



Nyang'au, M. K., Ochola, W. A., Maobe, S. N. (2022). Out of school youth reflection on participation in decision making on implementation of school agriculture programme. *International Online Journal of Education and Teaching (IOJET)*, 9(2), 637-660.

Received : 29.11.2021
Revised version received : 07.02.2022
Accepted : 10.02.2022

OUT OF SCHOOL YOUTH REFLECTION ON PARTICIPATION IN DECISION MAKING ON IMPLEMENTATION OF SCHOOL AGRICULTURE PROGRAMME

(Research Article)

Corresponding author:
Martha Kemunto Nyang'au
Kisii University, Kenya
mkemunto@kisiiversity.ac.ke

Washington A. Ochola
Kisii University, Kenya
aochola@kisiiversity.ac.ke

Samson N. Maobe
Kisii University, Kenya
snmaobe@kisiiversity.ac.ke

Biodatas:

Martha Kemunto Nyang'au is currently a Lecturer in the Department of Agricultural Education and Extension, Kisii University. She has received Bachelor's and Master's of Science degrees in Education and Extension in Egerton University and PhD in Agricultural Education and Extension. Her research interests are in agricultural education and extension.

Washington A. Ochola is currently a Lecturer in the Department of Agricultural Education and Extension, Kisii University. He received Bachelor's and Master's of Science degrees in Education and Extension in Egerton University and PhD in Agricultural Extension and Rural Development. His research interests are in agricultural extension and rural development.

Samson N. Maobe is an Associate Professor in the Department of Agricultural Education and Extension, Kisii University. He previously studied Bachelor's of Science degree in Agriculture, Master's and PhD degrees in Agronomy from University of Nairobi. His research interests are in agronomy, agricultural extension.

Copyright © 2014 by International Online Journal of Education and Teaching (IOJET). ISSN: 2148-225X. Material published and so copyrighted may not be published elsewhere without written permission of IOJET.

OUT OF SCHOOL YOUTH REFLECTION ON PARTICIPATION IN DECISION MAKING ON IMPLEMENTATION OF SCHOOL AGRICULTURE PROGRAMME

Martha Kemunto Nyang'au
<https://orcid.org/0000-0001-7799-0362>
mkemunto@kisiiversity.ac.ke

Washington A. Ochola
<https://orcid.org/0000-0002-2706-5950>
aochola@kisiiversity.ac.ke

Samson N. Maobe
<https://orcid.org/0000-0001-9570-4868>
snmaobe@kisiiversity.ac.ke

Abstract

Secondary school agriculture programme is meant among other benefits to prepare youth in attaining self-reliance using vocational skills gained, in the post-schooling period as they transition to adulthood. A study was done to determine reflection of out of school youth on participation in decision-making on implementation of the programme in an effort to establish measures to improve its outcomes. In the feedback, the out of school youth rated their level of participation in decision making on implementation at a mean score of 6 out of 10 indicating that there is still room for improvement. The out of school youth rated as very important the five strategies proposed to enhance their engagement in decision making on implementation. The strategies 4 and 6 were ranked more significantly very important thereby standing out from the rest. Strategy 4, states that if school administration could listen to the voices of youth it will build confidence for free discussions on the challenges faced in implementation. Strategy 6 advocates for the inclusion of youth in decision making on the use of the school farm to enable them air their views on its proper utilization as a training facility rather than being used to administer punishment to errant students. There was a strong positive correlation between the level of participation in decision making and the level of implementation of the school agriculture curriculum. The high rating of strategies proposed suggests the need to address the pertinent issues in them so as to enhance participation of youth in decision making on implementation for improved outcome. Thus, the inclusion of feedback from the out of school youth and elements of the strategies developed in the review of school agriculture programme would improve its effectiveness in attaining intended objectives.

Keywords: Out-of-school youth reflection, decision-making, agriculture

1. Introduction

The vocational objective of introducing secondary school agriculture curriculum is to develop self-reliance in youth, problem solving abilities and occupational outlook in young people based on agriculture, which is the main fall-back option for youth livelihood in rural areas (Konyango, 2010; Republic of Kenya, 1984; Njoroge, 2006). School agriculture programme is therefore meant to expose a critical mass of the population who are youth to the basic principles and practices of the agro-sector which is the economic backbone of rural areas in developing world. According to Reidmiller, (2002) there is hope that youth would apply the agricultural knowledge and skills learned in the subject on their own even after school. However, Njenga, Mugo and Opiyo, (2012) observe that schools have generally tended to alienate youth from careers in agriculture through the manner in which the subject is taught. According to Konyango (2010) the participatory implementation of school agriculture curriculum has not made an impact on the practical aspects of the subject, hence suggesting shortfalls in student outcome particularly in the acquisition of vocational agricultural skills meant for self-reliance. The rigid top-down approach in decision making in Kenya's national education system does not give youth space to engage in the decisions of implementation of agriculture curriculum at school level (Konyango, 2010). Therefore, the youth have no say when schools exploit the examination process to meet the academic aim at the expense of equipping them with the practical skills as intended so as to achieve the vocational objective as well. Konyango and Asienyo (2015) identify the need for participatory approach in decision making on implementation of the programme as solution noting that it may improve: communication between participants, promote community support, facilitate acquisition of skills and knowledge and also lead to sustainable implementation strategies. The inclusion of youth in the decision making on implementation of the programme will allow them to voice their concerns and interests for their benefit. The United Nations Convention (UNC) on the Rights of the Child 1989 promotes the right of involving young people in decisions that affect their lives (UN, 1989) and the vocational objective in school agriculture curriculum should not be exception. In Kenya, the ministry of state and youth affairs that is mandated to ensure that youth play a critical role in programmes which concern them for improved outcome is silent on their engagement in decision making to ensure ownership and successful implementation of programmes hence creating a gap (MSYA, 2007).

Studies on secondary school agriculture programme have concentrated on improving the academic performance of youth in the subject with more emphasis being put on the influence of pedagogical methods and their influence on excellence in scores to meet the requirements for the white collar job market. For instance, Kibett, (2002) investigated the effect of the project method of teaching and problem solving approach in the agriculture subject on learners' academic performance. Ngesa,(2002) researched on the experiential learning in agriculture subject. Nyang'au, Kibett and Ngesa (2011) studied the factors influencing the initiation and implementation of KCSE agriculture projects. Other studies have been on the utilization of the school farm for teaching agriculture with results indicating minimal usage (Konyango & Asienyo, 2015). Others are on factors influencing choice of agriculture as a subject of study by students (Muchiri, Odilla & Kathuri, 2013; Kirimi, 2015; Chemjor, 2016). Thus, from the available literature, there is scanty information on studies done to further the vocational objective of school agriculture programme making it appear as if the subject curriculum was meant purely for academic purpose which is not the case (Konyango, 2010).

To better understand how to improve self reliance outcomes in youth who undergo secondary school agriculture programme, there is need to determine reflection of out of school youth on how to increase youth participation in decision making on its implementation. Konyango (2010) note that implementation of practical school subjects like agriculture should set the

students for productive life and make tangible contributions to sustainable community livelihoods. However, the study by Konyango (2010); Konyango and Asienyo (2015) shows that the current status of the subject in schools does not reflect scientific and practical ideals of school agriculture but rather the emergence of theoretical teaching of the subject contrary to the expectations, suggesting that it may be the source of the deficit especially inadequate vocational skills in out-of-school youth for self-reliance hence their lack of interest in agro-based activities.

The initiative by the Kenyan government to have agriculture as a subject in school curriculum is supported by UNESCO (2012) and World Bank (2000). School agriculture curriculum is meant to be implemented through a participatory approach. The purpose is to ensure that a critical mass of the population who are youth are imparted with the basic knowledge and skills in agriculture, change their attitude and thus prepare them for the kind of existing jobs in rural areas (Konyango, 2010; Konyango and Asienyo, 2015). Out of school youth in particular are meant to be the major beneficiaries as skills acquired in the programme are meant to enable them become independent as they transit to adulthood. The United Nations (2003); MSYA (2007) indicate that any programme targeting youth should seek for their views in order to make implementation process successful for gainful outcomes. Participation of out of school youth in decision making on implementation of school agriculture programme which they have undertaken would entail drawing on their reflection on ideas, fears, concerns, interests and aspirations. The inclusion of such reflections of beneficiaries in curriculum would ensure appropriate decisions and policies are made to guarantee successful implementation arrangements for their own benefit, their societies and the nation as a whole.

A study by Konyango (2010) shows that school agriculture teachers are teaching the subject neither practically nor putting emphasis on learning by doing which is the guiding philosophy of the subject. The study indicates a decline in the support and enthusiasm in the teaching of agriculture as a practical subject. Most teachers have shifted their interest to instructing biology because it is less cumbersome, require less institutional support and could partly be taught theoretically (Konyango (2010). The result is that the youth that have gone through school agriculture programme show lack of vocational skills and interest in the occupation that is a fall-back option for self-reliance in rural areas. There is thus an increased number of unemployable youth who are also not innovative enough to take up agriculture as business like any other venture for independence. The initial vocational aim of school agriculture of imparting the youth with basic skills for self-reliance may have been abandoned in pursuit of better grades in the academic objective that promise white collar jobs (Konyango, 2010). In this study, the failure to attain the vocational objective is attributed to the possibly low youth participation in decision making on implementation of the programme where they can articulate their concerns and desires.

Young people below 35 years of age comprise 75% of Kenya's total population. These youth are innovative and full of ideas, hence a resource that should be treasured for national development by being taken into consideration in decision-making processes on matters affecting their lives. Kenya being a democratic nation, with an agro-based economy, it is expected that young people should take an active role in decision making in matters of agriculture in order to articulate their challenges, aspirations and interests in the sector as regard to programmes that target to involve and benefit them for purposes of ownership and successful implementation. But Kenya's policy blueprints fall short in demonstrating the

engagement of youth in decision making on implementation of agricultural programmes meant to benefit them thereby leaving a gap that deserves the attention.

The out-of-school youth are meant to be the major beneficiaries of secondary school agriculture programme in self-reliance using the vocational skills they have acquired in the learning process on the subject. However from the available literature, little investigation has been done in getting the reflections of out-of-school youth on role of learners in decision-making on implementation of the agriculture curriculum especially during their schooling days. Such feedback by out-of-school youth would possibly provide independent evidence from adolescents that are not under the control of school. The feedback would inform improvement in teaching school agriculture for better outcome. The engagement of out of school youth in decision-making in the implementation of school agriculture programme would help identify strategies for improved outcome. The expectation is that out-of-school youth are no longer under the maneuver of institutional management and would therefore be expected to give independent opinion for the improvement of learners participation in decision-making on school agriculture for success in attainment of improved outcome. The out of school youth are without fear or favour, unlike those still in school that you might fear that they could easily be influenced by the school management and provide biased opinion. The World Youth Report (WYR), 2003) note that youth participation in decision-making promotes their well-being and development; therefore it is a high time that societies embraced the strategy of youth inclusivity in addressing their concerns. It is for the reason that this study sought to determine feedback opinion from the out-of-school youth that have gone through the school agriculture programme, and are within their communities where they are meant to be enjoying self-reliance arising from the vocational skills acquired from the subject during their schooling days.

The objective of the study is to find out the reflection of out-of-school youth on their participation in decision-making on implementation of school agriculture programme and to develop youth perceived strategies that would enhance their interest in the implementation process, lead to the success of the curriculum in imparting vocational skills for self-reliance which is one of the major goal for which school agriculture was initiated.

2. Methodology

2.1 Setting

The study was carried out in Kisii and Nyamira counties region, southwest Kenya highlands in 2019. Jaetzold and Schmidt (1982) characterized the Kisii and Nyamira region into five agro-ecological zones (AEZs). The characterization into five AEZs was done using production potential of the area, cropping, livestock systems and taking into account climatic factors of rainfall found in different parts of the region. In this study, the AEZs have been adopted as farm types to provide different and unique farming systems from which sampling was done. The farm types were used to obtain diverse out of school youth population segments of respondents. Such varied youth samples varied in exposure, opportunities and experiences in participation in decision making on implementation, and application of vocational skills attained in school agriculture for self-reliance by virtue of their environments. The farm types indicated by the agro-ecological zones are typical of similar ones found in other parts of Kenya and therefore representative of major farming systems available to youth. The farm types for the Kisii-Nyamira counties region are specifically amongst the prevalent ones in the Kenyan highlands and are as follows:

- 1) Tea-dairy zone, 2) Tea –coffee zone, 3) Maize-pyrethrum zone, 4) Coffee-banana zone, 5) Marginal-sugarcane zone.

During their schooling days the out of school youth would have gone through either of the three school categories prevalent in the study area as follows: Extra-county, County or sub-county.

2.2 Out of school youth population

The target population comprised of out of school youth who had studied agriculture subject in secondary education during their schooling days and were registered with youth groups promoting agricultural activities for livelihood. The out of school youth were purposefully sampled from officially registered youth groups spread across the five farm type zones of the two counties. Specifically youth who had studied secondary school agriculture and therefore presumed to have acquired vocational skills in the subject were selected for the study to provide independent feedback opinion based on self-reliance challenges out of school during the application of vocational skills acquired in school agriculture. These youth lack formal employment and find themselves in rural areas where more than 75% of the population is engaged in agriculture for livelihood, something that is typical of most countries in Africa. The youth find themselves falling back to vocational skills gained in secondary school agriculture to carry out agro-related activities for self reliance.

2.3 Research Design

The investigation adopted an-ex-post facto research approach to study the influence of out of school youth participation in decision making on implementation of school agriculture programme. According to Simon & Goes, (2013) ex-post facto approach is an investigation in which there is no interference from the researcher and in which it is not possible or acceptable to manipulate the characteristics of human participants. The researcher therefore did not create a treatment but examined the effects of a naturally occurring treatment after it had taken place. This means after the fact or retrospectively (Cohen, Manion & Morrison, 2007; Kothari, (2004). A cross sectional survey design was used in data collection.

2.4 Sample Size and Sampling Procedure

There were 280 out of school young people who had studied agriculture in secondary schools in the 75 registered youth groups actively involved in the implementation of agricultural activities for self reliance. The youth groups are spread in the five farm types of Kisii and Nyamira region. In accordance to the sampling Tables in Krejcie & Morgan (1970); Kathuri & Pals (1993) which summarizes the population sizes and appropriate sample sizes, the study adopted a sample size of 160 from the 280 population of out of school youth. Purposive and stratified random sampling procedures resulted in 29 out of school youth being selected from different farm types as follows: 29 youth from tea-dairy, 9 from maize-pyrethrum, 32 youth from tea-coffee, 32 from coffee-banana, and 58 youth from sugarcane chewing and crushing farm type. The youth numbers sampled per farm type were according to their proportions in the total population. At farm type level, simple random sampling technique was used to select the youth who participated in the study as respondents.

2.5 Instrumentation

Data was collected using a questionnaire because the respondents involved were literate and, therefore could read questions and respond appropriately by filling. The questionnaires were

administered face to face. Daniel, (2004) indicates that with questionnaires the participants can fill responses at their own convenience, and that it allows some time for the respondents to familiarize with the questions and think about the answers. The questionnaire used was closed type and had two likert rating scales; one coded 1 to 10 for measuring the level of participation in decision making and level of implementation of school agriculture programme, where 1– 4 meant low level, 5 – 7 was average while 8 – 10 meant high level of participation. The other scale was coded, 1 to 5, and was used to rate the strategies proposed to increase the participation of youth in decision making on the implementation of school agriculture, where: 1=Not Important; 2=Least important; 3=Important; 4=Very Important, 5=Extremely Important. The questionnaire had three sections, with section A addressing the level of participation in decision making, B was on level of implementation of school agriculture programme and C had statements on strategies proposed to increase participation of youth indecision making.

2.6 Data Collection procedures

The questionnaires were left with sub-county agricultural extension officers in-charge of the registered youth groups to assist in their administration. The in-charge extension officers had been briefed by the researcher who had made prior visits to their offices on administration procedures. This was occasioned by the tight schedule of some of the youth who were involved in side hustle activities and it required the extension officer to invite them to one central place and this would be done at convenient time when all youth were to be in attendance to avoid biased sampling of those to participate. The researcher picked the filled questionnaires from sub-county extension officers after a period of one month as agreed. There was 95% return back rate of the filled questionnaires. The respondents replied to the questionnaire items by ticking [] in the two scales that were provided appropriately.

2.7 Data Analysis

The following qualitative and quantitative statistical tools were applied in data analysis: percentages, two tailed t-test, analysis of variance, Tukey post hoc test, Spearman correlation two tailed and linear correlation. Percentages were use to describe the strategies proposed to increase participation of out of school youth in decision making process on implementation of school agriculture programme. The two tailed t- test was used to determine the difference of gender of out of school youth in decision-making on implementation of school agriculture programme. The F-test was used to establish if there were significant differences among out of school youth in decision-making on implementation of school agriculture as a result of age, agro-ecological zones (farm type), and approximate parents' land sizes. The Tukey post hoc test was applied in mean separation where there were significant differences. Spearman rank correlation coefficient two tailed test was employed to determine the relationship between the levels of participation in decision-making on implementation of school agriculture programme. Linear correlation was used to establish the influence of participation in decision making by of out of school youth in school agriculture programme and implementation process.

3. Results

3.2 Characteristics of the study population

3.2.1 Distribution of out of school youth by age bracket

The distribution of out of school youth population in the study area by age bracket is presented (Table 1). The age of out of school youth was almost uniform across the different brackets, where 33% are aged 21-25 years. The other proportions of 28% and 26% of out of school youth are in age brackets of 25-30 and 31-35, respectively. The remaining 11.3% are in the age bracket of 15 to 20 years (Table 1).

Table 1. *Distribution of out of school youth by age*

Age in years	Youth out of School	
	Frequency	Percent
15 - 20	18	11.3
21 -25	54	33.8
26 - 30	46	28.8
31-35	42	26.3
Total	160	100.0

3.2.2 Distribution of out of school youth by gender

The distribution of out of school youth in the study area in percentage by gender is provided in Table 2. In the sample population of out of school youth, the proportion of female was more than male, whereby the latter constituted 47.5 % while 52.5% were female.

Table 2. *Distribution of out of school youth by gender*

Gender	Youth out of School	
	Frequency	Percent
Male	76	47.5
Female	84	52.5
Total	160	100.0

3.2.3 Distribution of out of school youth by parents' land size

Table 3 presents results on the distribution of out of school youth according to their parents approximate land size. Most out of school youth (57.6%) had parents with 0 – 2 acres of land, followed by 30.6% youth whose parents' land sizes were between 2 -3 acres. The other proportions (7.5% and 3.1%) had parents with 3 - 4 and 4 - 5 land acreages, respectively. The same proportion (1.3%) of out of school youth had parents with land holdings of between 5 - 10 and above 10 acres.

3.2. 4 Distribution of out of school youth by access to parents' land

The result in Table 4 shows the distribution of out of school youth by access to parents' land for use. Most out of school youth (54.4%) have access to parents' land, while 43.1% lack the same.

Table 3. *Distribution of youth out of school parents' land Size*

Land in acres	Youth out of School	
	Frequency	Percent
0- 2	90	56.3
2 - 3	49	30.6
3 -4	12	7.5
4 -5	5	3.1
5 - 10	2	1.3
Above 10	2	1.3
Total	160	100.0

Table 4. *Distribution of out of school youth by access of parents' land for use*

Access to land	Youth out of school	
	Frequency	Percent
Yes	91	56.9
No	69	43.1
Total	160	100.0

3.2.5 Distribution of out of school youth by agro- ecological zones

The distribution of out of school youth population in relationship to agro-ecological zones (AEZs) adopted as farm types is presented in Table 5. There is a near uniform distribution of out of school youth residents across the different farm types as follows: tea/coffee and sugarcane chewing/crashing zone have almost the same number of out of school youth, 21.9% and 21.3 %, respectively; the coffee/banana zone had 20.0%. The same proportion 18.8% and 18.2%) of out of school youth are from the tea/dairy and maize/pyrethrum zones, respectively.

Table 5. *Distribution of out of school youth by farm types*

Main farming activity Zone	Youth out of School	
	Frequency	Percent
Tea / Dairy	30	18.8
Maize / Pyrethrum	29	18.2
Coffee / Banana	32	20.0
Tea / Coffee	35	21.9
Chewing or Crashing cane	34	21.3
Total	160	100.0

3.3 Level of participation of youth out of school in decision making on implementation of school agriculture programme by gender

Table 6 presents result on the level of participation of out of school youth in decision making on implementation of school agriculture programme by gender. The result indicates that gender makes a non-significant difference in the level of participation in decision making by out of school male and female youth ($M = 5.75$, $SD = 5.896667$) and ($M = 6.33$, $SD = 4.947791$), $t(153) = 1.97559$, $p = 0.116414$ respectively on implementation of the programme. Therefore there was no difference between male and female youth of either group in decision making on implementation of school agriculture programmes.

Table 6. *T-test result on gender difference of out of school youth on level of participation in decision making on implementation of school agriculture programme*

Level of participation in decision making	Out of school Youth Gender			
	Total	Male	Female	Total
1.00	9	7	3	10
2.00	13	3	3	6
3.00	21	2	6	8
4.00	14	8	3	11
5.00	57	17	14	31
6.00	47	4	7	11
7.00	40	13	17	30
8.00	69	15	20	35
9.00	33	4	8	12
10.00	58	3	3	6
N	361	76	84	160
Mean		5.75	6.33	
SD		5.897	4.948	
Df	228			153
t-value	1.970			1.976
p-value	0.070			0.116

3.4 Level of participation of out of school youth in decision making on implementation of school agriculture programme by parents' land size

Table 7 shows result on the level of participation of out of school youth in decision making on implementation of school agriculture programme by parents land size. Kruskal Wallis test shows a highly significant difference amongst out of school youth on the level of participation in decision making on implementation of school agriculture programme based on variation of parents' land size ($K(160, 5) = 32.394$, $p < .001$) (Table 7). Thus, the level of participation in decision making on implementation of school agriculture programme by out of school youth differ with the approximate land size of the parents.

Table 7. *Kruskal Wallis non-parametric test on the difference of out of school youth on level of participation in decision making on implementation of school agriculture programme by parents' land size.*

N	160
Test Statistic	32.394
df	2
Significance	.001

The result was further subjected to Dunn's post hoc test and the outcome is presented in Figure 1. The result indicates that youth whose parents' land size was 0 to 2 acres had significantly lower level of participation in decision making than those whose parents' land size was between 2-3 and 3-4 acres (Figure 1).

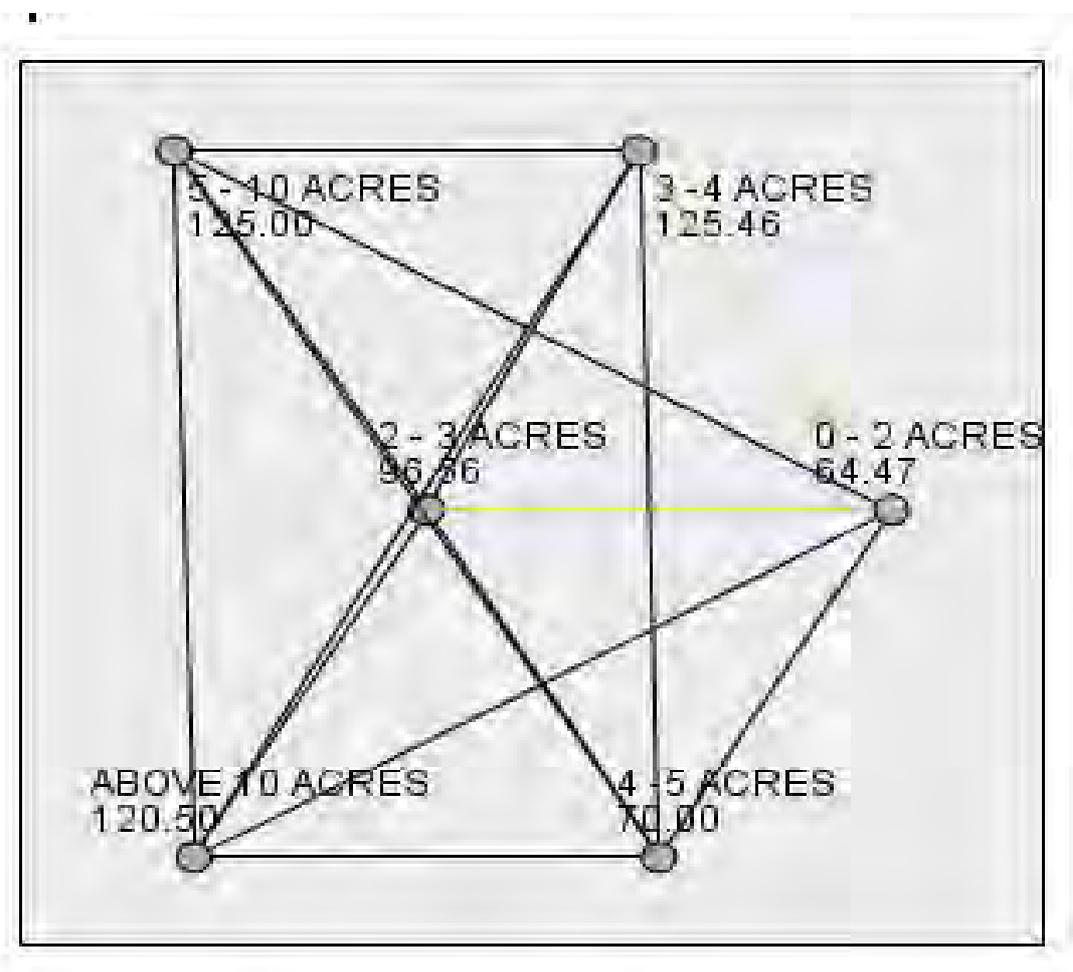


Figure1. *Pair-wise comparison of out of school youth on level of participation in decision making on implementation of school agriculture programme by parents' approximate land size.*

Table 8 presents the spearman rank correlation coefficient (two tailed test) result on out of school youth parents' land size and the level of participation in decision making on implementation of school agriculture programme . The result shows a significant positive association between parents approximate land size and the level of participation in decision

making on implementation of school agriculture programme ($r_s (158) = .407, p < .001$) by out of school youth.

Table 8. *Spearman correlation coefficient of parents' land size and level of participation in decision making on implementation of school agriculture programme of out of school youth*

Aspects of correlation		Level of participation in decision making by out of school youth	Approximate size of parents land	
Spearman's rho	Correlation	1.000	.407**	
	Level of participation in decision making	Coefficient	.000	
		Sig. (2-tailed)	.000	
		N	160	
	Approximate size of parents land	Correlation	.407**	1.000
		Coefficient	.000	.
	Sig. (2-tailed)	.000	.	
	N	160	160	

3.5 Level of participation of out of school youth in decision making on implementation of school agriculture programme by school category attended

The analysis of variance (ANOVA) result in Table 9 shows the influence of the out of school youth level of participation in decision making on implementation of school agriculture programme by school category attended. The F-test result ($F (159) = 7.527, p \text{ value} = 0.001$) indicates that school category attended by out of school youth made a highly significant difference on their level of participation in decision making on implementation of school agriculture programme.

Table 9. *Analysis of variance (ANOVA) result of out of school youth on the differences in the level of participation in decision making on level of implementation of school agriculture programme by school category attended*

Sources of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	75.814	2	37.907	7.527	.001
Within Groups	790.680	157	5.036		
Total	866.494	159			

Further analysis of the result of out of school youth on mean separation using Tukey post hoc test is presented in Table 10. The result shows a significant difference in the level of participation of out of school youth from sub-county and extra-county schools in decision making on implementation of school agriculture. The out of school youth from extra-county school category registered a higher level of participation ($M=7.0526$) compared to those from the sub-county schools ($M=5.3521$). However, there was a non-significant difference in the level of participation in decision making, between out of school youth from sub-county and county schools which had means of $M=5.3521$ and $M=6.2941$, respectively.

Also, the county and extra-county out of school youths showed non-significantly different means $M= 6.2941$ and $M=7.0526$, respectively indicating similarity in their level of participation in decision making on implementation of school agriculture. The result demonstrate that the school categories possibly differ in aspects that facilitate learners participation in decision making on implementation of the programme.

Table 10. *Tukey post hoc test result of out of school youth on the differences on level of participation in decision making on level of implementation of school agriculture programme by school category attended*

School Category	N	Subset for alpha = 0.05	
		1	2
Sub County	71	5.352	
County	51	6.294	6.294
Extra County	38		7.053
Sig.		.093	.212

3.6 Strategies proposed to increase participation of out of school youth in decision making on implementation of school agriculture programme

Table 11 shows analysis of variance (ANOVA) result on the rating of strategies proposed to increase participation of out of school youth in decision making on implementation of school agriculture programme. The F-test result ($F = 2.727$, $df = 160$, P value = .019) indicate a significant difference in the ratings of the five strategies proposed to increase the level of participation in decision making on implementation of school agriculture programme by out of school youth.

Table 11. *Analysis of variance (ANOVA) result on rating of strategies proposed to increase participation of out of school youth in decision making on implementation of school agriculture programme*

Sources of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.118	5	3.224	2.727	.019
Within Groups	1127.631	155	1.182		
Total	1143.749	160			

The Tukey post hoc test in Table 12 is on the differences in mean separation of the ratings of the strategies proposed to increase participation of out of school youth in decision making on implementation of school agriculture programme. The results indicate that the mean ratings of strategies 6 and 4 of $M=3.9250$ and $M=3.9313$, respectively are similar and significantly higher than those of the rest. The mean ratings of strategies 3 and 5 of $M=3.8563$ and $M=3.7688$, respectively are the same while strategy 2 has significantly the lowest mean ($M=3.5625$). Thus, out of school youth rated strategies 6 and 4 as more significantly very important than the rest, including strategy 3 which is on decision making on implementation of school agriculture programme. Strategy number 4, states that if school administration could listen to the voices of youth it will build confidence for free discussions on the challenges faced in implementing school agriculture programme. Strategy 4, suggests that possibly the school principals and agriculture teachers do not listen to the youth even when

they would be having genuine issues in the implementation of school agriculture curriculum thus curtailing success of the programme.

Table 12. *Tukey post hoc test result on the difference in mean rating of strategies proposed to increase participation of out of school youth in decision making on implementation of school agriculture programme*

No.	Strategies proposed for increasing participation of out of school youth in decision-making on implementation of school agriculture programme	N	Subset for alpha = 0.05	
			1	2
2	The views of youth to be listened to and be seen to influence the implementation of school agriculture especially the selection of KCSE agriculture projects	160	3.5625	
1	Adults to view youth as actors in decision-making now and involve them rather than avoiding them as immature people who should be seen and not heard	160	3.7125	3.7125
5	A School administration that recognizes youth and seeks for their ideas on how products from their agriculture projects should be used like those from KCSE	160	3.7688	3.7688
3	A bottom-up approach in decision-making on matters of curriculum will ensure youth air their views on having agribusiness and ICT in school agriculture	160	3.8563	3.8563
6	Including youth on matters of the school farm will give them a chance to suggest better use rather than being used to administer punishments	160		3.9250
4	If school administration can listen to the voices of youth it will build confidence for free discussions on the challenges faced in implementing school agriculture	160		3.9313
	Sig.		.151	.466

3.7 Relationship between the level of participation in decision making and level of implementation of school agriculture programme by out of school youth

Table 13 shows the relationship between the level of participation in decision making by out of school youth and the level of implementation of school agriculture programme.

Spearman correlation coefficient result ($r_s(158) = .767, p < .001$) indicates a strong positive relationship between the level of participation in decision making and the level of implementation of school agriculture programme by out of school youth (Table 13).

Table 13. Spearman Correlation coefficient on the level of participation in decision making and level of implementation of school agriculture programme by out of school youth

The correlations		Level of participation in decision making by out of school youth	Level of implementation of school agriculture programme by out of school youth
Spearman's rho	Level of participation in decision making by out of school youth	Correlation Coefficient	1.000
		Sig. (2-tailed)	.767**
		N	.000
Spearman's rho	Level of implementation of school agric programme by out of school youth	Correlation Coefficient	.767**
		Sig. (2-tailed)	1.000
		N	.000

Discussion

4.1 Characteristics of the study population

4.2.1 Distribution of out of school youth by age bracket

Majority of the out of school youth fall in the age bracket of 21-25 years old (Table 1). The distribution on age of out of school youth reflects the correct situation since the age bracket of 21- 25 years old constitute those young people who have completed high school but have not joined tertiary institutions for various reasons. The finding shows that the out of school youth have 10 - 15 years to attain 35 years hence transit to adulthood. It is during the period that youth are meant to benefit in self-reliance from vocational skills gained in secondary school agriculture. The school subject is meant to impart knowledge and skills and impact on a critical mass of youth to make them self reliant, thus contributing to a critical mass of population knowledgeable in agriculture, the economic backbone of rural areas in Africa. The youth are expected to demonstrate the skills during the 10 - 15 years of post schooling period in form of using the skills for independence as they transition to adulthood.

4.2.2 Distribution of out of school youth by gender

In the sample population of out of school youth, the proportion of female was more than male (Table 2). The observation corroborates the FAO (2011) who note that more female are usually involved in the agricultural sector and in implementing improved agricultural activities than their male counterparts.

4.2.3 Distribution of out of school youth by parents' land size

Most of the out of school youth have parents with meagre land sizes of 0–2 acres (Table 3). The observation is in line and typical of the situation on the ground concerning land in the

Kenyan highlands where the study was carried out. The implication of the result is that most out of school youth may not be in a position to put into practice the knowledge and skills acquired from school agriculture back at home because they rely on parents land to implement agriculture for self reliance which apparently would be scarce.

4.2. 4 Distribution of out of school youth by access to parents' land

Land accessibility to out of school youth is not a problem; at least one-half of out of school youth (54.4%) have access to parents' land for their own use (Table 4). The finding implies that parents land size does not limit youth from accessing it for use so long as one was interested. However, the 43.1% of the out of school population that does not have access to parents land could for practical purpose be considered a large proportion that may not be ignored. The later observation corroborates Afande, Maina & Maina, (2015) who basing their finding on the Kenya census of 2009 noted that youth are disenfranchised lot in terms of land ownership. The observation also agrees with White (2012) who note that due to absolute land rights by the older generation who either sale the land or allocate it outside the family the youth lack access and hence are disenfranchised, especially in areas where there are no other alternatives to a decent livelihood. The finding is remarkable given the fact that many parents in the study area had small land holdings of 0 – 2 0 acres, but the proportion of more than one-half could still allow their sons and daughters access for their use.

4.2.5 Distribution of out of school youth by farm types

There is a near uniform distribution of out of school youth population across the different agro-ecological zones (AEZs) adopted as farm types (Table 5). The finding implies that farm types did not affect the distribution of youth, despite the fact that they present varied agricultural opportunities for self-reliance as they represent different cropping and livestock production systems. Farm types, also present varied crop and livestock production potentials caused by different rainfall, temperature and soil conditions that present diverse opportunities and challenges to the youth in the application of vocational skills gained in school agriculture. The result is within expectation given that the residence distribution is a natural phenomenon. The agro-ecological zones of the world, Kenya included are a natural phenomenon and youth have no option or choice over them and where they happen to reside. Different conditions found in the diverse agro-ecological zones (AEZs) present varied farming activities and opportunities for youth out of school youth, depending on where they find themselves. Thus, youth in the various farming zones learn to adopt and implement activities suitable to their locality and the farm types present diverse segments of out of school youth for the study.

4.3 Level of participation of youth out of school in decision making on implementation of school agriculture programme by gender

Table 6, suggests that both male and female out of school youth engaged similarly in decision making on implementation of school agriculture curriculum. Therefore, the dominance of female proportion in the study population does not bias the outcome of the study. The finding suggest that the effectiveness of school agriculture programme in imparting skills and knowledge for self-reliance to out of school youth is the same irrespective of gender since both male and female youth participate the same in decision making on its implementation. Lack of gender differences in participation of youth in decision making on youth programmes

has been noted in some cases before. Findings of the present study concur with Borden; *et al.* (2006) who established that the decisions made by Latino and Latina youth to participate in youth programmes did not differ with gender. Both youth identified personal development and the positive impacts the programmes have in their lives as the primary reasons for deciding to participate and not gender (Borden; *et al.*, 2006). The findings particularly apply to youth who may not have direct access to land and production resources unlike male adults.

4.4 Level of participation of out of school youth in decision making on implementation of school agriculture programme by parents' land size

Kruskal Wallis test (Table 7), Dunn's post hoc test (Figure1) and Spearman correlation coefficient test result (Table 8) confirm that participation in decision making on implementation of school agriculture programme by out of school youth is influenced by the approximate land size of the parents. Youth whose parents' land size was 0 -2 acres had considerably a lower level of participation in decision making on implementation of agriculture programmes than those whose parents' land was more than 2 acres. The observation suggests that the level of participation in decision making on implementation of school agriculture programme by out of school youth increased with rise in parents land size within the land range of 0 to 4 acres that is prevalent in the study region. The size of land owned by the parents offer youth the opportunity to experience the value of practical application of agricultural knowledge and skills learned in school agriculture for self reliance. The result indicates that out of school youth made decisions to use parents' land to initiate crop or livestock production projects at home for practice on creation of livelihoods and independence, based on approximate land size of the parents. The observation concurs with the study by Adesina, and Eforuoku (2016) who indicate that farm size significantly influenced the intensity of participation of youth in related programmes.

4.5 Level of participation of out of school youth in decision making on implementation of school agriculture programme by school category attended

The F-test result ($F(159) = 7.527$, $p \text{ value} = 0.001$) indicates that school category attended by out of school youth make a highly significant difference on level of participation in decision making on implementation of school agriculture programme (Table 9). Tukey post hoc test confirms a significant difference in the level of participation of out of school youth from extra-county and sub-county schools in decision making on implementation of school agriculture. The out of school youth from extra-county school category registered a higher level of participation ($M=7.0526$) compared to those from the sub-county schools ($M=5.3521$) (Table 10). However, there was a non-significant difference in the level of participation in decision making, between out of school youth from sub-county and county schools which had means of $M=5.3521$ and $M=6.2941$, respectively. Also, the county and extra-county out of school youths showed non-significantly different means $M= 6.2941$ and $M=7.0526$, respectively indicating similarity in their level of participation in decision making on implementation of school agriculture. The result is possibly because school categories differ in their resource endowment for implementation of agriculture programme. This probably in turn affects the decisions made by youth during implementation process. The aspects of the programme in which they are likely to differ are such as the type of agriculture project selected, which in turn may vary their level of decision making. The finding on the influence of school category attended by respondent is in agreement with earlier observation by Nyang'au, Kibett & Ngesa (2011) who note that owing to variations that arise from resource endowment of institutional categories, various secondary schools opt for different

choices of agriculture projects for the KCSE examination. The school categories differ in resources and facilities because of variations in the level of funding they receive from the government which decreases in the order extra-county, county and sub-county schools. Konyango (2010) confirmed the view that resources and facilities are determinants of effective implementation of a participatory agriculture curriculum. The implication of the result is that extra-county and sub-county schools are possibly considerably differently endowed with resources, and this might have caused the variations in the level of decision making by out of school youth who attended different school categories. Therefore it appears that well endowed schools provide youth space to air their views and also enable their youth the freedom to make independent decisions. The differences in academic quality by grade for admission into the various school categories could also be a factor, and reflects disparity in quality of learners at entry stage. The entry grade requirement for extra-county schools is higher than that for sub-county ones and by same trend those who attended the latter schools are considered to be less endowed in decision making, though that might not be always the case. It is possibly such divergences that may have contributed to the observed responses.

4.6 Strategies proposed to increase participation of out of school youth in decision making on implementation of school agriculture programme

There is a significant difference in the ratings of the five strategies proposed to increase the level of participation in decision making on implementation of school agriculture programme by out of school youth (Table 11). Tukey post hoc test results indicate that the mean ratings of strategies 6 and 4 of $M=3.9250$ and $M=3.9313$, respectively are similar and significantly higher than those of the rest (Table 12). Thus, out of school youth rated strategies 6 and 4 as more significantly very important than the rest, including strategy 3 which is on decision making. Strategy 4, states that if school administration could listen to the voices of youth it will build confidence for free discussions on the challenges faced in implementing school agriculture programme. Strategy 4, suggests that possibly the school principals and agriculture teachers do not listen to the youth even when they would be having genuine issues in the implementation of school agriculture curriculum thus curtailing success of the programme. The suggestion conforms to the MYSA (2007) and Mutuku (2011) who observe that young people in Kenya are marginalized in decision making. According to UN (2003), marginalization of youth in decision making occurs in families, schools, local communities, in programmes, local, regional and national governments. Thus, Mutuku, (2011) recommends for a radical change towards respecting the participatory rights of youth in all spheres of life if the issues that affect them are to be addressed effectively. Strategy 6 advocates for the inclusion of youth in decision making on the use of the school farm to enable them air their views on its proper utilization as a training workshop or facility rather than being used to administer punishment to errant students. The use of school farm to punish errant youth portrays agriculture as a punishment and does not motivate those who have a passion for the career. It also impacts negatively on those studying the subject leading to low participation in decision making on its implementation. Additionally, it may contribute to the negative attitude against agricultural sector as commonly observed in the youth. The findings confirm that youth wish to be included in decision making on the school farm and that principals and teachers should not use the farm to create a negative mentality among young people towards agriculture by emphasizing on their commercial gain. Rather, the school farm should be utilized to mentor members of the young farmers club (YFC) in the institution for agro-based careers. The findings agree with Simovska, (2007) and Buijs, (2009) who note that participation and democracy are core values in schools since they create appropriate ground for students to participate in relevant aspects of decision making at school and thus the processes of teaching and learning. Thus, youth should be allowed to have a say on how the

school farm should be used in the teaching and learning of agriculture to enable them benefit from it in acquisition of vocational skills for self-reliance. The present situation may possibly be worse in some schools as noted by Konyango, *et al* (2015) that some principals deny the agriculture teachers and students' access to the farm and use it commercially for personal gain. From the responses, youth are advocating for a positive use of the school farm in a manner that will promote the image of agriculture as decent career and not a punishment. Therefore, recent proposals by government bureaucrats to use the school farm as part of school feeding programme as cost-cutting measure to reduce cost of running schools might not conform to expectation of learners. Such function for the school farm might further advance its commercialization for personal gain rather than for imparting vocational skills for self-reliance in youth besides the academic objective as originally schemed. Strategy 3 on decision making which was the subject of this investigation was rated as very important though not as more significantly very important as strategy 4 and 6 by out of school youth. The strategy 3 had proposed for a bottom-up approach in decision-making on matters of the agricultural curriculum. Nonetheless, the high rating of the strategy 3 indicates that youth would like to be at the centre-stage in matters of school agriculture curriculum. That would accord young people opportunity to inform those at the top about their interests, fears, frustrations, aspirations and concerns and not those at the top dictating to them. The analysis is in line with Lodge (2005); Rud-duck and Fielding (2006) who note that school reforms require student participation to identify the problems and solutions because it is their life at stake and in this case, creation of livelihoods for their independence as they transition to adulthood. The finding would imply that out of school youth think and feel that possibly they are better placed in informing those at the top about the shortfalls and gaps of school agriculture curriculum. According to Inegbedion and Islam (2019) agricultural courses need to be more business focused, with hands-on skills on agri-innovations and agri-entrepreneurship. Possibly this could be the concern of youth and if consulted during curriculum reviews they would air their views instead of experts speaking for them and expecting theirs to implement without question (Nyang'au, Ochola and Maobe, 2021).

. It might be that be that incorporating the views of out of school youth who have gone through the school agriculture programme might possibly provide a much more needed solution for success than the adult policy makers at top pushing it down the throats of young people. The youth therefore should be seen as the best agents in solving their own problems, from their own experiences and not other peoples' experiences. They are the ones, who can narrate the frustrations they face in implementing school agriculture curriculum, what they think is lacking and their aspirations about a future career in farming. Being the consumers of the school agriculture curriculum content, out of school youth need to be recognized as stakeholders in curriculum decision making and their views taken seriously in informing those at the top and policy makers in programme. The out of school youth would provide feedback about their concerns and aspirations on school agriculture curriculum changes. The understanding is further supported by Charles and Haines (2014) who observe that young people like it when they decide and not being dictated to by someone and that they do not want to be merely consulted but rather be partners that influence action for change.

4.7 Relationship between the level of participation in decision making and level of implementation of school agriculture programme by out of school youth

Spearman correlation coefficient result ($r_s(158) = .767, p < .001$) shows a strong positive relationship between the level of participation in decision making and the level of implementation of school agriculture programme by out of school youth (Table 13). From the findings, the level of implementation of school agriculture programme by out of school

youth increases with rise in the level of participation in decision making on its implementation processes. The observation corroborates that of Akva, Kai and Smith (2014) who found positive associations between youth programme decision making practices and motivation to attend the programmes. The outcome therefore implies that increased level of participation in decision making would possibly act as a motivation to improve youth implementation of school agriculture programme leading to success in attaining its objectives. The strong positive correlation between the level of participation in decision making and the level of implementation of the programme suggests that the execution of school agriculture programme might be considerably improved by engaging youth in its decision making on it. The finding implies that youth are possibly more likely to implement school agriculture programme better and with enthusiasm if they are involved in decisions making as this would take care of their interest thus lead to better acquisition of skills and knowledge attainment for self reliance. This probably is an indication that youth would be having issues in the manner school agriculture programme is presently implemented. Their participation in decision making on implementation of school agriculture programme might provide them space to air their views on some critical aspects of the curriculum freely. This will build confidence among the youth and the administration and eliminate the negative attitude the youth harbour towards agriculture as a result of being part and parcel of solution providers to the problems they face (Nyang'au, Ochola and Maobe, 2021).

Thus, from the result of the study, there were significant differences ($F = 6.486$, $p < 0.01$) amongst out of school youth on the level of participation in decision making on implementation of school agriculture programme as a result of diversity of school categories attended and as a result of parents' land size ($F = 7.527$, $p < 0.01$). Also, there were strong positive correlations between the level of participation in decision making and the level of implementation of school agriculture programme by out of school youth. From the result, it follows that the hypothesis H_{01} : which stated that there is non-significant difference amongst the level of participation of out of school youth in decision-making on implementation of school agriculture programmes tested at 0.05 level of significance, is rejected.

5. Conclusions

In view of the study on out of school youth,

- 1) There is a strong significant positive correlation between the level of participation of out of school youth in decision making on school agriculture and level of implementation of the programme. Therefore, engagement of out of school youth in decision making on school agriculture especially in the review of the curriculum would enhance feedback for implementation improvement and success to attain its vocational objective, to impart skills for self-reliance. In the present situation, out of school youth are scantily consulted on school agriculture programme that they went through during their schooling days. Yet they are in good position to provide feedback for improvement of implementation based on whether they are meeting self-reliance objective, and possible changes necessary to meet that expectation from the point of view of beneficiaries.
- 2) Out of school youth rated all the five strategies proposed to increase level of participation of youth in decision making on implementation of school agriculture programme as very important with strategy 4 and 6 standing out in significance. Therefore, the execution of the pertinent ingredients contained in the strategies would lead to improved outcome especially in imparting the much needed vocational skills for self-reliance and to produce a critical mass of population knowledgeable in agriculture.

6. Recommendations

The findings will be useful in addressing participation issues of out of school youth in decision making on implementation of school agriculture programme to improve transfer of knowledge and skills thus meeting both the academic and vocational objectives. Also, to enhance learning and developmental outcomes in young people for advancement of agriculture career and self reliance as anticipated in participatory curriculum implementation of school agriculture.

7. Acknowledgement

The article is based on Chapter one of PhD thesis study conducted by the first author, Dr. Kemunto. We are grateful to the Vice Chancellor, Kisii University for providing a study leave to the main author to undertake the reaesrch. The Department of Agricultural Education and Extension and Dean, School of Agriculture and Natural Resources Management are all gratefully acknowledged for availing facilities that enabled this research work to be done.

References

- Adesina, T. K., and Eforuoku, F. (2016). Determinants of participation of Youth-in-Agriculture programme in Ondo State, Nigeria. *Journal of Agricultural Extension*, 20(2): 104-117
- Akiva, T., Kai, C. S., & Smith, C. (2014). Involving Youth in Program Decision-Making: How Common and What Might it Do for Youth? *Journal of Youth and Adolescence*. <https://doi.org/10.1007/s10964-014-0183-y>
- Buijs, G. J. (2009). Better schools through health: Networking for health promoting schools in Europe. *European Journal of Education*, 44, 507–520.
- Charles, A. & Haines, K. (2014). Measuring young people's participation in decision making: What young people say. *International Journal of Children's Rights*, 22(3), 641–659. <https://doi.org/10.1163/15718182-55680022>.
- Chemjor, E. (2016). Factors influencing the choice of agriculture subject by boys and girls in public secondary schools in Kajiado County, Kenya. M.Sc. Research Project, University of Nairobi, 112p.
- Cohen, L. & Manion, L. & Morrison, K. (2007). *Research Methods in Education*. Education (Vol. 55). http://doi.org/10.1111/j.1467-8527.00388_4.x Croom Helm Ltd, London.
- De Acedo Lizárraga, M. L. S., De Acedo Baquedano, M. T. S., & Cardelle-Elawar, M. (2007). Factors that affect decision making: Gender and age differences. *International Journal of Psychology and Psychological Therapy*, 7(3), 381–391.
- Inegbedion, G & Islam, M. Md. (2019). Youth Motivations to Study Agriculture in Tertiary Institutions. *The journal of Agricultural Education and Extension* <https://doi.org/10.1080/1389224X.2020.1773285>
- Jaetzold, R. & Schmidt, H.(1992). *Farm management Handbook of Kenya: Natural Conditions and Farm Management Information*. Volume II/A. West Kenya (Nyanza and Western Provinces). Ministry of Agriculture, Kenya, in Cooperation with the German Agricultural Team (GAT) of German Agency for Technical Cooperation (GTZ), Nairobi, Kenya. 408 p.
- Kathuri, N. J. & Pals, D. A. (1993). *Introduction to research*. Njoro, Kenya: Educational Media centre, Egerton University.
- Kibett, J.K. (2002). *Effect of project based learning-on student performance in secondary school agriculture* (Unpublished Ph.D. Thesis). Njoro, Kenya: Egerton University.
- Kirimi, D. K. (2015). *Influence of Choice of Agriculture Subject Among Public Secondary School Students in Kibirichia Division Buuri Sub-County, Kenya* Unpublished Thesis, University of Nairobi, Kenya.
- Konyango JJJO (2010). *An Analysis of the Implementation of Education Policies Influencing*

Secondary school Agriculture in Kenya and their Implications on Curriculum Improvement Between 1959 and 2004. PhD Dissertation. Egerton University.

- Konyango, J.J. J.O & Asienyo, O. B. (2015). Secondary School Agriculture: Participatory Approaches to the Implementation of Secondary School Agriculture curriculum in Kenya Between 1959 and 2012: *International Journal of Scientific Research and Innovative Technology*, 2 (1): 1-11.
- Kothari, C. R. (2004). Research Methodology. Methods and Techniques. New age International Publishers. New Delhi: India PP. 401.
- Krejcie, R.V., & Morgan, D.W., (1970). Determining Sample Size for Research Activities. Educational and Psychological Measurement. <https://doi.org/10.1177/001316447003000308>.
- Lodge, C. (2005). From hearing voices to engaging in dialogue: Problematising student Participation in school improvement. *Journal of Educational Change*, 6, 125–146.
- Marilyn S. & Goes, J., (2013). Dissertation and scholarly research: Recipes for success. DO-10.13140/RG.2.1.5089.0960. www.dissertationrecipes.com.
- Ministry of State and Youth Affairs (MSYA) (2007). Kenya National Youth Policy. Retrieved in June 15 2013, from <http://www.Youthaffairs.go.ke/.national>.
- Muchiri, J. M., Odilla, G.A. & Kathuri, N.J. (2013) Students' Perception of Secondary School Agriculture: A Case of Meru Central District, Kenya. *Asian Journal of Social Sciences & Humanities*, ISSN- 2186-8492 Vol. 2 No. 4.
- Mutuku, C.M. (2011). Youth Empowerment in Kenya: A Policy Science Analysis of Government Values and Priorities. Youth Perspectives on their Empowerment in Sub-Saharan Africa the Case of Kenya. Saarbrücken, Germany: Lambert Academic Publishers.
- Njoroge, G. M. (2006). Possible causes of low student enrollment for agriculture at KCSE and suggested solutions. Proceedings of the Stakeholders' Workshop on Agricultural Education and Training held on 30th November and 1st December 2006 at Kenya School of Monetary Studies, Nairobi, Kenya: Ministry of Agriculture.
- Ngesa, F. U. (2002). Impact of Experiential and Mastery Learning Programmes on Academic Achievement in Secondary School Agriculture (Unpublished Ph.D Thesis). Njoro, Kenya: Egerton University.
- Njenga, P., Mugo, F. and Opiyo, R. (2012). Youth and Women Empowerment through Agriculture in Kenya. Downloaded on 2nd October 2014. Available at www.vsojitolee.org.
- Nyang'au, M. K., Kibett, J. K. & Ngesa, F. U. (2011). Comparison of Perceptions of School Principals, Teachers and Learners Towards Factors Influencing Implementation of Secondary School Agriculture Projects in Kisii District of Kenya. *African Journal of Basic and Applied Sciences*, 3 (2): 57 - 62. ISSN: 2079 -2034.

- Nyang'au, M. K., Ochola, W. A., Maobe, S. N. (2021). Participation of in and out of school youth in decision-making on showcasing success stories by young agripreneurs for motivation to implement agricultural programmes. *International Online Journal of Education and Teaching (IOJET)*, 8(4). 2559-2580.
- Nyang'au, M. K., Ochola, W. A., Maobe, S. N. (2022). Student Youth Participation in Decision Making on Implementation of School Agriculture Programme. *International Journal of Curriculum and Instruction* 14 (1) (2022) 226-242.
- Reidmiller, S. (2002). Primary school agriculture: What can it Realistically Achieve? *Journal of Agriculture Education*, 28, 9-13.
- Republic of Kenya. (1984). *8-4-4 system of education*. Nairobi: Government Printers
- Simovska, V. (2007). The changing meanings of participation in school-based health education and health promotion: The participants' voices. *Health Education Research*, 22, 864–878.
- UNESCO, (2012). Youth and skills: Putting education to work, EFA global monitoring report, 2012. UNESCO Publishing. P 480.
- United Nations (1989). Convention on the Rights of the Child. Nov.20, 1989, 1577 U.N. T.S. 3.
- United Nations (2003). World Youth Report Chapter 10: Youth Participation in Decision Making. The World Programme of Action for Youth to the Year 2000 and Beyond. New York: United Nations.
- World Youth Report. (2003). The Global Situation of Young People. United Nations.