



Educational Technology

Elixir Edu. Tech. 78 (2015) 29839-29843

Elixir
ISSN: 2229-712X

Effect of millenium village primary school meal project on enrollment rate and attendance of pupils in Yala Division, Siaya County, Kenya

James Bill Ouda¹, Rose Atieno Opiyo¹ and Paul Ogula²

¹Masinde Muliro University of Science and Technology, Kakamega, Kenya.

²Catholic University of Eastern Africa, Nairobi, Kenya.

ARTICLE INFO

Article history:

Received: 29 November 2014;

Received in revised form:

11 January 2015;

Accepted: 19 January 2015;

Keywords

School meal project,
Enrollment rate, Retention rate,
Public primary school.

ABSTRACT

The focus of this study was to examine the effect of the Millennium Village Primary School Meal Project on enrolment rate and attendance of pupils in public primary schools in Yala Division, Siaya County, Kenya. The evaluation used both ex-post facto and case study research designs. The mixed methods was adopted because when both qualitative and quantitative designs are used in the same study, the strengths of both produce a research synergy in which the whole collective benefits are greater than what is obtained from either designs alone. A sample size of 179 respondents was selected using purposive sampling as well as stratified random sampling procedures. The respondents included the Area Education Officer (AEO), head teachers, other teachers, pupils, project staff and the parents through the Parents Teachers Association (PTA) membership. The instruments of data collection used in the study included questionnaires, interview guide, document analysis guide, Focus Group Discussion (FGD) guide as well as observation guide. The findings indicate that the project had significantly contributed to increased pupils enrollment as well as retention rates. In order to increase its visibility as well as sustainability, the study recommends that there is need for financial support from the government as well as capacity-building the parents on the project related activities like the tendering process so that they may participate and in the process ensure project sustainability.

© 2015 Elixir All rights reserved.

Introduction

The Millennium Development Goal Centre for East and Southern Africa is based in Nairobi, Kenya, and supports and implements the Millennium Villages Project (MVP) in twelve cluster sites in ten African countries – Ghana, Mali, Nigeria, Senegal, Kenya, Tanzania, Malawi, Rwanda, Uganda and Ethiopia (The Millennium Village Project, 2008). According to the UN Millennium Project Report (2005), the project was implemented, to provide immediate evidence that, by empowering communities with adequate resources, people in the poorest regions of rural Africa could lift themselves out of poverty in five years, and meet the Millennium Development Goals by 2015.

Millennium Villages were designed to demonstrate how the eight Millennium Development Goals (MDGs) could be achieved in rural Africa through community-led development. The Millennium Village (MV) initiative works directly with the respective communities, Non-Governmental Organizations (NGOs) and national governments to show how rural African communities could lift themselves out of poverty and achieve the MDGs (Millennium Villages, 2006). Their farm productivity, health, education, and access to markets could be enhanced, while operating within the budget constraints established by international agreements for official development assistance if they have access to proven and powerful technologies (The Millennium Village Project, 2008).

The World Bank (2006a) informs that each of the 12 clusters of villages was located in a distinct agro-ecological zone. These include arid or humid, highland or lowland, grain producing or pastoral so as to reflect the range of farming, water,

and disease challenges facing the continent and to show how tailored strategies can overcome each one of them. The villages were located in hunger “hotspots” where chronic hunger is widespread, often accompanied by a high prevalence of disease, lack of access to medical care, and a severe lack of infrastructure. They were also located in a reasonably peaceful nation governed by an accountable government (Millennium Villages, 2006). In Kenya, the Millennium Village is located in Yala Division, Siaya County.

Millennium Villages offer a scalable model for fighting poverty at the village level and achieving the Millennium Development Goals. The approach can be expanded from the village to district level and eventually to countries across Africa (UN Millennium Project Report, 2005). The Millennium Village effort was explicitly linked to achieving the Millennium Development Goals and addresses an integrated and scaled-up set of interventions covering food production, nutrition, education, health services, roads, energy, communications, water, sanitation, enterprise diversification and environmental management. The project implementation focuses on participatory community decision-making. For example, at each village, specific committees and community members identified and evaluated possible interventions supported by a scientific team and local partners. Together they created a package of village-specific interventions that were deemed most appropriate and cost effective. They also produced a community action plan for the implementation and management of these interventions. The Millennium Villages initiative was linked to national – level processes to ensure that the success could be scaled up by governments (World Bank, 2006a).

Tele:

E-mail addresses: jmsbillouda@gmail.com

© 2015 Elixir All rights reserved

Sustainability of the project

The Millennium Villages (2006) aimed at establishing the ground-level evidence showing that the United Nations (UN) Millennium Project's recommended interventions for rural Africa can lift villages out of the poverty trap and achieve economic viability through community empowerment backed up with adequate resources. Over time these communities would end their dependency on outside assistance thereby ensuring sustainability (The Millennium Village Project, 2008). Critical to the sustainability of the Millennium Villages was the need to empower the entire community. This included women and vulnerable groups by building local technical, administrative and entrepreneurial capacity. The Millennium Villages empowered local groups to identify the pressing problems of most community members, their responsibilities for developing workable and cost effective solutions, and their central role in identifying, communicating and designing the project so that the initiative can be locally managed (World Bank, 2006b).

Multiple levels of government were providing major in-kind contributions and playing a key role in the implementation of the Millennium Villages interventions and the identification and application of lessons learnt. Millennium Villages (2006) were selected in close consultation with national governments. To ensure that the Millennium Villages were part of national discussion and policy formulation, new villages were only initiated in countries where national leadership supported and engaged in the Millennium Villages and was committed to investing additional government resources. Ensuring that the Millennium Villages can be scaled up as part of national development strategies and agreeing on cost-sharing from the outset ensured that governments were full partners in the project and also in the long-term operational sustainability. The Millennium Villages also relied on existing government implementation mechanisms, such as agricultural extension workers, educational officers and other government staff who are already working in the villages (UN Millennium Project Report, 2005).

The Millennium Villages initiative was supported by several actors including the Millennium Promise, United Nations Development Program (UNDP), the Earth Institute at Columbia University, and the Government of Japan. The interventions to bring villages out of extreme poverty are implemented by the communities themselves (The Millennium Village Project, 2008).

There are several interventions that have been implemented in each of the Millennium Villages including Sauri Village in Yala Division, Siaya County in Kenya. Some of these interventions include agricultural and agro-forestry techniques, vitamin and mineral supplements to tackle malnutrition and make children stronger and essential health services to provide critical, life-saving medicines and raise productivity (World Bank, 2006b). The interventions also targeted investments so as to relieve burdens on women in terms of improved access to water and fuel wood, accessible clinics, mills for grain, and trucking and ambulance services.

The primary school meals project was also initiated as an intervention introduced to increase enrollment rate and attendance of pupils in public primary schools. According to the Millennium Villages (2006) the project involved providing daily school lunches to pupils using locally produced food so as to support children's nutrition, school enrollment as well as attendance while at the same time increase demand for locally produced food. Other interventions included access to anti-retroviral medicines, sleeping under an insecticide-treated bed

net to prevent children from getting malaria, and immunizations since it lowers the incidence of common diseases, such as measles. The study focused on the MV primary school meals project and assessed the extent to which the intervention had influenced enrollment rate and attendance of pupils in Yala Division, Siaya County, Kenya.

Statement of the purpose

The implementation of the School Meals Project (SMP) has been in existence in Yala Division, Siaya County in Kenya since 2000. The intervention was introduced as part of a 'quick win' in the Millennium Village to achieve MDG on education: achieve Universal Primary Education (UPE) by 2015. As an intervention, the project was designed to provide free, daily school lunches using locally produced food with the intention of increasing enrollment rate and attendance of pupils in public primary schools in Yala Division, Siaya County (The Millennium Village Project, 2008). Since the implementation of the project, there is limited evidence to show that monitoring or formative evaluation had been conducted. Therefore there is need to objectively assess and document its effect on enrollment and attendance rates in public primary schools in Yala Division. Accordingly, the purpose of the study was to conduct a formative evaluation of the SMP to assess the extent to which the intervention had affected enrollment rate and attendance of pupils in public primary schools in Yala Division, Siaya County, Kenya.

Evaluation questions

What is the effect of the millennium village primary school meals project on enrollment rate and attendance of pupils in public schools?

Theoretical framework

The study was guided by the Maslow's Theory of Needs. The focus of the theory is satisfaction of needs as a way of changing attitude and behaviors. Maslow has a hierarchy of five levels of needs (Brehm, 1996). At the bottom of the pyramid are the physiological needs including food and water. The feeding project attracts pupils to school so as to satisfy their physiological needs and in the process increases enrollment rates. Once the physiological needs are satisfied, the next level of needs which are safety and security become active. Security needs become visible when the pupils are preoccupied less with thoughts of where the food will come from, since it has been satisfied. Once the pupils feel secure in class, they are able to focus on remaining in school leading to improved attendance rate. The pupil then seeks for love, affection and belonging, the third level of needs. This need is satisfied by attending school regularly so that they can associate with school activities hence feel that they belong to the school. Belonging is enhanced through regular school attendance. This in the long run improves the pupil's self esteem and ultimately self actualization, the fourth and fifth levels in the Maslow's hierarchy of needs respectively.

Evaluation model

The evaluation adopted the Context, Input Process and Product (CIPP) model of evaluation by Daniel Stufflebeam. The CIPP model is a comprehensive framework for guiding evaluations of projects and programs. Context evaluation assesses needs, opportunities, assets and challenges to help decision makers define project or program goals and priorities. Input evaluation assesses alternative approaches, work plans, human resource, and budget for their feasibility and potential cost outcomes. Process evaluation asks; what is being done? Is it being done? Product evaluation identifies and assesses project or program outcomes – intended and unintended, short term,

midterm and long term. The CIPP model was ideal for this evaluation because it emphasizes the fact that evaluation's most important purpose is not to prove, but to improve a project or a program while giving evidence of accountability (Worthen, Sanders & Patrick, 1987).

Evaluation design

The evaluation used a combination of ex post facto and case study designs. Ex post facto design was used in the evaluation because the study intended to assess project outcomes. In the study, the researcher could not manipulate the variables and the respondents were already in existing categories (Mugenda & Mugenda, 2003). This is a characteristic of ex post facto study design which generated quantitative data. The case study, which generated qualitative data, was adopted because it focused on the case of the project being evaluated. It was an in-depth study conducted in a natural setting. The design allowed the use of a variety of sources and a variety of types of data as part of the study (Denscombe, 2003). The study therefore used the mixed methods because the strengths of both the qualitative and quantitative designs produced a research synergy in which the whole collective benefits are greater than what is obtained from either designs alone.

Location of the project

The project was located in Yala Division, Siaya district. It is situated just north of the Equator in the highlands west of the Rift Valley and about 40 km North of Lake Victoria. The general topography is undulating with ephemeral stream rivers and wetlands meandering through the hills. The altitude ranges from 1140 to 1500m above sea level with some of the high altitude areas receiving an annual rainfall of 1800 to 2000mm (Mango, 1999). Yala Division subsistence farmers rely mainly on maize and beans as their staple crops. Land area per household for farming is around 0.6 hectares, which is generally insufficient to support the average household size of five (5) people. Almost 65% of the population lives on less than \$1 a day. A limited school lunch program was in place prior to the start of millennium village school meal project, but it was only available to less than 10% of primary school pupils (The Millennium Village Project, 2008). Nearly all the citizens in Yala Division are Kenyan, mainly from the Luo ethnic group though other ethnic groups are also present. The main languages spoken are Dholuo, Luhya, Kiswahili and English.

Target population

In the study the target population included all public primary schools in Yala Division implementing the school meals project, the Area Education Officer (AEO) of the division, the head teachers and other teachers of the respective schools and the pupils of the said schools, parents and the project staff.

Sample and sampling techniques

The evaluator used probability and non-probability sampling techniques to select the sample of 179 for the study. Seven (7) public primary schools selected using stratified random sampling. Seven (7) head teachers of the sampled schools participated in the study as key informants. The AEO and three (3) project staff were purposively sampled. Pupils for the FGD were sampled using stratified random sampling. Two FGDs (class v and viii) were conducted in each school sampled. Each FGD comprised ten (10) pupils making an overall total of 140 pupils. Upper primary pupils were preferred because they were bound to understand questions, participate in the discussion and give reliable responses. Three (3) PTA members were sampled purposively from each school, making a total of 21 parents. Two teachers were also selected from each of the

sampled school using purposive sampling making a total of 14 teachers.

Instruments of data collection

The evaluator used the following instruments: Questionnaire for teachers, Questionnaire for AEO, Interview guide for head teachers, Interview guide for parents and an Interview guide for the project staff. Focus group discussion guide for pupils was used to collect information from them. An observation guide was used to collect information on school physical facilities. Document analysis guide was used to collect data on enrollment of pupils. The use of several data collection methods enables triangulation by the researcher (Denzin, 1989). Experts in research methodology in the department of educational, Catholic University of Eastern Africa (CUEA) reviewed the instruments of data collection. Their suggestions were used in revising the instruments before the process of data collection, hence ensuring their face validity and content validity. Reliability of the instruments was determined through a pilot study in two schools that were not included in the actual study.

Data analysis and presentation

The qualitative data analysis was on-going as the evaluator collected data in the field. Field notes based on the interviews, discussions and observations were noted. The data was coded, organized thematically and analyzed. Where necessary, data was quantified and tabulated for ease of analysis. Quantitative information was organized, coded and summarized using the Statistical Package for Social Sciences (SPSS). The raw data was coded into numerical values and keyed into the computer. The data was analyzed using descriptive statistics.

Enrollment in project schools

The effect of the school meals programme on enrollment was determined in the study. To attain this objective the researcher carried out a document analysis by scrutinizing records on the enrollment of pupils in the sampled schools. Results are reflected in Table 1 below.

Schools	Years of Enrollment and Number of Pupils Enrolled				
	2002	2003	2004	2005	2006
I	391	414	438	465	501
II	388	411	480	501	516
III	262	273	284	297	293
IV	523	548	596	637	635
V	796	850	892	959	958
VI	653	659	663	665	675
VII	743	812	887	925	997
Total	3756	3967	4240	4449	4575

There was a drastic and consistent increase in the number of pupils enrolled in almost all the primary schools sampled during the project implementation period. The unprecedented increase in enrolment could be attributed to the introduction of the school meals project although there could be other confounding variables like the introduction of the free primary education in 2003.

This is in agreement with a report by IFPRI (2004) which ascertains that, in terms of enrollment and attendance, the provision of food can help attract pupils to school and maintain their attendance once they enroll. When food for education programs are targeted to low income communities with low enrollment and attendance rates, the contribution of these programs to increase enrollment and attendance is primarily via a transfer of income. Provision of school meals reduces parents' cost of sending children to school, (Powell, 1983).

Majority of the respondents who took part in the study were

happy with the way the feeding project was being implemented. One pupil indicated that since the water tanks were put in place by the project, they no longer carry water from home to school especially during the rainy season. Most of the parents and teachers reported that the school meals project was important to the schools. According to a majority of them, children from poor families were able to attend school every day so that they can benefit from the school meals project. One of the pupils in the group discussion observed that, pupils from disadvantaged families were assured of at least one decent hot meal a day, therefore they did not want to miss a day of school. Most of the head teachers, other teachers and the AEO were of the opinion that the pupils had a balanced diet when having their lunch in the school. The belief that the school meals project had made more pupils enroll in school was almost universal among the respondents in the study.

Effect of the school meals project on pupil attendance

Effect of the school meals project on attendance of pupils to school also determined by the study. Majority (69%) of the respondents reported that pupils attended school regularly since the introduction of school meals project. Only 31% were of the contrary opinion. Some of the pupils agreed that they attended school regularly since the introduction of SMP and pointed out that they did so because they didn't have food at home. Carrying out an analysis of the class registers, the researcher was able to ascertain that a great majority of the pupils attend school regularly.

This may be a realistic outcome of the importance of the meals to the children thus a motivational incentive for pupils to enroll and attend school regularly. "I come from a poor family where we cook once a day, in the evening," said one pupil during the FGD, "and so, my mother brought me to school so that I can eat lunch." As the pupil gave this statement you could feel the gravity of the matter as the others watched in silence. Was she speaking for the rest of the pupils, I wondered? "Does it apply to the others," I asked the group? One pupil lifted up his hand and said, "Yes, most of us come from very poor families and are orphans." According to Abraham Maslow (1943) as quoted by Desforges and Abouchaar, (2003), there are five levels of needs set up a hierarchy. In the levels of the needs, the organism does not feel the second need until the demands of the first need have been relatively well satisfied, and so no.

When the physiological needs are relatively well satisfied, and are no longer controlling thoughts and behaviors, the need for safety and security can become active. Since the pupil is not preoccupied with thoughts of where the lunch will come from, s/he feels secure in the class environment, more settled and attentive in class and even participates in the teaching and learning process. This is likely to lead to improved school attendance by the pupil.

Benefits of the school meals project to the community

The study was also interested in determining the extent to which the school meals project benefited the education stakeholders in an effort to increase enrollment rate and attendance of pupils. The greatest benefit of the SMP as indicated by parents was that the pupils save time from going home for lunch, leading to improved school attendance of the pupils. The pupils were assured of a decent hot balanced meal and this improved not only their health but also school enrollment and attendance. Other benefits include transfer of income since the pupils eat lunch in school and created a market for locally produced foods. This had led to the community now growing a variety of crops like passion fruits, maize and beans to supply the schools. Water tanks have also been installed in

schools for Rain Water Harvesting (RWH) and employment opportunities have been created for the community.

Head teachers on the other hand indicated that the SMP had benefited the local community in that it had led to transfer of parents' income since they do not feed their children during lunch and have more time for other businesses. Powell, (1983) confirms that provision of school meals reduces the parents cost of sending children to school. Families would send their children to school as a means of saving money, (Cueto, 2001) and in the process increase pupils' enrolment rate and attendance of pupils.

The AEO indicated that the school meals project had benefited the local community a great deal. This was through creation of market for local farmers' products through purchasing of foodstuff like grains and fruits. The pupils get a balanced diet which has improved their health and the teacher pupil contact time has improved. The pupils had also found benefits in the project. They not only ate a decent hot and balanced diet, but also saved time that would have been used to go home for lunch. The feeding project made pupils attend school regularly. According to Gratham-McGregor, (1989), regular attendance ensures that the sequence of instruction is maintained.

Conclusion

The study found that the SFP has contributed to increased enrollment rate and attendance of pupils in public primary schools in Yala Division, Siaya County, Kenya. These outcomes could be attributed to the benefits to the community as a result of the implementation of the SFP. The study also found that the school meals project was of immense benefits to the local community in diverse ways. This is due to the fact that it had created market for the local farmers' produce, employment to the local community as well as relieving parents off the burden of buying food and cooking lunch for their school going pupils hence reducing the family budget and time taken to prepare meals. School meals are also often seen as a form of income substitution for poor families as well as a source of jobs for the local community. The meals project has also ensured that the pupils are assured of at least one hot balanced meal in a day.

Recommendations

The study recommends that:

1. The Government of Kenya (GoK) should ensure that education policies on SFP are integrated in agricultural production. The government should also invest resources, including financial resources in the SFP to promote its sustainability.
2. The food for the SFPs should be bought from the local farmers so as to cut costs.
3. The local community needs to be capacity-build on the formation of Self Help Groups (SHGs) to engage in agricultural activities as well as the tendering process so that they are able to participate actively in the project activities.
4. The sponsors of the project should plan for the capacity-building training workshops for project stakeholders so that they are empowered to participate in project activities.

References

- Brehm, J.W. (1996). *A theory of Psychological reactance*. New York: Harper Collins.
- Cueto, S. (2001). "Breakfast and Dietary Balance: The enKid Study. Breakfast and Performance." Public health and nutrition, San Isidro, Lima, Peru.
- Denscombe, M. (2005). *The good research guide for small-scale social research projects* (2nd Edition). Buckingham: Open University Press, England.

- Denzin, N.K. (1989). *The Research Act: A Historical Introduction to sociological Methods*. (3rd edition). Englewood cliffs: Prentice Hall, Inc.
- Desforges, C. & Abouchaar, A (2003). *The Impact of Parental Involvement, Parental Support and Family Education on Pupil Achievement*. A literature review. London :Department of Education and Skills. Available at <http://www.dfs.gov.uk/research/data/uploadfiles/pr433.pdf>. Downloaded on 2nd January 2007. Machines, Inc. USA.
- Grantham-McGregor, S. (1989). *Nutritional status, physical work capacity and mental function in school children*. Nutrition Foundation of India. (Nutrition Foundation of India Scientific Report no.6).
- IFPRI (2004). *Food for Education: A Review of Program Impact*. Washington D.C. 20006-1002. USA.
- Mango, N.A.R. (2002). *Husbanding the land: Agrarian Development and socio-technical change in Luo land Kenya*. Published PhD Thesis, Wageningen University, Netherlands.
- Millennium Villages (2006). *Annual Report for Sauri, Kenya. Millennium Research Village*. July 2005 to June 2006.
- Mugenda, O.M. and Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Acts Press, Nairobi.
- Powell, C. (1983). *An evaluation of giving Jamaican government schools meals to a class of children*. Washington, DC: USAID.
- The institute at Columbia University: Earth Institute Directory/ Columbia University*. Retrieved from <http://www.earthinstitute.columbia.edu/sections/view/9>
- The Millennium Village Project (2005). *Annual Report Millennium Research Villages. The first year: July 2004 to June 2005*.
- The Millennium Village Project (2008). *Millennium Villages Project Annual Report January 1 – December 31 2008*
- UN Millennium Project Report (2005). *Investing in Development: A Practical Plan to Achieve the Millennium Development Goals*. New York.
- World Bank (2006a). *'OVC in Education Sector Programs: School Feeding Programs*. Retrieve from <http://info.worldbank.org/etools/docs/library/164047/sector/education4>.
- World Bank (2006b). *'Repositioning nutrition as central to Development: A Strategy for Large Scale Action'*, in *Directions for Development*. World Bank: Washington D. C.
- Worthen, B.R, Sanders, J.R and Fitz Patrick, J.L. (1987). *Program evaluation: Alternative approaches and practical guidelines*. New York: Longman.