

AN ASSESSMENT OF THE EFFECTIVENESS OF SCHOOL GARDENS IN CHURCH FOUNDED PRIMARY SCHOOLS IN PACHWA SUB-COUNTY, KIBAALE DISTRICT

Mark Obboko

Undergraduate, School of Education, Bugema University, Uganda

Atugonza Hannington

Undergraduate, School of Education, Bugema University, Uganda

©2014

International Academic Journals

Received: 21st January 2014

Accepted: 26th March 2014

Full Length Research

Available Online at: http://www.iajournals.org/articles/iajournals_v1_i1_97_103.pdf

Citation: Obboko, M. & Hannington, A. (2014). An assessment of the effectiveness of school gardens in church founded primary schools in Pachwa Sub-County, Kibaale District. *International Academic Journals*, 1 (1), 97-103

International Academic Journals

www.iajournals.org | Open Access | Peer Review | Online Journal Publishers

ABSTRACT

The study assessed the effectiveness of school gardens among church founded primary schools in Pachwa sub-county, Kibaale district. Specifically, the study objectives were: to assess the effectiveness of school gardens towards the provision of midday meals, and on teaching/learning. The study was based on cross sectional research design with both qualitative and quantitative methods. Teachers were the target population of the study and the questionnaire as the main tool for data collection. It was found out that school gardens produces enough food, can be used

to grow food crops like potatoes, beans, maize, vegetables and others; are also used to provide vegetables that are used to supplement midday meals. The study concluded that school gardens were effective towards teaching –learning process as they provided materials like leaves, flowers, roots, and soil. Furthermore, pupils used school gardens for practical activities such as planting, weeding, staking, pruning and harvesting.

Key Words: *Effectiveness, School gardens, Provision of meals, Teaching-learning materials*

INTRODUCTION

School gardens play a central role in helping to supply the nutritional needs of the children. They also serve as powerful “hands-on” teaching tools for improving child nutrition and education. School gardens make education relevant and promote active learning. The procedure from the gardens can help supplement school meals and improve child nutrition by adding variety and micro nutrients and improving overall food security. Furthermore, they decrease the cost of schooling and school feeding programs and can be an effective means of transfer of appropriate agriculture technology within the community (Mulera and Chemutai, 2004).

Gardens for life (GFL) an international initiative under the direction of the education project in the UK is bringing the joy of gardening and education about the origins of food to the thousands of school children in India, Kenya and England. In India in partnership with the centre for development education, the syngenta foundation has funded the involvement of children from 20 schools in Mumbai and Pune. They have very little green space available, and so instead must grow vegetables in pots, old tyres and available small areas. The schools now have grown 10 to 12 varieties of vegetable including tomatoes, aubergines and okra. The students have also exchanged experiences and learning resources with students in England, (Bristol, corn wall and Gloucestershire) and in the rift valley of Kenya and have used the project as a prompt for debating on topical food issues (Leonard and Penick, 2003).

Mulera and Chemutai (2004) also supported by Odongo (2010) who affirms that school gardens are vital in provision of midday meals in schools, make learning practical and help learners to develop farming skills and practices. However, they did not carry out their studies in Pachwa Sub County. This study therefore sought to establish the effectiveness of school gardens on the

provision of mid-day meal in church founded primary schools in Pachwa Sub County, Kibaale district.

Okurru (2006) point out that for a long time schools have been faced with challenges of providing midday meals. The challenge can be overcome if schools establish school gardens. Many schools have abundant school land that is not utilizing yet it can be put under use by establishing school gardens. By establishing school garden learners learn and practice various farm practices, carryout projects, plant crops that are finally harvested and utilized for food. Unfortunately some schools harvest crops and either share the produce among teachers or sell them as one of the source of school income. Such schools need to realize that utilizing the harvested crops for provision of meals at school, contributes to effective teaching/learning and academic performance. If learners utilize the harvested crops for food, they will have a positive attitude towards agriculture and working in school gardens in particular.

Mukiibi (2009) concurs with Okurru (2006) when he asserts that school gardens reduce administrative costs by reducing the cost of purchasing food for schools. The school garden enriches nutrition in school by providing a variety of food nutrients. Different learners can plant different crops in different plots as projects for study purpose. The mature crops can later be harvested and used to provide meals at school.

In Rwanda the organization CARE International farmers of the future initiative (FOFI) founded 27 pilot schools to start their own gardens. By the end of the three year project, 28 satellite schools had started their own gardens. Furthermore, in Niger the similarly named Farmers of the Future (FoF) program educates young people about how to transition from subsistence farming to market – oriented farming. FoF is collaboration between the organizations pencils for kids which builds schools and provides school supplies in Niger, eliminate poverty now which invests in education and economic development; and the International Crops' Research Institute for the semi-Arid Tropics (ICRISAT). FoF's tress for kid program trained children from six villages to graft fruit trees to bread more nutrition and productive plants. The children are now able to earn an income by providing grafting services and training farmers in nearby villages (Mulera and Chemutai, 2004).

Penick and Leonard (2003) note that you can study ecosystems by looking at major structural features such as the dominant species like forms and indicators. Different plant and animal species can be found in school gardens and these can be vital learning materials for pupils. It is hence worth mentioning that school gardens provide learning materials activities, they learn many farm practices such as pest and disease management in crops, spraying pruning, staking, thinning, weeding, harvesting, storage of produce to mention but a few.

In Uganda many schools especially those that are church founded have established school gardens. School gardens are vital not only in helping the effective implementation of the curriculum but also equipping learners with the basic survival skills especially those that are

agriculture related. Uganda is an agricultural country and majority of her population rely on agriculture for food and income. The rapidly increasing population requires improved skills in agriculture, improved methods of farming improved crop and animal species which can be carried into the parents through their children if school garden are emphasized. When learners participate in school gardens, they learn different farm practices especially those that are improved in turn can post agricultural production communities (Mulera and Chemutai, 2004).

In Pachwa Sub County the church founded schools have adequate land where school garden have been established. However, the effectiveness of these schools garden in these church founded schools in as far as provision of mid-day meals, provision of learning material and in enhancing teaching/learning had not been established.

Many primary schools especially church founded in Uganda and Pachwa Sub-county in particular have enough land where schools gardens have been established. However, much as the schools have the school gardens it appears many still meet constraints in provision of midday meals, provision of learning materials and carrying out effective teaching/learning. It is therefore not clear whether the school gardens have specific purpose in as far as school management and effective teaching/learning is concerned. In assessing the effectiveness of those school gardens in church founded schools in Pachwa sub county Kibaale district: the guiding objectives were: To assess the effectiveness of school gardens towards the provision of midday meals in selected church founded primary schools in Pachwa Sub County; and to assess the effectiveness of the school gardens towards teaching/learning in selected church founded primary schools in Pachwa sub-county.

RESEARCH METHODOLOGY

This study was carried out in Pachwa Sub-county, Buyaga East Kibaale district. Pachwa Sub-county is bordered by River Nkusi in the north a natural boundary with Kabwoya Sub County in Hoima district, Kiryanga Sub County in the East, Kabamba Sub-County in the south East, Mabaale Sub County in the South and south west and Bugoma forest in the west. It is made up of four parishes namely; Pachwa, Igayaza, Kyabasara, and Kyakabanda. The sub-County is located 40 miles along Hoima - Fort Portal road and 164 miles from Kampala city along Kampala-Hoima-Kagadi road. The inhabitants of the sub county are the Banyoro, Bakiga, Banyankole, Banyarwanda, Bafumbira, Bakonjo and Alur. The activities done in the sub county are farming and carrying out some business activities in Pachwa growth centre.

The researcher used a cross sectional study design with both qualitative and quantitative method. Cross sectional study design helped the researcher to get views of such respondents on the effectiveness of school gardens in church founded schools towards provision of midday meals, provision of learning materials and teaching/learning. Quantitative method allowed the researcher to quantify information to draw conclusions based on the responses.

The study used only five schools in which the study was carried out. The schools were selected because they have adequate land and have established school gardens. The population of the study included all the teachers from the five selected schools pointed out in the locale of the study. The total target population was 75 teachers.

The researcher used a self-administrated questionnaire to collect data from the respondents. The questionnaire was selected because it collects a lot of information within a short time, collects data that can be kept and referred to in future. Provides respondents freedom, to express themselves, and caters for the literature respondents.

Data obtained was edited and coded. This strategy helped to remove errors and put similar responses together respectively. The researcher used descriptive statistics to analyze the responses in which frequency and percentages were used.

RESEARCH RESULTS AND DISCUSSION

The study aimed at assessing the effectiveness of school gardens among church founded primary schools in Pachwa Sub County, Kibaale district. Specifically, the study looked at: assess the effectiveness of school gardens towards the provision of midday meals in selected church founded primary schools in Pachwa Sub County, and assessing the effectiveness of the school gardens and teaching/learning in selected church founded primary schools in Pachwa sub-county.

Effectiveness of School Gardens towards Provision of Midday Meals

The study assessed the effectiveness of school gardens towards provision of midday meals in selected church founded primary schools in Pachwa Sub-County.

Table 1: Effectiveness of school gardens towards provision of midday meals

Responses	SD	D	A	SA
Food throughout the year	13(17.3%)	21(28%)	23(30.7%)	18(24%)
Growing crops	8(10.7%)	9(12%)	26(34.7%)	32(42.7%)
Vegetables	5(6.7%)	13(17.3%)	41(54.7%)	16(21.3%)
Teachers' meals	6(8%)	17(22.7%)	24(32%)	28(37.3%)
Maintaining the garden	8(10.7%)	13(17.3%)	37(49.3%)	17(22.7%)
Provision of midday meals	5(6.7%)	7(9.3%)	33(44%)	30(40%)
Child' friendly	3(4%)	12(16%)	35(46.7%)	25(33.3%)
Meals at school make children concentrate	10(13.3%)	12(16%)	32(42.7%)	21(28%)

n=75

Table 1 presents findings regarding effectiveness of school gardens towards provision of midday meals. In relation to whether the school garden produce enough food, the findings showed that 41(54.7%) of the respondents agreed at different levels that their school garden produces enough food that can be used throughout the year. This shows that the school garden was able to serve

midday meals of pupils at school. As pertains to whether the school garden is used to grow food crops. The findings also show that 58(77.4%) of the respondents agreed at different levels that their school garden is used to grow food crops like potatoes, beans, maize, vegetables and others. The findings imply that the school gardens are used to ensure that the school has food since it is used to grow a number of crops that are used within the school.

Concerning whether the school garden provide vegetables, the findings show that 57(76%) of the respondents agreed at different levels that their school gardens are used to provide vegetables that are used to supplement midday meals. The findings imply that the school gardens are effectively being used to ensure that there are vegetables for pupils to use at school than buying. As pertains to whether school garden are used to supplement teachers meals, the findings show that 52(69.3%) of the respondents agreed at different levels that school gardens supplement teachers' meals throughout the term. The findings show high effectiveness of school gardens which help to supplement teachers' meals. Findings relating to whether the school had maintained school gardens the findings show that 54(72%) of the respondents at different levels agreed that school maintain school gardens to ensure that they do not use a lot of funds in buying food for both teachers and pupils. The findings show how effective the school gardens can be in ensuring food efficiency at schools.

In relation to whether the school garden help to provide midday meals, the finding show that 63(84%) of the respondents agreed at different levels that school gardens enable the schools to provide midday meals to their pupils. Concerning whether obtaining meals at school make the child friendly, the finding show that 60(80%) of the respondents agreed at different levels that pupils who get meals at school make them friendly. The findings show the effectiveness of school gardens effectiveness through meal provision at school that were surveyed in the study. In relation to whether meals at school make children concentrate, the findings show that 53(70.7%) of the respondents agreed at different levels that meals that are provided at school enable the pupils concentrate. This show how effective school gardens can be towards provision of meals at school.

The findings are in line with Beinempaka, et.al. (1989) who notes that pupils find great satisfaction in growing fruit and vegetables for their own consumption. In addition, vegetables form an important component in the diet and so help to provide a link between the practical aspects of growing crops and their value in human nutrition.

Effectiveness of School Gardens towards Teaching-Learning

Furthermore, the study assessed the effectiveness of school gardens towards teaching-learning process in selected church founded primary schools in Pachwa sub-county.

Table 2: Effectiveness of school gardens towards teaching-learning

Responses	SD	D	A	SA
Gardens provide learning materials	5(6.7%)	7(9.3%)	21(28%)	42(56%)
Use of school garden	11(14.7%)	6(8%)	28(37.3%)	30(40%)
Practical activities	10(13.3%)	10(13.3%)	24(32%)	31(41.3%)
Projects	6(8%)	15(20%)	29(38.7%)	25(33.3%)
School garden act as science laboratory	7(9.3%)	9(12%)	36(48%)	23(30.7%)
School garden act as demonstration site	13(17.3%)	5(6.7%)	31(41.3%)	26(34.7%)

n=75

Table 2 presents findings relating to effectiveness of school gardens towards teaching-learning process. As pertains to whether teachers use learning materials from school garden for pupils understanding, the finding show that 63(84%) of the respondents agreed at different levels that teachers use materials like leaves, flowers, roots, soil and other from the school garden for teaching learning process. In relation to whether teachers use the school garden as a classroom, the findings show that 58(77.3%) of the respondents agreed at different levels that learning in school garden breaks classroom monotony and makes learning real. This shows that teachers use school gardens to break the monotony of the classroom conditions. Concerning whether learners use school gardens for practical activities, the finding shows that 55(73.3%) of the respondents agreed at different levels that pupils use school gardens for practical activities such as planting, weeding, staking, pruning and harvesting. This shows that school gardens effectively enable pupils to have practical skills in panting, weeding staking pruning and harvesting. The findings support the works of Beinempaka, et.al. (1989) that an important preliminary to outdoor practical work is instruction in the classroom. The teachers must explain simply the way in which a plant grows, the structure and function of various parts of the plant and just at a plant requires in order to grow properly Whenever possible, the teacher should give small demonstrations on for example, how to plant seeds in trays, or how to stake plants before commencing the main work in the garden.

In relation to whether pupils use school gardens to make projects, the findings reveals that 54(72%) of the respondents agreed at different levels that learners have done projects in school gardens like developing seedling in the nursery, and vegetable growing. This shows that school gardens are used effectively towards making projects of pupils. Relating to whether garden act as science laboratory, the results who that 59(78.7%) of the respondents agreed at different levels that school garden act as science laboratory where pupils go to watch and see particular things like seeds germination, pollination, pruning and staking. The findings imply that school gardens are effective in acting as laboratory for pupils to learn. Concerning to whether school gardens act as demonstration site, the findings show that 57(76%) of the respondents agreed at different levels that school gardens act as demonstration site for teaching-learning of farm practices such as planting, weeding, staking, pruning and harvesting. Thus, the findings imply that school gardens are effectively used towards learning process. The findings reflect Penick and Leonard

(2003) who argues that the ecosystems play a fundamental role for dominant species like forms and indicators. Different plant and animal species can be found in school gardens and these can be vital learning materials for pupils. It is hence worth mentioning that school gardens provide learning materials activities, they learn many farm practices such as pest and disease management in crops, spraying pruning, staking, thinning, weeding, harvesting, storage of produce to mention but a few.

CONCLUSIONS AND RECOMMENDATIONS

The study concludes that school gardens were effective towards provision of midday meals, since they were able to produce enough food, were used to grow food crops like potatoes, beans, maize, vegetables and others. Furthermore, it was found out that school gardens were effective towards teaching-learning process as teachers used materials like leaves, flowers, roots, soil and other from the school garden for teaching learning process, pupils use school gardens for practical activities such as planting, weeding, staking, pruning and harvesting. Also learners had done projects in school gardens like developing seedling in the nursery, and vegetable growing. They also act as demonstration site for teaching-learning of farm practices such as planting, weeding, staking, pruning and harvesting.

Based on the study findings the study recommends that: other schools need to maintain school garden in order to ensure that they provide meals to their pupils and teachers at school. Also, school need to use them for teaching-learning process. Church founded school need to highly maintain the school gardens in order to ensure constant and sufficient food within the school. Researchers need to study factors that affect school gardens in public schools in the country.

REFERENCES

- Beinempaka, A.B., Kato, H., Mulera, D.B. & Obwol, A. (1989). *Principles and Practice of Agriculture*. Malaysia: Macmillan.
- Bennaars, G.A., Otienda, J.E. & Boivert, R. (1994). *Theory and Practice of Education East African Educational*: Nairobi: Macmillan Publishers.
- Beverley, L.Y. (1995). *Teaching Primary Science*: Hong Kong, Longman Group Limited.
- Farrant, J.S. (2000). *Principles and Practice of Education*. England: Longman
- Krajci, K.J.S. & Czerniakmc, B.F.C. (2003). *Teaching Science in Elementary and Middle School Classroom. A Project Based Approach 2ndEd*. USA; McGraw-Hill
- Leonard, W.H. & Penick, J.E. (2003). *Biology a Community Context*: USA: McGraw Hill.
- Mukibi, J. (2007). *Establishing A School Garden*: Kampala: Fountain Publishers.
- Mulera, B.D. & Chemutai, R. (2004). *Functional Primary Agriculture for Uganda Primary Five*. Kampala: Joibaso Publishers Limited.
- Odongo, D. (2010). *Teaching Agriculture in Primary Schools*. Kampala: Fountain publisher.
- Okurut, D. (2006). *Agriculture for Primary Schools*: Kampala: Joibaso Publishers Limited.
- Sutherland, M. (1988). *Theory of Education*. London: Macmillan publishers.