

# Sustainability of the Home - Grown School Feeding Programme in Sinda District, Zambia: A Qualitative Descriptive Study

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**Abstract:** ***Background:** School feeding programs are an important intervention for providing school going pupils with food while at school. The Home - Grown School Feeding Programme (HGSFP) in Zambia is implemented by the government that supplies food rations to rural primary schools on a termly basis. The purpose of this study was to identify ways of sustaining the HGSFP in Sinda District of Zambia. **Methods:** The study employed a qualitative descriptive research design. Purposive sampling was used to select the respondents. Data was collected using semi - structured interview guides and thematic analysis was used to analyse the data. **Results:** Four distinct themes challenges in implementing the HGSFP for sustainability: Human, financial and material resources; Time management; School production units; and Stakeholder collaboration. **Conclusion:** The HGSFP is a very effective programme in promoting good health, fighting high dropout rates, high absenteeism rates as well as promoting retention and school attendance in primary schools. Primary schools in collaboration with various stakeholders need to expand their production units to sustain the HGSFP in Sinda district.*

**Keywords:** Home grown programme; Nutrition; Production Units; School feeding; Sustainability; Sinda;

## 1. Background

School feeding program is an intervention that provides nutritious foods to primary day - pupils attending school. It is an intervention that is designed to support education of pupils living in poverty and food insecure areas [1, 2]. It is with this background that the school feeding programs are beneficial for the physical, mental, and psychosocial development of school - age pupils [3]. School feeding is a global issue that has attracted research, especially in less developed countries. It is estimated that about 60 million pupils go to school hungry every day in developing countries [4]. Providing school meals is therefore vital in nourishing these pupils. With school feeding, parents are also motivated to send their pupils to school instead of keeping them at home to work or care for siblings [5].

With the knowledge that the implementation of school feeding programmes can improve both the welfare of school pupils and the livelihood of local smallholder farmers, Zambia launched the Home - Grown School Food Programme (HGSFP) in June 2011 in pilot form and a policy body and a programme management unit were anticipated to oversee wide scale implementation [6]. The main objectives of the HGSFP were to: reduce hunger among school going pupils; increase school enrolment, attendance, retention, completion rate and performance, particularly of pupils in rural communities and poor urban neighbourhoods; correct gender imbalance through increased girl - child enrolment; and increase development opportunities among peasant farmers. Pupils benefit from a hot nutritionally balanced school meal which reduce hunger, improve their health and education outcomes; farmers benefit from improved access to school feeding markets and

communities benefit from new catering, processing and food handling jobs [6].

The HGSFP in Zambia has been running in 39 districts, in 10 provinces targeting over 1million learners and Sinda district is one of them. Sinda district is found in Eastern Province, situated along the Great East Road. It is bordered by Petauke District on the west, Katete District and Lusangazi District on the north. It also shares a boundary with the Republic of Mozambique in the south. The District has 82 primary schools of which 79 are on the HGSFP. The programme had a dual support system; the World Food Programme (WFP) purchased cooking oil and cowpeas while the Government of the Republic of Zambia procured maize and also paid for transportation of the food rations to the selected schools on a termly basis.

## 2. Statement of the Problem

High dropout rates and absenteeism due to high levels of poverty are the major challenges among vulnerable pupils in primary schools. Hence, the Ministry of General Education in Zambia uses the HGSFP as a conduit to solve these challenges by reducing hunger among these vulnerable pupils. Despite bringing about academic and health benefits to pupils, the HGSFP is externally driven and the schools that benefit are mere recipients of the food rations. There has been little attention given to the aspect of sustaining the programme at the school and community levels. This would leave them vulnerable whenever these food rations were to be cut off. There is a need to explore ways in which this programme could be sustained internally for the beneficiaries to continue solving their own academic and other related challenges. Being an important public health

intervention, the purpose of this study was to explore ways of making the HGSFP sustainable at school and community levels in Sinda district for the improvement of pupils' health, nutritional status and the development of their cognitive abilities.

### General Objective

To identify ways of sustaining the Home - Grown School Feeding Programme in Sinda District of Zambia.

### Specific Objectives

- To determine challenges faced by pupils, parents, teachers and educational administrators in implementing the HGSFP.
- To determine ways in which the Ministry of General Education (MOGE) can localise the HGSFP in primary schools.
- To identify the roles that different stakeholders can play to sustain the HGSFP in primary schools.

### Research Questions

What are the challenges faced by pupils, parents, teachers and educational administrators in implementing the HGSFP? How can the Ministry of General Education localise and promote the HGSFP in primary schools? What roles can different stakeholders play to sustain the HGSFP in primary schools?

### Significance of the Study

The findings of this study may be important in assisting the Ministry of General Education and schools to identify ways that the HGSFP could be sustained in primary schools on the program and how it could be rolled out and implemented in all primary schools. The study would also add to the existing body of knowledge on the ways of sustaining the Home - Grown School Feeding Program.

### Scope of the Study

The study only focuses on selected primary schools that were implementing the school feeding program in Sinda District of Eastern province. The study was also limited to education administrators, head teachers and school health and nutrition coordinators, parents and pupils in selected primary schools of Sinda district.

## 3. Literature Review

### *Origin of School Feeding Programme*

A combined programme of teaching and feeding hungry pupils began as early as 1790 in Munich, Germany and France in 1867. The school feeding programme was introduced to Africa in South Africa in the early 1940's providing free milk to white and coloured schools [7]. In Zambia, school feeding was introduced after independence in 1964. The government supported this programme through budgetary allocation to pupils in early grades implemented by local authorities [8].

### *Global Perspective on Home Grown School Feeding*

India has the biggest SFP worldwide and it first implemented 'The Mid - Day Meal Scheme (MDMS) ' in 2001 which includes procurement of grains that are a subsidy by their government through its Food Corporation of

India, and also fresh fruits and vegetables which are procured at state level. At the school level, the programme is managed by the Village Education Committee, the School Management and Development Committee, the Parents and Teachers' Association (PTA) or, in some cases, Non - Governmental Organisations (NGOs). Further, a study conducted in Pakistan revealed that the programme provided an income in the form of one or two tins of cooking oil to families of girls that attended school for a maximum of twenty days in a month. This study further revealed that, the schools that participated in the programme experienced an increase in enrollments and attendance from 73% to 95% among participant [9]. A study by [10] evaluated the impact of SFP in Bangladesh and the findings revealed that SFP had a substantial positive impact on parents as they were motivated to send their children to school at an early age thus increasing enrolment and attendance rates from 43 percent to 73 percent. Similarly, the studies by [9] and [10] were more focused on the impact of school feeding programmes in Pakistan and Bangladesh which also appeared to have a positive result in schools. However, the studies did not give a guide on how the programme could be sustained which was the main focus of this study. The study by [11] was in line with this study's main objective which was to sustain the school feeding programme in Sinda district in which the government procures maize from Food Reserve Agency (FRA) to supply to the implementing schools unlike having a community - based approach like the Guyana case where local farmers provide the relevant nutritious food to the schools.

### *African Perspectives of Home - Grown School Feeding*

A study by [12] was done on assessing the role of the Mozambique National School Feeding Programme on enrolment, retention, and attendance of learners, and its possible role in local agriculture, in Nampula Province, 2013 - 2015. A mixed - method research approach was used and the results of the study revealed that the initiation of a school feeding programme seemed to have a positive impact on enrolment, attendance, and retention of primary school pupils in the schools implementing the SFP while schools without SFP failed to retain their pupils. In another study by [13], it examined the impact of the school feeding programme on access to basic education in the South Tongu district in the Volta Region of Ghana. The results of the study showed that the school feeding programme had a significant impact on increased enrolment, attendance and retention of pupils in the South Tongu District.

### *Local Perspective on Home Grown School Feeding project*

A research study to evaluate the implementation of HGSFP in selected Primary Schools in Nyimba district, Zambia was conducted by [14]. This study used a descriptive research design and qualitative research methods were adopted. The study established that MOGE and WFP were partners in delivering food to primary schools in Nyimba and the programme improved school enrolment and attendance, completion rates improved, drop out and absenteeism rate also decreased. One of his recommendations was that MOGE should decentralize buying of food to school communities to promote the participation of local farmers instead of buying from commercial farmers in Lusaka. The study focused on how the HGSFP was implemented in

Nyimba which is dissimilar to the current study [14]. However, unlike other reviewed scholars, the study had adopted a descriptive design and used the qualitative research method which is similar to the current study. Lastly, a study was conducted by [15] to find out whether or not the School Feeding Programme had enhanced the school enrolment, attendance and performance in selected Basic Schools in Mongu district. Quantitative and qualitative research methods were used with a study sample of 155 participants from ten (10) schools. The findings of the study showed an increase in school enrolment and attendance in most schools.

A study to evaluate the effectiveness, efficiency, relevance, impact and sustainability of the school feeding programme at St Paul's Secondary School in Kapiri Mposhi District in Zambia was conducted by [16]. Their findings revealed that the programme was effective, efficient and sustainable because it was inclusive, meaning it involved pupils, parents, local authorities and the surrounding communities. Unlike [17] and other reviewed scholars whose studies were based on Primary schools, the study by [16] was based on a secondary school.

## 4. Methods/ Approach

### 4.1 Research Approach

Qualitative research approach, with a philosophical paradigm of interpretivism, was adopted to establish the ways of sustaining the HGSFP in selected primary schools in Sinda district. The qualitative approach was employed as the study needed in - depth views, ideas and knowledge from the participant's perception about the school feeding programme.

### 4.2 Research Design

The study used a descriptive research design to help lead to the formulation of important principles of knowledge and coming up with solutions to significant problems in that respect.

### 4.3 Study Population

The population for this study comprised primary school head teachers, School Health and Nutrition (SHN) coordinators and a Statistical officer from the District Education Board Office. These study participants were perceived to be reliable in giving information on the implementation of HGSFP and how to sustain it as they were directly involved in the school feeding programme.

### 4.4 Data Collection/Instruments

This qualitative study used semi - structured interview guides and semi - structured questionnaires to collect information from the statistical officer, head teachers, SHN coordinators, parents and pupils. These instruments were suitable for studying people's understanding of prevailing situations and for describing their experiences, attitudes, ideas and opinions towards school feeding activities.

### 4.5 Sampling Techniques

Purposive sampling technique was used to select the participants. This was due to their involvement in the school feeding programme implemented in primary schools in Sinda District.

### 4.6 Sample Size

The sample size for this study comprised twenty (20) primary schools out of seventy - eight (79) schools implementing the program in Sinda district. A total of fifty - four (54) study participants were involved of these, twenty (20) were headteachers, twenty (20) were School Health and Nutrition (SHN) coordinators, seven (7) parents, six (6) pupils and one (1) was Statistical officer from the District Education Board office. These study participants were perceived to be reliable in giving information on sustaining the HGSFP as they were directly involved in the running of the programme.

### 4.7 Data Analysis

Thematic analysis was used to analyse the data as common themes were identified based on the objectives [18]. However, [19] warn that in spite of the thematic analysis being flexible, this flexibility can lead to inconsistency and a lack of coherence when developing themes derived from the research data.

## Results

The qualitative data analysis from the interviews and focus group discussions produced four distinct themes: Human, financial and material resources; Time management; School production units; and Stakeholder collaboration. Themes 1 and 2 answered the first research question i. e. *What are the challenges faced by pupils, parents, teachers and educational administrators in implementing the HGSFP?* Themes 3 and 4 addressed the second research question i. e. *How can the Ministry of General Education localise the HGSFP in primary schools?* Themes 1, 2, 3 and 4 also addressed the third research question i. e. *What are the identified roles that different stakeholders can play to sustain the HGSFP in primary schools?* Each theme is discussed further below.

### Theme 1: Human, Financial and Material Resources

The HGSFP in Sinda district experiences challenges relating to the unavailability of certain resources to aid its successful implementation. This theme explains the challenges as well as roles that stakeholders can play to sustain the HGSFP in relation to human, financial and material resources. Human resource in this theme includes cooks and other manpower needed to aid the implementation. The theme also includes financial resources that includes lack of funds to enhance the programme. The theme further includes material resources such as utensils, firewood, salt and other materials needed to implement the programme effectively.

### Challenges

When asked what their challenges in implementing the programme and what roles stakeholders can play to sustain

the HGSFP, the headteachers, SHN coordinators, statistical officer, parents and pupils had the following to say. One headteacher had this to say over the challenges faced:

*We have no money to pay cooks on daily basis. The other challenge is that most pupils do not come with plates to feed on they usually use plastics instead which are not... healthy because some of them just pick them up from anywhere. And then parents welcomed the programme but because of pressure of farm works others do not come to cook food for the pupils.*

Another Headteacher said:

*The major challenge we face here is arranging for people to volunteer to cook without any incentive. And most parents are not willing to cook. The other problem we face is the issue of organizing firewood and because of this sometimes we don't cook. The other thing is that pupils do not carry plates and schools don't have the plates to give them...but the pupils love the programme.*

One more Head teacher had this to say on challenges:

*As administrators, the major challenge we face is lack of finances to procure resources such as firewood, salt and equipment to prepare food from. And then some pupils do not manage to come with their plates to be fed from.*

One SHN coordinator said:

*The parents do not come to help cook for the pupils...rather it is left in the hands of teachers and the teachers are not enough to take turns in the preparation of food. The other issue is that some of the pupils do not bring plates to feed on and the school does not have money to buy plates for the pupils.*

From the focus group discussion, one parent said:

*There is failure to pay K10 [\$1.25]for payment of helpers by parents. Most of them don't have money (translated from Nsenga language).*

The Statistical officer had this to say:

*Some primary schools have challenges with mobilizing cooks. And some schools, especially the ones in urban areas have a challenge in organizing firewood to cook the food. And there is also lack of secure storage facilities for the food. The other issue is that there are budgetary limitations due to competing needs especially now with the current austerity measures, this has resulted in the failure to monitor and report on the programme activities.*

### **Stakeholder roles to sustain the HGSFP**

When asked what roles stakeholders can play to sustain the HGSFP, the head teacher said:

*Pupils should come to school every day and come with plates to use. Parents should also support the programme by providing firewood and cooking food for their pupils for free. And then cooperating partners need to provide full financial support to the school like starting up school business.*

Another head teacher said;

*Pupils must bring plates to feed from and parents should be able to organize firewood as well as responding to their*

*duties particularly preparing the food. The Ministry (MOGE) can also provide necessary needs required for smooth running of the programme.*

One SHN coordinator had this to say:

*There is need to sensitize much on bringing plates. The parents should advise the pupils to carry plates when going to schools and the Ministry should provide all materials for learning to take place kaili (Since) they bring food.*

Another SHN coordinator said:

*First the pupils...they should start bringing plates and then the parents should give each other turns to cook for their pupils during the week. For the ministry, they should continue supplying food to schools constantly.*

The statistical officer suggested the following:

*I think the government can just employ permanent school cooks under government payroll. Parents should also be willing to supply firewood for their pupils.*

### **Theme 2: Time Management**

This theme addresses the issue of time in the implementation of HGSFP which was concurrent in all responses during the analysis. The theme addresses the challenge of time and what roles different stakeholders could play to ensure time is managed and that the programme is sustained.

#### **Challenges**

During the interviews one Headteacher had this to say over the challenge of time:

*I wouldn't say really, we have had major challenges in the programme except that we have large numbers of pupils... we have over 600 pupils here although they are separated by steams (morning and afternoon) so when feeding them the time spills over into the period that follows.*

Another Headteacher had this to say:

*The challenge we have is that due to over enrolment we have limited time to feed learners, teachers have a challenge of late coming of learners from break time and supervising learnings' feeding is time consuming.*

Another Headteacher said:

*The supply of food stuff is irregular and sometimes it takes long to come and pupils stop school when there is no food. Then we also have challenges on times of feeding as it takes a lot of time.*

One SHN coordinator had this to say:

*Sometimes some pupils do not report for school which makes it difficult for us to apportion food because the maize takes long to prepare and so it has to be cooked early enough. Then when is ready it takes a lot of time to feed the pupils.*

Another SHN coordinator said:

*The challenge we have is that there is no enough time to feed as it was advised to be feeding at break time which is only for 20 minutes.*

One more SHN coordinator said:

*The challenge is that most time is wasted on sharing food, hence affecting the learning time after break.*

From the focus group discussion held with pupils, one pupil said:

*Some pupils they like pushing each other on the line when feeding. It takes long to get your food.*

A parent from the focus group said that:

*There is a lot of bullying when serving the pupils and sometimes stronger and bigger pupils bully the weak and smaller ones leading to accidents like burning each other with food as the smaller pupils try to run away from trouble.*

### **Stakeholder Roles to Sustain the HGSFP**

When they were asked what roles stakeholders could play to address the issue of time, one headteacher had the following to say:

*Pupils need to comply with the given guidelines regarding feeding time. Teachers also need to manage time so that planned lessons are fully covered and not disturbed by the feeding.*

Another Headteacher said:

*Teachers need to accompany the pupils when feeding so that time is no wasted during feeding.*

### **Theme 3: School Production Units**

This theme addresses the research question on how the MOGE could localise the HGSFP as well as the question on roles that different stakeholders could play to sustain the programme. One common suggestion on sustaining the programme venturing in production units that include gardening, farming and other ventures that would bring income to schools.

### **Localising the HGSFP**

When asked what could be done to localize the HGSFP one headteacher had the following to say:

*The programme can be localized by starting up production units and schools to plan adequately on planting maize for example 40kgs of maize, sweet potato farming, cassava and also purchase fertilizer like 50kg x 16 pockets.*

Another Headteacher said:

*The program can be localized creating young farmers' clubs in schools to help learners develop skills in various fields. In line with this schools can also go into agriculture.*

Another Headteacher said:

*The programme can be localized by schools coming up with projects such as gardening or chicken rearing. This can be done by growing the common food crops in that particular area.*

A SHN coordinator said:

*By providing enough home - grown produces within the school and the school and the school community so as to supplement shortfall of food supplied.*

Another SHN coordinator said:

*It can be localized by having the school garden and field so that we produce our own food,*

In a focus group discussion with pupils, one pupil suggested that:

*Madam.... I think we can grow the PU by growing soya beans and maize to make soya chunks and samp meal for us.*

A pupil said:

*By starting a piggery and poultry and rear chickens.*

Another pupil said:

*We can also start gardens and grow vegetables for sale*

From the focus group with the parents, one parent suggested that:

*As Parents we can be growing foodstuffs for the school such as beans and maize so that the school can prepare nshima and fresh maize. (Translated from Nsenga language)*

Another parent said:

*By us contributing maize at the start of the year so that the school can make samp meal for learners. (translated from Nsenga language).*

Another parent said:

*By revamping production unit and diversify into long - and short - term projects such as poultry, fish farming etc. (translated from Nsenga language)*

### **Stakeholder Roles to Sustain the HGSFP**

When asked what roles different stakeholders could play to sustain the HGSFP the Headteacher had the following to say:

*Firstly, pupils can get involved in weeding, applying fertilizer and harvesting. Parents on the other hand can get involved in land preparation. They can help the school acquire land and inputs. The ministry (MOGE) should meet school budgets under production unit, they can provide a starter pack in form of farming inputs such as fertilizer and seeds to schools once a year as opposed to buying maize for schools every term*

Another Headteacher said:

*Pupils can be allowed to maintain the gardens. Each child can be given a permanent bed to maintain and water and tell them that the one whose bed will be well maintained will be given an award. This can motivate them to work. The Ministry should also encourage each school to embark on farming, gardening, piggery and provide schools with equipment and water tanks.*

Another Headteacher said:

*If there could be a way were the ministry (MOGE) could release funds for us to start up PU. Especially primary schools up to grade 7 Cooperating partners also can continue supporting the schools in production unit. Also like we can engage bana COMACO (Community Markets for Conservation) to provide us with seeds to grow the plants or equipment.*

One SHN Coordinator said:

*The schools must support SHN and PU to work well. The pupils can be watering and the Ministry should train the parents and teachers in growing their own crops.*

From the focus group discussion, one pupil said:

*We can be cleaning the poultry and our parents to be allowing the pupils to go back to do work*

Another pupil said:

*Teachers can be supervising pupils working and us we can obey the teachers and do what they tell us.*

From the focus group discussion with parents. One parent suggested that:

*Pupils can work in the garden and PU then as parents we can also lend land to the school for PU. The schools can also lobby government for starter pack or capital. (Translated from Nsenga language)*

#### **Theme 4: Stakeholder Collaboration**

This theme answers all the three research questions in this study and it includes, government, community, and school participation in the implementation and sustenance of the HGSFP. The theme also addresses issues of sensitisation as well as monitoring and supervision. When asked what could be done to localise the HGSFP and what roles stakeholders could play to sustain the HGSFP, one headteacher said:

*We need to work together and educate parents and learners on the importance of HGSF. Sensitization has to be enforced. Cooperating partners, they can assist us with knowledge or technical advice while parents can help the school by providing information on how the school can improve the programme.*

Another headteacher suggested that:

*What I can say is that the parents or rather the community need to give support to the management for the smooth running of the programme.*

Another headteacher said:

*It can be localised through the collaboration of the government, the school and the community. There is need to encourage all stakeholders to be involved because everyone has a role they can play.*

A SHN coordinator said:

*The programme can be localized by making the schools and community to be producers of food which the school would need. Also cooperating partners can do training in agriculture and other capacity building.*

Another SHN coordinator said:

*I think as a school we need to work together to educate parents and learners on the importance of the HGSFP. The ministry (MOGE) also needs to educate both parents and teachers to be productive and support the programme.*

One parent suggested that:

*School administration should vigorously sensitize the school community about their important role of participating in school projects even in smaller groups in sections (translated from Nsenga language). There is need for*

*sensitization of teachers, pupils and the community of the importance of the HGSFP. And also, the ministry could develop a deliberate policy which could help in training teachers and pupils develop skills which promote entrepreneurship.*

Another Headteacher said:

*We all need to work together. Our ministry (MOGE) can make arrangements with the Ministry of Lands and Chiefs so that schools to be provided with land so that the production may be enhanced.*

## **5. Discussion**

### *Challenges in implementing the HGSFP*

The study was aimed at establishing challenges faced by education administrators, pupils and parents in implementing the HGSFP. To do that, the headteachers, the SHN coordinators, statistical officer, parents and pupils were asked to explain what they thought were the major challenges faced by schools while implementing HGSFP.

The first challenge in implementing the HGSFP as per the findings was organising firewood. Fire wood is a cheap source of energy and schools need to find ways of ensuring that there is adequate firewood for cooking. This is in line with a study conducted by [13] who stated that the community's support and understanding have not been forthcoming as the community is not ready to help but the schools are trying to play the role of the community.

The second challenge experienced by schools was the provision of utensils by learners. During break time, most pupils do not have plates or spoons for them to collect food to eat, most of them share a plate with several other learners while others even tend to use their plastics or bottles, they pick to collect food which is not hygienic. This challenge is in agreement with a study conducted by [20] whose findings revealed that during meal taking times learners were provided with plates, but no spoons.

The third challenge revealed from the findings was the parents' unwillingness to cook for the pupils. The challenge of employed cooks is something that the HGSFP has neglected, well able schools are able to employ their own cooks who they pay from the school coffers. A study conducted by [17] in Ghana on running an effective school feeding programme suggests forging effective stakeholder collaboration or partnership.

The fourth challenge was lapses in delivery of foodstuffs to the school. The problem of lapses in food delivery in Sinda schools is because the food rations that are received in schools do not tally with the enrolments that are in schools, hence, foods rations are less and tend to finish before the term ends. This contradicts the findings of [20] whose findings revealed that participants expressed their satisfaction with the delivery of maize to the school.

### *Roles of parents in sustaining the HGSFP*

Parents perform major roles in assisting the school administrators to manage and oversee programs. The first role identified involved parents themselves getting involved

in HGSFP and its activities. This entails parents being available to provide resources, labour, finances and support the school administration whenever the need arises. This aspect emerged also in the Nyimba study by [14] that also investigated the roles of various stakeholders in managing HGSFP.

#### *Roles of school education administrators in sustaining the HGSFP*

School administrators are expected to encourage and monitor the HGSFP programme, encouraging pupils and teachers in the production unit and revamp the production unit among other responsibilities they have in school.

#### *Roles of MOGE in sustaining the HGSFP*

In this study, the identified roles of the Ministry of General Education officials from headquarters include supplying foodstuffs to schools. MOGE should exercise direct oversight over all the schools in the programme and embark on continuous and vigorous monitoring and evaluation exercise.

#### *Roles of Cooperating partners in sustaining the HGSFP*

Cooperating partners can assist with major resources such as farming supplements and equipment like hoes to ensure school communities can sustain the programme on their own. They could also help in the provision of trees for schools to plant and eventually have the firewood from within school premises.

#### *Localising the HGSFP*

When it came to localising the HGSFP the findings revealed that stakeholder collaboration, massive sensitisation on the importance of the programme and engaging in school production units with farming inputs from the government would sustain the programme. This is in line with the findings of [17] whose study in Ghana was on running an effective and sustainable school feeding.

## 6. Conclusions

The HGSFP is a very effective programme in promoting good health, fighting high dropout rates, high absenteeism rates as well as promoting retention and school attendance in primary schools. However, the programme faces some setbacks. The major challenges involved insufficient time allocated in the feeding process which affects feeding time, pupils' inability to bring plates but instead share plates or use plastics which is not hygienic, parents' unwillingness to cook for their pupils because there is no incentive given to them, lack of school financial support and inconsistency in food delivery. The HGSFP can be sustained through stakeholder collaboration, which involves the efforts of the government, community, school and cooperating partners to come in and play different roles. Secondly, HGSFP can be sustained through school production units where the schools begin to grow their own crops with the help of the government and cooperating partners providing some form of capital for farming inputs to start their projects

## 7. Recommendations

The HGSFP should be decentralised to school and community levels. Community farmers within the school locale can be engaged as the current situation does not conform to the term 'home - grown'; and the Ministry of General Education in partnership with the Ministry of Agriculture should consider empowering primary schools with grades 1 to 7 with some farming inputs for them to kick start production units in schools.

## 8. Limitations of the Study

The researchers could not collect data from a large number of pupils and parents as planned due to the COVID - 19 pandemic which caused a sudden closure of all schools in Zambia. The researchers only managed to interview a limited number of parents and a few pupils in examination classes that were allowed to resume classes.

## 9. Future Scope

The following are possible areas for future research: (i) Determining factors that negatively influence parents not to participate in school HGSFP activities; and (ii) Establishing the capacities of schools to run their own Home - Grown food for the school feeding programme.

## 10. Declarations

### 10.1 Ethical considerations

Permission from the Sinda District Education Board Secretary (DEBS) was given. The study participants were informed about the research aim and methods before signing the informed consent form. For the pupils, consent was obtained from the head teachers of respective schools. All details of the research were explained to the study participants, including the fact that they were free to participate or choose not to participate if they felt uncomfortable. They were free to withdraw anytime if they so wished. The researchers also observed confidentiality during the study by not naming any targeted school, headteacher, teacher or pupil.

### 10.2 Availability of Data and Materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

### 10.3 Competing Interests

The authors declare that they have no competing interests.

### 10.4 Funding

This research did not receive any funding.

## 11. Authors' Contributions

TLB conceptualised the study and collected data in the field. Both TLB and EK participated in analysing the data and drafting the manuscript. EK supervised the project, in terms of design of the study, the field work and analyses. Both authors read and approved the final manuscript.

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