attendance record of adult literacy class 2.3 Results of assessment	BoM and early grade teachers , a volunteer facilitator	Facilitator's honorarium by GLMi Kenya

2

Group Work by Geographic Location

- **3 schools** will make one group (10 groups in total)
- Discuss the following issues:
  1. What kind of good practices do you have for increasing community participation in school?
  2. What kind of good practices do you have for improving pupils' learning outcome?
  3. **How can we link community's potentials with learning outcome?**

3

Gentle Reminder of Your Tasks Ahead

- **Community meetings** to be held in September-October 2017 to share information obtained in this training
- **School Development Plan (SDP)** (Oct. 2017-Dec. 2018) to be completed by the end of October, 2017
- **Implementation and monitoring** of SDPs (Oct. 2017-)
- **Presentation on progress of SDP** in July 2018 (tentative)

GLM Institute Kenya Team will visit you for monitoring and sharing information!

4

Inclusive Society and Education

University of Tsukuba
JUN Kawaguchi

4th July, 2017

Contents of Discussion

- What is "Disability" ?
- What is "Inclusive education" ?
- Why do we need "Inclusive Society" ?

What is "DISABILITY" ?

The Definition of "Disability"

- What are the differences between these?
  - Impairment
  - Disability
  - Handicap

Types and % of Disability

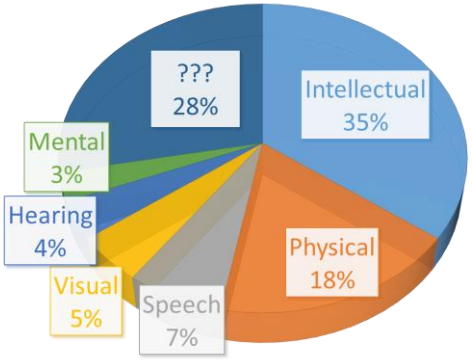
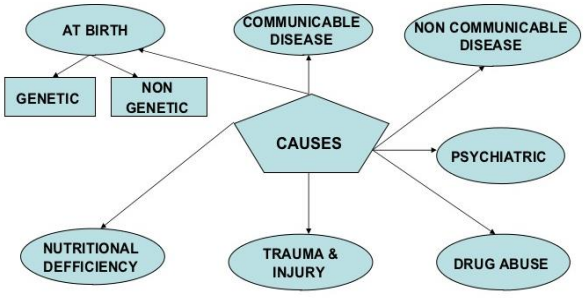


Chart 1 : Types and % of Disability in the world

Source: UNICEF 2015

Cause of Disability



Map 1: Cause of disability

Source: APCU 2012

What is this gap?

- Gap A :
  - WHO (1979) : 10 % of the world's population are people with disability.
  - Filmer (2005) : Pupils with disability are 1.7% of population.
  - UNICEF (1999) : The number of pupils with disability is 150 million, only 3% are able to go to school.
  - World Bank (2003) : 115 million children are out of school, among them 40 million are pupils with disability. Only 5% can complete primary school.

3

What is this gap?

- Gap B

Head teacher at School A :

"Our area has only 2 out of school children with disability"

Head teacher at School B :

"Our area has 50 out of school children with disability"

4

What is "Inclusive Education" ?

5

International trend of education for pupils with disability in developing countries

- 1948: "Universal Declaration of Human Rights "
- 1981: "International Year of Disabled Persons" -Slogan "Complete participation and equality"
- 1983～1992 "International Decade of Disabled Persons" ⇒From "Special education" to "Integrated education"
- 1989: "Convention on the Rights of the Child"
- 1990: "World Conference on Education for All"
- 1994: "Salamanca statement" ⇒ Inclusive education
- 2015 : Incheon declaration, SDGs: "Inclusion" is a key word

6

Salamanca statement 1

We believe and proclaim that:

- every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning
- every child has unique characteristics, interests, abilities and learning needs,
- education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs,
- those with special educational needs must have access to regular schools which should accommodate them within a child-centered pedagogy capable of meeting these needs

7

Salamanca statement 2

We believe and proclaim that:

- regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes ,creating welcoming communities, building an inclusive society and achieving education for all;
- moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately **the cost-effectiveness of the entire education system.**

Source: Salamanca statement/UNESCO

The situation of IE in some countries

- Challenges of "Inclusive Education"
  - The definition of Inclusive Education has become fixed, but it is not clear how we can provide Inclusive Education (Forlin 2012).
  - There are no experts of Inclusive Education even in most teacher training colleges. The situation is the same in most developed countries. Experts of education for pupils with disability teach Inclusive Education (K. Tait 2012).
- Challenges in developing countries
  - In general, there is a lack of teachers (UNESCO 2005)
  - Supply factors are insufficient (teacher training system, textbooks, curriculum and other teaching materials)
  - It is often misunderstood with "Integrated Education" (Armstrong 2010).

⇒In many cases, "Inclusive Education" has become just a "Dumping Education" in some developing countries.

1

Why do we need "Inclusive Society" ?

2

Discussion 1

- Please make groups of 3
- Please take a position to support segregated society, integrated society and inclusive society by each member
- Please try to convince other 2 members to change their positions

1

The definition (Source: Boyle and Topping 2012)

- Segregated society: Form of society is separated based on specific socio- economic status. Apartheid is an extreme form of segregation based on skin color.
- Integrated society: All members in the society have equal rights and responsibilities. In reality, minority needs to adjust the majority.
- Inclusive Society: Social inclusion is a kind of integration but there is a recognition of the difference between the included group, usually a minority, and the majority group. The majority group have a responsibility to look after and include the minority.

2

Discussion 2

- With the 3 members, please discuss and find the reasons why we need inclusive society.
- Please find the obstacles to create inclusive society in your community.

3

Barriers to promoting IE

- Questionnaire: Do you welcome pupils with disability in your child's class for next year?

Table 1: Parents reaction for IE introduction in Italy

	Mother	Father
Children with disability	○	◎
Children without disability	×	△

N=387 Source: Topping 2012

4

Strategy to find the
Out of school children

1

Homework

- By the end of October
- Assessment of OOSC in the community
- Additional assessment of OOSC with community during the community meeting either in September or October
- Discuss why children are out-of-schooled and how they can solve the issue

2

We collect the real picture of OOSCs in each community

- We need to catch and list up the each concrete number and reason for OOSC.
- E.g.
  - No1: 12 year old, girl, visual impairment. Because of father's will, she have to be in the house at XXXX
  - No.2: 7 year old, boy, hearing impairment XXXX

3

Setting the Strategy

- Please make groups of 9 (members from 3 schools)
- Please set the strategy
  Who will be members of the task team?
  How can task members find out of school children?

  ⇒ *Please decide concrete task road map*

4

UWEZO and Baseline Survey Data Analysis

Tetsuya Yamada
Education Specialist
GLMi Kenya

1

UWEZO Data Analysis

2

What is UWEZO?

- Nation-wide Household-based learning survey
- Data in 2014
  - 600 households surveyed in Loitokitok sub county
  - **English** and **Kiswahili** literacy, and **Numeracy** which are to be attained after 2 years of primary education
  - 775 children aged 6-16 (387 boys and 388 girls) took Swahili test
  - 785 children aged 6-16 (391 boys and 394 girls) took English test
  - 778 children aged 6-16 (388 boys and 390 girls) took math test
- Enrollment Situation
  - **16%** of children aged 6-13 (103 children)in Loitokitok are NOT currently enrolled in school and **15%** of children aged 6-13 (100 children)in Loitokitok have never enrolled in school (The national average is around 10%)
  - Most of children who are currently out-of-school have NEVER attended school

3

Community/Family situation

- The majority is Maasai (75%)
- About **74%** of mothers in Loitoktok did not attend any formal schooling before. The percentage is way higher than the national average (11.3%)
- About 47% of households in Loitoktok are considered to be poor
- About 40% of children can eat meals either only 1 or 2 times per day

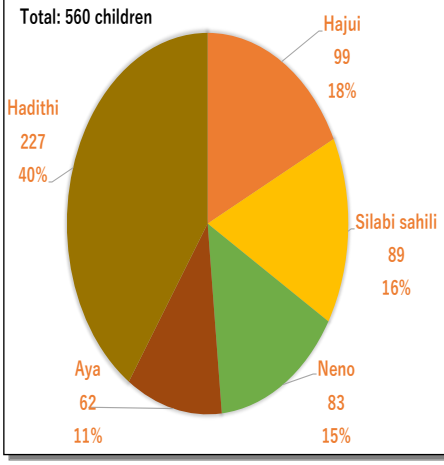
4

Extra Lesson

- **86%** of enrolled students (639 students) do not receive any extra lesson.
- There seems to be no gender gap in the extra lesson status.
- However, students at private school are likely to attend extra lesson. 25 out of 67 private school students (**37%**) receive extra lesson while 76 out of 607 public school students (**13%**) do.
- Students at the lower grades are less likely to receive extra lesson (**90%** of Class 1 students and **93%** of Class 2 students do not receive extra lesson while **78%** and **56%** of pupils at Class 7 and 8 respectively do not).

5

Kiswahili Performance of Children aged 7-13

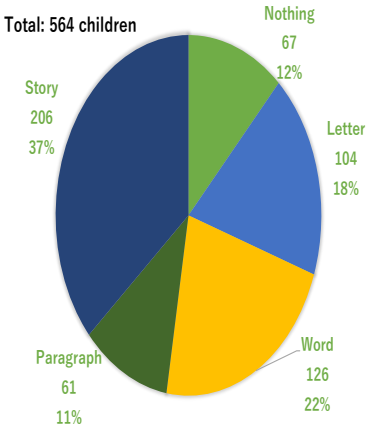


Only **40%** of children aged 7-13 in Loitokitok met the Class 2 Kiswahili level

18% of children could **NOT UNDERSTAND ANYTHING**

6

English Performance of Children aged 7-13

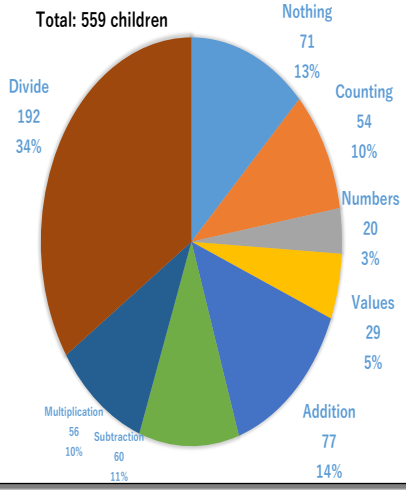


Only **37%** of children aged 7-13 in Loitokitok met the Class 2 English level

12% of children could **NOT UNDERSTAND ANYTHING**

7

Math Performance of Children aged 7-13



Only **34%** of children aged 7-13 in Loitokitok met the Class 2 Math level

13% of children could **NOT UNDERSTAND ANYTHING**

8

Multiple Regression Analysis

- How variables below affect test scores (English, Swahili and Math)
- **Children's age**, **Mother's educational level, Wealth, Meals children eat per day**, **Extra lessons, Pre school, Never enrolled in school**
- Obviously "**Children's age**" and "**Never enrolled in school**" have the most statistically significant relationship with test scores
- Except those two variables, "**Meals children eat per day**" influences the most, controlling variables including **wealth** and their **mother's educational level**
- **"Extra Lesson"** has the positive statistically significant relationship with all Swahili/Math/English test scores, controlling the same variables above

9

Additional Multiple Regression Analysis

- $Y=a+b1X1+b2X2+b3X3+b4X4+b5X5+b6X6+b7X7+b8X8$

Y=(Swahili or English or Math)

X1=Children's age, X2=mother's educational level X3=Meals children eat per day, X4=whether children attend extra lessons/tuition, X5=years children attend pre school, X6= whether children never enrolled school, X7=wealth, **X8= whether Maasai is mother tongue**

Being a child whose mother tongue is Maasai has a negative statistically significant impact on Swahili test scores (not on Math and English test scores)

9A

Learning Assessment

10

Learning Assessment Details

- School-based survey conducted by GLMi Kenya in June 2017
- Purpose: Understanding the **basic learning level** of students
- We developed the "basic" questions (not challenging) based on the Kenyan curriculum by grade

- No gender and age gap in scores
- Swahili is not officially taught at ECD

11

Mean test scores

	ECD	Class 1	Class 2
Swahili (Number of school=14)	52/100	40/100	36/100
Math (Number of school=21)	78/100	64/100	66/100
English (Number of school=14)	-	-	61/100

Students seem to have difficulty in Swahili

There is a big variance in mean test scores among students

12A

Percentages of students who can answer all or most of all questions

	ECD	Class 1	Class 2
Swahili (Number of school=14)	27%	14%	15%
Math (Number of school=21)	51%	40%	33%
English (Number of school=14)	-	-	25%

Most of the students do not understand what they learnt at school.

Especially, students are really weak in Swahili

13A

The relationship among test scores

- There is a positive statistically significant relationship among Swahili, Math and English test scores for Class 1 and Class2.
- Bright students can do well in all subjects; however, weak students are likely to be left behind in all subjects.

14

Baseline Survey

Surveyed by GLMi Kenya in May 2017 at 30 schools

15

Out-of-School Children

- Only 15 schools can answer the number of out-of-school children. **The rest of 15 does not know the number or the data are not available**.
- The average number of Out-of-School Children is 83 at one school (Max 240 Min 5)

16

Disabled children

- **No classrooms** are available for special education at all 30 schools
- 12 disabled students are attending school on average (Max 87 students)
- 16 schools have teachers who were trained for special education.
- Only **12** schools can answer the number of disabled children who are out-of-school. On average 5 disabled children are out-of-school at one school.
- **No BoMs mentioned that their role is to solve the issues for out-of-school children and disabled children.**

17

Community Contribution to School Management

- 1084 ksh-The average amount of money Parents and PTA contribute for hiring teachers and school management in a year per pupil
- Schools have more meeting with parents if community financially contributes to the school
- **However, this community contribution has no statistically significant relationship with test scores**
  - The fact that community contributes to school didn't lead to the improvement in educational quality

18

Summary and Implications

- **Learning Tragedy**
  - Urgent needs to think about the way to improve their learning
  - E.g. Extra lesson is not common for lower grade children, but it can be an effective tool to improve learning according to the statistical analysis
  - Necessity to identify students who are left behind and focus on their learning
- **Community participation** and its link with improvement of **learning**
  - Community is active in supporting schools in Loitokitok. But, how can the community participation contribute to "Learning"?

19

Summary and Implication

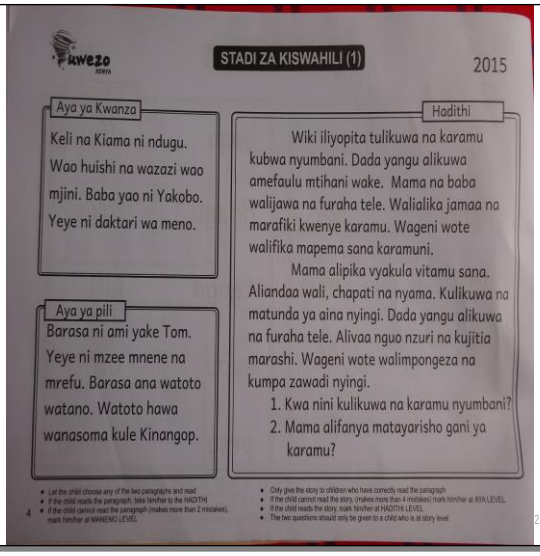
- There is still an **access** issue in Loitokitok and little understanding on children who are out-of-school (especially disabled children who are out-of-school)
  - Urgent needs to assess the number of out-of-school children and the reason why they are out-of-school
- Are you ready for **inclusive** learning environment?
  - Disabled students are left behind at the classroom or even at home. How can the school provide quality education to ALL children?

20

UWEZO 2015 Kiswahili test

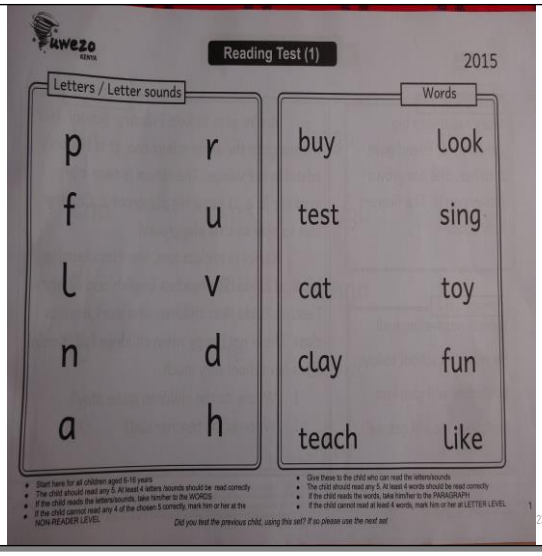
21

UWEZO 2015 Kiswahili test



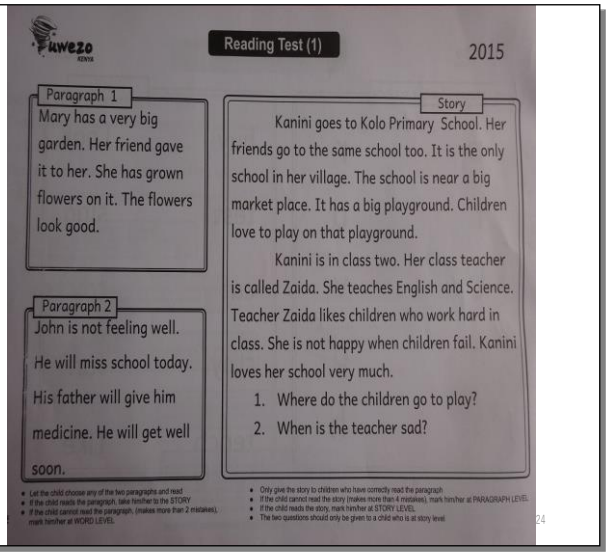
22

UWEZO 2015 English test



23

UWEZO 2015 English test



Uwezo KENYA

Reading Test (1) 2015

Paragraph 1

Mary has a very big garden. Her friend gave it to her. She has grown flowers on it. The flowers look good.

Paragraph 2

John is not feeling well. He will miss school today. His father will give him medicine. He will get well soon.

- Let the child choose any of the two paragraphs and read
- If the child reads the paragraph, take him/her to the STORY
- If the child cannot read the paragraph, (makes more than 2 mistakes), mark him/her at WORD LEVEL

Story

Kanini goes to Kolo Primary School. Her friends go to the same school too. It is the only school in her village. The school is near a big market place. It has a big playground. Children love to play on that playground.

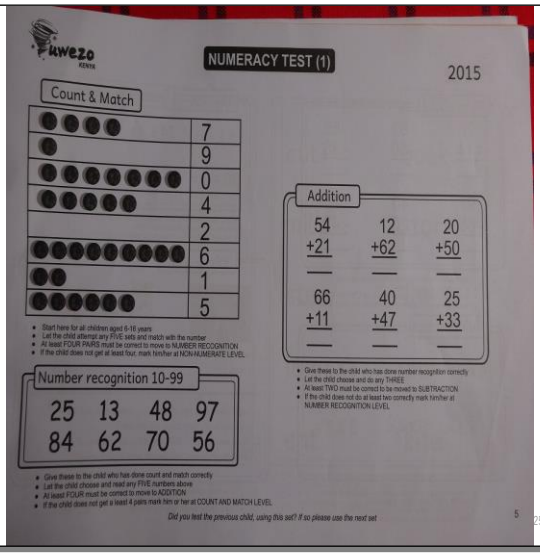
Kanini is in class two. Her class teacher is called Zaida. She teaches English and Science. Teacher Zaida likes children who work hard in class. She is not happy when children fail. Kanini loves her school very much.

1. Where do the children go to play?
2. When is the teacher sad?

- Only give the story to children who have correctly read the paragraph
- If the child cannot read the story (makes more than 4 mistakes), mark him/her at PARAGRAPH LEVEL
- If the child reads the story, mark him/her at STORY LEVEL
- The two questions should only be given to a child who is at story level

24

UWEZO 2015 Math test



Uwezo KENYA

NUMERACY TEST (1) 2015

Count & Match

●●●●	7
●	9
●●●●●●●	0
●●●●●	4
	2
●●●●●●●●	6
●●	1
●●●●●●	5

- Start here for all children aged 6-16 years
- Let the child attempt any FIVE sets and match with the number
- At least FOUR PAIRS must be correct to move to NUMBER RECOGNITION
- If the child does not get at least four, mark him/her at NON-NUMERATE LEVEL

Number recognition 10-99

25	13	48	97
84	62	70	56

- Give these to the child who has done count and match correctly
- Let the child choose and read any FIVE numbers above
- At least FOUR must be correct to move to ADDITION
- If the child does not get a least 4 pairs mark him or her at COUNT AND MATCH LEVEL

Did you test the previous child, using this set? If so please use the next set

5

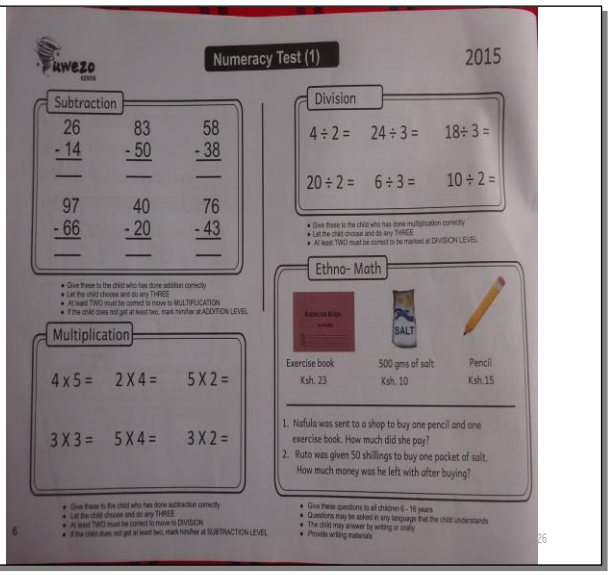
Addition

54 +21 =	12 +62 =	20 +50 =
66 +11 =	40 +47 =	25 +33 =

- Give these to the child who has done number recognition correctly
- Let the child choose and do any THREE
- At least TWO must be correct to be moved to SUBTRACTION
- If the child does not do at least two correctly mark him/her at NUMBER RECOGNITION LEVEL

25

UWEZO 2015 Math test



Uwezo KENYA

Numeracy Test (1) 2015

Subtraction

26 - 14 =	83 - 50 =	58 - 38 =
97 - 66 =	40 - 20 =	76 - 43 =

- Give these to the child who has done addition correctly
- Let the child choose and do any THREE
- At least TWO must be correct to move to MULTIPLICATION
- If the child does not get at least two, mark him/her at ADDITION LEVEL

Multiplication

4 x 5 =	2 X 4 =	5 X 2 =
3 X 3 =	5 X 4 =	3 X 2 =

- Give these to the child who has done subtraction correctly
- Let the child choose and do any THREE
- At least TWO must be correct to move to DIVISION
- If the child does not get at least two, mark him/her at SUBTRACTION LEVEL

6

Division

4 ÷ 2 =	24 ÷ 3 =	18÷ 3 =
20 ÷ 2 =	6 ÷ 3 =	10 ÷ 2 =

- Give these to the child who has done multiplication correctly
- Let the child choose and do any THREE
- At least TWO must be correct to be marked at DIVISION LEVEL

Ethno- Math

Exercise book	500 gms of salt	Pencil
Ksh. 23	Ksh. 10	Ksh.15

1. Nafula was sent to a shop to buy one pencil and one exercise book. How much did she pay?
2. Ruto was given 50 shillings to buy one packet of salt. How much money was he left with after buying?

- Give these questions to all children 6 - 16 years
- Questions may be asked in any language that the child understands
- The child may answer by writing or orally
- Provide writing materials

26

Appendix 12 Program of Governance and Leasership Training 2018

Governance and Leadership Training Program in 2018
CADVES Project

Period of the Training: From Monday, July 30 to Friday, August 3, 2018

Objective of the Training:

The objective of the training is threefold: namely,

1) To analyse and discuss the results of the learning assessments conducted in 2017 and 2018 and the list and characteristics of out-of-school children (OSC) at the school and zonal levels;
2) To come up with concrete strategies to ensure learning opportunities for OSC at school and zonal levels; and
3) To reflect on and revise the existing School Development Plans (SDPs) based on discussion made on 1) and 2) above.

Outcome of the Training:

The expected outcome of the training is as follows:

1) Revised School Development Plans for 30 schools
2) Concrete collective strategies to eliminate out-of-school children at the zonal level

Mode of Training:

- The training will be conducted by school zone, each of which includes 6 schools.
- The mode of training includes brief presentations made by the Loitoktok Team, Charles, Jun, and Mikiko, presentation of each school on their SDPs, and discussion.
- The important modality of training is to create a space whereby participants feel that this is their work and that GLMi Kenya is just assist what they are doing. Each facilitator and presenter should bear in mind the ownership of the participants at all times during and after the training.
- The venue should be carefully identified for each zone. The Loitoktok Team will decide how best we could organize the training so that there will no delay of the program and overly expensive cost for training.

Participants:

110 Head teachers, Board of Management (BoM) Chairs, PTA Chairs, and Chiefs of 30 target schools

Program:

8:30-9:00 Registration

Opening of the Training

9:00-9:30 Opening speech by Charles
Introduction of the team members and participants by Laban
Explanation of the objective of the training by Mikiko

Session 1: Analyse and Discussion on the Results of the Learning Assessments and the Out-of-school Children (OSC)

Facilitator: Shadrack

9:30-9:50 Presentation on the learning assessment results in 2017 and 2018 at the school and zonal levels by Tetsuya
9:50-10:00 Q & A
10:00-10:20 Presentation on OSCs and school facilities at the school and zonal levels by Laban
10:10-10:30 Q & A

10:30-10:45 Break

Session 2: Strategies to Ensure Learning Opportunities for OSC

Facilitator: Charles

10:45-11:00 Presentation on OSC and children with disability and some plans on the resource rooms in 2018/19 by Jun
11:00-11:10 Q & A
11:10-11:25 Presentation on civic engagement for eliminating OSC in Loitoktok by Charles
11:25-11:35 Q & A
11:30-13:00 Discussion on concrete strategies for eliminating OSC at the zonal level and school levels

13:00-14:00 Lunch

Session 3: Presentation and Revision of School Development Plan

Facilitator: Tetsuya

14:00-14:15 Tips on viable SDPs by Mikiko
14:15-15:00 Group discussion at the school level to revise their SDPs
15:00-16:00 Presentation on revised SDPs (5 min. for presentation, 5 min. for Q&A x 6 schools)

16:00-16:30 Wrap Up and the Way Forward by Mikiko

Appendix 13 Presentation documents of Governance and Leasership Training 2018

Leadership and Governance Training for Schools in Loitokitok,

Presented By: Charles Masangira

Director, Illaramatak le Mpusel and Chairman, GLMi

30th July-3rd August 2018

Legal framework

- Are we aware of the provisions of the children rights as far as education is concerned in the Constitution of Kenya and the Children's Act CAP 141 Revised Edition 2012 (References)
- What is our role in enforcing this provisions...(Community sensitisations especially parents, being vigilant,)

Legal provisions for access to Education in the Constitution.

- The Constitution- Article 43 (1) f, - a right to Persons, 53 (1)b, -Children, 54 (1)b, -PWDs 55 (a), -Youth, 56 (b) – minority and marginalised groups
- Children Act 2001 (Revised in 2012)- Part II; safeguards for the rights and welfare of Children. Every Child is entitled to free and compulsory primary education.... , Non Discrimination

School/Class attendance

- Attendance affects learning either positively or negatively. What are the key reasons or barriers to proper school attendance?
- Some of the expected reasons;
- Traditional/ cultural background
- Illiteracy by parents
- Natural calamities e.g. drought etc
- Few community role models
- Shortage of teachers

What are some of the solutions to the barriers?

- Possible feedback;
- Sensitize parents and the community on the importance of education
- Encourage home visits- engaging individual parents, teachers and local leaders to visit homes of OSCs.
- Encourage involvement of other stakeholders such the Government, BOM, Parents Association and other organisations and institutions.
- Attractive school environment for learners

What other opportunities and strengths can we utilise to our advantage?

- Expected feedback;
- Supportive parents
- Goodwill and support of the politicians and other leaders
- Goodwill of the community
- Presence of an education office at the Sub county level
- Involvement of other stakeholders and well wishers to the education sector

What is our role as School managers- BOM,PTA, Local leaders and teachers in ensuring that we improve the education in our schools?

Action/ Activity	Expected Change	Person Responsible	Who will Verify	

Learning Assessment results in 2017 and 2018

@Governance and Leadership Training

July 30th-August 3rd 2018

Tetsuya Yamada

Education Specialist

GLMi Kenya

Agenda

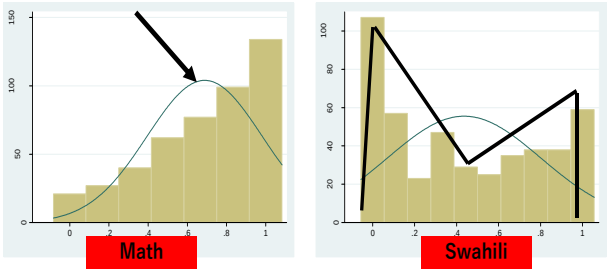
1. Learning Assessment in 30 schools
2. Comparison of learning assessment in 2018 and in 2017
3. Learning Assessment in zones
4. Item Analysis
5. Some Implication
6. Discussion Questions

Raw Scores and Standard Deviation (SD) at 30 schools

Subject	Male	Female	Total
Math class 1	70(SD:29)	67(SD:29)	69 (SD: 29)
Swahili class 1	43(SD:37)	44(SD:37)	44 (SD: 37)
Math class 2	61(SD:27)	62(SD:26)	61 (SD: 26)
Swahili class 2	30(SD:30)	32(SD:30)	31 (SD: 30)

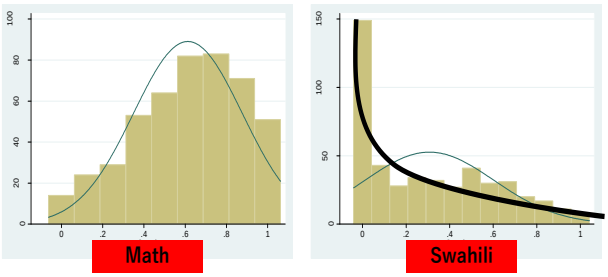
- Students have more difficulty in Kiswahili.
- Female students seem to do good in all subjects except math class1, but the difference is not statistically significant. *Full mark is 100

Distribution of scores for class 1



- Many students score above mean scores for MATH (69%).
- However, there is a big gap in SWAHILI scores and the biggest group scored 0%.

Distribution of scores for class 2



- Many students score around mean scores (61%) in MATH and distribution looks a bell curve.
- Many students score 0% in SWAHILI.

Comparison of raw scores in 2017 and 2018

Subject	2017			2018			Change
	Male	Female	Total	Male	Female	Total	
Math class 1	65 (SD:28)	64 (SD:28)	**65 (SD:28)**	70 (SD:29)	67 (SD:29)	**69 (SD:29)**	4 Increased
Swahili class 1	39 (SD:33)	39 (SD:34)	**39 (SD:34)**	43 (SD:37)	44 (SD:37)	**44 (SD:37)**	5 Increased
Math class 2	65 (SD:26)	66 (SD:26)	**66 (SD:26)**	61 (SD:27)	62 (SD:26)	**61 (SD:26)**	5 Decreased
Swahili class 2	34 (SD:30)	34 (SD:29)	**34 (SD:29)**	30 (SD:30)	32 (SD:30)	**31 (SD:30)**	3 Decreased

Class 1 IMPROVED but Class 2 DECREASED

Zonal Analysis of class 1 raw scores

Zone A: Olchorro, Paranai, Imisigiyo, Amboseli, Oldonyo-oibor, Enkongu-Narok, Loormeuti
Zone B: Munyurra, Nasipa, Esossian, Matepes, Oloibor-soit, Elerai
Zone C: Inkisanjani, Orkaria, Iltilal, Moilo, Samai, Elangata-Enkima
Zone D: Meshanani, Eluai-Nalepo, Olgulului, Osoit, Iloirero
Zone E: Ilchalai, Olbili, Oltiasila, Olorika, Olanti, Shilishili

2018	Math class 1			Swahili class 1		
	Male	Female	**Total**	Male	Female	**Total**
Zone A	64(SD:27)	64(SD:26)	**64(SD:27)**	40(SD:38)	33(SD:32)	**37(SD:36)**
Zone B	76(SD:32)	70(SD:32)	**73(SD:32)**	44(SD:40)	48(SD:42)	**46(SD:41)**
Zone C	71(SD:35)	66(SD:34)	**68(SD:35)**	51(SD:37)	48(SD:37)	**49(SD:37)**
Zone D	64(SD:28)	64(SD:32)	**64(SD:30)**	27(SD:29)	34(SD:32)	**31(SD:31)**
Zone E	76(SD:22)	72(SD:22)	**74(SD:22)**	52(SD:33)	54(SD:35)	**53(SD:34)**
30 schools	70(SD:29)	67(SD:29)	**69(SD:29)**	43(SD:37)	44(SD:37)	**44(SD:37)**

Zonal Analysis of class 2 raw scores

2018	Math class 2			Swahili class 2		
	Male	Female	**Total**	Male	Female	**Total**
Zone A	52(SD:27)	51(SD:27)	**52(SD:27)**	24(SD:23)	26(SD:30)	**25(SD:26)**
Zone B	74(SD:27)	77(SD:22)	**75(SD:25)**	45(SD:33)	47(SD:29)	**46(SD:31)**
Zone C	54(SD:26)	56(SD:28)	**55(SD:27)**	25(SD:29)	21(SD:25)	**23(SD:27)**
Zone D	65(SD:23)	62(SD:23)	**63(SD:23)**	19(SD:25)	16(SD:21)	**18(SD:23)**
Zone E	61(SD:25)	65(SD:22)	**63(SD:24)**	36(SD:32)	45(SD:28)	**41(SD:31)**
30 schools	61(SD:27)	62(SD:26)	**61(SD:26)**	30(SD:30)	32(SD:30)	**31(SD:30)**

8

Which questions students are weak in?

Math class 1
- Subtraction of 2 digits numbers (e.g. 16-9)

Swahili class 1
- Andika Kinyume (e.g. Simama, Cheka)

Math class 2
- Subtraction of 3 digits numbers and simple multiplication (e.g. 100-84, 2 × 5)

Swahili class 2
- **Kukanusha sentensi**. **Kanusha sentensi zifuatazo.**

9

Some Implication

- There is a negative statistically significant difference in ratio of Maasai in school community and Kiswahili class 2 scores among 30 schools. →Schools which have more Maasai tend to have less Swahili scores in class 2.
- Some students catch up at least Swahili letters and words and others cannot catch up completely in class1 (BIG GAP)
- However, most students cannot catch up in class 2 once Swahili sentences are introduced. This tendency is strong in Maasai school community.
- The transition from basic concepts to relatively complex ones seems to be key especially for Maasai children.

10

Do parents' contribution, feeding and teachers matter?

- The answer is not necessarily YES.
- The per-pupil contribution from parents, the frequency of feeding program and the pupil-teacher ratio are statistically insignificant factors to test scores including KCPE scores among 30 schools.

11

Discussion Questions

- Why are Swahili scores low especially in class 2?
- Why did class 2 scores decrease while class 1 scores increased from 2017 to 2018?
- Why did some zones and schools perform well but others not?

12

CADVES

Capacity Development for Village-Based Sustainable Primary Education Strategy

Tips for Viable School Development Plan

30 July-3 August, 2018

Mikiko Nishimura
GLMi Institute
International Christian University

1

What was the problem?

- **Learning crisis** – only 30-40% of children are learning at Grade 2 level
  - ✓*How can we improve children's learning?*
- **Weak link** between community participation and learning
  - ✓*How can we make use of collective wisdom?*
- **Paradoxical Dichotomy** of Central Control and Local Control over the Free Primary Education policy
  - ✓ *How can we create a collaborative environment and not blame each other?*

2

How are we doing in school governance?

	2017	2018
BOM members approved	22	25
Have School Development Plan	16	29
Collects money to hire teachers	27	29
Meet with parents at least once a term	27	26
Have very active or active community	19	20
KCPE results	250.25('16)	258.08 ('17)
KCPE mean score above 250.0	13	16
KCPE score above 300.0	2	4

3

Participation, Contribution, and Learning Outcome in 2016 and 2017

- **NO CORRELATION** between KCPE mean score (2016, 2017) and:
  - The attendance rates of parents and BoM members in meetings
  - Financial contribution to school
  - Head teacher's perception on activeness of community participation
  - Parental financial contribution to school for hiring teachers
  - Percentage of parents who are not able to pay
  - PTA's financial contribution other than for hiring teachers

4

Some Evidence in 2018

- A positive statistically significant relationship between the difference in community activeness between 2017 and 2018 and the difference in the mean learning assessment test score of class 1 in Kiswahili between the same period.

→The more head teachers see community as more active than before, the higher the test score became.

→ However, there is no evidence on math in class 1 and math and Kiswahili in class 2.

5

Why do we need the School Development Plan (SDP)?

6

Equal Access to Education

- Gender disaggregated enrollment
- Survival rates
- Completion rates
- Regularity of attendance
- Repetition rates
- Promotion to the secondary level

7

Rights within Education

- Learning outcomes by gender
- Gender balance within the classroom
- Factors shaping participation and performance (e.g. health, nutritional status, child's involvement in family work)
- Social discrimination within the classroom and society

Source: UNESCO (2005) Scaling up good practice in girl's education. Paris: UNESCO.

8

Effective Schools

1. High expectations for success
2. Strong instructional leadership
3. Clear and focused mission
4. Opportunity to learn/time on task
5. Frequent monitoring of student progress
6. Safe and orderly environment
7. Positive home-school relations

Lezotte, L. W. & Snyder, K. M. (2010). What effective schools do: Re-envisioning the correlates. Solution Tree.

9

What do we need to include in School Development Plan?

- **Objectives** – should respond to the problems of the school.
- **Activities** – should be implemented at the local level.
- **Time frame** for each activity – should be achievable.
- **Monitoring indicators** – should assign who will monitor.
- **Implementer** – should manage within and across schools.
- **Input/Resources** – should include local resource (i.e. financial, physical, and human resources).

10

SDP - Example

Objectives	Activity	Time Frame	Monitoring Indicator	Implementer	Input/ Resource
1. Early grade learners will improve their test scores	1.1 To develop a remedial lesson plan 1.2 To select a facilitator 1.3 To conduct remedial lessons 1.4 To conduct continuous assessment	1.1 December 2017 1.2 December 2017 1.3 January-Dec. 2018 1.4 Once per term	1.1 Remedial lesson plan 1.2 Attendance record of remedial lesson 1.3 Results of learning assessment	BoM, early grade teachers, a volunteer teacher/ facilitator	GLMi Workbooks Teachers Honorarium by GLMi Kenya →Local resources should replace it by March 2020.
2. At least 10 out-of-school children will come to enroll in school	2.1 To identify out-of-school children in the village 2.2 To have meetings with parents 2.3 To collect donation for dormitory expenses 2.4 To enroll children	2.1 January-May 2018 2.2 January-May 2018 2.3 May-August 2018 2.4 Sept.-Oct. 2018	2.1 List of out-of-children in the village with reasons for non-enrollment 2.2 Meeting records 2.3 Donation records 2.4 List of enrolled children	Chief Head teachers BoM PTA School children	Donation from community members and leaders

11

Is your SDP solid?

- Do you have common understanding of school goals?
- Is discussion in the school meetings based on evidence/reliable data?
- Do all stakeholders understand and agree to their roles and responsibilities?
- Is your SDP not an unrealistic wish list?
- Are you not dependent on external donors?
- Are you monitoring the SDP?
- Does your SDP address equal access to and rights within education?

12

Some more questions to you

- Are you addressing all the problems and challenges of your school in terms of access, rights, and quality of education in SDPs?
- What activities have already been implemented?
- What activities have not been implemented yet?
- Why not?
- Is there any activity that requires collaboration with other stakeholders whom you can reach out?
- How can you collaborate with other schools?

13

Group work by school

- Outline problems/challenges that your school has (NB. Think about the concrete evidence with reference to your school profile).
- **Revise/Add possible outcomes** that you would like to have as objectives of SDP.
- **Revise/Add strategic actions** that will lead to the objective. Think about the possibilities to **link with other schools** to jointly tackle the common issues.
- Revise resources and indicators that are feasible and manageable at the local level.
- Think about how best you can replace the external resources by local resources such as teachers' token for remedial lessons.

14

Learning Opportunities for OSC and Children with Disability

University of Tsukuba
JUN Kawaguchi

30th July to 3rd Aug, 2018

1

Contents of Discussion

- How do we include Out-of-school Children(OSC) ?
- How do you provide good quality of education for children with disability ?
- How do you participate in the resource room construction project in 2019?

2

How do we include OSC?

3

Enough number of OSC you found ?

- How many children are out of school?

Net enrollment ratio in Kajiado district is about 75%.

It means if the number of children in the school is 120 , we could make calculation as below.

B（the number of school aged children）= 120 －K（the number of non school aged children）

（ Y（OSC）＋B）× 0.75 ＝ B

if K=20, B=100

0.75Y ＋ 75 = 100

0.75Y = 25

Y = 33

What are the obstacles to find OSC?

- Lack of cooperation in *community*?
- Some *parents* tried to hide these children?
- *Teachers* do not want to increase their workload?

Anything else?

5

What are the demerits of having OSC in your community?

- The demerits are not only within Education sector.

1. Economically?

2. Socially?

6

How do you provide good quality of education for children with disability ?

7

If ...

- If OSC join in the school and the school is not inclusive, they easily drop out.
- If OSC join in the school and no one assists teachers, teachers try to kick out children with disability.
- If OSC join in the school and they do not learn anything, they can not get any job.

8

Examples of tackling OSC and children with disability in different countries.

We need to take balance for 4 points below

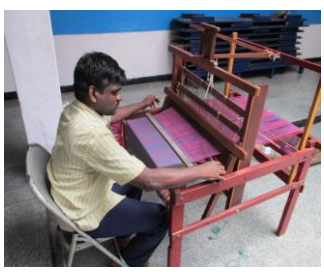
1. Human rights (Access)
2. Educational contents
3. Cost Effectiveness
4. Educational quality

9

Team teaching

10

Collaboration with NGO and company



11

Internship by College students

12

Who can assist children?

13

How do you participate in the resource room construction project in 2019?

14

Future Plans

- What kinds of facilities do we make?
- How can communities utilize these facilities in the future?
- Who will maintain the facilities and how?

15

Thank you very much for your participation

Jun Kawaguchi
University of Tsukuba
Master Program in Education,

Assistant Professor,

〒305-8572
1-1-1 Tennodai Tsukuba Ibaraki, JAPAN
TEL:＋81-29-853-6746
Mail:kawaguchi@human.tsukuba.ac.jp

Any time, anything, please ask Charles!!

Example of a School Profile: Olchoro School Profile

July 2018

Prepared by GLMi Kenya

- Current Enrolment

	Class 1	Class2	Class3	Class4	Class5	Class6	Class7	Class8	Total
Male	17	29	27	56	40	39	45	47	300
Female	12	15	21	30	48	47	36	57	266

- Teacher Qualification

Total Teachers	TSC	Community	County	Others
11	11			

- Pupil-Teacher Ratio: 51
- KCPE Score

	Math	Eng.	Kiswahili	Science	Social	Total	Candidate
2016	45	37.75	49.86	40.45	38.42	212.16	66
2017	41.09	41.36	41.71	37.12	38.35	199.63	70

- GLMi Learning Assessment Mean Raw Scores

Year	School	Math class1			Swahili class 1			Math Class 2			Swahili Class2		
		M	F	Total	M	F	Total	M	F	Total	M	F	Total
2017	Olchorro	81	48	**65**	56	29	**42**	84	72	**78**	61	34	**48**
	30 schools	65	64	**65**	39	39	**39**	65	66	**66**	34	34	**34**
2018	Olchorro	65	61	**63**	48	72	**58**	49	50	**49**	39	38	**39**
	Zone A	64	64	**64**	40	33	**37**	52	51	**52**	24	26	**25**
	30 schools	70	67	**69**	43	44	**44**	61	62	**61**	30	32	**31**

*Scores are calculated out of 100. M means scores for Male and F means scores for Female.

2018 Class 1 Learning Assessment Raw Scores Item Analysis

School	Math							Kiswahili									
	Total	Q1	Q2	Q3	Q4	Q5	Q6	Total	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Olchorro	63	67	53	67	47	87	60	58	73	67	73	60	67	60	33	47	40
30 schools Average	69	76	69	69	58	76	66	44	53	45	40	58	44	41	50	34	33

2018 Class 2 Learning Assessment Raw Scores Item Analysis

School	Math									Swahili												
	Total	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Total	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Olchorro	49	75	63	44	44	50	31	44	44	39	50	50	56	31	6	6	44	44	38	63	25	50
30 schools	61	79	65	41	53	57	45	74	77	31	41	40	41	18	16	18	34	34	25	45	31	27

School Comparison Chart

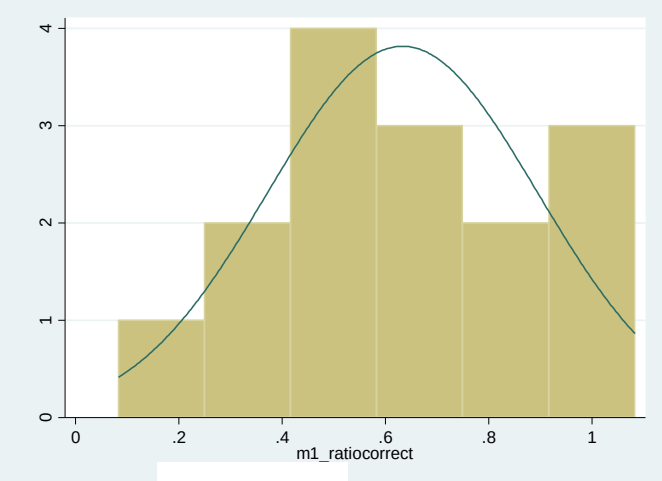
School	Enrolment	Number of Teachers	Pupil-Teacher Ratio	KCPE16	KCPE 17	Math Class 1		Swahili Class 1		Math Class 2		Swahili Class 2	
						2017	2018	2017	2018	2017	2018	2017	2018
Olchorro	566	11	51	212.16	199.63	65	63	42	58	78	49	48	39
Paranai	180	9	20	225.76	216.32	57	65	31	69	64	68	48	15
Imisigiyo	306	10	31	244.85	215.94	66	43	27	5	73	17	18	4
Amboseli	503	12	42	274.22	279.6	58	63	45	47	77	58	66	30
Oldonyo-oibor	664	17	39	333.32	340.39	49	77	29	23	52	58	26	27
Enkongu-Narok	222	9	25	220.15	255	66	80	50	44	89	78	59	31
Eluai-Nalepo	213	10	21	-	-	64	63	14	26	91	59	8	1
Olgulului	349	13	27	254.06	239.34	76	69	41	49	49	61	17	22
Meshanani	249	10	25	291.9	305.22	75	79	53	23	91	80	80	22
Osoit	446	10	45	228.06	233.96	40	64	7	38	44	57	14	32
Ilchalai	289	12	24	230.97	246.16	85	74	72	76	70	66	46	56
Olbili	178	11	16	252.89	258.9	57	79	15	38	57	48	12	22
Oltiasika	305	9	34	274.56	233.47	72	82	32	69	73	70	16	45
Inkisanjani	917	20	46	206.19	231.34	76	57	62	34	71	50	43	42
Loormeuti	431	11	39	256.48	226.99	54	63	29	31	70	37	27	26
Orkaria	647	11	59	247.45	236.93	28	16	8	4	48	55	20	4
Iltilal	950	14	68	318.41	299.92	70	94	72	74	52	66	23	22
Moilo	161	7	23	-	268.53	32	91	15	65	34	61	15	43
Samai	328	9	36	282.25	289.04	83	72	55	52	81	40	55	23
Munyurra	532	10	53	227.84	269.71	79	68	51	35	68	80	39	55
Nasipa	322	12	27	290.81	328.08	53	69	18	66	56	71	37	59
Esosian	501	12	42	268.73	268.77	90	81	65	91	-	79	55	50
Matepes	653	16	41	276.82	296.56	65	43	40	5	50	58	19	31
Oloibor-soit	276	10	28	190.57	185.86	-	91	47	52	88	79	43	27
Elerai	375	10	38	225.1	254.43	87	86	54	31	63	85	22	53
Olorika	505	13	39	250.54	303.04	62	77	20	25	63	61	15	12
Elangata-Enkima	839	18	47	230.52	277.6	56	88	38	72	70	58	59	8
Olandi	249	11	23	242.61	230.18	63	70	72	76	56	55	30	42
Iloirero	432	11	39	247.53	240.32	69	44	17	17	50	61	5	10
Shilishili	289	9	32	202.31	253.15	81	64	51	32	70	76	47	68
30 schools Average	**429**	**11.6**	**36**	**250.25**	**258.08**	**65**	**69**	**39**	**44**	**66**	**61**	**34**	**31**

Zonal Average Comparison Chart

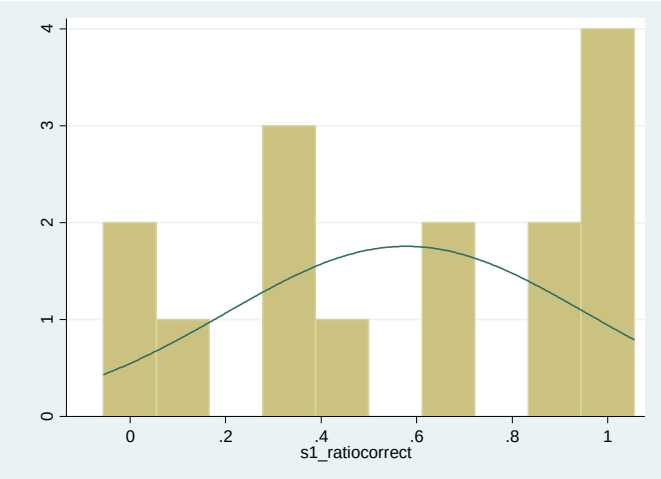
Zone	Enrolment	Number of Teachers	Pupil-Teacher Ratio	KCPE16	KCPE 17	Math Class 1		Swahili Class 1		Math Class 2		Swahili Class 2	
						2017	2018	2017	2018	2017	2018	2017	2018
Zone A (Olchorro, Paranai, Imisigiyo, Amboseli, Oldonyo-oibor, Enkongu-Narok, Loormeuti)	410	11	35	252.42	247.70	59	64	36	37	72	52	42	25
Zone B (Munyurra, Nasipa, Esossian, Matepes, Oloibor-soit, Elerai)	443	12	38	246.65	267.24	62	73	46	46	54	75	36	46
Zone C (Inkisanjani, Orkaria, Iltilal, Moilo, Samai, Elangata-Enkima)	640	13	46	214.14	267.23	58	68	42	49	59	55	36	23
Zone D (Olgulului, Meshanani, Eluai-Nalepo, Osoit, Iloirero)	338	11	31	204.31	203.77	65	64	26	31	65	63	25	18
Zone E (Ilchalai, Olbili, Oltiasika, Olorika, Olandi, Shilishili)	303	11	28	242.31	254.15	70	74	44	53	65	63	28	41
30 schools Average	**429**	**11.6**	**36**	**250.25**	**258.08**	**65**	**69**	**39**	**44**	**66**	**61**	**34**	**31**

- Histogram for Learning Assessment

Olchorro class 1

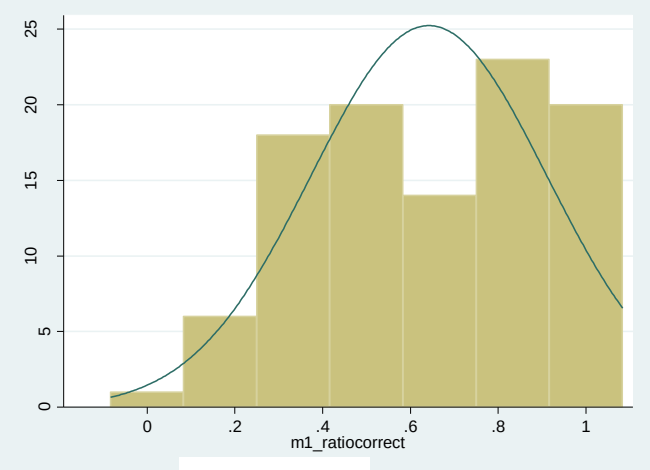


Math

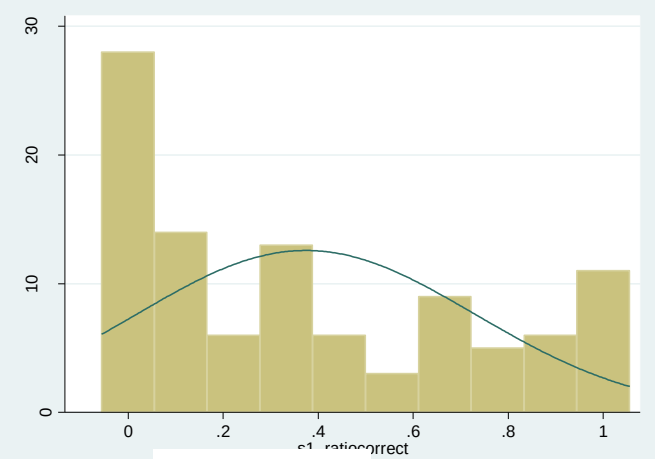


Swahili

Zone A class 1

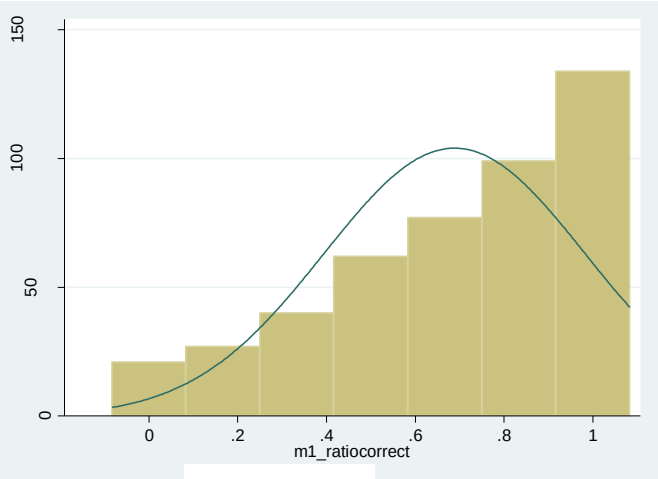


Math

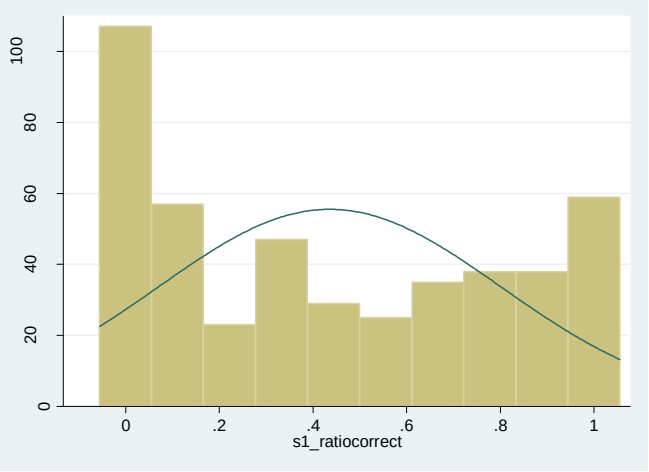


Swahili

30 schools class 1

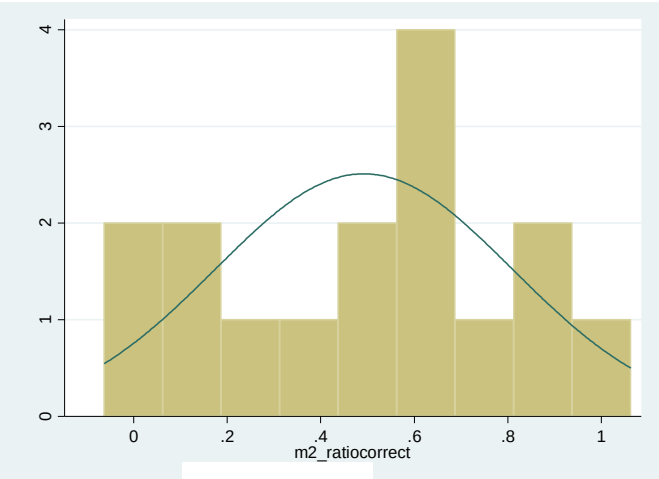


Math

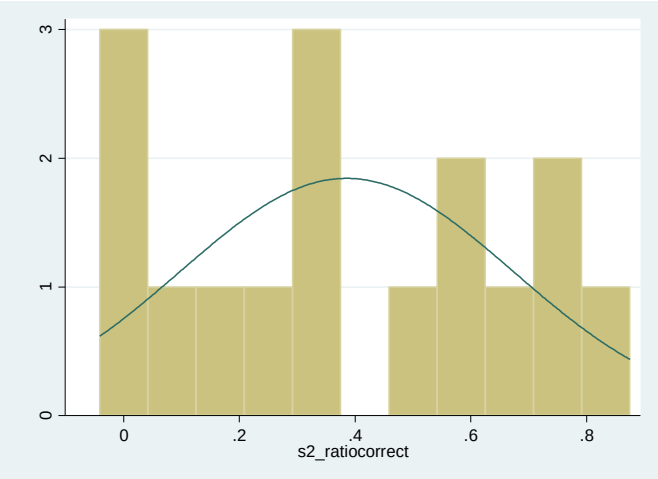


Swahili

Olchorro Class 2

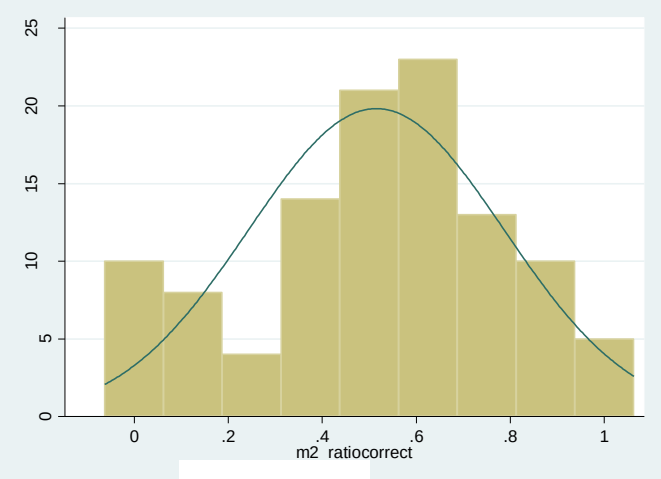


Math

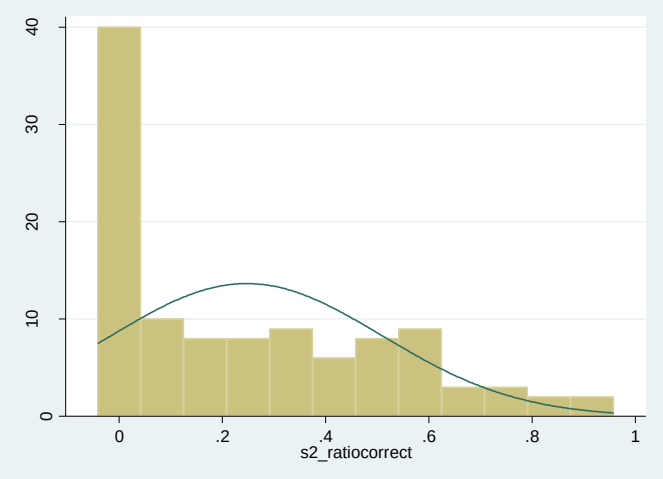


Swahili

Zone A class 2

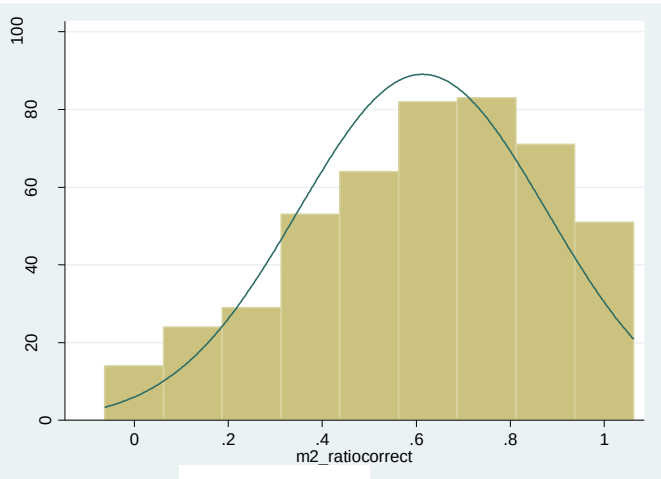


Math

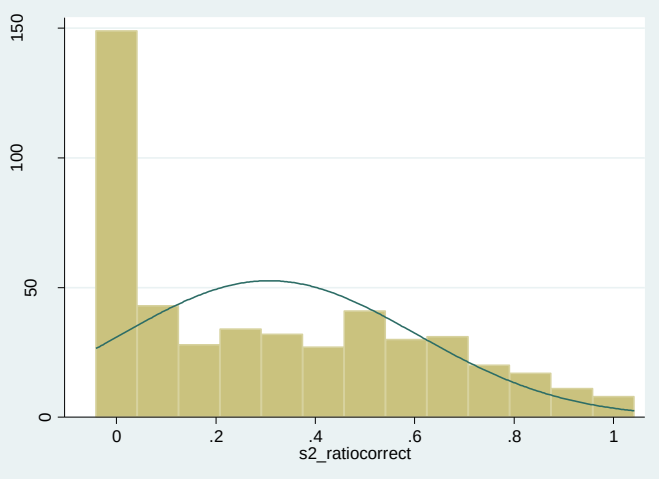


Swahili

30 schools class 2



Math



Swahili

- Governance Information

	2017	2018
Availability of BoM	Yes	No
Availability of School Development Plan	Yes	Yes
Collection of Money from Parents	No	No
Number of Community MTG since Jan. *1	2	5
Activeness of Community	Neutral	Passive
Frequency of BoM MTG since Jan. *1	2	0
Frequency of PTA MTG since Jan. *1	-	1
Attendance of BoM/PTA MTG (%)*2	90%	NA
Amount of Money the school collected from parents since January	-	NA
Per-pupil Contribution from parents per term	0	NA

*1 In 2017, we receive information for the number of community meetings and BoM meetings per term. The number of meetings since January 2017 is the number of meetings per term multiplied by 2.
*2 Attendance of BoM/PTA meetings in 2017 is only the attendance of BoM.

- Out-of-school children/disabled children

	2017	2018
Number of out-of-school children	NA	52
Out-of-school children by Gender	NA	34 boys 18 girls
Out-of-school children by reasons	NA	44 Child labor, 6 parent ignorance, and 1 Farming
Number of disabled children who are out-of-school and its disability types	NA	1 (Mental)
Number of disabled children enrolled in a primary school and its disability type	68 (39 boys and 29 girls) 36 visual, 23 hearing/speech, 1 Physical, 8 Other	27 (11 boys and 16 girls) 14 visual, 12 hearing/speech, 1physical.
Availability of Special Education Unit	No	Yes
Number of SNE trained teachers	1	1(Alice N'gore-Diploma)

Appendix 14 Program of Governance and Leasership Training 2019

CADVES Project
GOVERNANCE AND LEADERSHIP TRAINING PROGRAM

Training period: 19th-23rd August and 4th September, 2019

Objectives of the Training

1. To understand the importance of analyzing school data and the process of school planning
2. To reflect and improve the steps of formulating the School Development Plan (SDP)

Expected Outcomes of the Training

After the training, the participants will be able:

1. To analyze school data before planning SDP;
2. To plan and implement SDP in an effective way; and
3. To continue planning and implementing SDP after CADVES project terminates in March 2020.

Participants

113 Head Teachers, BOM Chairs, PTA Chairs, and Chiefs of 32 schools in Loitokitok Sub-County

Time	Content	Moderator
8:30- 9:00	Registration	Joan Katei
9:00- 9:20	Introduction of participants	George Njiriri
	Introduction of project team	
	Explanation of the objectives of CADVES	Charles Masangira
9:20- 9: 30	Opening remarks by CSO Officer/SNE, Loitokitok Sub-County	Patrick Nang'unin
Session one		
9: 30- 10:00	Why does SDP matter?	Tetsuya Yamada
	Data analysis and planning	George Njiriri
10:00- 10:55	Group discussion	
10: 55- 11: 10	Tea break	Joseph Kiiru
11: 10- 12: 00	Group presentations of the data analysis	George Njiriri
12: 00- 13: 00	Analysis of SDPs and group discussion	Tetsuya Yamada
13: 00- 13: 50	Lunch	
Session two		
13: 50- 14: 45	Presentation of each school and Q & A session	George Njiriri
14: 45- 15: 05	Role play on the process of school planning	GLMi team
15: 05- 15: 35	Analyses of the role play and Q & A session	George Njiriri
15: 35- 15: 55	Wrap up session	George Njiriri
15: 55- 16: 05	Final remarks	Charles Masangira
16: 05- 16: 15	Closing remarks by DEO, Loitokitok Sub-County	Laban Siwilli
16: 30	Departure	

Appendix 15 Presentation documents of Governance and Leasership Training 2019

CADVES

Governance and Leadership Training

Data Analysis and Planning

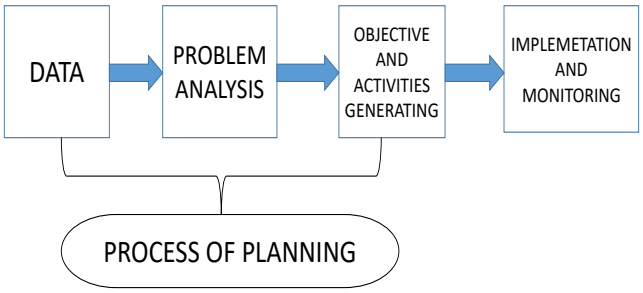
August 2019

George Njiriri

GLMI Kenya

1

PLANNING PROCESS



2

DATA

- What is Data- This is evidence or fact about certain need not fiction.
- Data is found from all stakeholders
  - ❖ Headteacher
  - ❖ Parents
  - ❖ Chief
  - ❖ School records – academic result,
  - ❖ Organizations – through research which was done

3

Examples of Data

Category	Examples
Pupils	Number of out of school children, Number of children with special needs
Teachers	Number of teachers by gender, Number of qualified teachers
School Management	Frequency of BOM meetings, Proportion of female members in BoM

4

Problem Analysis

- What is problem: evidence-based information
- Need is drawn from evidence/ fact and comparison to other schools and the past data
- In problem analysis we ask ourselves why question.
- We have to search for multiple causes of any need

5

Examples of Problem

- Poor Early grade performance
- High drop out rate in upper grades
- Lowest KCPE performance in in Loitokitok
- Few number of community meetings and BOM meetings
- No action after the meeting

6

Activities are actions after getting your problems which are based on **evidence** and aiming at certain **objectives**.

I. Think of there multiple causes and generate multiple activities

Remember multiple activities can solve one problem

2. Identify the best alternative activity based on high impact.

3. Low cost and sustainable activity

Remember <u>one activity</u> can hardly solve a problem

7

Examples of Objectives and Activities

Problem – Dropping of learning outcome from grade one to three

Objective – Improving learning outcome in lower grade

Activities –

1. Analyze the areas in and reasons for dropping of learning outcome from grade one to three
2. Organize a teachers meeting to discuss how to improve learning using local materials
3. Organize BOM and PTA to discuss the role of parents in education

8

PROCESS

DATA

Data from school records, headteacher, community and chief.

PROBLEM ANALYSIS

Compare the school data to other schools and the past data

Identify unique problem of the school

OBJECTIVE AND ACTIVITIES PLANNING

Do planning according to problem identified by evidence of the school

Involve all stakeholders from the beginning to the end

9

PLANNING STEPS

1.Get data from the school, community, records and do comparison to other schools and the past data;

2. Use different data available from the school and stakeholders to identity the problems;

3. List down all problems of your school and make objectives and activities;

4. Write down possible objective and activities;

5. Plan multiple activities to tackle the problems and achieve the objectives.

6. Choose from multiple alternative activities with high impact and low cost .

7. List the implementers and give yourselves time line.

School Development Plan

10

TIME

Using data to identify unique problems	Time 30 Minutes
Planning activities from school problem analysis	Time 30 Minutes
Presentation of the planned activities	Time 5 minutes per group

11

Do we really need SDP (School Development Plan)?

Tetsuya Yamada (Ndeseiya)
Education Specialist
GLMi Kenya

1

Do we need SDP (School Development Plan)?

- SDP is a plan to develop schools, **planned by school stakeholders**. School can implement activities mainly based on **community resources**.
- Why do we need to formulate SDP in a **written form**?

Counter Argument

❑Head Teacher can plan efficiently….(?)
❑Head Teacher has an idea in his/her mind….(?)
❑Stakeholders (BoM and PTA) are busy….(?)
❑Parents do not understand school matters….(?)
❑Planning normally fails, so we do not need SDP….(?)

2

What is the benefit of having SDP?

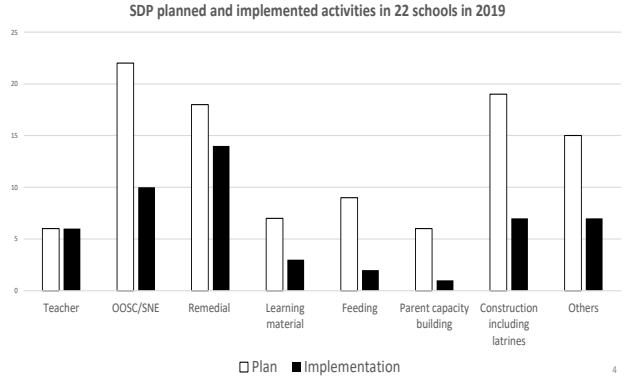
SDP

- **Reminds** us what community as a whole have to do now
- Tells us **how far** we have done
- Enriches **ownership** of parents
- Enables the room for **outside donors** to chip-in

A school makes children **tomorrow better** than today.

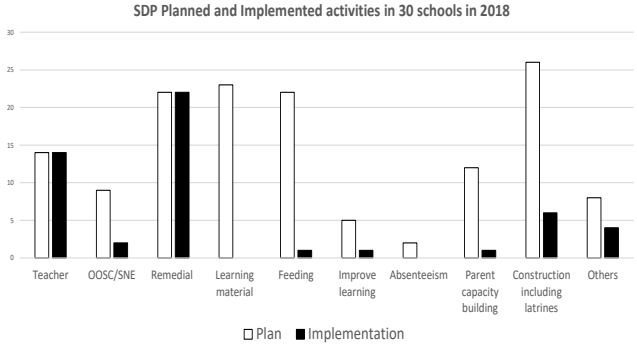
3

What is a current situation of SDP in Loitokitok?



4

SDP plan and implementation in 2018



5

What are the bottle necks of your SDP?

- SDP is a **wish list**
- Leaders came up with ideas **without looking at data**
- You can do some activities without SDP (Teacher Hiring)
- SDP is **not shared** with BoM, PTA, chief and parents

In short, SDP is not **owned** by schools

How can we make **feasible** SDP, based on **evidence** and on **community resource**?

6

The objective of this training

Training objectives

- To understand the importance of analyzing school data and the process of school planning.
- To reflect and improve the steps of formulating the School Development Plan (SDP)

Expected outcome of the training.

- To analyze school data before planning SDP
- To plan and implement SDP in an effective way; and
- To continue planning and implementing SDP after CADVES project terminates in March 2020

7

Positive Change in the mind-sets

- "GLMi is training community on solving their own problems **without depending on external sources/ donor"** (Imisigiyo HT).
- "GLMi set standards and clear mind that **community is capable of funding their activities** rather than depending on donors" (Iltilal HT)
- "We will continue implementing **sustainable remedial lessons** with parents" (Eluai-Nalepo, Osoit, Loormeuti and Esosian HT)

8

Analysis on your SDP

Tetsuya Yamada (Ndeseiya)
Education Specialist
GLMi Kenya

1

What have we learned in the morning?

- **Data analysis** is the first step before planning
- Do you identify **multiple-causes** for a problem?
- **Wish-list** does not work.
- **Is a plan feasible in terms of resources**?
- Donor does not support unless you **start in the ground**
- Sharing the planning/implementation process to parents is essential to have **the sense of togetherness**

2

Analysis on your SDP

- Read your SDP
- Identify which objectives you have achieved or not
- List up objectives you have not achieved on the form
- Discuss following points

1. Are objectives set based on data?
2. Are activities planned feasibly based on locally-available resource?
3. What are alternative solutions or revisions?

3

Wrap Up Session

- From today's training, what do you want to improve in your leadership and management?
- Think of the school **vision** (direction), let it be your guiding star.

➢**Planning is a process, and not an end in itself.**

Remember to start with survey/data and remember that every stakeholder has data, **shared ownership**, and power of the mind.

Do problem analysis based on **evidence**.

Come up with objectives and activities with high impact and low cost, which will lead to **sustainability**.

1

How can you improve your leadership?

➢**Leadership**

- Improve your leadership style
- Remember to be servant leader
- Avoid selfish motives and think about public good

➢**Ownership**

- Have shared ownership
- Before your start any activity, think of sustainability

2

Way Forward

- GLMI will continue partnering with schools for
  - Reducing the number of out-of-school children
  - Learning improvement of early grade pupils
  - Improving learning environment for children with disability
- Also remember CADVES is ending in March 2020.
- Final presentation of 30 schools will be in late February or early March 2020.
- Request – Prepare the solid SDP 2020
- Any suggestion for our partnership between now and until March 2020?

3

Final Remarks

- Please fill out the reflection sheet.

If you want to walk quickly, walk alone, but if you want to go far, let us walk together

Thank you and God bless you.

4

Appendix 16 Program of Early Grade Teachers Training 2017

Training for Early Grade Teachers

Date: Thursday, 6 July, Friday, 7 July

Venue: Kilimanjaro Hotel, Loitoktok, Kenya

Participants: 60 Primary School Teachers (Grade 1 to 2) from 30 Schools

Facilitators: Nagisa Nakawa and Shadrack Mpelele

Schedule:

DAY 1

8:30-9:00 Registration

9:00-9:30 Opening of the Training

- ✓ Remarks from DEO
- ✓ Explanation of the purpose and schedule of the training
- ✓ Introduction of project members

9:30-11:00 Reviewing the result of UWEZO and discussion

9:30-9:50 Sharing the result of UWEZO

9:50-10:10 Group discussion on why students did not do well in literacy and mathematics

10:10-10:40 Sharing opinions for quality education

10:40-11:00 Summing up

11:00-11:15 Break

11:15-13:00 Development of T/L materials for numbers

11:15-11:45 Short lecture on importance of pre-mathematics and development of T/L materials for numbers

11:45-12:15 Q & A session

12:15-15:30 Development of T/L materials for numbers (Continuing)

12:15 -12:30 Explaining the programme

12:30-13:00 Coming up a T/L materials and usage of it in pairs.

13:00-14:00 Lunch Break

14:00-14:30 Sharing time for the best T/L materials in groups

14;30-15:00 Presentation

15:00-17:00 Development of T/L materials for geometry and measurement

15:00-16:00 Short lecture on importance of pre-mathematics and development of T/L materials for geometry and measurement

16:00-16:15 Q & A session

16:15-16:30 Sharing time for development of T/L materials in groups

16:30-17:00 Sharing time for the best T/L materials

DAY 2

8:30-9:00-Registration.

9:00-9:30-Presentation on the baseline learning assessment data and UWEZO data;

- ✓ Statistical overview of baseline learning assessment on early grades.
- ✓ Statistical overview of UWEZO data in Loitokitok sub-county.

9:30-12:00-Professional records

9:30-10:30 Short lecture on importance of having and keeping profession records.

10:30-10:45 Q&A session

10:45-11:00 Break

11:00-12:00 Sharing time on development of the professional records i.e

- ✓ Attendance register
- ✓ Syllabus
- ✓ Timetable
- ✓ Schemes of work

12:00-13:00-Activity on schemes of work preparation

13:00-14:00-lunch

14:00-15:00-sharing time on the development of professional records i.e

- ✓ Lesson plan
- ✓ Record of work covered
- ✓ Progress records
- ✓ Health's record

14:30-15:00-Activity on lesson plan preparation

15:00-15:15- Course in summary and departure;

- ✓ Summary of activities
- ✓ Way forward

15:15-15:30- Closing remarks by

- ✓ TSC Personnel officer.
- ✓ Prof. Nagisa Nagawa.

Training for Early Grade Teachers (Day 1 Mathematics)

Na(i)gisa Nakawa
Kanto Gakuin University
Japan

Part 2: Development of T/L materials for numbers

(1)Development of children's abilities toward concepts of numbers

(2)Importance of focusing on children's understanding in mathematics education

(3)Some pedagogical suggestions in terms of representations from several textbooks

2

The first thing teachers have to know is

Mathematics is a new language that children did not know!

Question

- What kind of difficulties are you faced to in teaching mathematics? Write the qualitative aspects

Two different categories in mathematics

- Numbers
- Measurement

(1)Development of children's abilities in numbers for class 1 in Kenya

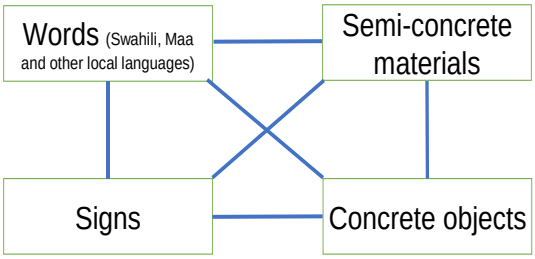
- To learn numbers up to 100
- To learn mathematical signs such as numerals, '+', '-' and '='.
- To write/read numerals and signs
- To add and subtract numbers up to 100
- (1 digit) +(1 digit) with carrying over (e.g.) 8+5
- (2 digits) – (1 digit) with borrowing (e.g.) 16-7
- Number patterns (e.g.) 25,23,21, __, 17… 0,5,10…
- To compare the size of two/three numbers
- To deal with money

(1)Development of children's abilities in numbers for class 2 in Kenya

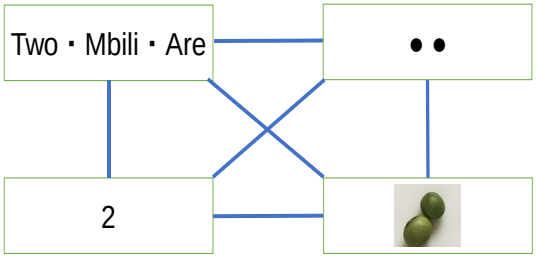
- To learn numbers up to 1000
- To add, subtract, multiply and divide
  - 3 digits - 3 digits (without borrowing), 2 digits – 2 digits
  - 2 digits ÷ 1 digits
  - 2 digits + 2 digits
  - 1 digit x 1 digit
- Vertical way of calculations
- Number patterns

(2)Importance of focusing on children's understanding in mathematics education

(i) What is understanding?



Example: 2



Development of children's abilities in numbers: counting

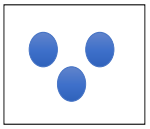
- Counting is the first step for children to get to know numbers.
- Let children count in many situations and let them know the effective ways of counting (e.g. Make some groups of 5 and 10 and arrange them in an organised way)
- Basic principle of counting
  - What do you count? -focus on attribute (e.g. same colour/shape/size?)
  - 1 to 1 correspondence
  - Read the number to count in the end, that is the number of the objects you count

Development of children's abilities in numbers: after counting

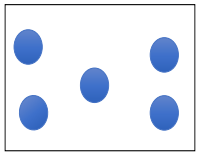
- Next step after counting- we should let children be able to recognise numbers without counting
- The ability of subitising should be fostered in children's understanding of numbers

Development of children's abilities in numbers

- Perceptual subitising
  - Recognising a number without using other mathematical processes.



- Conceptual subitising
  - Capable of viewing number and number patterns as units of units



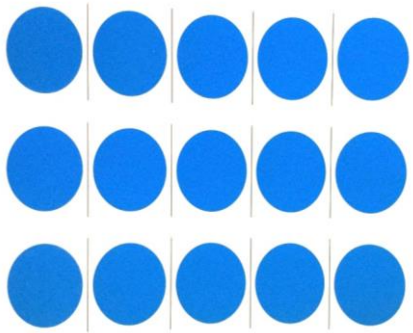
(3)Some pedagogical suggestions in terms of representations from textbook analysis: Class 1

- Combinations of the four representations should be more focused.
- Subitising is important as well as counting. In class 1/2, let us lead children to move from counting to recognise numbers immediately using semi-concrete objects

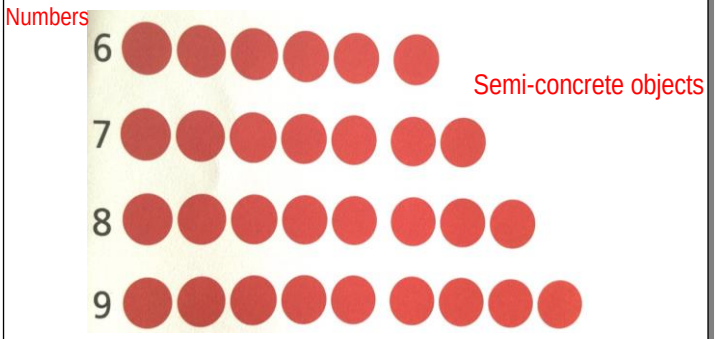
(3)Some pedagogical suggestions in terms of representations from textbook analysis: Class 1

- Focus on a group of 5 and 10 using semi-concrete objects in the beginning
- Semi-concrete objects are like small marbles (circle/dots) to express numbers visually. It connects between concrete objects and signs.

T/L materials – they can be used in any classes!

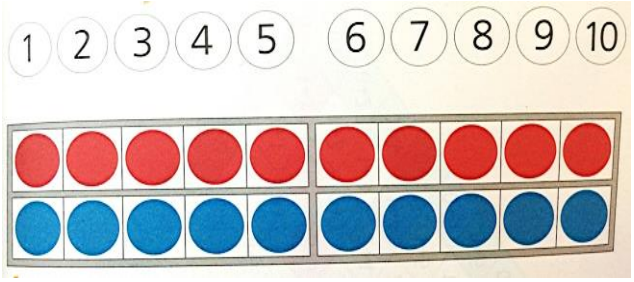


Connection between numerals and numbers in semi-concrete objects



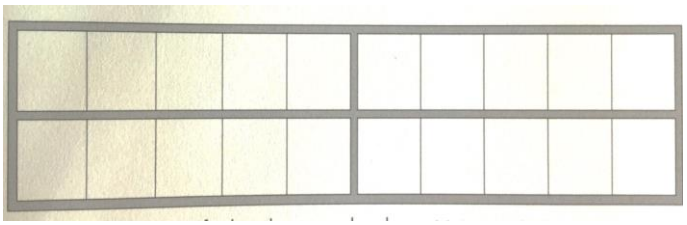
(3)Some pedaaogical suggestions in terms of representations from various textbooks

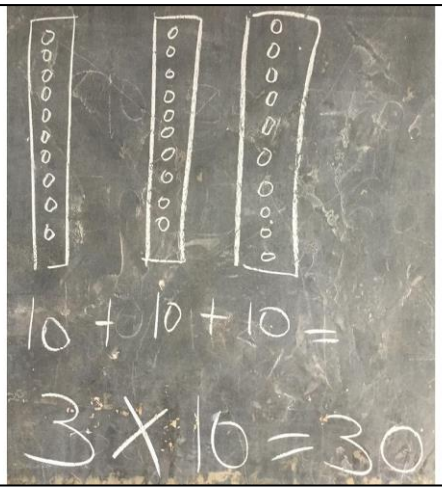
Framework of 20 – very useful!

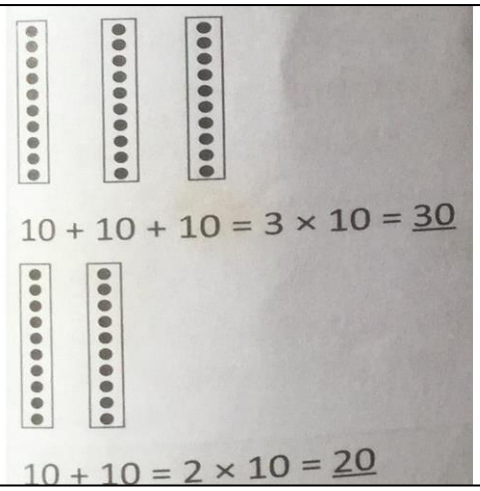


(3)Some pedagogical suggestions in terms of representations from various textbooks

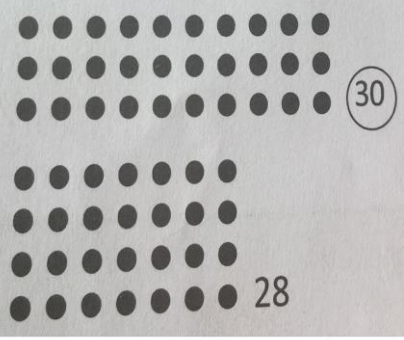
Framework of 20 – empty



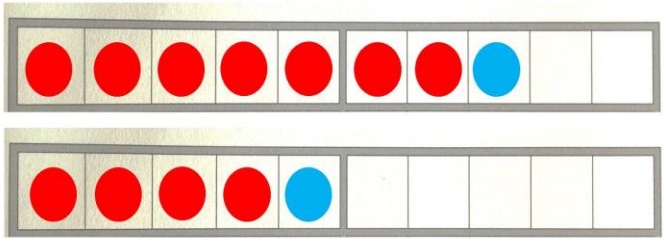




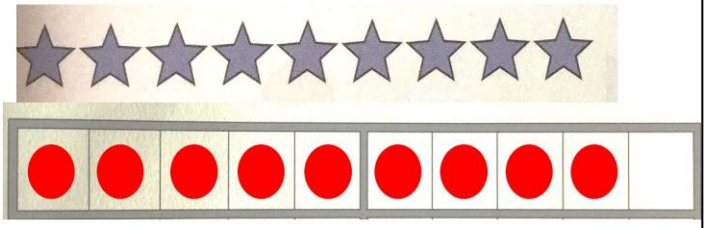
Have pupils count the dots and circle the greater number.



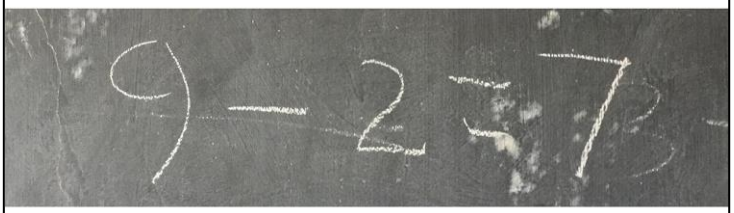
From PRIDE



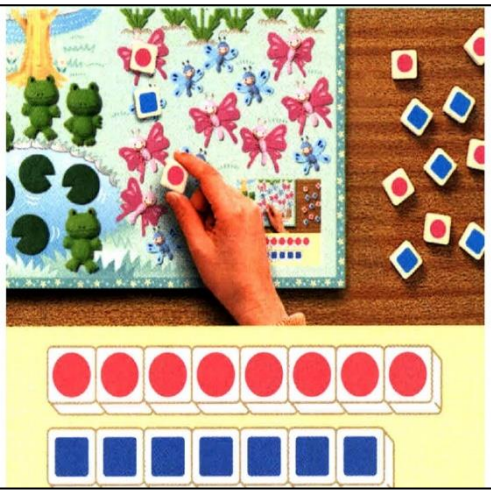
From PRIDE



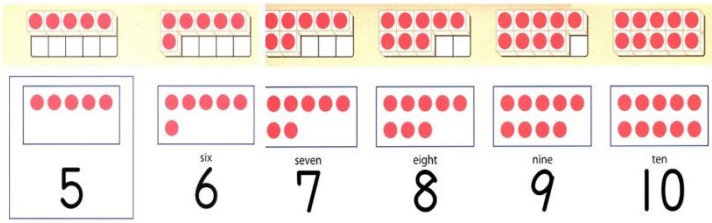
•**Pupils' response was 8… why?**

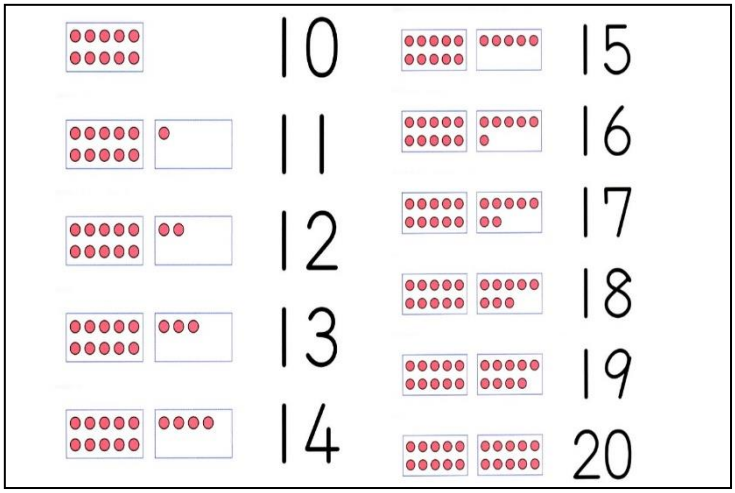


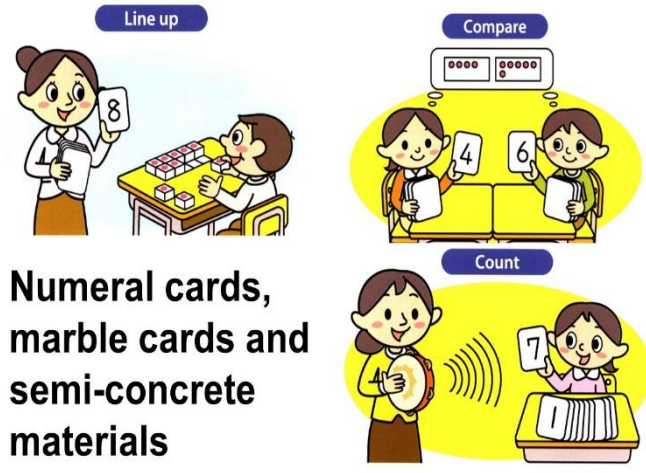
Japanese textbook



Semi-concrete materials, marbles, numerals and words



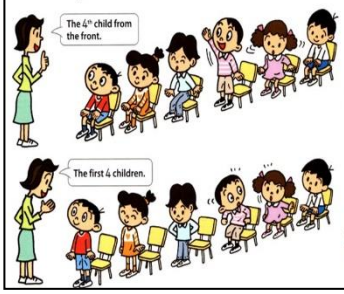




Numeral cards, marble cards and semi-concrete materials

After cardinal numbers, ordinal numbers come in

Stand up.



Color.

The 5th bird from the front.

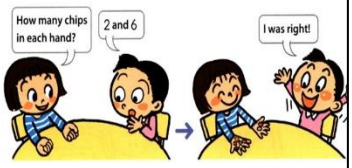
The first 3 cars.

What position is the cat in?

Composition and decomposition of numbers

8

Eight chips



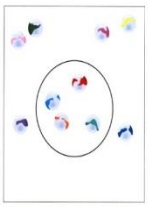
1 and 2 and 3 and

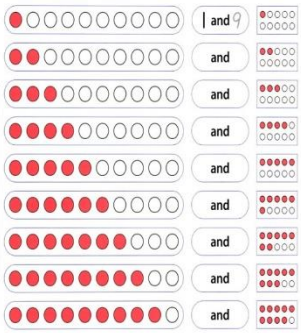
4 and 5 and 3 6 and 7 and

Composition and decomposition of numbers

10

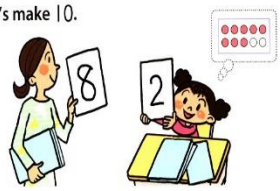
Shooting chips





Composition and decomposition of numbers

Let's make 10.



10 is 7 and	10 is 9 and
10 is 2 and	10 is 4 and

Making 10

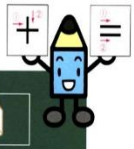
Introducing Addition

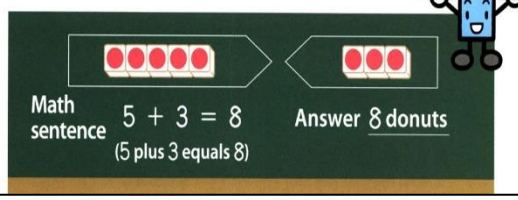
1

5 donuts

3 donuts

How many donuts in all?





Math sentence 5 + 3 = 8

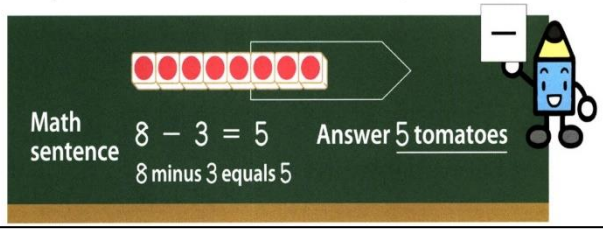
(5 plus 3 equals 8)

Answer 8 donuts

Introducing Subtraction

8 tomatoes

If you eat 3 tomatoes, how many will be left?

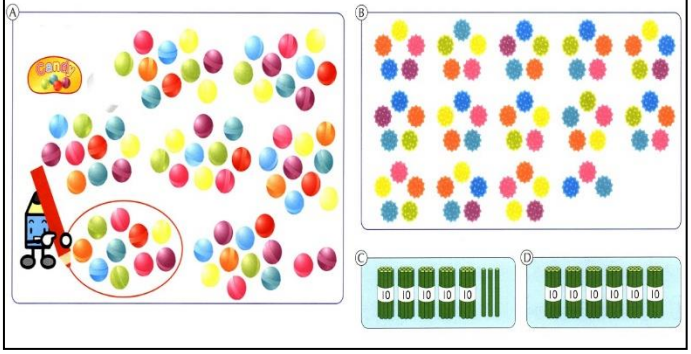


Math sentence 8 − 3 = 5

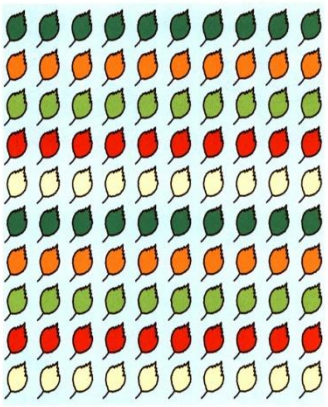
8 minus 3 equals 5

Answer 5 tomatoes

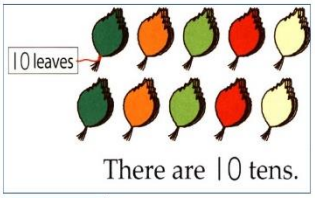
Visualising the amount of numbers (numbers more than 10)



How many are there?



Numbers up to 100



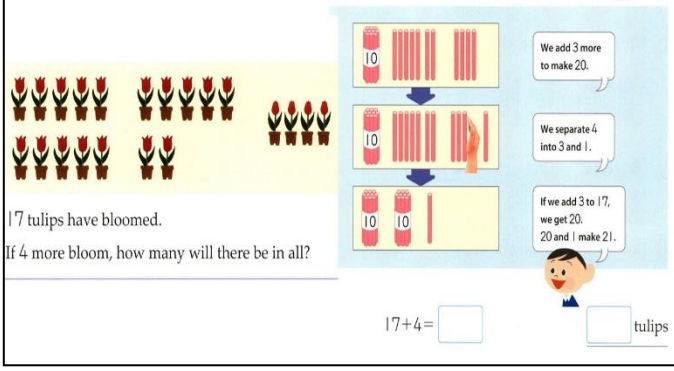
Children can see the actual amount of 100

Way of addition

Math sentence

It will be more than 20.

Think about it using 10 and .



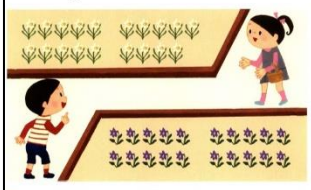
17 tulips have bloomed.

If 4 more bloom, how many will there be in all?

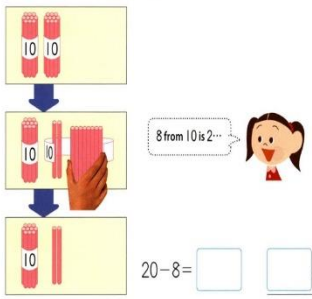
17+4= tulips

Way of subtraction

Let's try calculating 20−8 from !.



Think about it using 10 and .



The daffodils and violets are blooming.

There are 19 daffodils.

If we pick 8, how many will be left?

Math sentence = daffodils

There are 20 violets.

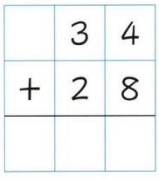
If we pick 8, how many will be left?

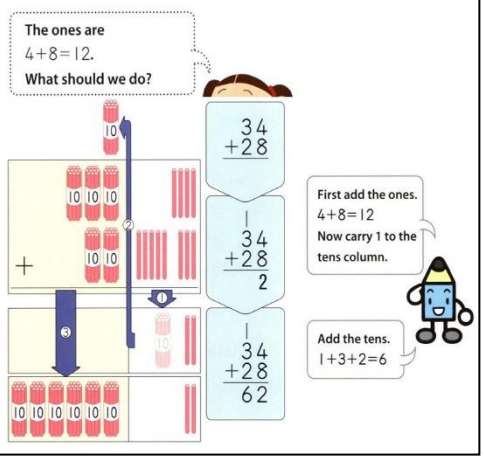
Write a math sentence.

Math sentence

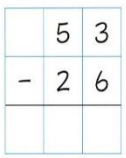
The number is decreasing by 8, so we need to subtract.

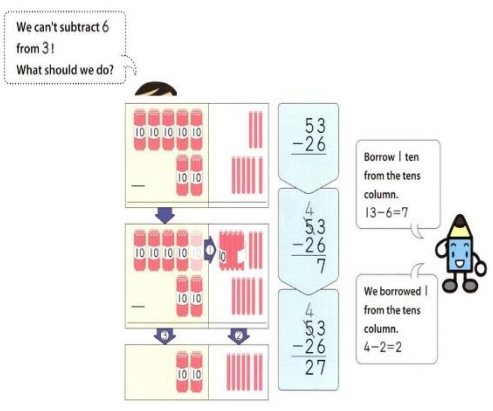
20−8= sticks

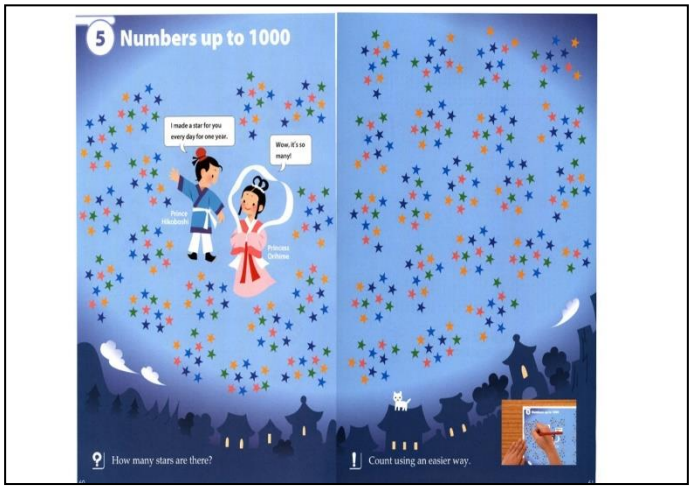


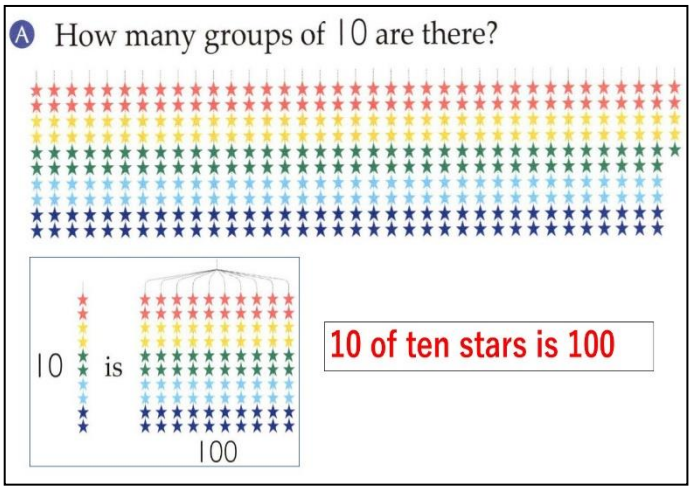


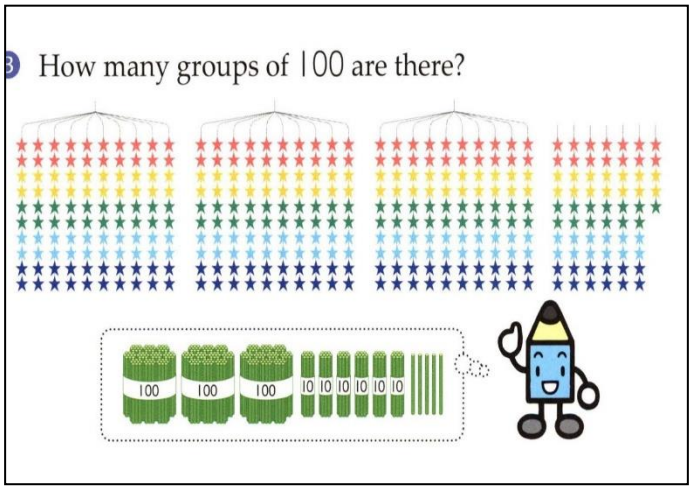
Do the vertical calculation for 53−26.











(3)Some pedagogical suggestions in terms of representations from various textbooks

Summary

- Keep using very simpler materials for children's understanding numbers in different representations
- Marbles of 5, 10, 20 and 100 – They can feel the amount of numbers. Continue to use them till Class 2.
- Framework of 20 is very useful and they can be used for addition and subtraction.
- Number cards with numerals and dots. They will foster children's subitising and recognising numbers more than just keeping using numerals. Numerals are abstract for children.

Question

- What are your new findings when you listened to the short lecture?

Tasks you brought

For class 1 teachers

(1) Develop a teaching material for counting and writing numbers from 1 to 20 using hands-on materials and explain how you are going to use it

For class 2 teachers

(2) Develop a teaching material for counting and writing numbers from 1 to 100 using hands-on materials and explain how you are going to use it

Group work FINISH BY 4 p.m.

- Revise your homework if you would like to change for children's better understanding of number concept if needed.
- Present ideas for teaching numbers in your group and mention critical comments for each presenter.
- Complete the improved homework if needed and choose the best one in your group in terms of good representations and teaching. Prepare the manila paper for the best one.

Contents to be considered

(i)Objective of teaching using the material
(ii) Main theme: numbers 1-20(class 1)/1-100(class 2)
(iii) Specific theme you would like to teach
(iv)The materials you used for the hands-on material
(v)The good perspective of your idea
(vi)The brief flow of lesson you plan
*Describe how you are going to use your material for what kind of task you are going to set

Sharing time

- Look around tables and read carefully other groups' contents written.
- Choose the one you like the most, writing your comment on the piece of paper distributed

Part 3: Development of T/L materials for geometry and measurement (15:30-17:00)

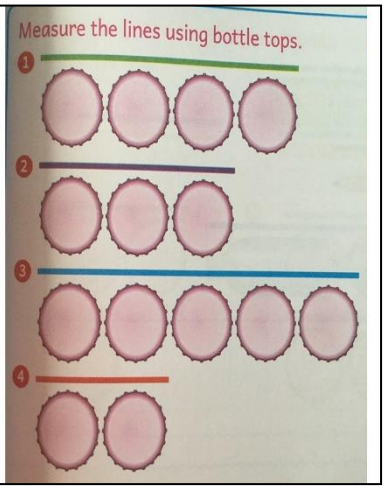
- To show the principle of learning measurement

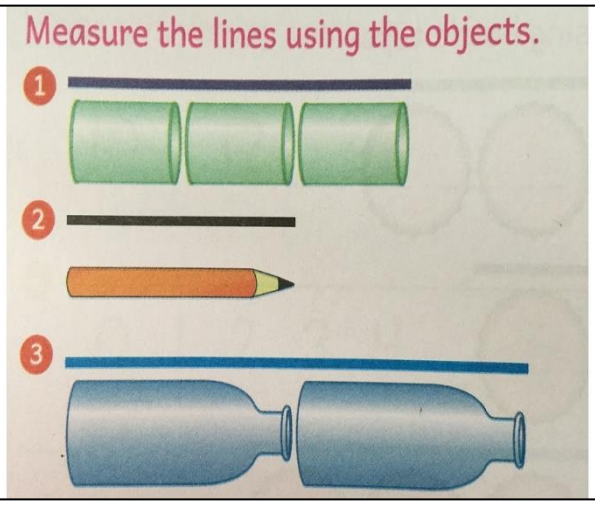
Measurement

- Important areas- because they are practical in children's life!
- Five stages of measurement
- Vocabulary in the children's environment
  - Big-small, high-low, long-short, shallow-deep
  - Bigger-smaller, higher-lower, longer-shorter, shallower-deeper
- Direct comparison
- Indirect comparison
- Comparion using an agreed unit (up to class 2)
- Comparison using a universal unit (such as cm, g, kg, cm^2)
- Comparison in relations (such as y=2x)

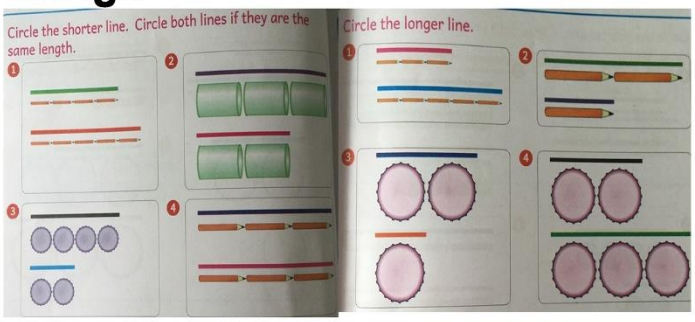
PRIDE

- Use lines which are already abstract for children
- Use local materials to measure the length of lines

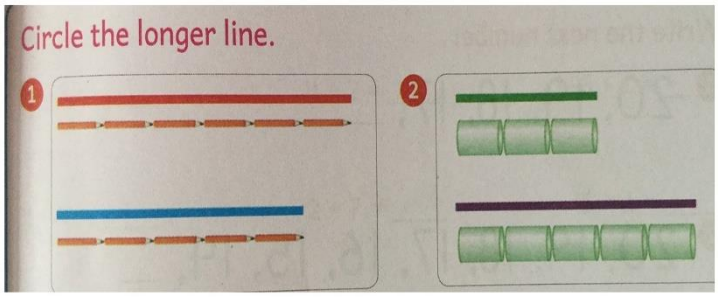




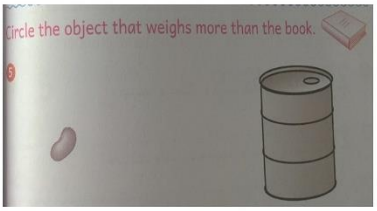
Comparing lines using concrete things

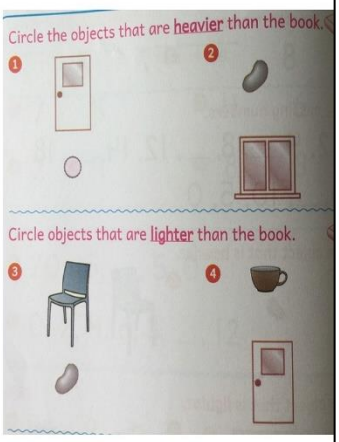


Comparing the length of two lines

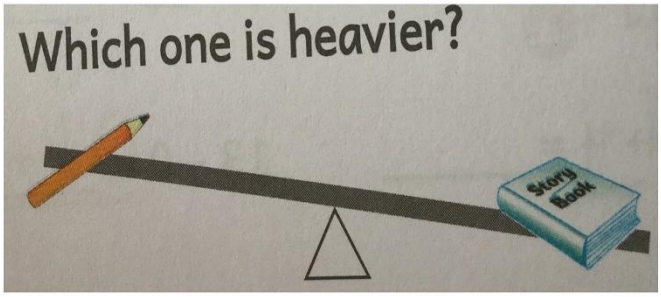


Introducing weight

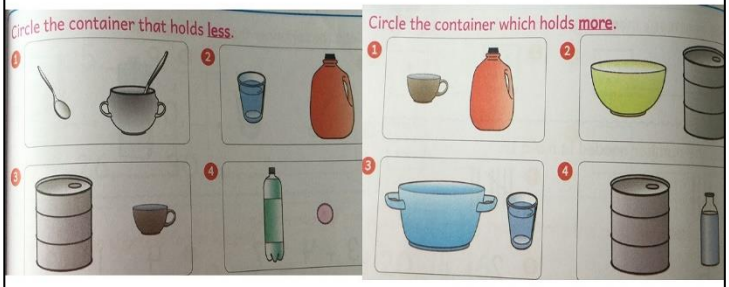




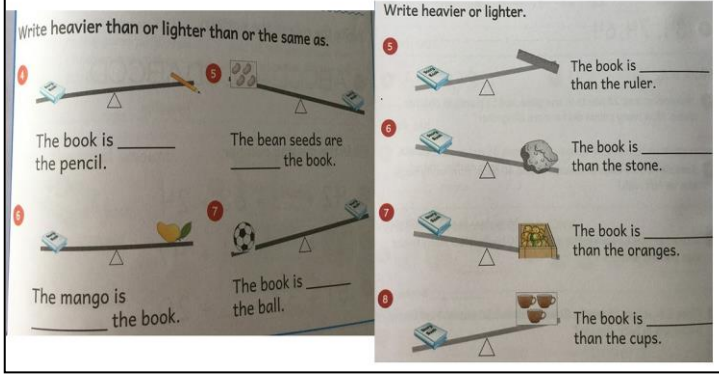
Comparing the weight of two things



More and less



Heavier and lighter with words



How many cups?

Measurement in textbooks from class 1 to 2: analysis

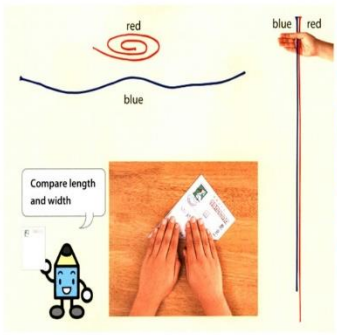
- Measuring lines using a certain unit
- Comparing weight of two different things
- Which is heavy?
- Mass- more or less

- Vocabulary in the children's environment
- Direct comparison
- Indirect comparison
- Comparion using an agreed unit (up to class 2)

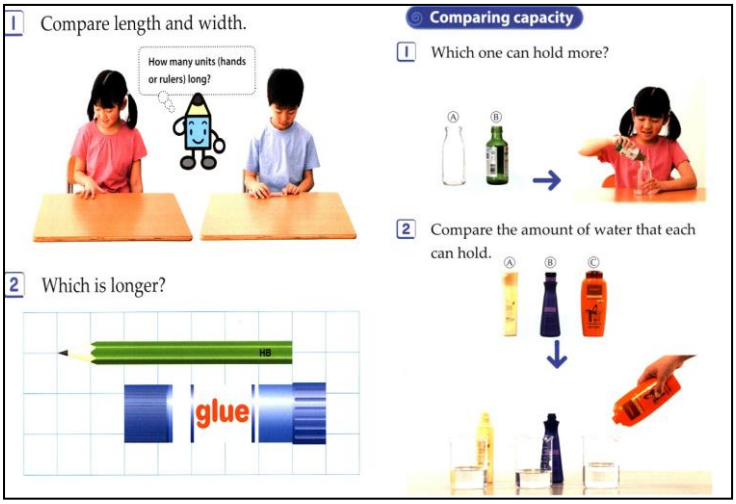
Japanese textbook

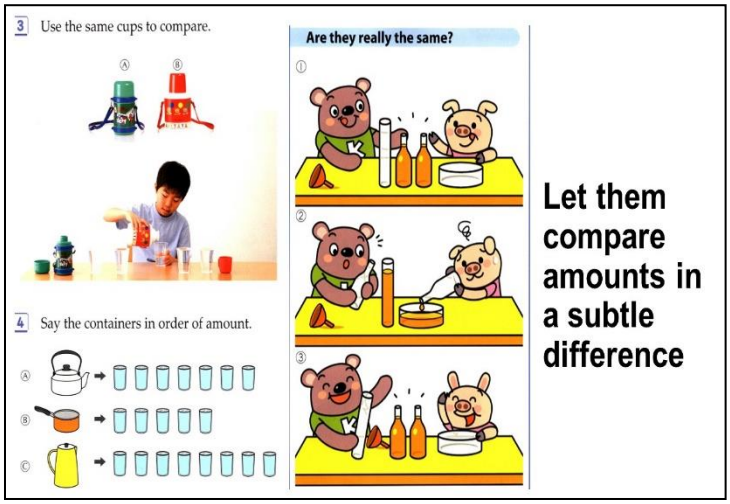
- Start to compare two pencils, concrete things around children.
- Direct comparison can be done when the bottoms are at the same points.

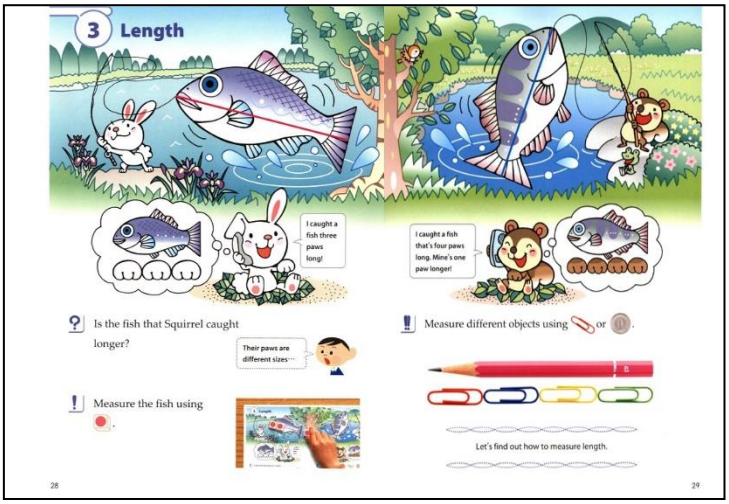
Direct comparison and Indirect comparison



Use their body for direct measurement!







Suggestions

- To set up a daily life situation where pupils should compare things
- Direct and indirect measurement should be done a lot in Class 1 for length, weight and volume
- Use an agreed unit for measuring things around their surroundings

Question

- What are your new discoveries or findings when you listened to the short lecture?

Tasks you brought

- For class 1

(2) Develop an idea for measuring the length of two objects using an any unit related to page 39 [Circle the longer line], 40 [Circle the shorter line....], 41 [Circle the shorter line...] and 45-47[Circle the longer/shorter line] of PRIDE textbook [Mathematics Pupil's Book 1].

- For class 2

(2) Develop an idea for measuring the amount of liquid using an any unit related to page 94 [How many cups?], 125 [Which one holds more?], 126 [Which one holds more?] of PRIDE textbook [Mathematics 2 pupil's book].

Groupwork

- Revise your homework if needed. (15 mins)
- Present your ideas for teaching measurement in your group and mention your critical comments for each presenter (20 mins)
- Complete the improved homework if needed and choose the best one in your group in terms of good representations and teaching. Prepare the manila paper for the best one. (20 mins)

Sharing time

- Look around tables and read carefully other groups' contents written.
- Choose the one you like the most, writing your comment on the piece of paper distributed and put your paper on the table you would like the most.

Presentations

- Make a presentation for 3 minutes to explain brief lesson flow and T/L materials

Presentations: What have we learned?

- A: Bottle top 1-20 Make a group of 5, 1-20
- B: Number cards from 1 to 20, different languages, number cards-sticks-cards
- C: Addition 9+3=12, sticks and marbles in different representations
- D: Addition 9+3=12, 8+5=13, using sticks and marbles
- E: Number cards, number cut-out, jumping, bottle top
- F: Counters, number cards, number line,
- G: Tallies, counters, jumping
- H: Bottle tops, number cards
- I: Counting 1-5 with sticks, counters
- J: Counters, stones, fingers, hundred chart, songs

Tasks ahead 1/2

1. [By the end of July]
   Make a summary of what you have learned newly.

2. [By the end of July]
   - [For class 1 teachers] Make a lesson plan in which children learn up to 20 using any semi-concrete materials.
   - [For class 2 teachers] Make a lesson plan in which children learn up to 100 using any semi-concrete materials.

78

Tasks ahead 2/2

3. [By the end of October]
   - Come up with traditional or local playing related to mathematical learning and develop it further for a lesson in any part of teaching and learning for class 1 or 2.

4. [From September] Discussion within your school once a month and discussion in zonal schools at the end of each term

Capacity Development for Village-Based Sustainable Primary Education Strategy.

Training for Early Grade Teachers [Grades 1&2]

PROFESSIONAL RECORDS

1

What materials are required for making professional records?

1. Primary Education Syllabus
2. Course books
3. Attendance registers
4. Class timetables

2

Learning objectives

By the end of the session, the participants should be able to;

a. Define a syllabus
b. State all the professional records they should keep
c. Explain the importance of every professional record that they keep

3

Procedure

Which one do you now?

- Schemes of work
- Lesson Plan
- Progress records
- Record of work covered
- Registers such as admission attendance
- Time table
- Health record of each child

4

1.1 What is an Attendance register?

It is a record showing daily learner class attendance record. It should be marked in the morning and in the afternoon to show which specific sessions the learner attended

5

1.2 What is a time table?

It is a plan showing the order in which the lessons of the day will be taught in a given class.

6

1.3 What are schemes of work?

These are written descriptions of the work that has been planned for a particular content to be covered over a specified period of time. It can also be defined as a document that contains topics and subtopics from the syllabus which are broken down into smaller units meant for teaching over specified duration or period of time for example one school term or one year.

7

1.3 What are schemes of work? (continued)

As a teacher it is necessary that you acquire the skill of preparing the schemes of work and lesson plan.

The preparation of schemes of work is about breaking up the content of the syllabus into meaningful components or units and arranging these components in a logical sequence for teaching.

1

1.3 What are schemes of work? (continued 2)

Schemes of work no doubt represent an effort by the teacher to plan systematically. It means therefore that the scheme of work is to be prepared before embarking on the teaching period. As you prepare the schemes of work, it is necessary for you to pay attention to:

- the changing times
- changing nature of learners
- the available learning facilities
- changes in the subject matter.

2

1.3 What are schemes of work? (continued 3)

Each subject area in the school ought to have a description of what is to be taught within a given period of time for example one school term. The description should include the key resource requirements.

3

1.3 What you consider during the schemes of work preparation stage ?

1) The topics and subtopics in the syllabus from which the schemes of work will be) prepared.

2 The number of teaching weeks available in the school term.

3) The number of lessons/periods allocated to the teaching the particular subject. In doing this, you must take into consideration the lessons to be used for:

- Class tests
- Revision
- Holidays/mid-term breaks
- Examinations
- Other school activities

4

schemes of work preparation stage (continued) ?

Allocate and distribute the available time to the topics and sub-topics. As you do this, consider the difficulty to the concepts to be taught, the amount of information to be covered and the teaching methods that you intend to use.

Arrange the topics such that teaching progresses from simple to complex and from known to unknown or from familiar to unfamiliar.

5

schemes of work preparation stage (continued 2) ?

Find out the previous knowledge and skills the learners already have. The learners' entry behavior should include information such as:

- **Knowledge already learnt**
- **The learners' intellectual competence**
- **The learners' logical competence**
- **Their observation skills**

6

What are the components of the schemes of work?

Week	Lesson	Topic	Theme & Objective	Teaching/ Learning Activities	Teaching Aids	References	Remarks
1	1						
	2						
	3						

7

What are the essential elements of the schemes of work?

1. Administrative details

While writing schemes of work, you will usually begin by staring some preliminaries and administrative details such as:

- **Class**
- **Subject**
- **The term and year**

8

What are the essential elements of the schemes of work? (Continued)

2. Week

A school term has about 13 weeks. However, not all the weeks would be available for teaching. Some weeks will be spent on tests. You should therefore indicate the specific time schemed for in terms of weeks available for teaching in the particular school term and available teaching lessons each week.

9

What are the essential elements of the schemes of work? (Continued 2)

3. Content

The content is the subject matter to be covered. It is written in form of topics and subtopics, to be taught over a period of time. The source of the content is the syllabus.

10

What are the essential elements of the schemes of work? (Continued 3)

4. Objectives

In writing the objectives, you will be guided by the following questions:

i. **What do you want the learners to learn?**
ii. **How do these objectives relate to the long term objectives of the subject?**

11

What are the essential elements of the schemes of work? (Continued 4)

5. Learning Activities

Learning activities are a description of what the learners would be doing or involved in, during the teaching and learning process. Indicate the learning activities for each of the lessons in the schemes of work.

12

What are the essential elements of the schemes of work? (Continued 5)

6. References

This includes the books to be used by the teacher during the preparation of the schemes of work. The teacher should indicate the title of the textbook, author and the pages where content has been derived from. The KIDs has vetted and approved a number of textbooks in every subject for use by their learners.

13

What are the essential elements of the schemes of work? (Continued 6)

7. Teaching Materials

During the teaching-learning process, you will need to use certain materials so as to simplify the content being taught. The materials may include non-reading materials such as charts, pictures and objects.

14

What are the essential elements of the schemes of work? (Continued 7)

8. Remarks Column

In this column you should write comments to indicate whether the topic was adequately covered or not giving reasons where possible.

15

Why are the schemes of work very important document for the teacher?

It assists the teacher:

i. **To group together topics those are related for easy teaching.**
ii. **To develop a logical sequence of activities following the pattern from known to unknown.**
iii. **To ensure proper time management relative to the amount of work load.**
iv. **To acquire relevant materials for effective lesson implementation**
v. **To integrate different learning activities.**
vi. **To cover a specific theme within a given time frames**

16

Let's make your schemes of work!

17

1.4 what is the lesson plan?

A lesson plan can be described as the teacher's work plan showing what the teacher and the learners should cover during a single lesson. At the lesson planning stage you should visualize the actual teaching learning situation and prepare an instructional guide(lesson plan) to the content to be taught.

18

1.4.1 what are components of a lesson plan?

a. Administrative Details

These are the details which you should give as the top of the first stage. The details include such information as name of the school, class or form, date, time, subject, topic and subtopic.

19

1.4.1 what are components of a lesson plan?

b. Objectives (Instructional Objectives)

It is very important to remember that the instructional objectives should be SMART.

20

1.4.1 what are components of a lesson plan?

c. Time

Time is a critical factor in your lesson planning. It determines the amount of practice of skills and the application. The timing shows the number of minutes that each phase and each stage or step of the lesson plan will take. As a general guide, the revision together with the instructional phase and should take not more than five minutes; the developmental phase, thirty minutes; and recapitulation phase, five minutes.

21

1.4.1 what are components of a lesson plan?

d. Content

The content is the main focus of the communication in the classroom. It is an indication of the details of what will be covered in each stage or step of the lesson and is stated in form of topics and subtopics. It includes **knowledge, skills, attitudes and values**. You should have a thorough knowledge of the content so as to guide the learners effectively.

22

1.4.1 what are components of a lesson plan?

e. Learning Activities

This is an indication of what the learners will be doing or involved in each step or stage during the learning process. Some examples of learning activities are:

- Making notes
- discussing in small groups
- Writing
- listing
- Classifying
- responding to questions.

23

1.4.1 what are components of a lesson plan?

f. Resource Materials

Instructional resource materials are means of conveying information. They help in enhancing teacher-learner interaction and also simplifies abstract concepts as well as allowing for skill development. They include such materials such as;

- **Maps**
- **Diagrams**
- **Pictures**
- **textbooks.**

24

1.5 learner progress record

The teacher should ensure that she /he keeps every child's progress record. This shows how the child is faring on it shows:

- **Areas covered**
- **Areas of achievement**
- **Areas of difficulty**

In some schools these books are known as individualized education plan (IEP)

25

1.6 record of work covered

It is a summary of the areas of the syllabus the teachers has covered.

The record of work covered is important for it helps the teacher to account for the work they done in class.

Record of work covered belongs to the school and it is kept for future reference to guide incoming teachers.

26

Let's prepare your lesson plan!

27

UWEZO and baseline learning assessment on Literacy

GLMi Kenya
Tetsuya Yamada

1

What is UWEZO learning survey

- UWEZO means capability in Kiswahili
- Nation-wide **Household-based** learning survey
- The main question, "Are our children learning?"
- Data in 2014
  - 600 households surveyed in Loitokitok sub county
  - **English** and **Kiswahili** literacy, and **Numeracy** which are to be attained after 2 years of primary education
  - 775 children aged 6-16 (387 boys and 388 girls) took Swahili test
  - 785 children aged 6-16 (391 boys and 394 girls) took English test
  - 778 children aged 6-16 (388 boys and 390 girls) took math test

2

Community/Family situation

- The majority is Maasai (75%)
- About **74%** of mothers in Loitoktok did not attend any formal schooling before. The percentage is way higher than the national average (11.3%)
- About 47% of households in Loitoktok are considered to be poor
- About 40% of children can eat meals either only 1 or 2 times per day

3

Enrollment situation

- There are many late comers whose ages are over the school ages and students who repeat grades
- **16%** of children aged 6-13 in Loitokitok (103 children) are NOT currently enrolled in school and **15%** of children aged 6-13 in Loitokitok (100 children) have never enrolled in school (The national average is around 10%)
- Most of children who are currently out-of-school have NEVER attended school

- Pre-school Experience

33% of children have never attended pre-school
(On the national average, 16% of children have never attended pre-school)

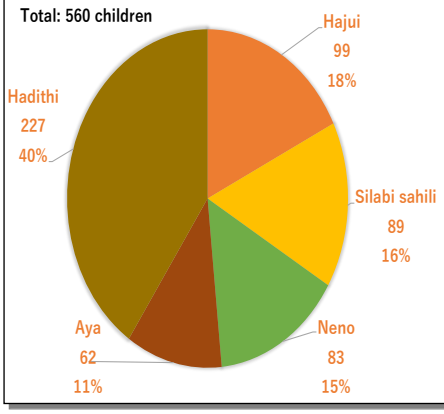
4

Extra Lesson

- **86%** of enrolled students (639 students) do not receive any extra lesson.
- There seems to be no gender gap in the extra lesson status.
- However, students at private school are likely to attend extra lesson. 25 out of 67 private school students (**37%**) receive extra lesson while 76 out of 607 public school students (**13%**) do.
- Students at the lower grades are less likely to receive extra lesson (**90%** of Class 1 students and **93%** of Class 2 students do not receive extra lesson while **78%** and **56%** of pupils at Class 7 and 8 respectively do not).

5

Kiswahili Performance of Children aged 7-13

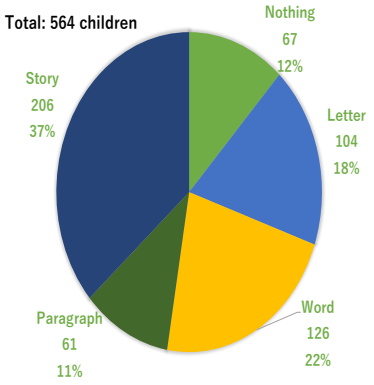


Only **40%** of children aged 7-13 in Loitokitok met the Class 2 Kiswahili level

18% of children could **NOT UNDERSTAND ANYTHING**

6

English Performance of Children aged 7-13



Only **37%** of children aged 7-13 in Loitokitok met the Class 2 English level

12% of children could **NOT UNDERSTAND ANYTHING**

7

Multiple Regression Analysis

- Y=a+b1X1+b2X2+b3X3+b4X4+b5X5+b6X6+b7X7

Y=(Swahili or English test scores)

X1=**Children's age**, X2=**Mother's educational level** X3=**Meals children eat per day**, X4=**whether children attend extra lessons,** X5=**Years children attend pre school,** X6= **whether children have never enrolled in school,** X7=**Wealth**

8

Results

- Obviously "Children's age" and "Never enrolled in school" have the most significant impact on test scores
- Except those two variables, "**Meals children eat per day"** has the biggest impact on test scores, even controlling some variables, such as **wealth** and **mother's education level**.
- **"Extra Lesson"** has the positive statistically significant relationship with Swahili and English test scores, controlling the same variables above

9

Additional Analysis 1

- Y=a+b1X1+b2X2+b3X3+b4X4+b5X5+b6X6+b7X7+b8X8

Y=(Swahili or English or Math)

X1=Children's age, X2=mother's educational level X3=Meals children eat per day, X4=whether children attend extra lessons/tuition, X5=years children attend pre school, X6= whether children never enrolled school, X7=wealth, **X8= whether Maasai is mother tongue**

Being a child whose mother tongue is Maasai has a negative statistically significant impact on Swahili test scores (not on Math and English test scores)

10

Additional Analysis 2

- Children who cannot understand well on Swahili tests are unlikely to understand well on English and Mathematics (especially children who are out-of-school)

11

Baseline Learning Assessment

- School-based survey conducted by GLMi Kenya in June 2017
- Purpose: Understanding the **basic learning level** of students
- We developed the "basic" questions (not challenging) based on the Kenyan curriculum by grade

- No gender and age gap in scores
- Swahili is not officially taught at ECD

12

Mean test scores (updated)

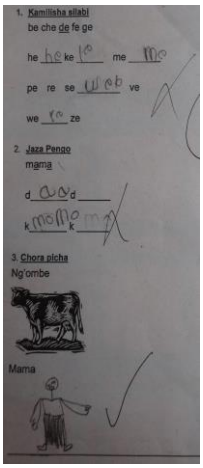
	ECD	Class 1	Class 2
Swahili (Number of school=14)	52/100	40/100	36/100
Math (Number of school=21)	78/100	64/100	66/100
English (Number of school=14)	-	-	61/100

Students seem to have difficulty in Swahili

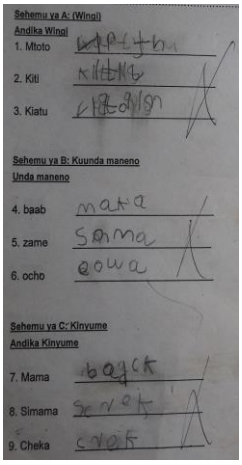
There is a big variance in mean test scores among students

Updated

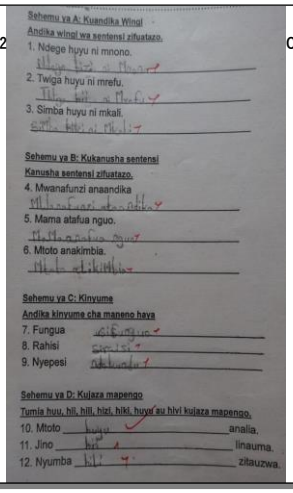
ECD



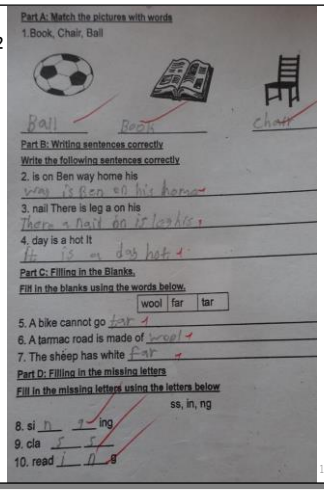
Class 1



Class 2



Class 2



Percentages of students who can answer all or most of all questions (updated)

	ECD	Class 1	Class 2
Swahili (Number of school=14)	27%	14%	15%
Math (Number of school=21)	51%	40%	33%
English (Number of school=14)	-	-	25%

Most of the students do not understand what they learnt at school.

Especially, students are really weak in Swahili

Updated

The relationship among test scores

- There is a positive statistically significant relationship among Swahili, Math and English test scores for Class 1 and Class2.
- Bright students can do well in all subjects; however, weak students are likely to be left behind in all subjects

Summary and Implication

- There is still an access issue in Loitokitok (Some has never enrolled in school and others enroll late)
  - Schools may need to understand the obstacles of enrollment
  - Not going to school is the biggest obstacle to the learning
- Learning Level in Loitokitok is really low
  - Urgent Needs to Improve Learning.
  - Children who cannot catch up with one subject are likely to be left behind on other subjects
  - Can the school think of any solution which can directly affect the learning level?
  - E.g. Extra lesson is not common for lower grade children, but it can be an effective tool to improve learning according to the statistical analysis

Summary and Implication

- Serving sufficient foods either at school or house can lead to a learning improvement
- Children whose mother tongue is Maasai tend to have difficulty to understand Kiswahili
  - Schools or community may need to consider extra Kiswahili lesson to Maasai children

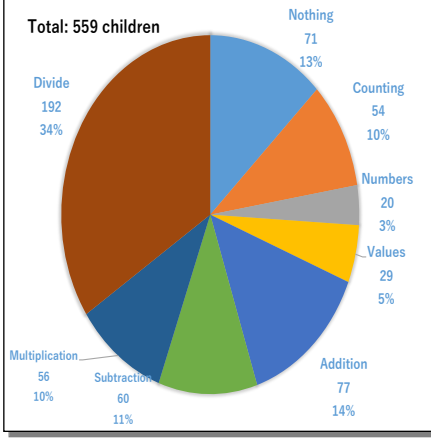
21

UWEZO and baseline learning assessment on Math

GLMi Kenya
Tetsuya Yamada

1

Math Performance of Children aged 7-13



Only **34%** of children aged 7-13 in Loitokitok met the Class 2 Math level

13% of children could **NOT UNDERSTAND ANYTHING**

6

Multiple Regression Analysis

- $Y=a+b1X1+b2X2+b3X3+b4X4+b5X5+b6X6+b7X7$

Y=(Math test scores)

X1=**Children's age**, X2=**Mother's educational level** X3=**Meals children eat per day**, X4=**whether children attend extra lessons,** X5=**Years children attend pre school,** X6= **whether children have never enrolled in school,** X7=**Wealth**

7

Results

- Obviously "**Children's age**" and "**Never enrolled in school**" have the most statistically significant relationship with test scores
- Except those two variables, "**Meals children eat per day**" influences the most, controlling variables including **wealth** and their **mother's educational level**
- **"Extra Lesson"** has the positive statistically significant relationship with math test scores, controlling the same variables above

8

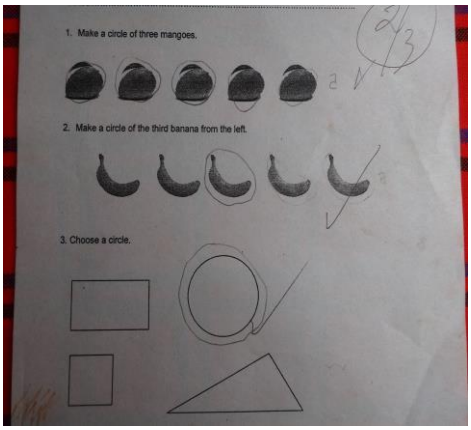
Mean test scores (updated)

	ECD	Class 1	Class 2
Swahili (Number of school=14)	52/100	40/100	36/100
Math (Number of school=21)	78/100	64/100	66/100
English (Number of school=14)	-	-	61/100

Students seem to have difficulty in class 1 and 2

There is a big variance in mean test scores among students

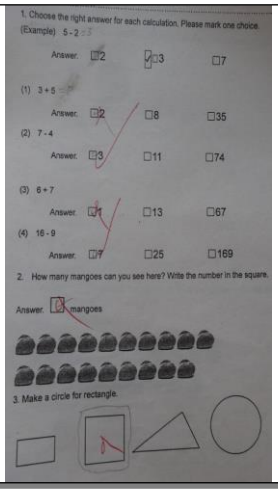
Updated



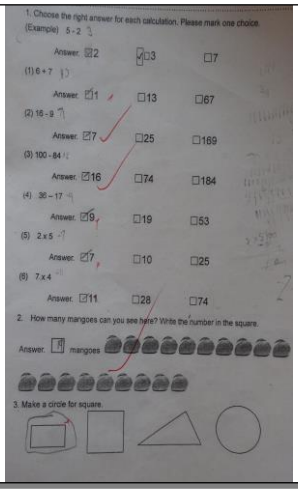
Mean Math scores at ECD are 80%, but the test asks just basic 3 questions

12

Class1



Class2



13

Percentages of students who can answer all or most of all questions (updated)

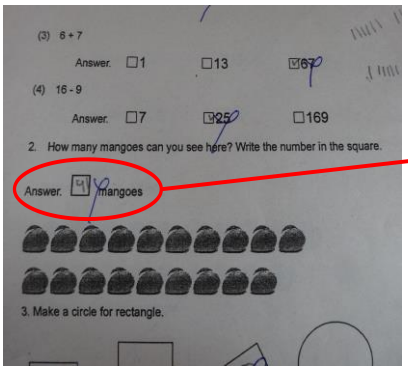
	ECD	Class 1	Class 2
Swahili (Number of school=14)	27%	14%	15%
Math (Number of school=21)	51%	40%	33%
English (Number of school=14)	-	-	25%

Most of the students do not understand what they learnt at school.

Especially, students are really weak in math at class 1 and 2

Updated

Example: Class 1 student's answer



Some students do not know how to write 19.

There are many answers, like 91, 1P, P1 for 19.

16

Implication

- There is still an access issue in Loitokitok (Some has never enrolled in school and others enroll late)
  - Schools may need to understand the obstacles of enrollment
  - Not going to school is the biggest obstacle to the learning
- Learning Level in Loitokitok is really low
  - Urgent Needs to Improve Learning
  - E.g. Extra lesson is not common for lower grade children, but it can be an effective tool to improve learning according to the statistical analysis
  - Necessity to identify students who are left behind and focus on their learning

17

Implication

- Mother's educational level and Economic level are low in Loitokitok
- However, controlling the effects of **mother's educational level** and **wealth**, "**meals per day**" has one of the strongest impact on test scores.
  - Serving sufficient foods either at school or house can lead to a learning improvement

18

Appendix 18 Program of Early Grade Teachers Training 2018

Participants: 59 teachers from Grade 1 and 2 from 30 schools

TIME	CONTENT
Day 1	13th August 2018
8:00-9:00	Registration
9:00-9:30	Opening of Training
	Remarks by Sub-County Director of Education Teachers Service Commission
	Explanation of the Purpose and Schedule of the Training by Shadrack Mpelele—Project Officer GLMi Kenya
9:30-10.30	Analysis and Discussion on the Results of the Learning Assessment.
	Presentation on the Learning Assessment results in 2017 and 2018 at the school and zonal levels By Tetsuya Yamada
10:30-11:00	Session by Dr. Nagisa Nakawa
	Introduction of the new curriculum: Objective and contents to teach
11:00-11:15	Tea Break
11:15-13:00	Session by Prof. Nagisa Nakawa
	Introducing a play-based activity for class 1 and 2: preparation, roll play and revision (1) -A shopping activity-
13:00-14:00	Lunch Break
14:00-15:00	Session by Prof Nagisa Nakawa
	Introducing a play-based activity for class 1 and 2: preparation, roll play and revision (2) -Measuring activity-
15:00-17:00	Session by Prof Nagisa Nakawa
	Coming up with a play-based activity and sharing information
	Homework for the second day
17:00	Closing for the Day
19:00	Supper
Day 2	14th August 2018
8:00-8:30	Registration
8:30-9:30	Session on Mathematics by Dr Nagisa Nakawa
	Introducing new workbooks for play-based activities (1)
9:30-10:45	Session on Mathematics by Dr Nagisa Nakawa
	Introducing new workbooks for play-based activities (2)
10:45-11:00	Tea Break
11:00-13:00	Session on Mathematics By Dr Nagisa Nakawa
	Introducing new workbooks for play-based activities (2) continued
13:00-14:00	Questions and Answer session
14:00-15:00	Lunch Break
15:00-17:00	Session on Kiswahili by Mary Silole

	Introduction of Kiswahili Session Session on Kiswahili by Mary Silole Msingi wa kusoma na kuandika lugha: Vipashio vya lugha
Day 3	
8:00-8:30	Registration
8:30-9:30	Session by Mary Silole Mdahalo: -Matatizo ya kusoma na jinsi ya kuyatatua -Matatizo ya kuandika na jinsi ya kuyatatua -Kazi ya makundi na mawasilisho
9:30-10:45	Session by Mary Silole Induction session for Kiswahili workbook --Utangulizi --Mpangilio wa mazoezi --Kigezo cha kwanza na cha pili
10:45-11:00	Tea Break
11:00-12:00	Recap and Way Forward by Tetsuya Yamada
12:00-12:30	Session on Monitoring Tools by Shadrack Mpelele
12:30-13:00	Session on Information sharing strategy by Edward Saruni
13:00-14:00	Lunch Break
14:00-14:30	Summary of Activity and Way Forward by Tetsuya Yamada
14:30-16:30	Distribution of learning materials and departure

Learning Assessment results in 2017 and 2018

@Early Grade Teacher Training

13th-15th August 2018

GLMi Kenya

Education Specialist

Tetsuya Yamada

Re-Introduction of ourselves

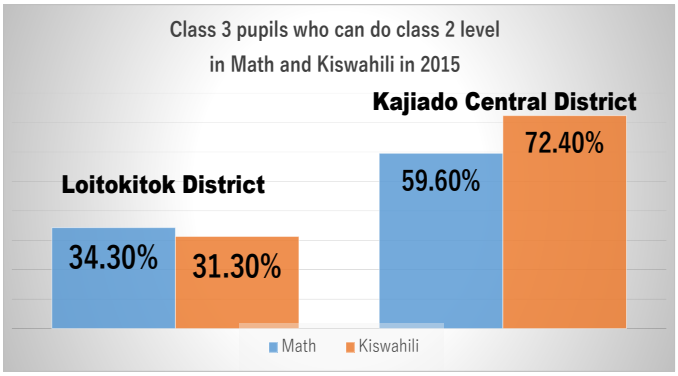
①

- **GLMi** stands for Global Link Management institute Kenya
- GLMi is implementing a 3-year-long project (2017-2020) called **CADVES** (Capacity Development Project for a Villaged-Based Sustainable Primary Education Strategy) in 30 schools in Loitokitok.
- We are not "**Donor**" but "**Catalyst**".
- We always care "**Ownership**" and "**Sustainability**".
- Our project aims "**Quality**" and "**Equity**" of Education.

2

Why did CADVES start?

①



Revisiting one of the purpose of CADVES

①

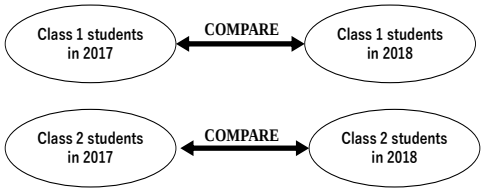
- Improve **Quality** of education
- CADVES prioritizes to improve **Numeracy and Literacy Foundation Skills in Early Grades** (Class 1 and 2).
- That is why **YOU** are here.
- That is why **REMEDIAL LESSONS** for class 1 and 2 are going on.

4

Description of Learning Assessment

①

- GLMi conducted math and Kiswahili learning assessment for class 1 and 2 students in June 2017 and 2018
- We randomly sampled 8 boys and 8 girls from 30 schools (app. 460 students in total)
- We tested class 1 level questions for class 1 students and class 2 level questions for class 2 students.



5

Percentage of Correct Answers and Standard Deviation (SD) at 30 schools

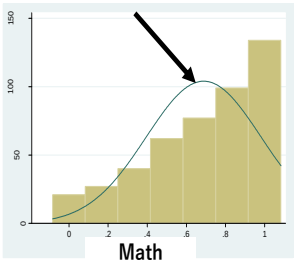
①

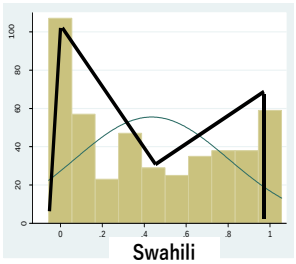
Subject	Male	Female	Total
Math class 1	70%(SD:29)	67%(SD:29)	69% (SD: 29)
Swahili class 1	43%(SD:37)	44%(SD:37)	44% (SD: 37)
Math class 2	61%(SD:27)	62%(SD:26)	61% (SD: 26)
Swahili class 2	30%(SD:30)	32%(SD:30)	31% (SD: 30)

- Students have more difficulty in Kiswahili.
- Female students seem to do good in all subjects except math class1, but the difference is not statistically significant.

6

Distribution of scores for class 1

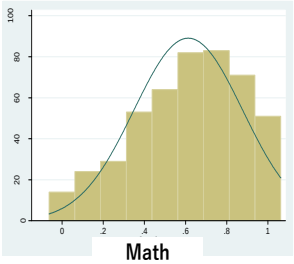


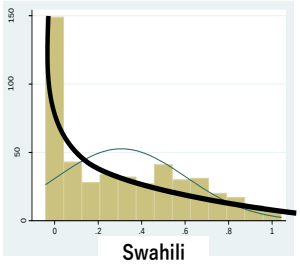


- Many students score above mean scores for MATH (69%).
- However, there is a big gap in SWAHILI scores and the biggest group scored 0%.

7

Distribution of scores for class 2





- Many students score around mean scores (61%) in MATH and distribution looks a bell curve.
- Many students score 0% in SWAHILI.

8

Percentage of Correct Answers in 2017 and 2018

Subject	2017			2018			Change
	Male	Female	Total	Male	Female	Total	
Math class 1	65% (SD:28)	64% (SD:28)	**65% (SD:28)**	70% (SD:29)	67% (SD:29)	**69% (SD:29)**	4% Increased
Swahili class 1	39% (SD:33)	39% (SD:34)	**39% (SD:34)**	43% (SD:37)	44% (SD:37)	**44% (SD:37)**	5% Increased
Math class 2	65% (SD:26)	66% (SD:26)	**66% (SD:26)**	61% (SD:27)	62% (SD:26)	**61% (SD:26)**	5% Decreased
Swahili class 2	34% (SD:30)	34% (SD:29)	**34% (SD:29)**	30% (SD:30)	32% (SD:30)	**31% (SD:30)**	3% Decreased

Class 1 IMPROVED but Class 2 DECREASED

9

Math Item Analysis

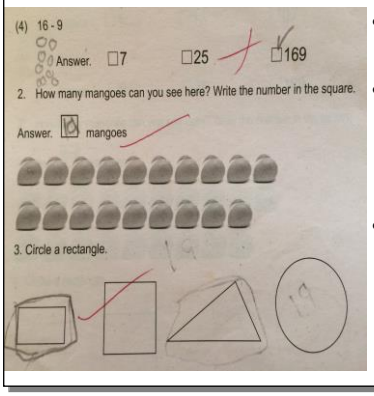
	Class 1 Math						
	Total	Q1	Q2	Q3	Q4	Q5	Q6
2017	65%	76%	67%	65%	55%	69%	56%
2018	69%	76%	69%	69%	58%	76%	66%
Change	+4%*	0%	+2%	+4%	+3%	+7%*	+10%*

	Class 2 Math								
	Total	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
2017	66%	77%	67%	47%	59%	59%	56%	78%	81%
2018	61%	79%	65%	41%	53%	57%	45%	74%	77%
Change	-5%*	+2%	-2%	-6%*	-6%*	-2%	-9%*	-4%	-4%

"" means that the difference between in 2017 and in 2018 is statistically significant.*

10

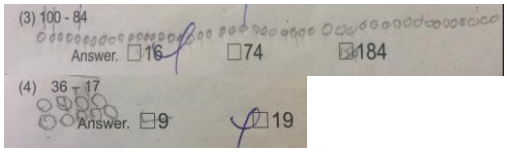
Math class 1 Analysis



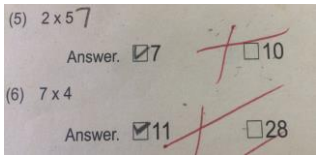
- This is the typical answer from class 1 students.
- Class 1 students in 2018 achieved more than those in 2017 on basic counting and recognition of shapes.
- There was an improvement for Q(4) 16-9 from 2017 to 2018. However, we found such common mistakes as Q(4) on the left photo.

11

Math class 2 Analysis



Students have difficulty in 3 digits and 2 digits subtraction. Some tried to solve by calculating one by one. They are not familiar with vertical subtraction.



Students are confused of signs (+, −, ×, ÷)

12

Group Work

1. Look at math answer sheets and find out strong and weak points of students in 30 schools in Loitokitok.
2. Discuss reasons why scores improved in math class 1 and scores decreased in class 2 after math remedial lesson implementation from January 2018.
3. Discuss how your PEDAGOGIAL approach influenced improvement and decrease.

13

Kiswahili Item Analysis

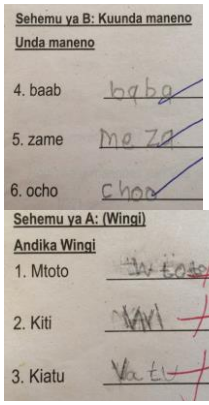
	Kiswahili class 1									
	Total	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
2017	39%	47%	38%	36%	52%	42%	32%	47%	29%	27%
2018	44%	53%	45%	40%	58%	44%	41%	50%	34%	33%
Change	+5%*	+6%	+7%	+4%	+6%*	+2%	+9%*	+3%	+5%	+6%

	Kiswahili class 2												
	Total	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
2017	34%	13%	47%	50%	19%	22%	14%	45%	35%	24%	56%	38%	42%
2018	31%	41%	40%	41%	18%	16%	18%	34%	34%	25%	45%	31%	27%
Change	-3%	+28%*	-7%*	-9%*	-1%	-6%*	+4%	-9%*	-1%	+1%	-11%*	-7%*	-15%*

"*" means that the difference between in 2017 and in 2018 is statistically significant.

14

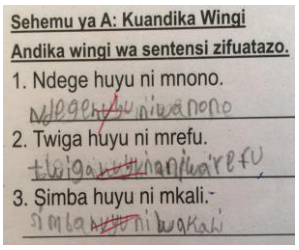
Kiswahili class 1 Analysis



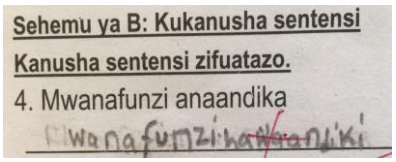
- There was an improvement in Q(4) and (6). Class 1 students in 2018 understood more syllable combination (b+a=ba) and words.
- There are many mistakes in spelling. We assume that they are familiar with conceptualizing ideas and words. They might even say words (watoto). However, in WRITING, they forget some vowels.
- There is a difficulty in syllable formation (consonants and vowels).

15

Kiswahili class 2 Analysis



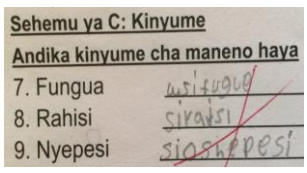
- Students understand the meaning of questions and they changed nouns to a plural form (e.g. mnono to wanono). However, they forget to change other parts (e.g. adjective huyu to hawa) to plural.

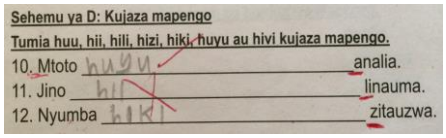


- It was confusing that we combined questions for present and future tenses for section B.
- However, students who can read and write in Kiswahili can choose appropriate prefix (ha-)

16

Kiswahili class 2 Analysis





- **Attention** problems. Students should answer opposite words NOT negative.
- If these questions are asked in an oral way, they can easily answer.
  - We should have limited choices and the space should have been narrowed.
- Students have difficulty to 1) identify if sentences are singular or plural and 2) find appropriate adjectives for those sentences.

17

Homework

1. Look at kiswahili answer sheets and find out strong and weak points of students in 30 schools in Loitokitok.
2. Discuss how your PEDAGOGIAL approach influenced improvement and decrease.

18

Issues we are facing.....

- Transition from mother tongue to kiswahili
- Pre-school experience
- Absenteeism of children
- Cultural practices
- Poverty
- Lots of paper work
- Few numbers of teachers
- Confusion of new curriculum design
- And so on ……..

It was a sad news for everybody that class 2 scores decreased even after remedial lesson implementation.

19

Can YOU become a PROACTIVE change-maker?

- Are you a just passive service implementer or a proactive change-maker?
- What can you change yourself (pedagogy) and approach other stakeholders (e.g. parents, head teachers, BoM and chiefs) for collective actions?
- Good Discussion at governance and leadership training at Meshanani

Potential action plans to improve learning outcome for class 1 and 2 are as follows.

- Create awareness of learners and parents
- Speak Kiswahili to children at home
- Motivate parents to monitor children's work
- Spread messages to parents at MTG
- Increase learning time (retain children at school)
- Discuss to get foods from parents at school
- Invite only class 1 and 2 parents to discuss their issues
- Assign non-Maasai teachers for class 1 and 2.

20

Group Discussion

- What can YOU do to improve basic numeracy and literacy for class 1 and 2 at remedial lessons?

1. Yourself

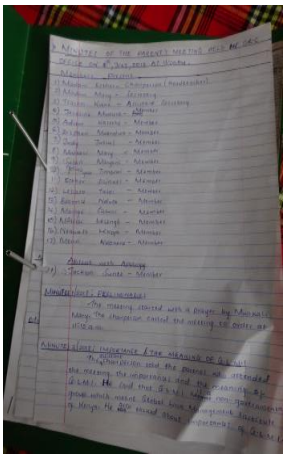
Pedagogy and **CONCRETE ACTIVITIES within your classroom**

22

Can you hold a meeting with class 1 and 2 parents?

Essosian teachers organized a meeting with them in the 2nd term as we suggested at the induction in May.
Essosian parents agreed to support foods to retain children in the afternoon in the 1st term.

- Share evidence about basic literacy and numeracy situation
- Share information about the progress of remedial lesson implementation
- Discuss issues you are facing for remedial lessons
- Come up with solution together with parents



23

Group Discussion

- What can YOU do to improve basic numeracy and literacy for class 1 and 2 at remedial lessons?

2. Collaboration
   - with parents
   - with Head Teachers
   - with BoM, PTA and chiefs
   - with other schools, as a zone and as Loitokitok 30 schools

24

Remedial Lesson Time Tables

- Develop remedial lesson time-tables for class 1 and 2 on A4 papers

Oltiasika Class 1					
	Monday	Tuesday	Wednesday	Thursday	Friday
Kiswahili	e.g. 14:00-15:00				
Mathematics					

2

Training for Early Grade Teachers (Day 1 Mathematics)

Na(i)gisa Nakawa
Kanto Gakuin University,
Yokohama,
Japan

Programme for today and tomorrow(mathematics)

- Day 1 (13th August)
  - Session(1) Introducing the new curriculum: objective and contents
  - Session(2) Introducing a play-based activity: preparation, roll-play and revision –a shopping activity-
  - Session(3) Introducing a play-based activity(2): preparation, roll-play and revision –a measuring activity-
  - Session(4) Coming up a play-based activity in pairs/homework

Programme for today and tomorrow (mathematics)

- Day 2 (14th August)
  - Session(1) Talk by Tetsuya and Shadrack
  - Session(2) Introducing new workbooks
  - Session(3) Q and A session in mathematics
  - After these sessions, Kiswahili sessions come.

DAY 1
MORNING
ACTIVITY: SESSION (1)

Programme for today and tomorrow (mathematics)

- Day 1 (13th August)
  - Session(1) Introducing the new curriculum: objective and contents
  - Session(2) Introducing a play-based activity: preparation, roll-play and revision –a shopping activity-
  - Session(3) Introducing a play-based activity(2): preparation, roll-play and revision –a measuring activity-
  - Session(3) Coming up a play-based activity in pairs/homework

Session(1) Introducing the new curriculum: objective and contents

- Objective of the session

  · You will be able to understand the new objectives, contents and methods of teaching in mathematics

  • You will identify what kind of activities you should teach in daily mathematics teaching.

Introduction (KICD, 2017, p.iii)

- The teacher must understand the learning outcomes and be able to use the suggested learning experiences to achieve the outcomes. The teacher can also design own learning experiences as long as they achieve the designed learning outcomes. A variety of learning experiences will ensure that learners are engaged in the learning experience. Practical experiences will allow learners to retain more in the learning process. The designs allow the teachers to use a variety of assessment methods but in the end they must evaluate the achievement of the learning outcomes.

Competency Based Curriculum

- Competency-based learning refers to systems of instruction, assessment, grading, and academic reporting that are based on students demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education.

(https://www.edglossary.org/competency-based-learning/)

Competency based curriculum: core competencies

- Communication and collaboration
- Critical thinking and problem solving
- Creativity and imagination
- Citizenship
- Digital literacy
- Learning to learn
- Self-efficacy

Mathematics activities: essence statement (KICD, 2017, p.2)

- Numeracy is a foundational skill that prepares the learner for number work, Mathematics in higher levels of schooling and mathematical approaches in all aspects of life. Numeracy activities involve identification and value placement of mathematical numerals, basic mathematical operations as well as measuring and describing shapes.

GENERAL LEARNING OUTCOMES

- By the end of Early Years Education, the learner should be able to: 1) demonstrate mastery of number concepts by working out problems in day to day life, 2) apply measurement skills to find solutions to problems in a variety of contexts, 3) describe properties of geometrical shapes and spatial relationships in real life experiences.

Structure of mathematics activities : An example(Curriculum design, p.3)

Strand	Sub-strand	Specific Learning Outcome	Suggested Learning	Key inquiry Question(s)
1.0 Numbers	1.1 Number Concepts (20 lessons)	By the end of the sub-strand, the learner should be able to: a) sort and group objects according to different attributes within the classroom, b) pair and match objects in the environment, c) order and sequence objects in ascending and descending order,	・Learners in pairs/groups to collect different types of safe objects. ・Learners in pairs/groups to sort objects with same attribute and group them together. ・Learners to play digital games involving sorting and grouping according to different attributes.	1) How can we find out which group has more objects than another? 2) How can we group items?
Core Competences to be developed: learning to learn, communication and collaboration, imagination and creativity, digital literacy, critical thinking and problem solving.				

Structure of mathematics activities : An example(Curriculum design, p.4)

Link to PCI's: Life skills: self-awareness and self-esteem- when using body parts in counting. ESD(Education for Sustainable Development) : DRR; safety- when collecting items and litter in the environment, environmental awareness- don't litter the environment.	**Link to Values:** responsibility unity
Link to other learning areas: Environmental activities Religious activities Language activities	**Suggested Community Service Learning Activities**: learners to assist in collecting and sorting litter in their locality and observe how it is disposed.
Suggested non-formal activity to support learning: learners to count trees in the school compound.	**Suggested assessment:** oral questions, written exercise, observation.

Rubrics: An evaluation tool or set of guidelines used to promote the consistent application of learning expectations, learning objectives, or learning standards in the classroom, or to measure their attainment against a consistent set of criteria. (C.D., p.4)

Exceeds expectations	Meets expectations	Approaches expectations	Below expectations
Correctly: sorts and groups, pairs and matches, orders and sequences, recites numbers 1-50, represents numbers 1-30 using concrete objects and beyond.	Correctly: sorts and groups, pairs and matches, orders and sequences, recites numbers 1-50, represents numbers 1-30 using concrete objects.	Inconsistently: sorts and groups, pairs and matches, orders and sequences, recites numbers 1-50, represents numbers 1-30 using concrete objects.	Major inaccuracies in: sorting and grouping, pairing and matching, ordering and sequencing, reciting numbers 1-50, representing numbers 1-30 using concrete objects.

Summary: what are new in the curriculum?

- Competency-based curriculum
- Seven competencies with mathematics activities
- Rubrics (Assessment and competencies)
- Links to values, other learning areas a

DAY 1
MORNING
ACTIVITY: SESSION (2)

Programme for today and tomorrow (mathematics)

- Day 1 (13th August)
  - Session(1) Introducing the new curriculum: objective and contents
  - Session(2) Introducing a play-based activity: preparation, roll-play and revision –a shopping activity-
  - Session(3) Introducing a play-based activity(2): preparation, roll-play and revision –a measuring activity-
  - Session(3) Coming up a play-based activity in pairs/homework

Session(2) Introducing a play-based activity: preparation, roll-play and revision –a shopping activity-

- Objective of the session
  - You will be experiencing a mathematical activity
  - You will identify what kind of activities you should teach in daily mathematics teaching.

Why play-based activity is important for children?

- The EIS (Enactive-Iconic-Semiotic) principle by Bruner helps learners understand better.
- Trantisions from manipulation with concrete materials to iconic representations such as marbles and diagram and to semiotic representation with numbers and signs can give learners scaffold to understand semiotic representations.
- Play-based activities give learners opportunities to get to know concrete things and experience which are the basic experience for them to move forward in abstract forms of mathematics.

Shopping activities proposed

• In Class 1, 2.5 Money (within 2.0 Measurement) (C.D., p.15)

(Learning Outcome)(b)Relate money to goods and services up to sh.100 in shopping activities

(Activity)Learners in pairs/groups to give their own experiences in relation to shopping activities.

• In Class 2, 2. 5 Money (within 2.0 Measurement) (C.D., p.35)

(Learning Outcome)((d)Carry out shopping activities involving change and balance.

(Activity) ・Learners in pairs/groups to practice giving change and balance using imitation money up to sh.1000 in shopping activities.

・Learners in pairs/groups to share own experiences in relation to shopping activities.

In KLB Skillgrow Pre-primary 1&2 (2018) What did children learn at the pre-primary level?

・In the pre-primary, bills and coins are introduced and children are classifying the money.

[Preparation]

(1) Make a purse/wallet using paper for currencies.

(2) Cut the items and write the appropriate price on the price sheet. Also cut the currencies.

(3) Make a group of 4 people and decide buyers and sellers. Start the activity.

[Preparation]

(1) Make a purse/wallet using paper for currencies.

(2) Cut the items and write the appropriate price on the price sheet. Also cut the currencies. (See the handout pp.3-24)

(3) On each table, decide buyers and sellers. Start the shoppintg activity.

Reflection (p.27)

(1) What kind of competencies can children acquire through this activity?

(2) What kind of mathematical abilities can children train through this activity?

(3) Revise the activity if you really have to conduct the activity in YOUR class, considering your school situation, class size and pupils' context.

(4) Make the rubrics according to your revised activity.

(5) How did you feel about the activity?

Reflection

(1)Fill in the sheet for your reflection. (15 minutes)

(2) Share your ideas to your group. (15 minutes)

(3) Choose the best revised activity that you are likely to conduct.

DAY 1
AFTERNOON
ACTIVITY: SESSION (3)

Programme for today and tomorrow (mathematics)

- Day 1 (13th August)
  - Session(1) Introducing the new curriculum: objective and contents
  - Session(2) Introducing a play-based activity: preparation, roll-play and revision –a shopping activity-
  - Session(3) Introducing a play-based activity(2): preparation, roll-play and revision –a measuring activity-
  - Session(3) Coming up a play-based activity in pairs/homework

Measurement(especially 'length') in the curriculum design (KICD, 2017, p.10)

- 2.1 Length (10 lessons) in 2.0 Measurement in G1 (C.D., p.10)
- Specific Learning Outcomes
- By the end of the sub-strand, the learner should be able to:
  a) compare length of objects directly,
  b) conserve length through manipulation,
  c) measure length using arbitrary units.
- Core competencies: communication and collaboration, imagination and creativity, critical thinking and problem solving, self-efficacy.
- Link to values: Responsibility, integrity and unity

Measurement(especially 'length') in the curriculum design (KICD, 2017, p.29)

- 2.1 Length (6 lessons) in 2.0 Measurement in G2 (p.30)
- Specific Learning Outcomes
- By the end of the sub-strand, the learner should be able to:
- By the end of the sub-strand, the learner should be able to:
  a) measure length using fixed units,
  b) identify the metre as a unit of measuring length,
  c) measure length in metres.
- Core competencies: communication and collaboration, critical thinking and problem solving, imagination and creativity, digital literacy, learning to learn.
- Link to values: respect, responsibility

Measurement

- Important areas- because they are practical in children's life!
- Five stages of measurement
- Vocabulary in the children's environment (Pre-primary level)
  - Big-small, high-low, long-short, shallow-deep
  - Bigger-smaller, higher-lower, longer-shorter, shallower-deeper
- Direct comparison
- Indirect comparison
- Comparion using an arbitrary unit (Grade 1)
- Comparison using a universal unit (such as cm, m, g, kg, cm^2)(Grade 2)
- Comparison in relations (such as y=2x)

Reflection

(1)Fill in the sheet for your reflection.
(15 minutes)

(2) Share your ideas to your group.
(15 minutes)

(3) Choose the best revised activity that you are likely to conduct.

Reflection… same as the activity 1

(1)What kind of competencies can children acquire through the activity?

(2)What kind of mathematical activities can children train through this activity?

(3)Revise the activity if you really have to conduct the activity in YOUR class, considering your school situation, class size and pupils' context.

(4)Make the rubrics acoording to your revised activity.

Programme for today and tomorrow (mathematics)

- Day 1 (13th August)
  - Session(1) Introducing the new curriculum: objective and contents
  - Session(2) Introducing a play-based activity: preparation, roll-play and revision –a shopping activity-
  - Session(3) Introducing a play-based activity(2): preparation, roll-play and revision –a measuring activity-
  - Session(3) Coming up a play-based activity in pairs

DAY 1
AFTERNOON
ACTIVITY: SESSION (4)

Make a pair and create one playing activity for your children

- Fill in the sheet with your pair. Refer the textbooks and curriculum framework. (30 minutes)
  - Objectives
  - Competencies that children will acquire
  - Contents
  - Flow of the activity
  - Be realistic to the activity
- Share the plan with your group members. Listeners should be attentive critically.

Examples of competencies and values

- Competencies
- communication and collaboration, imagination and creativity, critical thinking and problem solving, self-efficacy, imagination and creativity, citizenship, digital literacy

- Values
- Responsibility, unity, integrity, respect, patriotism, honesty, love, social justice, cooperation, social justice, positive competition, responsibility as learners work together, unity in working with others

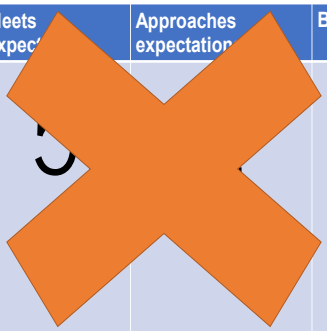
DAY 2
MORNING
ACTIVITY: INTRODUCING NEW WORKBOOKS FOR MATHEMATICS

Reviewing yesterday 1:
A shopping activity
–Good ideas for your class

- Items should be prepared before the activity
- Make a shop before the activity
- Make a simple shop and place it at the corner of the classroom
- Use paper as money in a big class

Rubrics: do not write the marks!

Exceeds expectations	Meets expectations	Approaches expectations	Below expectations
3	3		2



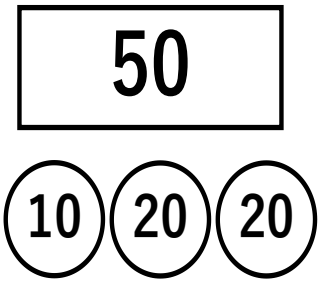
Rubrics: do not write the marks!

Exceeds expectations	Meets expectations	Approaches expectations	Below expectations
Correct: those who are precisely calculate the change and total of the prices and think of possible ways of using different varieties of coins	Correct: those who are precisely calculate the change and total of the prices.	Incorrect: Make some mistakes of calculations	Incorrect: Those who do not understand the action and meanings of sellers and buyers/Those who are not able to calculate addition and subtraction

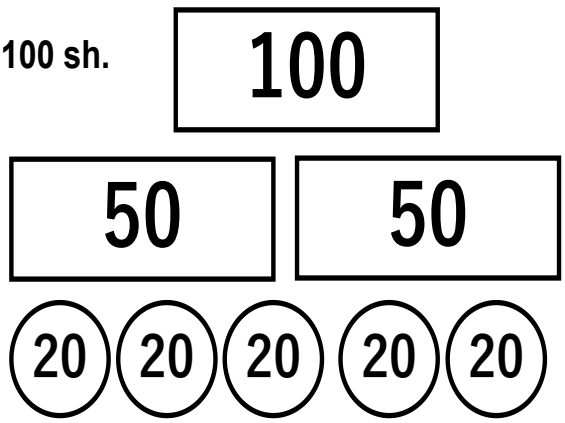
What does it mean?: Example

Exceeds expectations
Correct: those who are precisely calculate the change and total of the prices and think of possible ways of using different varieties of coin

- 50 sh.



100 sh.



Reviewing yesterday 2:
Coming up an activity in pair

- Two good planning particularly on (10) regarding the lesson flow
- Very concrete plans and well-described
- Compare yours with the selected ones and find out where you can improve your plan.
- The many sheets unfortynately did not describe in a concrete manner that I was not able to imagine what kind of lesson you were thinking of.
- WRITING CONCRETELY is a must.

Session(4) INTRODUCING NEW WORKBOOKS FOR MATHEMATICS

- Objective of the session
  - You will again review the result of the assessment test and discuss what we can do for children.
  - You will discuss how you can implement new workbooks, reviewing them in G1 and G2.

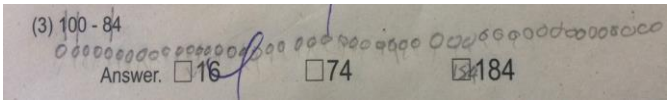
Revisiting the result of the assessment test in 2017 and 2018

Subject	2017			2018			Change
	Male	Female	Total	Male	Female	Total	
Math class 1	65 (SD:28)	64 (SD:28)	65 (SD:28)	70 (SD:29)	67 (SD:29)	69 (SD:29)	4 Increased
Math class 2	65 (SD:26)	66 (SD:26)	66 (SD:26)	61 (SD:27)	62 (SD:26)	61 (SD:26)	5 Decreased

44

Revisiting the result of the assessment test in 2017 and 2018

- Math class 2 Question(3) 100-84
- Children wrote circles for 100 times and tried to reduce 84 circles.
- They might be confused for subtraction and addition for 3 digits.

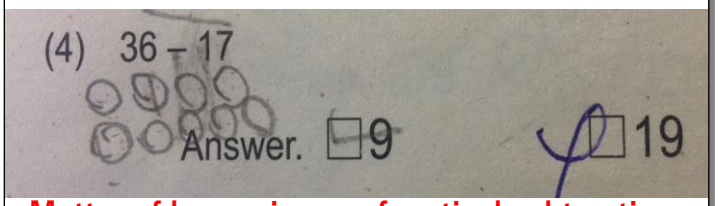


Time consuming

Revisiting the result of the assessment test in 2017 and 2018

Math class 2 Question (4) 36-17

Many children answered 9 rather than 19. When they borrowed 10 to the 1st digit, they might forget that they still have 20.

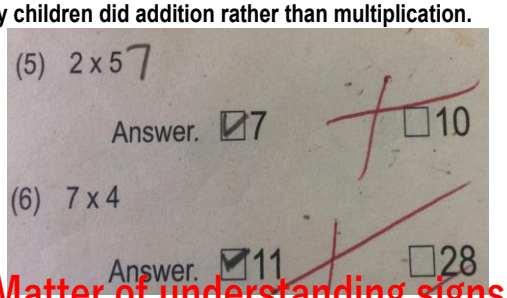


Matter of borrowing or of vertical subtraction

Revisiting the result of the assessment test in 2017 and 2018

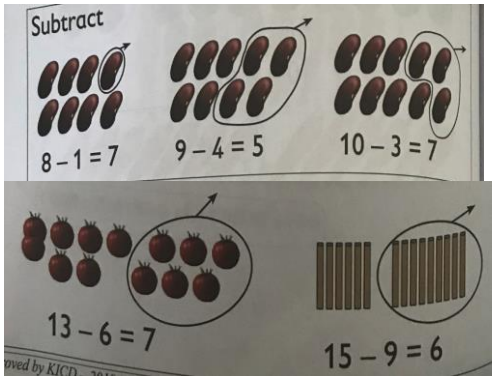
- Math class 2 Q(5) and (6) 2×5 and 7×4

Many children did addition rather than multiplication.

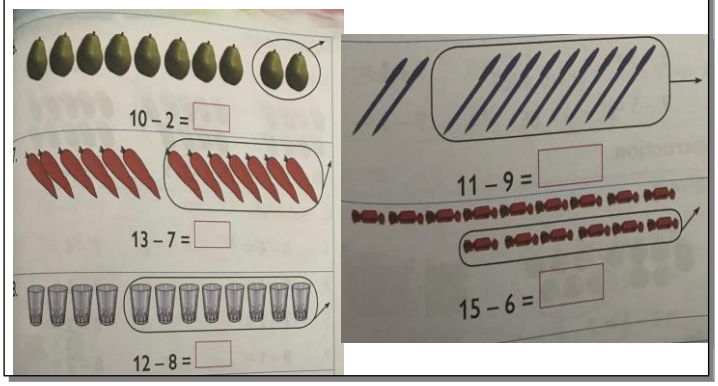


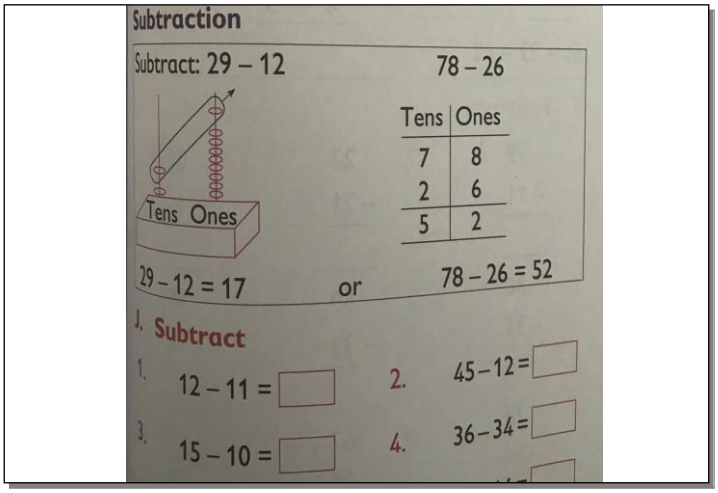
Matter of understanding signs

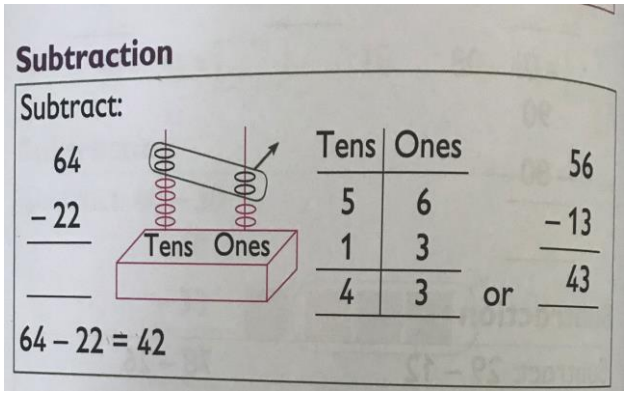
Subtraction with borrowing



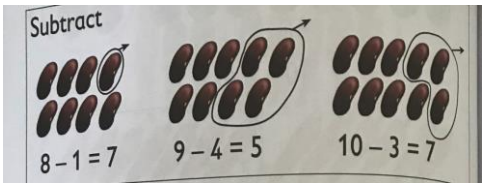
Subtraction with borrowing

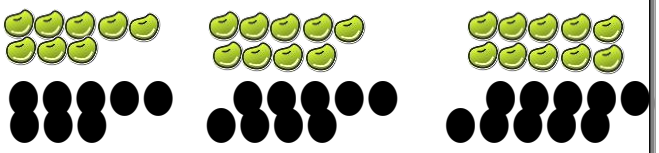






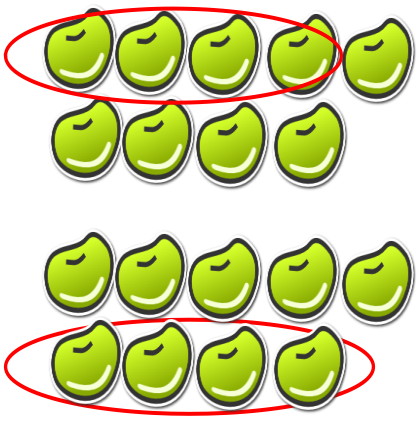
Revised!





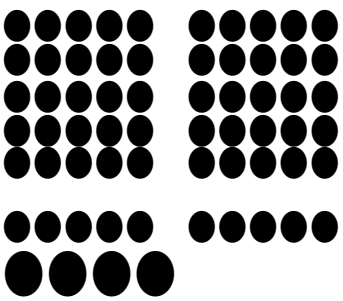
9-4=5

Where you take away 4 is very important.

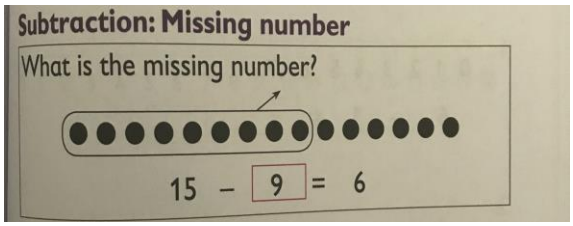


64-22=

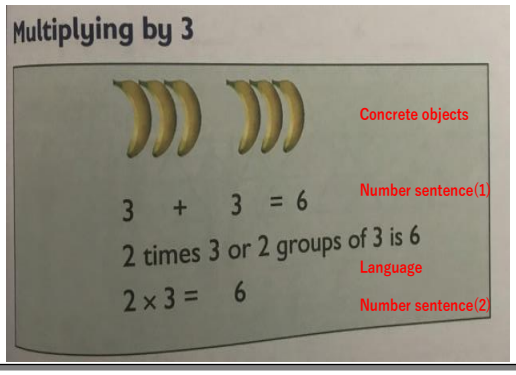
Where do you want to take away?

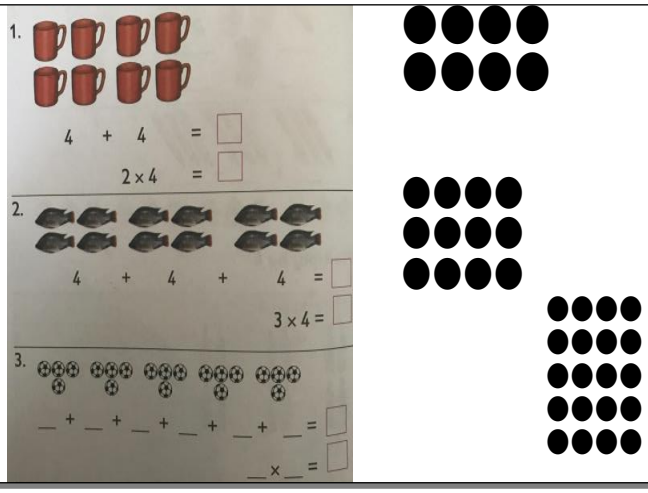


Where can you change?



Definition of multiplication- Good!





Concept for new workbooks

- Correspondence with the new curriculum design with as many as activities as possible.
- Almost same as the number concepts that I focused in the previous training in July, 2017
- It is up to you to modify the activity suggested in the workbooks as you see your children's condition and class size.

Ninja number song (a Japanese song)

- 1 and 1, reciting a spell
- 2 and 2, taking out the sword
- 3 and 3, hiding in the bush
- 4 and 4, putting on a head protector
- 5 and 5, throwing away stars,
- We are NINJA, DORON. -END-

Activity

- Solve the questions of workbooks and think the way you could revise for your children.
- Make a pair and do the activities using the workbooks.
- Also refer the other grade's workbook and remark the part which you can utilise for your children.
- Share your opinion in your group.

Early Grade Teacher Training on Kiswahili

By. Ms. M. S. Manini

1

Contents Day 2

Session 3: Introduction of Kiswahili session:

- **Lengo la kitabu**
- **Marejeleo na uchanganuzi**
- **Vigezo(1) na(2)**

Session 4: Msingi wa kusoma na kuandika lugha.

- **Vipashio vya lugha**

2

Contents Day 3

Session 1: Mdahalo

- **Matatizo ya kusoma na jinsi ya kuyatatua**
- **Matatizo ya kuandika na jinsi ya kuyatatua**
- **Kazi ya makundi na mawasilisho**

Session 2: Introduction session for Kiswahili workbook

- **Utangulizi / Mpangilio wa kitabu**
- **Mpangilio wa mazoezi**
- **Kigezo cha kwanza na cha pili**

3

MATARAJIO YA WARSHA

- **Kufikia mwisho wa warsha wahusika**

1. Wataje mafanikio na changamoto ya mazoezi katika muhula wa 1-2.

2. Waeleze msingi wa kusoma na kuilewa lugha

3. Waorodeheshe matatizo ya kusoma

4. Waorodheshe matatizo ya kuwandika

5. Waelekezwe katika mpangilio wa mazoezi

6. Watambue umuhimu wa kigezo 1&2

4

Session 3: Introduction of Kiswahili session:

- **Lengo la kitabu**
- **Marejeleo na uchanganuzi**
- **Vigezo(1) na(2)**

5

Lengo la kitabu

Kumwezesha mwanafunzi kuimudu stadi ya kusoma, kuandika na kuielewa lugha ya Kiswahili kutoka awali.

6

➢ Lengo la kitabu

● Mbinu kuu husika katika kitabu

① Kutambua Sauti na kuziandika

＊Kutofautisha sauti za alfabeti za vokali na konsonanti.
＊Vokali-5
＊Konsonanti-25

7

➢ Lengo la kitabu

② Kuunganisha Sauti kuunda silabi

*Silabi rahisi → K+V = b+a = ba
→ V+V = u+a = ua
*Silabi mwambatano → KKV =ch +a =cha
*Silabi changamano → KKKV=mbw+a=mbwa
*Silabi za maneno kamili → mbu, nje, mbwa
*Silabi za konsonti pekee → daktari

8

➢ Lengo la kitabu

③ Kuunganisha Silabi kuunda maneno

＊ Nomino za kawaida → Kiti, kitabu
＊ Vitezi → Simama, fagia, kula
＊ Vinumishi → Mbaya, huyu, wangu

9

➢ Lengo la kitabu

④ Kuunganisha maneno kuunda sentensi

＊ Fungutenzi → Anasimama, anakula.
＊ Sentensi sahili → Mtoto anakula.

10

➢ Marejeleo na uchanganuzi

1. MAFANIKIO YA MUHULA WA I＆II

① Taswira halisi katika kigezo 1&2
② Grade 1&2 kupiga hatua chanya katika kigezo I
③ Kigezo I&II kumalizika muhula 2
④ New Curriculum Design kutumika
⑤ Lishe shuleni 100％
⑥ Kumalizika kwa mazoezi

11

➢ Marejeleo na uchanganuzi

2. CHANGAMOTO

a. Muhula wa kwanza
① Usajili muhula mzima
② Ulinganifu wa kigezo 1&2
③ Mahudhurio mabaya
④ Kuachia katikati mazoezi
⑤ Msingi mbovu wa wanafunzi

b. Muhula wa pili
① Kuchelewashwa kwa vitabu katika shule
② Uhamaji wa wanafunzi
③ Utata wa herufi l,i,a

12

➢ **Marejeleo na uchanganuzi**

3. MBINU SULUHISHI

① **Kipindi maalum cha usajili**

② **Kukamilisha mazoezi ya kitabu**

③ **Njia mbadala ya waliochelewa**

④ **Marekebisho ya herufi**

13

➢ **Vigezo(1) na(2)**

LENGO LA KIGEZO 1&2
KIGEZO 1

① **Uwezo wa kipekee wa kusoma**
② **Uwezo wa kuandika**
③ **Mwalimu kutoa ushauri na maoni**
④ **Umilisi wa kutumia mbinu mbadala**

14

➢ **Vigezo(1) na(2)**

KIGEZO 2

① **Umilisi wa kusoma wa mwanafunzi**

② **Umilisi wa kuandika wa mwanafunzi**

③ **Kutoa ushauri na maoni kuhusu mwanafunzi**

④ **Hatua alizopiga mwanafunzi baada ya kigezo 1**

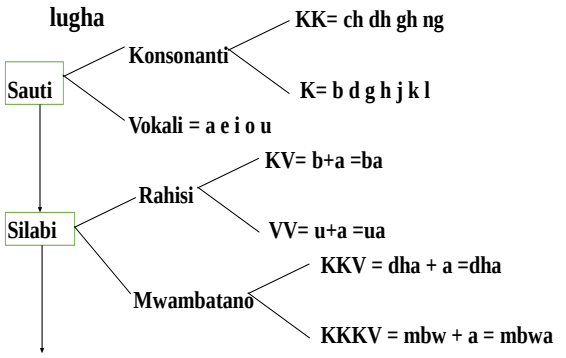
15

Kazi ya makundi

16

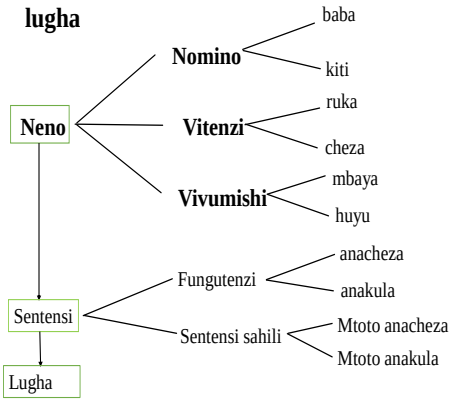
Session 4: Msingi wa kusoma na kuandika lugha.

➢ **Vipashio vya lugha**



17

➢ **Vipashio vya lugha**



18

DAY 3　Session 1:　Mdahalo

- Matatizo ya kusoma na jinsi ya kuyatatua
- Matatizo ya kuandika na jinsi ya kuyatatua
- Kazi ya makundi na mawasilisho

19

Kazi ya makundi na mawasilisho

20

- Matatizo ya kusoma na jinsi ya

1. Matatizo ya kusoma

① Athari ya lugha mama
② Kuchanganya sauti
③ Kusoma kinyume
④ Kusoma kwa kusitasita
⑤ Ukosefu wa bitabu na majarida
⑥ Kurudiarudia silabi na maneno
⑦ Kutafsiri vibaya maana
⑧ Kupachika silabi au maneno yasiyo
⑨ Kutozingatia alama za uakifishi
⑩ Kuruka silabi au maneno
⑪ Kumunyamumya midomo
⑫ Mazoea mabovu kusoma

21

- Matatizo ya kusoma na jinsi ya

2. Suluhisho

(1) Marudio ya sauti silabi na maneno Zaidi ①②③

(2) a. Wanafunzi wapewe vitabu vyao wenyewe
b. Waketi karibu na ubao ⑥⑩

(3) Walimu wajadili maswali katika ufahamu ⑦

(4) Vitabu binafsi ⑤

(5) Alama za uakifishi ⑨

22

- Matatizo ya kuandika na jinsi ya kuyatatua

① Kuandika nje ya mstari
* Tumia mistari kubwa
* Tumia mistari ubaoni

② Kujaza maneno yasiyoleta maana
* Waunde silabi kutoka kwa sauti
* Waunde maneno kutoka kwa silabi

③ Kutomaliza kazi
* Waketi mbele
* Wafuafiliwa wakati wa mazoezi

23

- Matatizo ya kuandika na jinsi ya kuyatatua

④ Wasioandika darasani
* Ufahamu wa vipashio vya lugha
* Wapewe kazi ya viwango vyao

⑤ Kuandika bila kutenganisha maneno
* Kuacha nafasi
* Kukamilisha silabi
* Kukamilisha sentensi

24

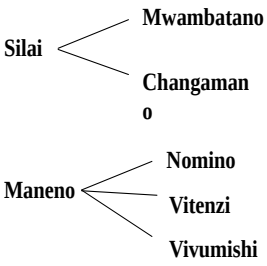
Session 2:
Introduction session for Kiswahili workbook

- Utangulizi / Mpangilio wa kitabu
- Mpangilio wa mazoezi
- Kigezo cha kwanza na cha pili

25

➢ Utangulizi / Mpangilio wa kitabu

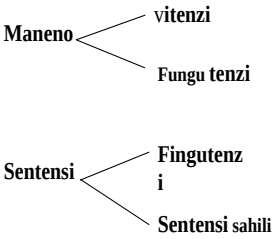
Muhula wa II



26

➢ Utangulizi / Mpangilio wa kitabu

Muhula wa III



27

➢ Mpangilio wa mafunzo / mazoezi

1. Alfabeti
   - ① Herufi kubwa
   - ② Herufi ndogo

2. Sauti za Kiswahili
   - ① Konsonanti
   - ② Vokali/irabu

28

➢ Mpangilio wa mafunzo / mazoezi

3. Silabi
   - ① Konsonanti - vokali
   - ② Konsonanti - konsonanti / vokali
   - ③ Vokali
   - ④ Konsonanti
   - ⑤ Maneno kamili
   - ⑥ Konsonanti - konsonanti - konsonanti / vokali

29

➢ Mpangilio wa mafunzo / mazoezi

4. Maneno
   - ① Aina za maneno
   - ② Nomino, vivumishi, vitenzi

5. Sentensi
   - ① Fungu - tenzi
   - ② Sentensi sahili

30

- **Mpangilio wa mazoezi**

Mambo ya kuzingatia

1. **Mafunzo tofauti**
2. **Manufaa kwa walengwa**
3. **Kukidhi makundi yote**
4. **Uwiano wa stadi na masomo mengine**
5. **Mafunzo rahisi hadi magumu**
6. **Marudio katika ngazi zajuu kwa kina**

31

- **Mpangilio wa mazoezi**

- **Kigezo cha I**

Kupima uwezo wa kipekee wa mwanafunzi binafsi kabla ya kutangamana na mazoezi ya ziada

- **Kigezo II**

Kutadhimini mwishoni uwezo wa kipekee wa mwanafunzi binafsi baada ya kutangamana na mazoezi ya ziada

32

Appendix 20 Program of Early Grade Teachers Training 2019

Mathematics and Kiswahili Early Grade Teacher Training in 2019

CADVES Project

Period of the Training: From Tuesday, 13 August to Friday, 16 August

13th(Tue)-Zone C, 14th(Wed)-Zone A, 15th (Thr)-Zone E+Enkijape, 16th (Fri)-Zone B+D+Illasit

Objective of the Training:

1) To reflect the current pedagogy at remedial lessons

2) To acquire skills in play-based activity and implement activities in a daily teaching

Outcome of the Training

1) Implement learnt play-based activity in their daily teaching.

2) Plan conducting the zonal lesson observation after September.

Venue: Catholic Church in Loitokitok

Participants: 54 remedial teachers at Grade 1 and 2 from 32 schools

Mathematics Program:

TIME	CONTENT
7:00	Breakfast
7:30-8:00	Registration
8:00-8:15	Opening by TSC director
8:15-8:30	Opening of Training Explanation of the Purpose and Schedule of the Training by Tetsuya Yamada
8:30-9:00	Explanation of the intention of lesson study by Nagisa Introduction of the lesson by a teacher
9:00-9:30	Demonstration by a teacher
9:30-9:40	Reflection by a teacher
9:40-10:10	Discussion by a whole team
10:10-10:30	Comments from teachers and Nagisa
10:30-10:45	Tea Break
10:45-10:55	Introduction of the lesson by a teacher
10:55-11:25	Demonstration by a teacher
11:25-11:35	Reflection by a teacher
11:35-12:05	Reflection by a whole team
12:05-12:25	Comments from teachers and Nagisa
12:25-13:00	Revision of the lesson plan
13:00-14:00	Lunch Break
14:00-15:00	Presentation for revised lesson plan and play-based activity by good teachers
14:30-15:00	Introduction of some Play-based activity by Nagisa

16:00-16:30	Wrap-Up Session by Tetsuya Yamada Awarding Best Teachers in the 2nd term Proposing to conduct the lesson observation at the zonal level
16:30	Closing for the Day
19:00	Dinner (1st day only)

Kiswahili Program:

TIME	**CONTENT**
7:45- 8:00	Registration
8:00-8:20	Opening of Training: by TSC Director
8:20-8:40	Explanation of the Purpose and Schedule of the Training by Janet Nasieku
8:40-9:10	Session by Janet/Mitsue: Explain purpose of L.S and process
9:10- 9:25	Lesson Study on: **Usafi wa mwili Lesson** Lesson demonstration by the teacher
9: 25:-10:25	Comments on the lesson study
10:25-10:45	Tea Break
10:45-11:00	Session by Facilitator
11:00-12:00	Lesson Study on: **Shuleni** Demonstration of the lesson by the teacher
12:00-12:30	Comment on the lesson study
12:30-13:15	lesson study Review
13:15 -14:00	lunch
14:00-15:00	Session by Facilitator Personal feedback Summary and discussion Play-based activity Example
15:00-16:00	Wrap-Up s session by Janet Nasieku Awarding Best Teachers in the 2nd term Proposing to conduct the lesson observation at the zonal level
16:00-17:00	Distributing of workbooks for 3rd term
17:00	Closing for the Day
19:00	Dinner (1st day only)

Appendix 21 Presentation documents of Early Grade Teachers Training 2019

The purpose of math early grade teacher training

Tetsuya Yamada
Education Specialist
GLMi Kenya

1

Ground Rules

- Turn off **cellphones** during the training
- Be **punctual**
  - Registration starts at 7:30
  - Training starts at 8:00
  - Tea Break is for 15 minutes and Lunch Break is for 60 minutes sharp
- **Respect** teachers who demonstrate lessons
- Be **proactive** during the training

2

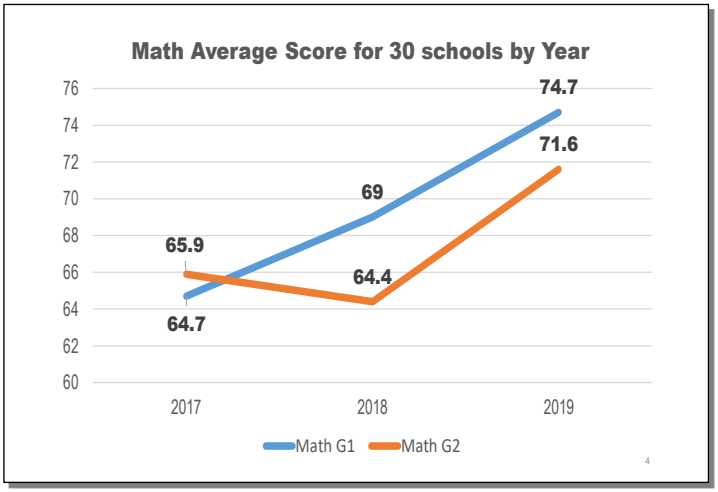
What is CADVES?

CADVES-**Capacity Development** Project for a **Village-based Sustainable** Primary Education Strategy

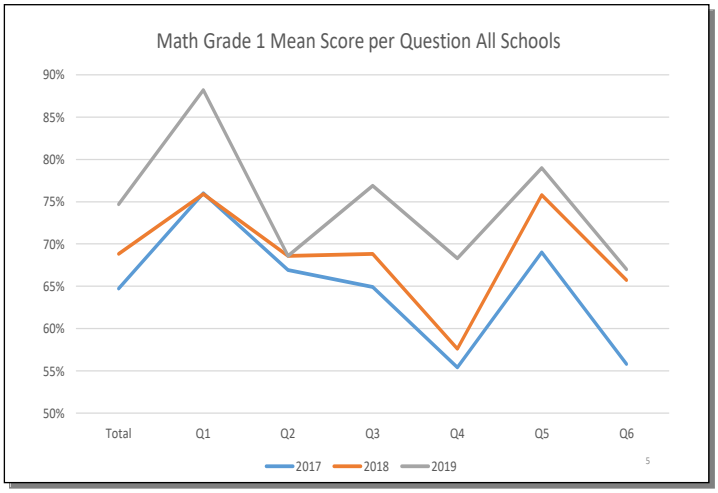
Overall Goal: Opportunities of quality primary education for lower grade children under difficult circumstances are expanded in 30 schools in Loitokitok.

Partnership between YOU as the major actors and US as facilitators

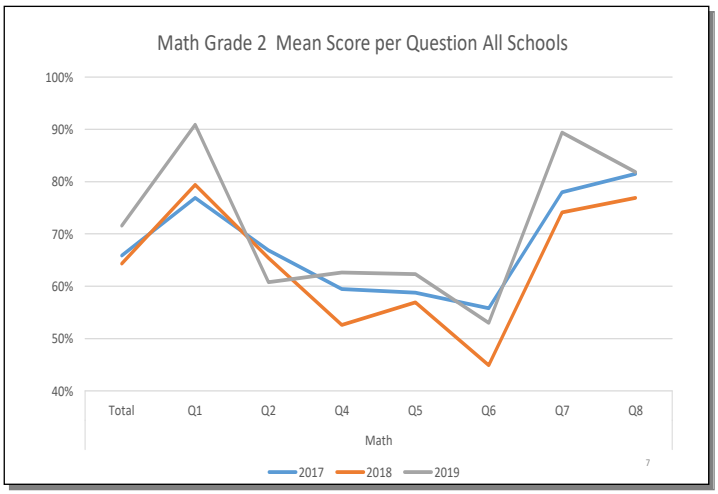
3



4



5



7

Math G2 Analysis

- Math G2 scores improved from 2018.
- This is thanks to the improvement in simple addition (Q1) and counting (Q7).
- Q2 for G2 is same as Q4 for G1. But, G1 performance is better..
- The common mistake for multiplication and subtraction is to do addition instead (Q6. 7×4=28)
- Many mistakes happen in the process of vertical subtraction. Either borrowed from the bottom (Q4. 36-17=21) or added (36-17=53).

8

Topics covered in the math training

- Counting (Counting with grouping)
- Measurement (Length, Mass and Capacity)

or

- **Money activity**

9

How can we tackle Learning challenges?

But… in a real sense,

how can you improve your pedagogy?

10

Lesson Study!

- What is "**Lesson Study**"?

Plan, observe and discuss lessons

Old-fashioned training	Today's training
Lecture-oriented	Discussion-oriented
Learn concepts	Learn practices
Knowledge comes from the lecture.	Knowledge comes from all participants.
Participants are listeners.	Participants create training with a facilitator.

11

The purpose of Early Grade Teacher Training

Purpose:

- To reflect your current pedagogy at your remedial lessons
- To acquire skills in play-based activity

Outcome:

- Implement play-based activity in your daily teaching
- Conduct lesson study practice within a school and a geographical zone

12

Wrap-up Session

Tetsuya Yamada
Education Specialist
GLMi Kenya

13

Reflection on the training (Lesson Study)

- Please fill in the reflection form

1

Best Teacher Award

- Award for teachers who are dedicated to remedial teaching and show excellent teaching methods

Criteria

- Teaching coverage of workbooks (not as a homework)
- Teaching methods and teaching aids
- Class management
- Class observation
- Class interaction
- Lesson Flow

3

Proposal 1: Zonal lesson study

- Organize zonal lesson study practice among geographically close schools.
- Lesson study can be done within a school.

4

Way Forward

Expected Outcome of Training:

- Implement play-based activity in your daily teaching
- Conduct lesson study practice within a school and a geographical zone

Plan:

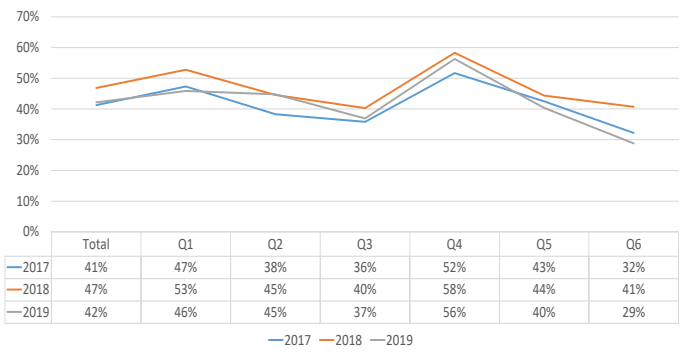
- Monitor remedial lessons
- Discuss about sustainability of remedial lessons at community MTG
- Cogenerate excellent pedagogy
- Conduct zonal lesson study
- Award best remedial teachers

6

Learning Assessment Analysis of Kiswahili

Glmi conducted math and Kiswahili learning assessment for Grade 1 and 2 students in June 2017,2018 and 2019.

Learning assessment analysis Grade 1



	Total	Q1	Q2	Q3	Q4	Q5	Q6
2017	41%	47%	38%	36%	52%	43%	32%
2018	47%	53%	45%	40%	58%	44%	41%
2019	42%	46%	45%	37%	56%	40%	29%

Learning assessment analysis Grade 1

- Grade one has a slight drop this year
- Q6 was the most poorly performed this question was about to write the words correctly : example ocho as choo
- Q1,2and3 was the secondly drop question the pupils were to write in plural and most of them could not write some words :example mtoto = Watoto

<Topic of Questions>

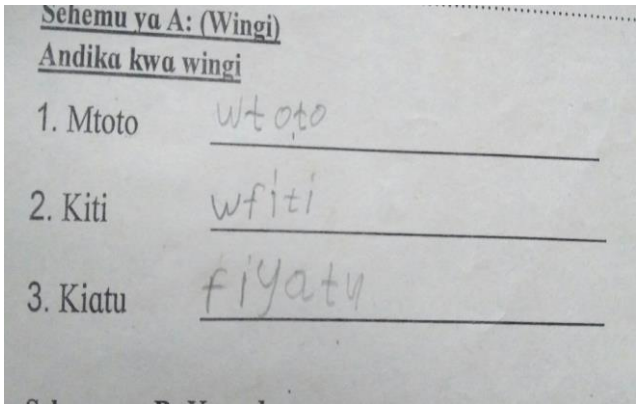
Q1,Q2&Q3: Singular and Plural

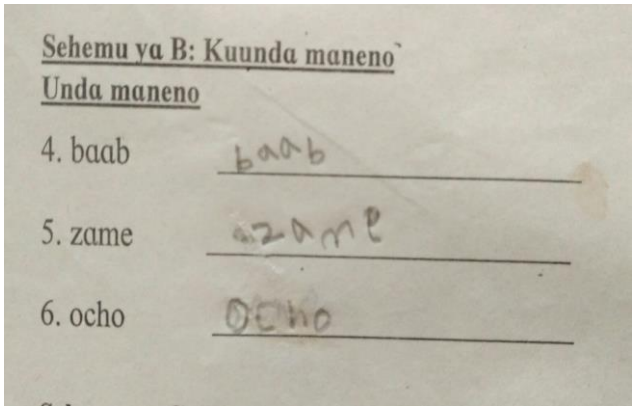
Q4,Q5&Q6: Writing words correctly

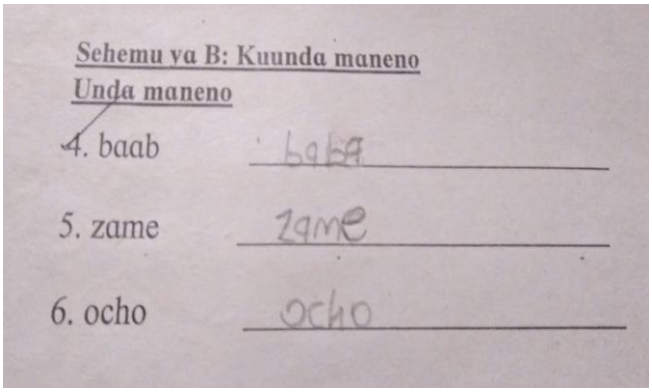
Common Mistakes Grade 1

- Children don't know how to write the word choo (Ocho)
- Children don't know to write the opposite of the words mama (wamama ,mamas)
- Children don't know to write the plural of words : kiti (vikiti, maviti, kitis) ; kiatu (Wakiatu, makiatu, Kiatus) mtoto (mtotos, matoto)

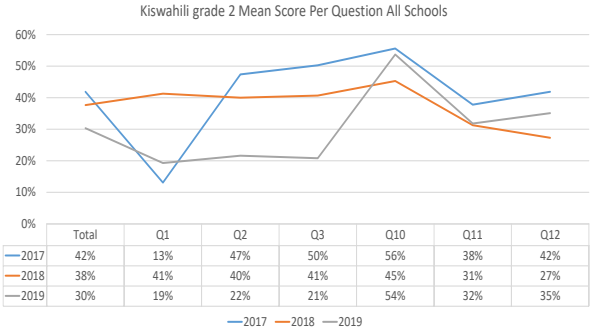
Examples of common mistake






Sehemu ya B: Kuunda maneno
Unda maneno
4. baab baba
5. zame zame
6. ocho ocho

Grade 2 learning assessment



	Total	Q1	Q2	Q3	Q10	Q11	Q12
2017	42%	13%	47%	50%	56%	38%	42%
2018	38%	41%	40%	41%	45%	31%	27%
2019	30%	19%	22%	21%	54%	32%	35%

Grade 2 learning assessment analysis

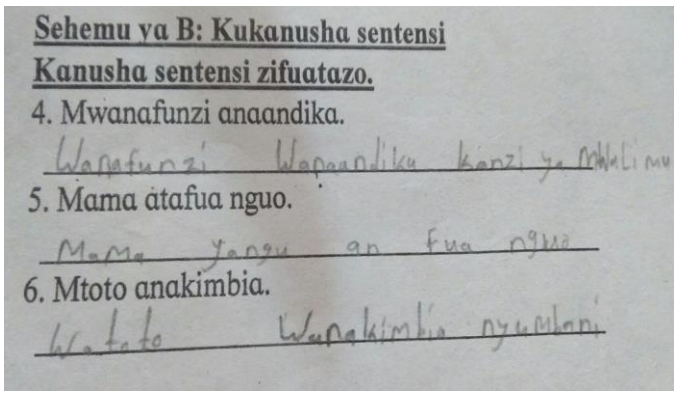
- Among the Q1,2&3 ; 1 is the most dropped question followed by Q3
- Q10,11 &12; these questions are fairly performed.
- Question 10 being the most improved
- Q11&12 each with a slight improvement continuously

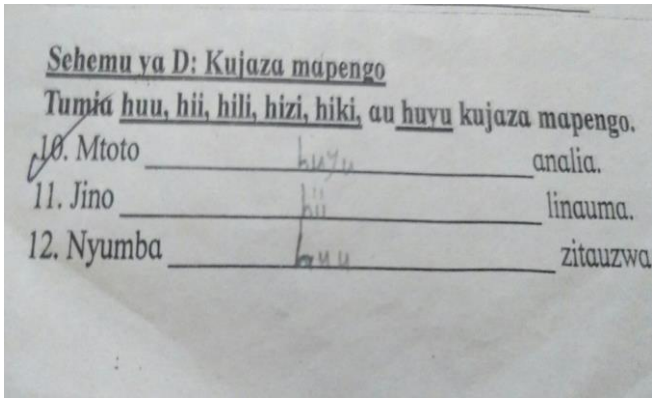
<Topic question>
Q1,Q2,Q3 : singular and plural
Q10,Q11,Q12: filling in the gaps

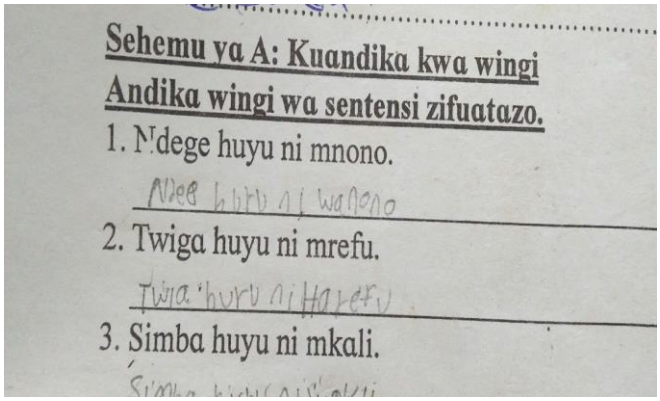
Common mistake grade 2

- Change the noun to plural though is not needed (masimba, wasimba)
- Forgot to change one word for plural. Ndege hawa ni "mnono"
- Jino hiki linauwa. Jino is singular
- Nyumba hii zitauzwa. Nyumba can be singular or plural. Zitauzwa shows this sentence is plural.

Example of common mistake


Sehemu ya B: Kukanusha sentensi
Kanusha sentensi zifuatazo.
4. Mwanafunzi anaandika.
Wanafunzi Wanaandika kanzi ya Kiswahili
5. Mama atafua nguo.
Mama yangu an fua nguo
6. Mtoto anakimbia.
Watoto Wanakimbia nyumbani


Sehemu ya D: Kujaza mapengo
Tumia huu, hii, hili, hizi, hiki, au huyu kujaza mapengo.
10. Mtoto huyu analia.
11. Jino hii linauma.
12. Nyumba huu zitauzwa



Sehemu ya A: Kuandika kwa wingi
Andika wingi wa sentensi zifuatazo.

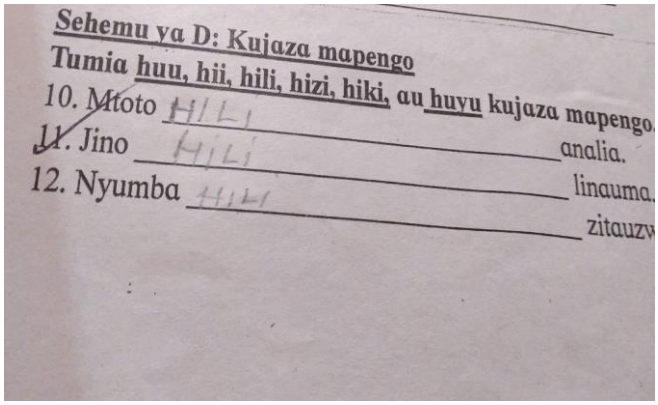
1. Ndege huyu ni mnono.

Ndege huyu ni wanono

2. Twiga huyu ni mrefu.

Twiga huyu ni Hajefu

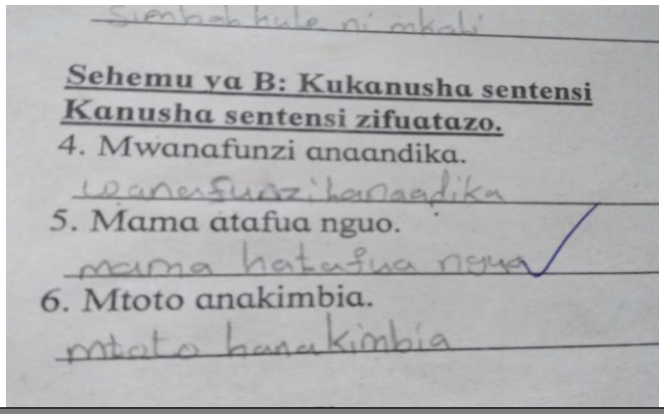
3. Simba huyu ni mkali.



Sehemu ya D: Kujaza mapengo
Tumia huu, hii, hili, hizi, hiki, au huyu kujaza mapengo.

10. Mtoto HILI
11. Jino HILI analia.
12. Nyumba HILI linauma.

zitauzv



Sienbah kule ni mkali

Sehemu ya B: Kukanusha sentensi
Kanusha sentensi zifuatazo.

4. Mwanafunzi anaandika.

Wanafunzi hanaandika

5. Mama atafua nguo.

mama hatafua nguo

6. Mtoto anakimbia.

mtato hanakimbia

How to overcome these mistakes?

Improving Pedagogy can reduce pupils' mistake

↓

Lesson Study

Training for Early Grade Teachers: Lesson study (Mathematics)

Na(i)gisa Nakawa
Kanto Gakuin University,
Yokohama,
Japan

What did we do duing the workshops over two years?

- Pedagogical explanations on numbers and measurement
- Introduction of some of play-based activities
  - e.g. Shopping, measuring and number bricks
- Introduction of competency based curriculum

Explanation of the procedure of lesson study (15 mins)

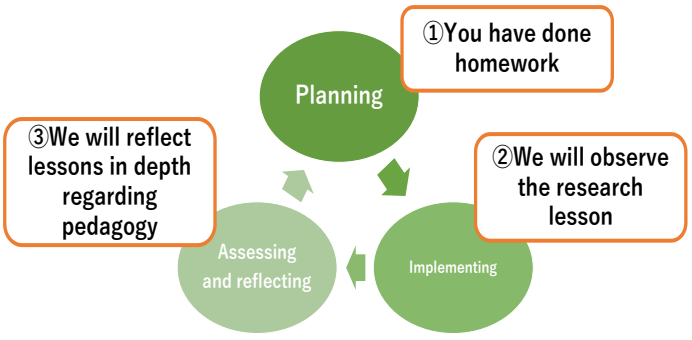
- Objective of the today's activity
  - You will be able to understand the way of conducting lesson study.
  - You will know how to reflect lessons through lesson study with critical eyes.

What is LESSON STUDY?

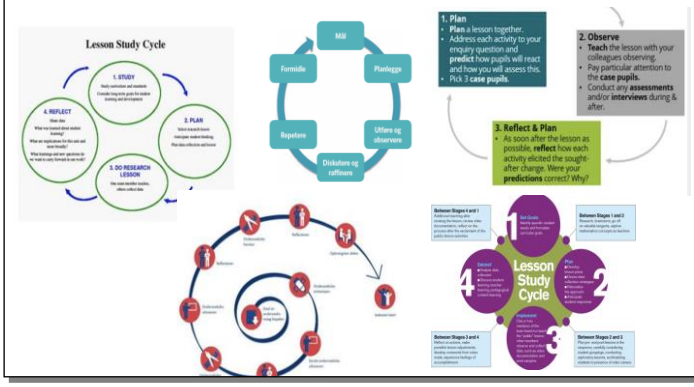
- A very simple way to do for improvement of lessons.
- Teachers with a common focus meet and plan lessons together.
- These lessons may have a focus on building skills or understanding, and are known as "research lessons", which are taught by one, and observed by not only all of the teachers who are doing the planning, but also by observers who, at one end of the spectrum, may come only from the teachers' own school, or, at the other end, may come from all over Japan

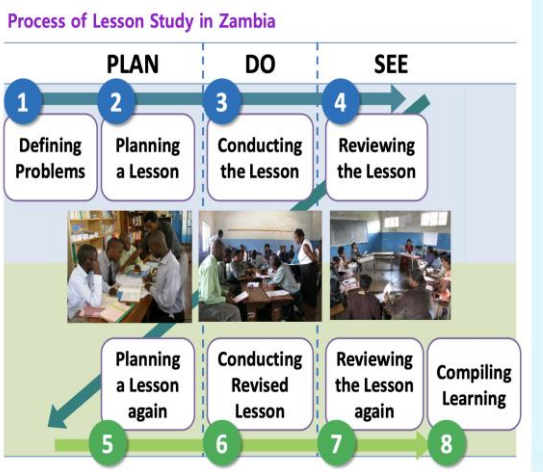
(Doig & Groves, 2011; Lewis & Tsuchida, 1998)

Today's simple lesson study cycle

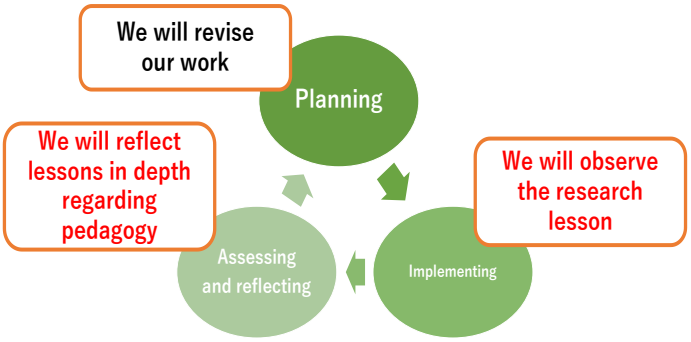


(Reference) Lesson study in the world





Today's simple lesson study cycle



Our lesson studies for today:

- **Numbers**
- **Measurement**

Note

- Do not just observe, but record attentively on what you have seen
- Focus on the teachers' and children's utterances during lesson (Focus on the quality aspect of the lesson)
- Do not write about the things that can not be improved such as number of children, good environment, enough materials and so on.

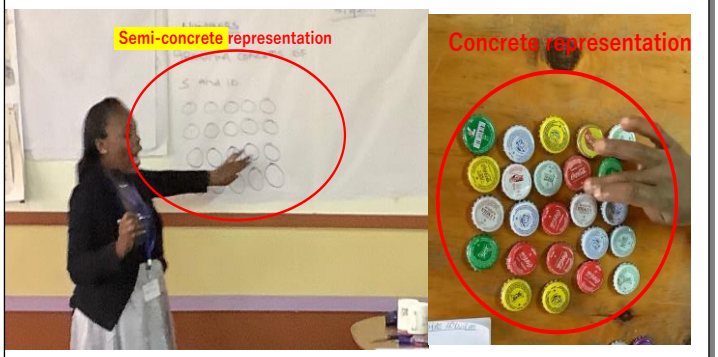
Reflection of Emmaculate's lesson(G2, number) 3rd day

- Outcome: (a) To group different objects into groups of 5 and 10
  (b) To identify groups of 5 and 10 without counting
- Activities conducted:

(1) Introduction: about fingers, introducing groups o 5 (8 mins)
(2) Actibity: Guess game and confirming the number of bottle tops by counting
(3) Introducing groups of 5 on b/b 'How many groups of 5 can you make?'
(4) Sing a song of numbers up to ten (counting)
(5) Make groups of 10

Good teaching

- Very good prepared with appropriate materials
- Good focus of groups of 5 (less teachers are focusing on this concept before groups of 10) –very important!
- Good appropriate number of focused activities: groups of 5 and 10



Groups of 10

- Outcome: (a) To group different objects into groups of 5 and 10
  (b) To identify groups of 5 and 10 without counting

Why did we need to teach groups of 5 and 10 in this particular lesson???

Because we would like to identify the exact number of bottle tops!
(The mean became outcomes…?)

B/B should be better.

- A 7 7 groups of 5 = 35
- B 4 4 groups of 5 = 20
- C 6 6 groups of 5 = 30
- D 5 5 groups of 5 =25

Change of the learning outcome slightly to make them more mathematical meaningful !

- **Outcome: (a) To group different objects into groups of 5 and 10**
  (b) To identify groups of 5 and 10 without counting

in order to identify the number of objects in an efficient way.

Skipped with some important part and mixed with counting in between??

- The number of the bottle tops were not confirmed… I guess the number of bottle tops in every group should be the same…?
- I did not understand the intention the guess game as the number of the bottle tops were too many to even guess….????
- Coming back to COUNTING while singing a song up to 10
  (Should have stressed 2 groups of 5…)
- Connection between groups of 5 and 10 could have been stressed to make the lesson flow well.

- Activities

(1)Introduction: about fingers, introducing groups o 5 (8 mins)

(2) Actibity: Guess game and confirming the number of bottle tops by counting

(3) Introducing groups of 5 on b/b 'How many groups of 5 can you make?'

(4) Sing a song of numbers up to ten (counting)

(5) Make groups of 10

By the way, colours matter for some children… if possible, stick to the same colour.

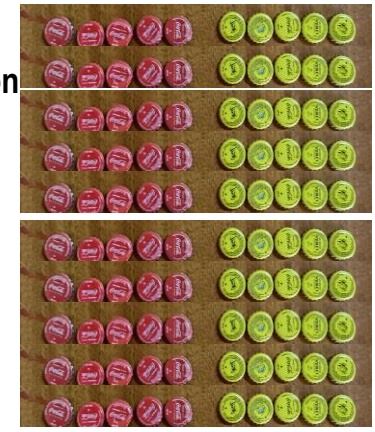
Any difference? Why important?

Make a connection from groups of 5 and a group of 10 for mental image

How many??

How many?

Connection
from the concrete to
abstract representation

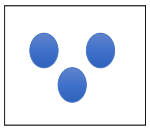


Reference
Development of children's abilities in numbers: after counting

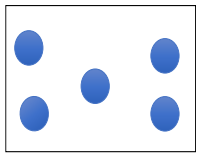
- Next step after counting- we should let children be able to recognise numbers without counting
- The ability of subitising should be fostered in children's understanding of numbers

Development of children's abilities in numbers

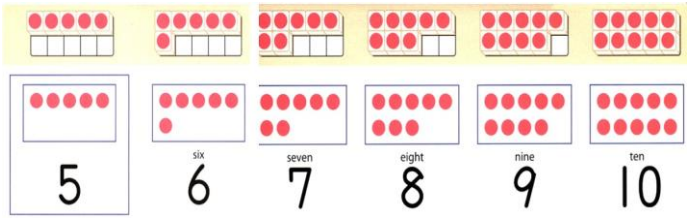
- Perceptual subitising
  - Recognising a number without using other mathematical processes.

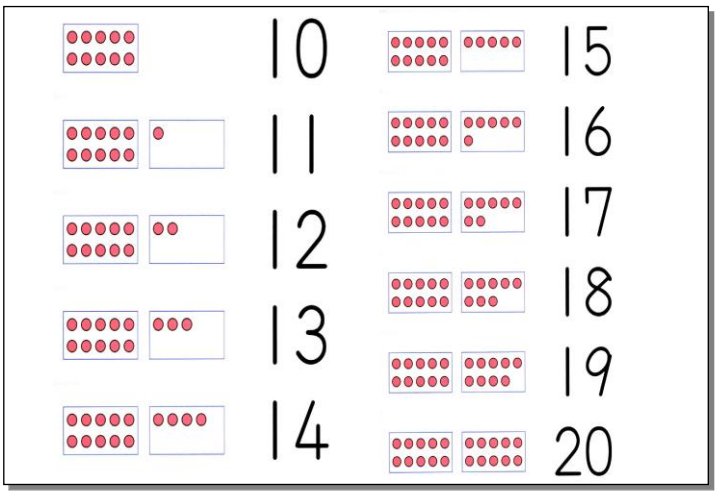


- Conceptual subitising
  - Capable of viewing number and number patterns as units of units



Semi-concrete materials, marbles, numerals and words





TIPS FOR PLAY BASED ACTIVITIES

NAGISA NAKAWA
KANTO GAKUIN UNIVERSITY, JAPAN

MY MESSAGES TO YOU…

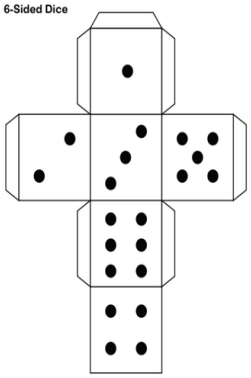
- Continue to think I will be better than today, better than yesterday…
- Be critical to your teaching. Do not feel satisfied with your teaching.
- The best teacher can think: where could I have taught better than what I did during a lesson?

IMPORTANT PART ON PLAY-BASED ACTIVITY

- It does not mean good if teachers only concentrate on 'activity' to keep children busy without any objectives of mathematics.
- For example, shopping activity should have an objective & it will be extended to the various mathematical objectives.

MAKE A DIE AND PLAY USING THEM

- Make two dice and do the game for addition and subtraction before introducing the operative signs.

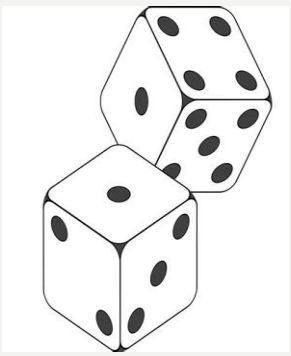


ADDITION

- Make a pair
- Also good practice for **subitising**
- Throw a dice and let another answer the black ones.

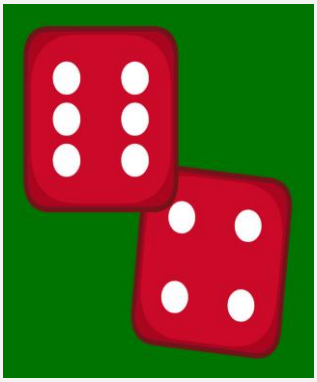
・Development: Increase the number of dice up to 4.

・Let pupils understand what addition means through actions



SUBTRACTION

- Take away the smaller number from the bigger number of the two dice.



GOOD EXERCISE TO UNDERSTAND THE OPERATIONS

Addition and subtraction

- 9☐ 4 = 13
- 9 ☐ 4 = 5

- 8☐3=11
- 8☐3=5

Add, subtract, multiply and division

- 4☐ 2 = 2
- 4☐ 2 = 8
- 4☐ 2 = 6
- 4☐ 2 = 2

- 20☐5=4
- 20☐5=15
- 20☐5=25
- 20☐5=100

ANOTHER GAME: MAGIS SQUARES

4	9	2
3	5	7
8	1	6

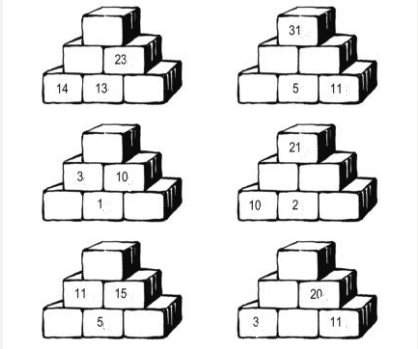
2		
	5	3
	1	

2	7	6
4		8

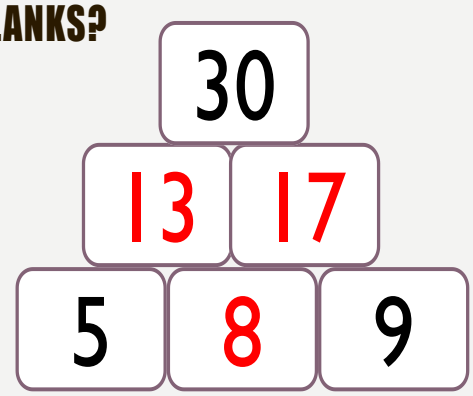
6		8
	5	

	7	2
		4

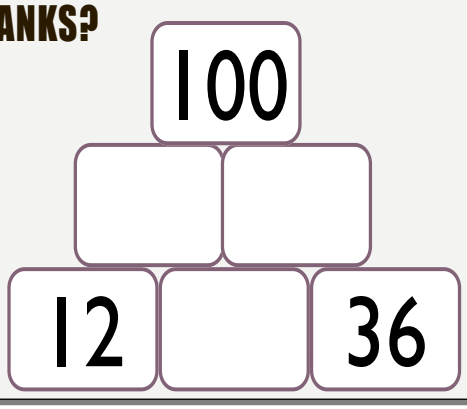
NUMBER BRICKS- ADD ADJACENT NUMBERS AND PUT IT ON THE ABOVE ONE



WHAT NUMBERS COME IN THE BLANKS?



WHAT NUMBERS COME IN THE BLANKS?



Appendix 22 Program of Early Grade Teachers Training 2020

Lesson Study Workshop in 2020

Period of the Training: From 14 (Fri) and 15(Sat), February 2019

Objective of the Training:

3) To create a lesson study culture among teachers in Loitokitok

4) To train selected teachers in facilitating a lesson study

Outcome of the Training

3) Teachers implement a lesson study at the school-level

4) Selected teachers facilitate a lesson study at their schools

Venue: St. Luke Catholic Church

Participants: 65 remedial teachers at Grade 1 and 2 from 32 schools

1st Day: Teachers are divided into two groups. Both groups do a math lesson study twice.

2nd Day: All teachers attend in the morning. Selected teachers attend for the rest of the program.

14th February (Fri)

Time	Content	Moderator
7:00	Breakfast	
7:45- 8:15	Registration	Ms. Joan Katei
8:15- 8:30	Opening remarks	Mr. Joseph Musyoka
8:30- 8:45	Explanation of the training objectives	Mr. Tetsuya Yamada
8:45- 9:05	Review of previous training	Dr. Nakawa Nagisa
	Tips for conducting a lesson study	
Session one (Group 1: Math and Group 2: Math)		
9:05- 9:35	Lesson Demonstration	A selected teacher
9:35- 9:45	Reflection	A selected teacher
9:45- 10:35	Discussion	A facilitator
10:35- 10:55	Comments for Lessons and Facilitation	A facilitator
		Dr. Nakawa Nagisa
10:55- 11:10	Tea Break	Mr. Brian Kagiri
11:10- 11:40	Lesson Demonstration (Revision)	A selected teacher
11:40- 11:50	Reflection	A selected teacher
11:50- 12:40	Discussion	A facilitator
12:40- 13:00	Comments for Lessons and Facilitators	Dr. Nakawa Nagisa
13:00- 13:50	Lunch	Mr. Brian Kagiri
Session two (Group 1: Math and Group 2: Math)		
13:50- 14:20	Lesson Demonstration	A selected teacher
14:20- 14:30	Reflection	A selected teacher
14:30- 15:20	Discussion	A facilitator
15:20- 15:40	Comments for Lessons and Facilitation	A facilitator
		Dr. Nakawa Nagisa
15:40- 15:50	Ice Break	Mr. Brian Kagiri
15:50- 16:20	Lesson Demonstration (Revision)	A selected teacher

16:20- 16:30	Reflection	A selected teacher
16:30- 17:20	Discussion	A facilitator
17:20- 17:40	Comments for Lessons and Facilitators	A facilitator Dr. Nakawa Nagisa
17: 40-18:00	Announcement	Mr. Brian Kagiri
18:00	Departure	
18:30	Buffet Party with participants	

15th February (Sat)

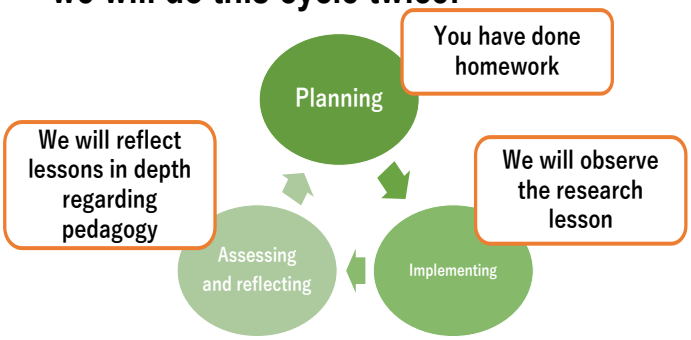
Time	**Content**	**Moderator**
7:00	Breakfast	
7:45- 8:15	Registration	Ms. Joan Katei
Session 1 (ALL)		
8:15- 9:15	Feedback of lesson study How to conduct a lesson study at school-level	Dr. Nakawa Nagisa
9:15- 10:00	Summary of CADVES project	Mr. Tetsuya Yamada
10:00-10:15	Best Teacher Award	Ms. Janet Nasieku
10:15-10:30	Announcement	Ms. Mitsue Hiromoto
10:30-11:00	Departure	Ms. Mitsue Hiromoto
Session 2 (Selected Teachers Only)		
11:00- 11:30	Tips for Facilitators	Dr. Nakawa Nagisa
11:30- 12:00	Lesson Demonstration	A selected teacher
12:00- 12:10	Reflection	A selected teacher
12:10- 12:40	Discussion	A facilitator
12:40- 13:00	Comments on facilitation	Dr. Nakawa Nagisa
13:00- 13:50	Lunch	Mr. Brian Kagiri
Session 3 (Selected Teachers Only)		
13:50- 14:20	Lesson Demonstration	A selected teacher
14:20- 14:30	Reflection	A selected teacher
14:30- 15:00	Discussion	A facilitator
15:00- 15:20	Comments on facilitation	Dr. Nakawa Nagisa
15:20- 15:50	Summary for facilitating lesson study	Dr. Nakawa Nagisa
15:50- 16:05	Announcement	Ms. Mitsue Hiromoto
16:05	Departure	Ms. Mitsue Hiromoto

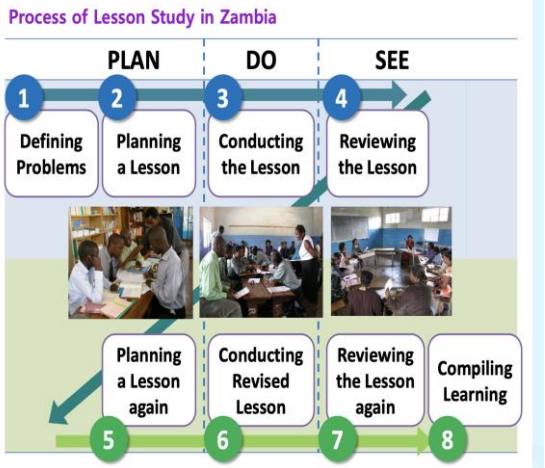
Appendix 23 Presentation documents of Early Grade Teachers Training 2020

Training for Early Grade Teachers: Lesson study (Mathematics)

Na(i)gisa Nakawa
Kanto Gakuin University,
Yokohama,
Japan

Today's simple lesson study cycle: we will do this cycle twice!





Our lesson studies :

- **Addition up to 10**
- **Fractions**

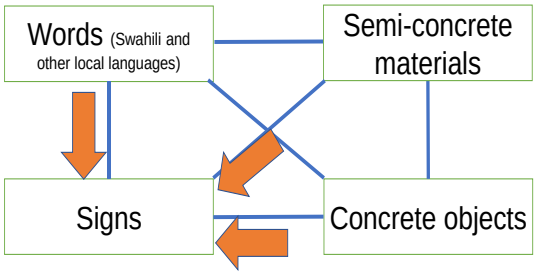
Addition up to 10

- Great points:
- Number song: can we invent an addition song…?
- Great preparations with concrete materials (but the sequence and contents really matter)
- Learner-centredness (but more autonomy to students needed)
- Child-friendly atmospheres IMPORTANT

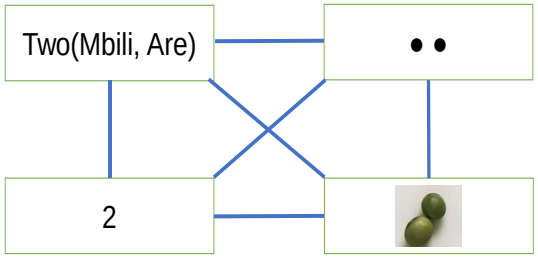
Addition problems with number recognitions

- What is understanding in mathematics?

What is understanding?



Example: 2



(2)Importance of focusing on children's understanding in mathematics education

Development of children's abilities in numbers: counting

- Counting is the first step for children to get to know numbers.
- Let children count in many situations and let them know the effective ways of counting (e.g. Make some groups of 5 and 10 and arrange them in an organised way)
- Cardinal numbers and ordinal numbers

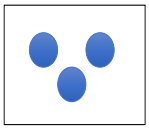
Development of children's abilities in numbers: after counting

- Next step after counting- we should let children be able to recognise numbers without counting
- The ability of subitising should be fostered in children's understanding of numbers

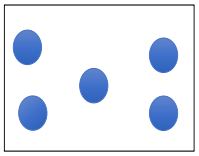
(2)Importance of focusing on children's understanding in mathematics education

Development of children's abilities in numbers

- Perceptual subitising
  - Recognising a number without using other mathematical processes.

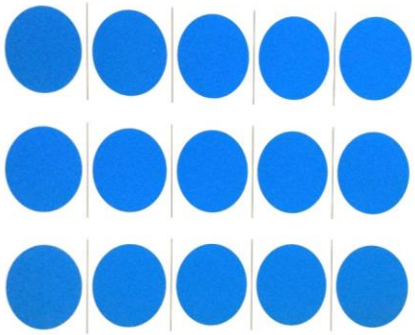


- Conceptual subitising
  - Capable of viewing number and number patterns as units of units



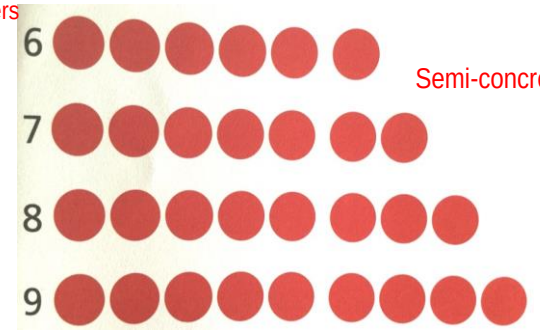
- Combinations of the four representations should be more focused.
- Subitising is important as well as counting. In class 1/2, let us lead children to move from counting to recognise numbers immediately using semi-concrete objects

T/L materials – they can be used in any classes!



Connection between numerals and numbers in semi-concrete objects

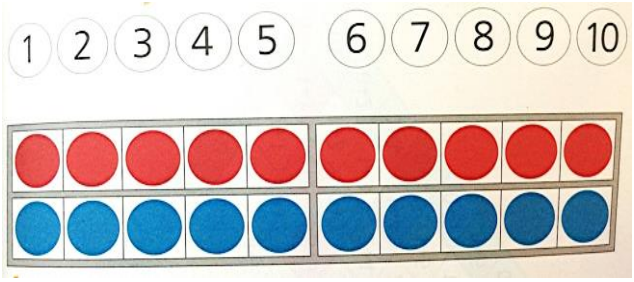
Numbers



Semi-concrete objects

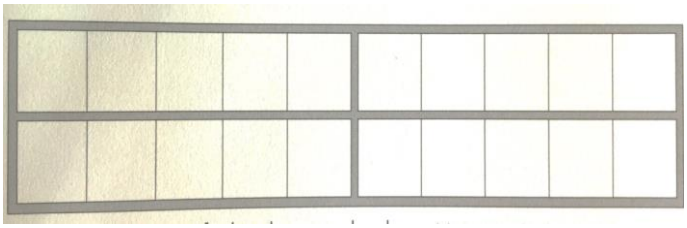
(3)Some pedaaogical suggestions in terms of representations from various textbooks

Framework of 20 – very useful!



(3)Some pedagogical suggestions in terms of representations from various textbooks

Framework of 20 – empty



Fractions

Challenges for children

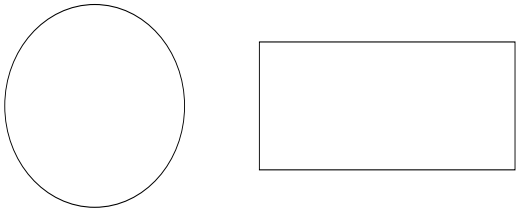
- The size of a fraction is determined by the relative size of the denominator and numerator.
- The size of a fraction will be smaller when the numeral of denominator is bigger.
- With numerals which size is bigger than 1, we can make a fraction which is less than 1.
- Infinite number of fractions with the same size of fractions ½=2/4=3/6=4/8

Advantage of fraction

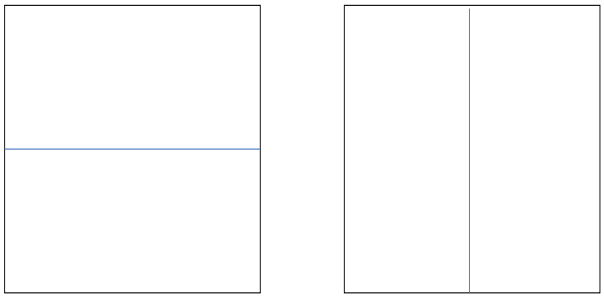
- Easier and quicker than decimal numbers
- Effective calcuations more than decimal numbers
- It will be connected up to the functional thinkings (based on the idea of ratio)

Multiple perspectives of ½

- In mathematics, children tend to believe there is only one answer. I want to break it! Maths sometimes gives us opportunity to think many ways



A case of the half of a square
(Yesterday one children did the left one)



Elicit their misconceptions
Do not always show the right ways…
let them think and make a mistake!

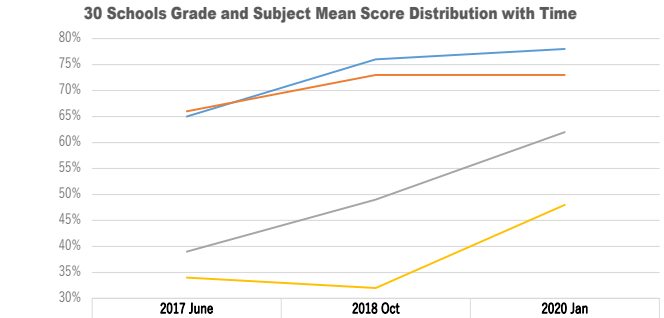
Important note on fractions

- Fractions deal with only continuous number not descrete numbers.
- Continuous numbers (or quantities): amount of liquid, length and so on which can be expressed with fractions and decimals.
- Descrete numbers: number of things: 1,2,3, 4, 5, 6, e.g. number of pupils, bottle tops

Summary of CADVES

Tetsuya Yamada
Education Specialist
Global Link Management institute Kenya

1



	2017 June	2018 Oct	2020 Jan
Math G1	65%	76%	78%
Math G2	66%	73%	73%
Kiswahili G1	39%	49%	62%
Kiswahili G2	34%	32%	48%

3

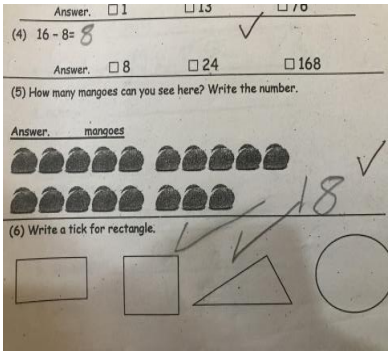
G1 Math

	2017	2018	2019
Overall	65%	76%	78%
Q5 (Counting)	69%	77%	**90%**

- Improvement: Basic counting (Count the number of mangos)
- Mistakes (81 for 18) still exist but not many compared to the past.
- Reason: Emphasis of Basic Counting as a fundamental skill

4

G1 Math Example



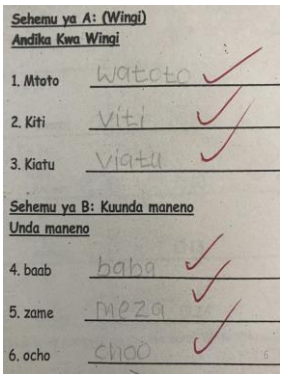
5

G1 Kiswahili

- General Improvement for all questions

	2017	2018	2019
Overall	39%	49%	62%

- Reason: Emphasis of **Silabi** on remedial workbooks and exercise books



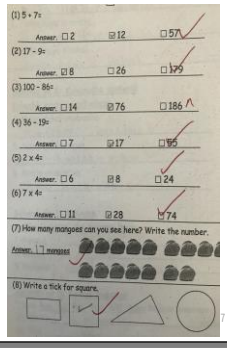
6

G2 Math

- General Improvement for all questions but mainly basic questions

	2017	2018	2019
Overall	66%	73%	73%
Q1 (1 digit addition)	77%	85%	89%
Q7 (counting)	78%	86%	90%

- Reason
  Emphasis of basic calculation and counting on remedial lessons



7

G2 Kiswahili

- Improvement in specific questions

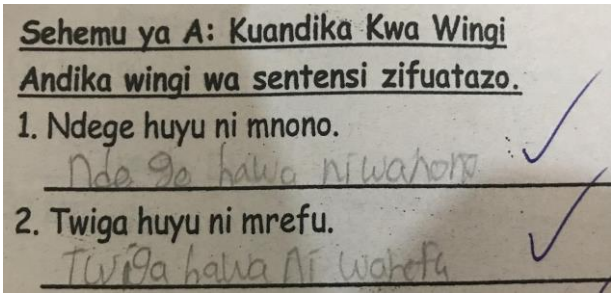
	2017	2018	2019
Overall	34%	32%	48%
Q1 (hawa)	13%	34%	**49%**
Q10 (huyu)	56%	44%	**69%**

- Reason

Emphasis of singular and plural sentences in teaching

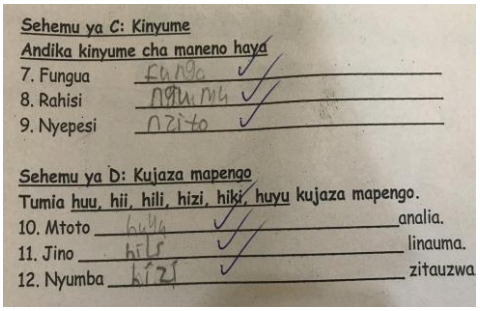
8

Grade 2



9

Grade 2



10

Lessons Learnt from Learning Assessment

- Remedial Lessons are not something new.
- **"Learning Time"** matters
- Remedial Lessons are effective to improve BASIC literacy and numeracy
- Exercise Books are simple but effective in practicing writing

11

Qualitative Change

- More play-based activities were used in the 3rd term 2019

12

Feedback on Previous Lesson Study Workshop

- I will involve other staff member during my lesson to point out good practices and alternative ones (Magdaline, Osoit)
- I can use teachers from other classes in to perform the lesson study together (Thomas, Samai)
- I can apply lesson study at my school level to ask teachers to observe as I teach as well as observing them teaching (Leah, Amboseli)
- Lesson study should be applied in our daily learning and lesson including remedial (Nchipai, Iloirero)

16

What's next?

?

Sustainability Plan for Remedial Lessons

- How do you think you can sustain remedial lessons?
  - What obstacles do you have in implementing remedial lessons?
  - Are there any schools which overcame obstacles?
  - How do you think you can overcome?
  - Which time can be allocated to remedials?
  - What materials do you need and how can you find those materials?
  - Write a proposal for head masters and school management to sustain remedial.

20

Obstacles for Remedial Lessons

- Time allocation
- Materials
- Feeding
- Cooperation from parents and school management

21

Sustainability of Lesson Study

- How can we implement lesson study?
- How frequent can you plan a lesson study?
- Write a proposal for head teachers and fellow teachers

1

Appendix 24 Program of SNE study tour 2019

Date:2nd and 4th July, and 10th-12th September 2019

Objectives:

1. To learn Inclusive Education or SNE from SNE centered school (Illasit Primary School and Enkijape Primary School) and to apply SNE practices in your regular classrooms.
2. To encourage enrolment of Special Needs children in your own schools, Illasit Primary School or Enkijape Primary School.
3. To raise awareness of SNE for participants and your community.

Participants: 85 participants (Head teachers, SNE teachers, Chief, BoM and PTA chairs and parents)

7:30-8:30	Meeting point or Pick up
8:30-9:00	Arrive at Illasit Primary School
9:00-9:30	Presentation by Illasit Primary School HT(10 min), SNE teacher (10 min), Q&A (10min)
9:30-9:50	Presentation by Education Office on SNE in Loitokito, Registration process, Q&A
9:50-10:00	Move from meeting room to resource room
10:00-10:35	SNE Unit Observation
10:35-10:45	Move from resource room to meeting room
10:45-11:45	Exchange Session
11:45-12:30	Lunch at Illasit Primary School
12:30-13:30	Move from Illasit to Enkijpae Primary School
13:30-13:45	Presentation by Enkijape Primary School
13:45-13:55	Presentation by Education Office
13;55-14:05	Q&A for School and Education Office
14:05-14:25	Observe girls' dormitory, walk to resource room
14:25-15:00	SNE Unit Observation
	Walk from resource room to meeting room
15:00-15:30	Exchange Session
15:30-16:00	Wrap up Session
16:00-17:30	Move from Enkijape Primary school to each zone

SNE Study Tour

by Education Office and GLMi

10th September 2019

Exchange Session

- What teaching techniques did you observe?

What is Mulim Tabitha's teaching techniques?

- What teaching techniques can you apply for SNE children in your school?

Exchange Session 2

- What teaching techniques did you observe?

What are SNE Unit's teaching techniques?

•What teaching techniques can you apply for SNE children in your school?

8 principles of Teachers' Instruction for Inclusive Education

1. Call for Attention of pupils
2. 1 Instruction → 1 Action (each by each)
3. Don't use vague words like well, let me see…
4. Visual Support
5. Concrete Actions (Connect action and words)
6. Confirm Repeating
7. Repeat Practices
8. Quick Response

Wrap up Session

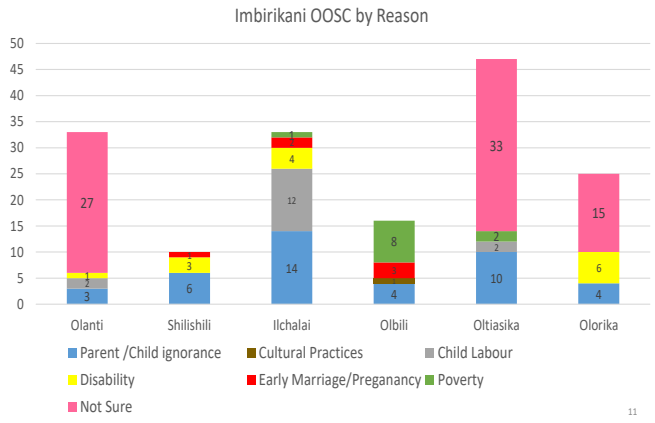
1. Current situation of Out of School Children with Special needs
2. What can you take an action for SNE children in your school?
3. Lesson Learned from SNE Study Tour

9

1. Current situation of Out of School Children with Special needs

School Name	Out of School Children	Out of School Children with SN
Olanti	33	1
Shilishili	10	3
Ilchalai	33	4
Olbili	16	0
Oltiasika	47	0
Olorika	25	6
Total	164	14

10



11

Many out of school children with Special Needs

Role of Headteachers, School Leaders

School Management Plan for SNE

For Safety Environment in school life

More Enrolment for Special Needs Children

Living in Dormitory at Enkijape Primary School

Buddy System
Senior pupil takes care of younger one

INTEGRATION

Learn Sign Language by living together

LIVING SKILLS

Role of SNE Teachers

Devising teaching technics for SNE learners

Communication and Social Skills

Living Skills

Role of Parents

Bring children with Special Needs to school

Let's give encouragement to parents who have children with Special Needs

2. What can you take an action for Special Needs children in your school or community?

Nothing about us
Without us

By David Werner

Appendix 26 SNE medical assessment result 2019

Date:
11th-15th November 2019 (Children with visual disability)
16th-20th November 2019 (Children with hearing disability)
25th-29th November 2019 (Physically challenged, mentally challenged and children with multiple disabilities)
2nd-6th December 2019 (Physically challenged, mentally challenged and children with multiple disabilities)

Objectives:
Medical doctors assess children for registration under NCPWD
Support Special Needs learners' pre-primary and primaryeducational support through registration
Raise awareness among parents and community people that Special Needs Learners get benefits by registration and have an education right.

Target Children for Assessment:
Children aged 5-18 with all type of disability from pre-primary to primary level at 30 schools.
*If over-aged children are at primary school, we assessed them.

Resource Persons:
1. Doctor: Julius Kamwanga Mukuria (PH, MH, Multiple)
2. Doctor: Kolesh Waweru Tumbes (PH, MH, Multiple)
3. Doctor: Andrew Mulwa Mutua (PH, MH, Multiple)
4. Doctor: Teresia Naisenya (VI)
5. Doctor: Rhodah Chelagat (HI)
6. Audiometer assessment officer/ Sign Language Interpreter:
Beatrice Koimerek, SNE Teacher, Enkijape Primary School
7. Team Leader: Patrick Kureko Nang'unin, CSO/SNE officer, TSC
8. Team Leader: Kiarii Francis, CSO/SNE officer, TSC

Result of SNE medical Assessment in 30 schools in Loitokitok November-December 2019

	Physical	Visual	Hearing	Mental	Learning Dif	Multiple	Dumb	Autism	Epilepsy	Speech	NA	Total
Assessment	49	67	16	28	1	16	2	4	4	2	10	199
Under Registration	41	10	8	24	1	14	1	4	4	1	5	113

Appendix 27 CADVES Reflection Seminar Program 2020

CADVES REFLECTION SEMINAR PROGRAM

Seminar Date: 3rd and 4th March, 2020

Venue: St. Luke Catholic Church

Objectives of the Training

1. To reflect on achievements and challenges for the past 3-year-activities
2. To make sustainable community-based school development plans
3. To set up strategy to continue the CADVES project activities at school, zone, and district levels

Participants

115 Head Teachers, BOM Chairs, PTA Chairs, and Chiefs of 32 schools in Loitokitok Sub-County

Observer from Embassy of Japan, MoE-SNE Director, DEO, TSC Director and two CSOs (6)

3rd March (Tue)

Time	Content	Moderator
7:00- 7:30	Breakfast	
7:45- 8:15	Registration	Joan Katei
8:15- 8:30	Opening remarks by District Education Office	Mr. Laban Siwilli
8:30- 8:50	Introduction of project team Explanation of Ground Rules	George Njiriri
Session one		
8:50- 9:20	Summary of outcomes for CADVES	Tetsuya Yamada
9:20- 10:20	Presentation on key achievement and discussion on success factors -Information creation and sharing -School Development Plan	George Njiriri
10:20- 10:40	Tea Break	
10:40- 11:40	Continuous presentation on -Early grade learning -Out-of-school children and special needs education	George Njiriri
11:40- 12:20	Discuss challenges and strategies	George Njiriri
12:20- 12:30	Explanation of the poster session	Tetsuya Yamada
Lunch (12:30-13:30)		
Session two		
13:30- 14:15	Poster session Part 1 (45 min)	Group Work
14:15- 15:00	Poster session Part 2 (45 min)	
15:00- 15:05	Choose the best SDP within a group	George Njiriri
15:05- 16:05	Presentation by 3 best schools -15 Minutes per group (Presentation and Q&A).	
16:05- 16:25	Discussion on what makes SDP better	Mikiko Nishimura
16:25- 16:40	Comments from stakeholders Charles Masangira, Ms. Mary Silole Mr. Patrick Nang'unin, and Mr. Laban Siwilli	
16:40- 17:00	Overall Feedback	Mikiko Nishimura
17:00- 17:15	Best SDP award and Announcement	
17:30	Buffet Party with participants	

4th March (Wed)

Time	Content	Moderator
7:00- 7:30	Breakfast	
7:30- 8:15	Registration	Joan Katei
8:15- 8:30	Explanation of CADVES essential components	Tetsuya Yamada
8:30- 9:30	Discussion on way forward by school.	George Njiriri Mikiko Nishimura
9:30- 10:15	Synthesis of discussion by area of intervention	George Njiriri
10:15-10:35	Tea Break	
10:35-11:20	Presentation by 3 area groups (15 minutes per group)	George Njiriri
11:20-11:40	Response from government officials Mr. Laban Siwilli, Mr. Patrick Nang'unin, and Mr. Fred Haga	George Njiriri
11:40-12:10	Open discussion on way forward	George Njiriri
12:10-12:30	Remarks from GLMi Charles Masangira, Mikiko Nishimura, and GLMi Team	
12:30-12:35	Closing Remarks by Mr. Fred Haga	
12:35-13:15	Lunch and Departures	

Time	Content	Moderator
13:15-15:15	Discussion about the role of government office 1. information sharing 2. community-based school management 3. early grade learning 4. out-of-school children and special needs children	Mikiko Nishimura
15:15-15:45	Explanation of Hand-over goods and the way of using goods	Mikiko Nishimura Mitsue Hiromoto
15:45-17:45	Draft MoU with DEO, TSC and MoE Exchange MoU	Mikiko Nishimura Tetsuya Yamada
17:45	Departure to Kibo Slope Lodge	
18:00	Dinner	

Appendix 28 Presentation documents of CADVES Reflection Seminar

Summary of outcomes of CADVES

Tetsuya Yamada
Education Specialist
Global Link Management institute Kenya

1

What does CADVES stand for?

- **Capacity Development** for a Village-Based **Sustainable** Primary Education Strategy (CADVES)

2

Background of CADVES project

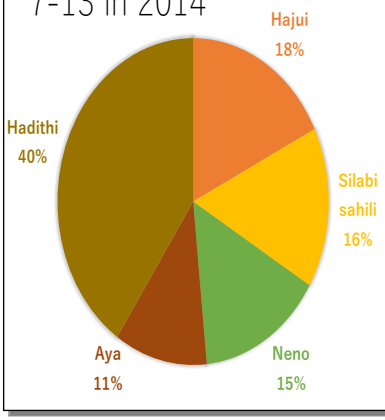
- Prof. Nishimura and Dr. Kawaguchi came to UWEZO research in Loitokitok in 2013
- They were amazed by UWEZO household survey and its philosophy.
- One of the philosophy is to utilize education data to improve education practices at the community level.
- In reality, education data was not utilized to improve education practice by community stakeholders.
- Rather, data was taken to Nairobi or even donors…

3

What is UWEZO learning survey?

- UWEZO means capability in Kiswahili
- Nation-wide **Household-based** learning survey
- The main question, "Are our children learning?"
- Data in 2014
  - **English** and **Kiswahili** literacy, and **Numeracy** which are to be attained after 2 years of primary education
  - Age 6-16
  - Loitokitok Sample- (600 households surveyed in Loitokitok sub county)

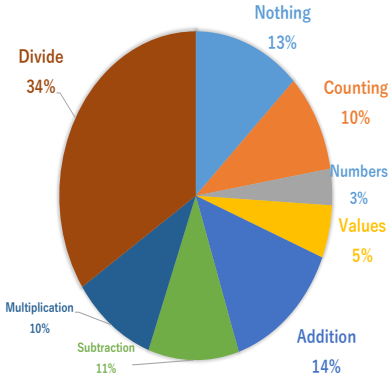
UWEZO performance in Kiswahili among aged 7-13 in 2014



Only **40%** of children aged 7 to 13 in Loitokitok met the Class 2 Kiswahili level

18% of children could **NOT UNDERSTAND ANYTHING**

UWEZO performance in Math among aged 7-13 in 2014



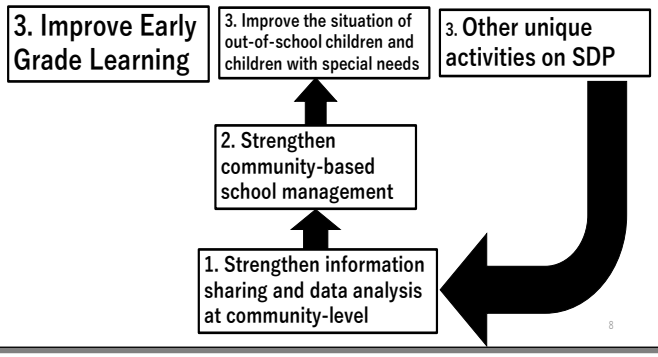
Only **34%** of children aged 7 to 13 in Loitokitok met the Class 2 Math level

13% of children could **NOT UNDERSTAND ANYTHING**

Enrollment situation

- There are many late comers whose age is over the school age and students who repeat grades
- 20% of children in Loitokitok have never enrolled in school (The national average is 10%)
- 20% of children who took UWEZO test are NOT currently enrolled at school
- Disability information are partially available in the community

Then, CADVES was planned!



8

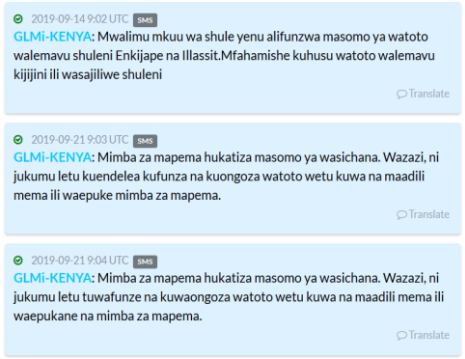
1. Strengthen Information sharing

9

1.1. Statistics training

10

1.2. Text message information sharing



116 messages were sent to **2216** parents in 30 schools.

11

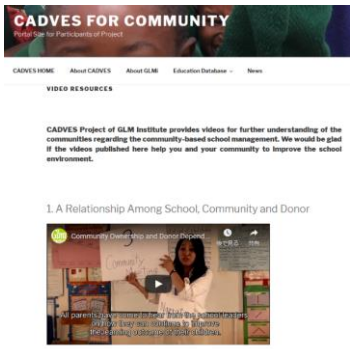
1.3. WhatsApp information sharing

1283 messages were exchanged on the below groups

1.Head teachers
2.Grade 1 and 2 teachers
3.Geographical zone

12

1.4. Data sharing on our Website



12 Analyzed data were uploaded on the website.

3 videos were uploaded

https://www.glminstitute.org/cadves/

13

1.5. Data sharing at community meeting

14

2. Strengthen community-based school management

15

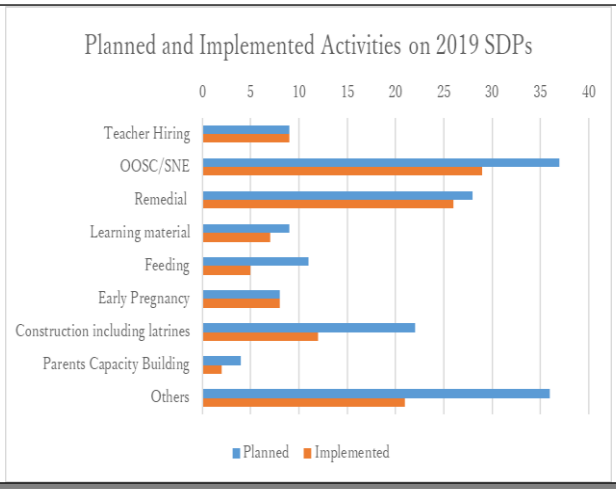
2.1. School Development Plan Formulation

All schools developed SDP.

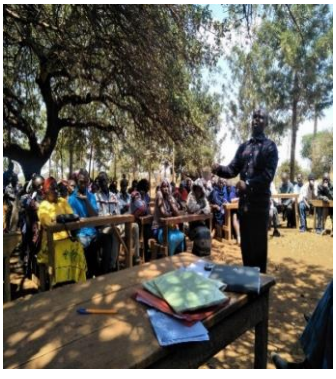
119 out of 164 planned activities were implemented in 2019.

At least **1.24 million KES** were locally mobilized to implement SDP activities in 2019.

16



2.2. Community meetings



Discussed the implementation of SDP activities

28 schools included remedial lessons on SDP

18

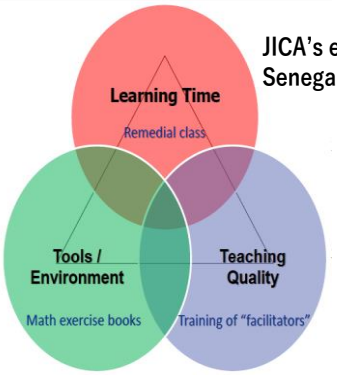
3. Improve Lower Grade Learning

19

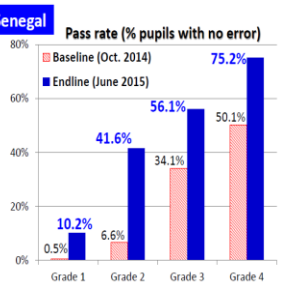
3.1. Remedial Lessons

20

What makes learning better?



JICA's experience in remedial lessons in Senegal

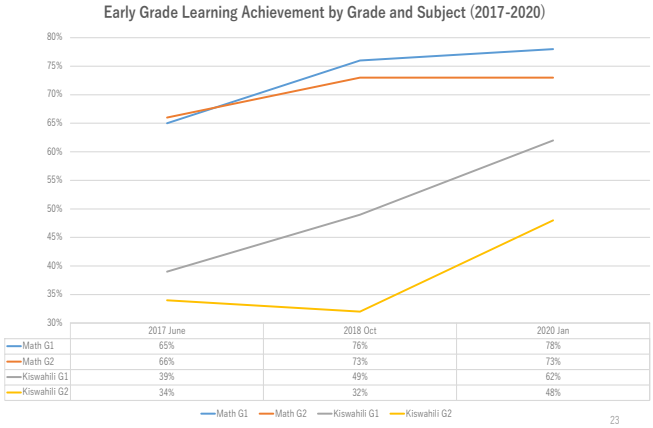


Source: Kunieda, N. (2017). Can Community Participation Contribute to the Improvement of Learning Opportunities and Quality? Paper presented in the GLMi Seminar on 26 May 2017. Tokyo.

21

3.2. Lesson Study

22



	2017 June	2018 Oct	2020 Jan
Math G1	65%	76%	78%
Math G2	66%	73%	73%
Kiswahili G1	39%	49%	62%
Kiswahili G2	34%	32%	48%

23

24

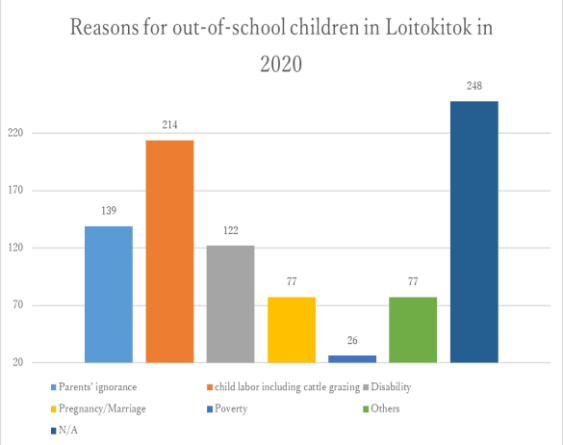
4. Improve the situation of out-of-school children and disabled children

25

4.1. Out-of-school children

- **29** schools created an action plan for out-of-school children on SDP
- **371 (32.5%)** out of 1140 identified children started to enroll at school.
- Dropout due to **Early Pregnancy** is a big issue.
- **6 schools** organized an urgent meeting on Early Pregnancy

26



27

4.2. Resource room and Dormitory construction at Enkijape and Illasit

28

4.3. SNE study tour

85 Head teachers, chiefs, BoM and PTA chairs and parents of SNE children joined the study tour to Enkijape and Illasit.

29

4.4. SNE medical assessment tour

199 children were assessed and **113** were under registration of NCPWD.

30

As a result

- The number of enrolled disabled children at 30 schools increased from **206** in 2018 to **330** in 220.
- **15** deaf children started to enroll at Enkijape primary school.
- **6** Mentally Impaired (MI) students started to enroll at Illasit primary school.
- **5** MI students at Illasit shifted to Grade 1 normal class.

31

Areas to be sustained

- Continuous community-based school development with SDP
- Sustainability of remedial lessons
- Application of Lesson Study into teachers' practice
- Set-up a proper mechanism to follow-up out-of-school children (e.g. Early Pregnancy) and SNE children
- Maintaining and utilizing Enkijape and Illasit

32

Essential Components of CADVES

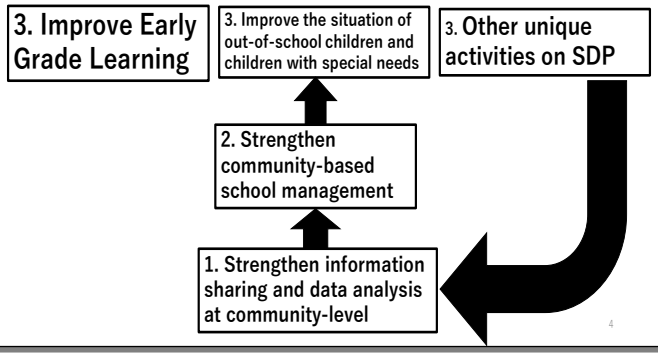
Tetsuya Yamada
Education Specialist
Global Link Management institute Kenya

1

What's next?

?

Then, CADVES was planned!



4

1. Strengthen Information sharing

- **Text message** information sharing to parents
- **WhatsApp** information sharing to head teachers, early grade teachers and zonal stakeholders
- **School data analysis** at school-level
- What DATA can you CREATE at school-level?

5

Iltilal Process of Achievement in information sharing and engagement of stakeholders

- Mindset: "Passion" and "Outcome-Driven"

- Mr. Mugusu implemented "Social Change Model" in planning

1. **Empower** (Rights of children)
2. **Enabling environment** (Rights-emphasized, Embrace criticism positively and welcoming environment)
3. **Community engagement** (Sense of Belonging)
4. **Collective choice**
5. **Non-judgemental open dialogue**
6. **Enough people** see the change

6

Elements of success in information sharing

- **Involvement of stakeholders**
- Wide participation
- Good communication
- **Shared common goals**
- **Trust and transparency**
- Collective decision-making

7

2. Strengthen community-based school management

- Develop **annual SDP** to improve school with community
- Discuss SDP implementation at **community meeting**

8

Samai Process of Achievement on SDP

- Community-based school construction project

1. **Needs Assessment** (Building was Far)
2. Begin with **calculation of locally available resources**
3. Explained **the needs clearly** to parents
4. **Transparent Budgeting** (150,000KES divided by 160 parents)
5. **Flexible Contribution** (Cash, Material or Labor)
6. **Proper Management** (List of parents who contributed)

9

Elements of Success on SDP

- Strong **commitment** to SDP
- Shared ownership-parents, community and school management
- Unity of working together
- Careful data analysis
- Wide **consultation** on strategies/actions before decision making
- Continuous consultation and sharing **with the increased number of like-minded people**

10

3. Improve Lower Grade Learning

- Increase learning time by **regular remedial lessons**
- Organize **lesson-study** at the school-level to improve pedagogy

11

Elements of success on remedial lessons

- **Commitment** of headteachers and teachers on Remedial Lessons
- Creativity in ways to increase learning time
- **Flexible** time schedule
- **Alternative and Multiple ways** to implement remedial lessons
- Involvement of parents in **monitoring** learning
- **Institutionalization** of remedial lesson to the whole school
- Allocate practice and reflection time
- Elder siblings help younger ones at home (**Peer-learning**)
- **Transparency** of managing community resources
- Planning remedial lessons based on **available resources**

12

4. Improve the situation of out-of-school children and disabled children

- **Community actions** to identify and enroll **out-of-school children and disabled children**
- **Community actions** to curb **Early Pregnancy**
- **Utilizing** and **maintaining resource rooms** and **dormitories** at Enkijape and Illasit

13

Elements of success on out-of-school children and children with special needs

- Involvement of **Chief** on ACTING the issue of out-of-school children
- **Commitment** and **collaboration** of HT and Chief
- Caring and volunteer spirit of school leaders
- Strategic **Plan** for realistic action
- **ACTIONS**!!!!
- Use locally **available** human and institutional **resources** (e.g. Church)
- **Response** to difficult circumstances (e.g. foods, feeder schools, sweets, role model)
- Continuous **record keeping** of pupils and **evidence-based action**

14

Elements of success on out-of-school children and children with special needs

- **Collaboration with sub-county government office** to identify and refer children with special needs to Enkijape
- Involvement of **various stakeholders** (PTA chair, Nyumba Kumi, Chief)
- **Continuous assessment** to follow-up vulnerable children (e.g. low-income and early pregnancy)

15

Example: Improvement of Early Grade Learning

• Within school

A head teacher assesses the current learning performance of early grade.

Head teacher discusses with early grade teachers about the bottleneck.

• With parents and community

PTA chair organizes a meeting to get a cooperation to start remedials for G1-8 from the representative parents

Chief organizes a sensitization meeting with community about the importance of early grade learning, showing the evidence you have.

17

Example: Improvement of Early Grade Learning

• With other schools in zone

Head teachers proposes to the head teacher at neighboring schools to conduct a zonal lesson study

• With sub-county offices and MoE

Head teacher reports the result of improvement in performances.

Head teacher proposes DEO to raise an agenda at Head Teacher meeting to promote remedial lessons at other schools in Loitokitok

18

Working plan on information and SDP

• With other schools in zone

HT and remedial teachers conduct bench marking to share information on out-of-school children and SNE on how to bring them to school

HT creates a **zonal facebook page** to share information

BoM, PTA, and HT organize a zonal workshop to exchange ideas on how to develop, implement and monitor SDP.

HT to invite Chief to sensitize at the community meetingon OOSC and SNE

20

Working plan on information and SDP

• With sub-county office and MoE

HT shares the information on out-of-school children, SNE and FGM with sub-county office and MoE through WhatsApp and SMS

HT shares the achievement and challenges of SDP **at head teacher MTG on termly basis.**

HT informs the DEO the progress of SDP through zonal office in the monthly return

HT invites DEO/MoE to monitor the implementation of SDP

HT and Chief forward OOSC/SNE data and pregnancy case to **DCC**

21

Working plan on early grade learning

• With other schools in zone

Chief and head teacher mobilize the formation of **zonal cluster** to discuss common achievement and challenges faced by G1-3 teachers

HT formulates a **common monitoring tool** (common assessment) focusing on G1-3.

All stakeholders within the cluster school organize for **a prize giving day** to motivate both teachers and learners in G1-3.

1

Working plan on early grade learning

• With sub-county office and MoE

HT requests sub-county officers to visit to monitor early grade learning

DEO and MoE to supervise the delivery of G1-3 learning materials

Head teacher reports the progress of early grade learning to DEO and MoE

2

Working plan on out-of-school children and SNE

• With other schools in zone

Chief liases with school administration with his area of jurisdiction for ensuring OOSC are effectively followed-up

HT set up WhatsApp group with other stakeholders to follow-up OOSC and SNE

3

Working plan on out-of-school children and SNE

• With sub-county office and MoE

Head teachers with other stakeholders discuss with DEO

HT submits the accurate list of OOSC and SNE to DEO

HT includes DEO and MoE officers on WhatsApp group for out-of-school children and SNE

DEO offices consider to place SNE schools for other disability

4

Government office plan on information sharing and SDP

• DEO office shares information through social media
• **DEO office monitors the outcome of SDP**
• DEO office involves Curriculum Development office in developing SDP

5

Government office plan on early grade learning

• DEO office conduct **formative** and summative assessment

6

Government office plan on out-of-school children and SNE

- Sub-county office conducts **a workshop** to assist teachers for acquiring knowledge on handling SNE leaners
- Every school has a champion/contact teachers for
- Sub-county office creates awareness to the community (education role model, use of successful case, bench making)
- Sub-county office **enforces the law** to enable all children attend schools

1

Government office plan on utilizing resource rooms at Enkijape and Illasit

- Sub-county office

Shows materials that SNE children made

Creates a chance to assess children with HI

Instruct teaches, parents and other pupils at Enkijape to use sign language to communicate with HI learners

Assist HI learners who come from far by being admitted and learn comfortably

2

How to sustain CADVES project?

- Keep documenting GLMi monitoring documents
- Constant review of SDPs
- Institutionalize some components (e.g. remedial lessons and lesson study)
- Keep communication channels at zonal level (e.g. WhatsApp)
- Create a forum through facebook to share information on school data

3

How to sustain CADVES project?

- No dependency on external donor support
- HT's meeting to share the progress of SDP
- Put up a structure with CSO officers to monitor and sustain the activities
- Utilize locally available resources (human, physical and financial)
- Think about accommodating other disabilities in Loitokitok with DEO/TSC office

4

Appendix 29 List of project members

1. List of Japanese CADVES Project Experts

Project Manager ***Dr.* Mikiko NISHIMURA**	Affiliation	Professor, Division of Arts and Sciences, College of Liberal Arts, International Christian University
	Specialties	● Evaluation of Education Policy ● Community Participation in Education ● International Educational Development
	Work Period	Mar. 30, 2017 – Mar. 29, 2020 (1st - 3rd Year)
	(Period in Kenya)	1) Jul. 2, 2017 – Jul. 8, 2017 2) Jul. 25, 2018 – Aug. 5, 2018 3) Aug. 18, 2019 – Aug. 25, 2019 4) Mar. 1, 2020 – Mar. 7, 2020
Math Expert ***Dr.* Nagisa NAKAWA**	Affiliation	Assistant Professor, Architecture and Environmental Design, Kanto Gakuin University
	Specialties	● Mathematics Education ● International Educational Development
	Work Period	Mar. 30, 2017 – Mar. 29, 2020 (1st - 3rd Year)
	(Period in Kenya)	1) Jul. 2, 2017 – Jul. 9, 2017 2) Feb. 11, 2018 – Feb. 17, 2018 3) Aug. 11, 2018 – Aug. 16, 2018 4) Aug. 12, 2019 – Aug. 19, 2019 5) Feb. 13, 2020 – Feb. 18, 2020
SNE Expert ***Dr.* Jun KAWAGUCHI**	Affiliation	Assistant Professor, School of Human Sciences, College of Education, Tsukuba University
	Specialties	● Inclusive Education in Developing countries ● Comparative Studies on Teacher Education ● International Education Development
	Work Period	Mar. 30, 2017 – Mar. 29, 2020 (1st - 3rd Year)
	(Period in Kenya)	1) Jul. 2, 2017 – Jul. 9, 2017 2) Feb. 11, 2018 – Feb. 23, 2018 3) Jul. 29, 2018 – Aug. 5, 2018
Construction Expert **Mr. Ryuichi WATANABE**	Affiliation	Exert, Community Road Empowerment (CORE)
	Specialties	Civil Engineering
	Work Period	Mar. 30, 2018 – Mar. 29, 2019 (2nd Year)
	(Period in Kenya)	1) May 8, 2018 – May 18, 2018

2. List of Local CADVES Project Experts

Kiswahili Expert	Affiliation	Deb Loitokitok Day & Boarding School
Ms. Mary M. SOLOLE	Specialties	Kiswahili Education
	Work Period	Mar. 30, 2017 – Mar. 29, 2020 (1st - 3rd Year) *(Feb. 7, 2019 – Mar. 29, 2020 as the Board Member of GLM INSTITUTE KENYA)*
Development Expert	Affiliation	Global Link management Institute Kenya (GLM INSTITUTE)
Mr. Charles S. MASANGIRA	Specialties	● Community Empowerment ● Educational Development
	Work Period	Mar. 30, 2019 – Mar. 29, 2020 (3rd Year) *(Mar. 30, 2017 – Mar. 29, 2020 as the Chairman of GLM INSTITUTE KENYA)* *(Aug. 30, 2018 – Mar. 29, 2019 as Senior Liaison Consultant Staff)*

3. List of CADVES Project Staff

Name	Position	Work Period
Ms. Mitsue HIROMOTO	Chief Administration and Coordination Officer	Aug. 1, 2018 – Mar. 29, 2020
Mr. Tetsuya YAMADA	Program Coordinator and Education Specialist	May 20, 2017 – Mar. 29, 2020
Mr. Kazuhiro YAMAMOTO	Chief Administrative Officer (Head Office)	Mar. 30, 2017 – Mar. 29, 2020
Mr. George N. KIMWERE	Project Officer	Mar. 30, 2019 – Mar. 29, 2020
	Driver and Logistics Officer	Oct 1, 2018 – Mar. 29, 2019
Ms. Janet N. KILELO	Community Liaison Officer	Mar. 30, 2019 – Mar. 29, 2020
	Assistant Project Officer	June 30, 2018 – Mar. 29, 2019
Mr. Joseph K. WAIRIMU	Data Management and Administration Officer	May 1, 2019 – Mar. 29, 2020
Mr. Paul K. KOROS	Driver	May 13, 2019 – Mar. 29, 2020
Ms. Joan S. KATEI	Field Staff	May 27, 2019 – Mar. 29, 2020
Mr. Brian NGUGI	Administration Officer	Aug. 3, 2019 – Mar. 29, 2020

4. List of Former CADVES Project Staff

Name	Position	Work Period
Ms. Miho IDA	Chief Administration and Coordination Officer	Mar. 30, 2017 – June 29, 2017
Mr. Asano USUI	Project Staff (Head Office)	April 1, 2017 – June 29, 2017
	Chief Administration and Coordination Officer	June 30, 2017 – Aug. 24, 2018
	Project Staff (Head Office)	Aug. 25, 2018 – Jan. 31, 2019
Mr. Shadrack MPELELE	Project Officer	Mar. 30, 2017 – Mar. 29, 2019
Ms. Laban SAMPERU	Community Liaison Officer	Mar. 30, 2017 – Mar. 29, 2019
Mr. Edward SARUNI	Administration and Accounting Officer	Mar. 30, 2017 – Dec. 29, 2018

Appendix 30 Activity photos

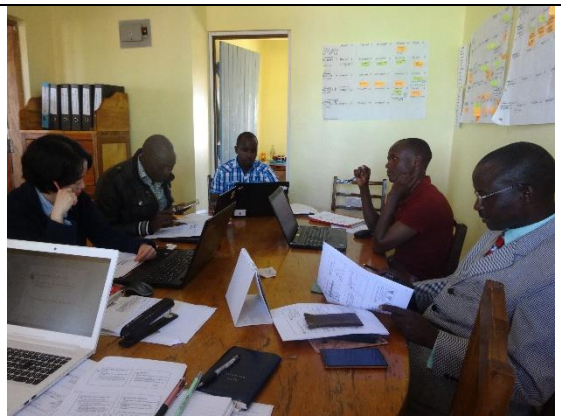
1st Year (April 2017 to March 2018)

Learning Assessment in June in 2017

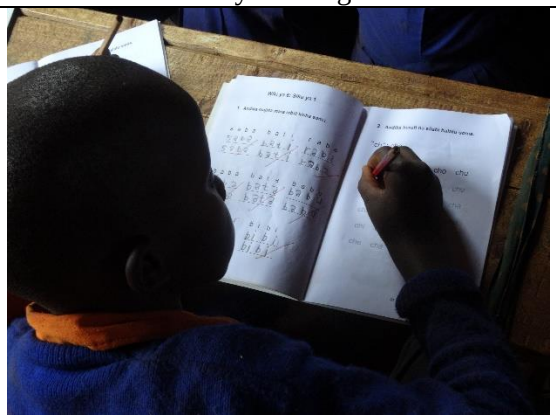
Governance and Leadership Training in July in 2017

Early Grade Teacher Training in July in 2017

Community meeting in 2017



Statistics traiinng in 2017



Remedial lessons in 1st term in 2018

SNE needs assessment at Enkijape in 2017

Poster for promoting parents' learning monitoring

2nd Year (April 2018 to March2019)

Learning Assessment in June 2018

Community meeting about SDP implementation in August 2018

Shopping Activity at Remedial Lesson

Development of Math and Kiswahili workbooks

Hanover to autospoce to Enkijape

Resource room construction at Illasit Primary school

Resouce room construction at Enkijape Primaty school

Renovation of Boys' dorimitory at Enkijape Primary school

	
Extension of Girls' dormitory at Enkijape Primary school	Inauguration ceremony of a resource room at Enkijape

3rd Year (April 2019 to March 2020)

	
Learning Assessment in June 2019	A measurement activity at a remedial lesson
	
Governance and Leadership Training in August-September 2019	Early Grade Teacher Training (Lesson Study) in August 2019

SNE study tours at Enkijape in June and September 2019

SNE study tours at Illasit in June and September 2019

SNE medical assessment in November and December 2019

Lesson study workshop in February 2020

A teaching aid developed by an Illasit teacher

A photo of stakeholders

at CADVES Reflection Seminar 2020