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**An Assessment Study on the Current Use of the 4-K Club Activities  
in Teaching of the Competency-Based Agriculture Subject in  
Grades 4-6 at Primary Schools in Makindu Sub-County, Kenya.**



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## An Assessment Study on the Current Use of the 4-K Club Activities in Teaching of the Competency-Based Agriculture Subject in Grades 4-6 at Primary Schools in Makindu Sub-County, Kenya.

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### Abstract

**Purpose:** This study sought to assess the current use of the 4-K Club activities in teaching of competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya.

**Methodology:** A descriptive survey research design was employed in the study. The target population of this study comprised of 926 teachers assigned to teach in grades 4-6 at primary schools in Makindu Sub-County in Kenya. The accessible population for the study comprised of 32 teachers assigned to teach agriculture subject in grades 4-6 in the 16 schools with active 4-K Clubs in Makindu Sub-County. The census method was used to select all 32 agriculture teachers from schools with active 4-K Clubs to participate in the study. Structured questionnaires were used to collect data from the respondents. Quantitative data was analyzed descriptively using statistics such as percentages and frequencies. Data was coded and analyzed using the Statistical Package for Social Sciences (SPSS v28.0). Results were then presented in tables.

**Findings:** The results indicated that there is little use of most of the 4-K Club activities conducted within the school farm, community and through use of ICT facilities in teaching of the competency-based agriculture subject in grades 4-6 by the agriculture teachers. However, the 4-K Club activity that was conducted at least frequently by most teachers when teaching was only guiding learners to carry out projects on crop production.

**Contribution to Theory, Policy and Practice:** The study recommended that the teachers assigned to teach agriculture subject at upper primary to increase use of the 4-K Club activities within the school farm, community and through use of the ICT facilities in teaching of the agriculture subject. In-service training to be conducted to train primary school teachers on use of the 4-K Clubs in teaching of the agriculture subject. Government of Kenya to lay down strategies needed to keep the 4-K Clubs active in schools for current use in teaching of the competency based agriculture subject.

**Keywords:** *4-K Clubs, Agriculture Subject, Competency Based Curriculum, Upper Primary School, Teaching and Learning*

## 1.0 INTRODUCTION

The use of agricultural youth club's activities in teaching agriculture subject has been embraced in various countries in the world (Elias et al., 2018). Activities of the clubs have been used by agriculture teachers to help learners acquire the required competencies in agriculture subject. For instance, in England and Wales Young Farmers Club is an agricultural youth club made to instill practical agriculture skills to learners in and outside the schools aged between 10-28 years (National Federation of Young Farmers Clubs (NFYFC), 2016). Members of the club learn by engaging in activities such as carrying out agriculture projects in school or outside in the community, attending agricultural shows, field trips, farming competitions among others. In addition, members of the YFC are required to work with local communities to transfer agriculture knowledge they learn to the community as well as learning from community resource persons (Ndambuki et al., 2024). In USA Future Farmers of America (FFA) is a youth club based in high schools has been used by teachers to help learners to apply the theory knowledge which they learn in classroom practically in the field since the year 1928 (Konyango, 2010). This is by providing opportunities for learners to work in farms, mechanic shops, gardens, with livestock and other agriculture-related facilities. This hands-on learning in FFA has helped learners to acquire practical skills and competencies which learners should master in agriculture subject.

In Africa, a number of countries have put in place agricultural youth clubs in schools to help agriculture teachers to supplement what they teach in classroom (Ndambuki et al., 2024). This is by guiding learners to carry out the club activities practically to acquire practical agriculture skill taught in class. For example, in Nigeria, agricultural youth organization involved in agriculture education include Young Farmers Clubs, 4-H clubs, Youth/Children in agriculture program and Youth Alliance in Nigeria (Ndubisi & Enobong, 2019). YFCs have been used in schools to help learners acquire the required competencies in agriculture subject (Salawu et al., 2021). Youth alliance in Nigeria is a program that is made to create agricultural base for youths while Children in Agriculture Program (CIAP) is a nationally organized research and development network which its main objective is to introduce children to agriculture and sustain their interest as they grow (Magagula & Tsvakirai, 2020).

In Kenya, 4-K Club which means ‘*Kuungana, Kufanya, Kusaidia, Kenya*’ which is based in primary schools is among agricultural youth clubs involved in agriculture education in Kenya (Recha et al., 2024). The club is situated in primary schools to help young people aged between 6-14 years learn practical agriculture skills through learning by doing since the motto is ‘*Kujifunza kwa Kufanya*’ which literally means learning by doing (Karanu & Oniang'o, 2017). In 4-K Club learners learn by; carrying out agriculture projects, field visits, participating in Agricultural Society of Kenya (ASK) agricultural shows and exhibitions, agricultural tours among others. In addition, learners are required to work closely with the community and their parents at home to replicate the knowledge and projects they carry out in school back at home (Muldoon, 2010). With the introduction of Competency-Based Education (CBE) in Kenya teachers assigned to teach agriculture subject at upper primary which comprises of grades 4-6 are required to guide learners

to carry out the club's activities when teaching to help them acquire the required core competencies (Ndambuki et al., 2024).

### **1.1 Problem Statement**

Teaching and learning of competency-based agriculture subject at primary school in grades 4-6 should be carried out in way that the learners will be involved in hands-on experiential learning. This would help them acquire the core competencies and the practical agriculture skills stipulated in the curriculum designs of agriculture subject. Among the ways which agriculture teachers would ensure practical implementation of the practical agriculture subject curriculum in grades 4-6 is by guiding learners to carry out the 4-K Club activities during the learning process. However scanty information on the level of teacher's use of the 4-K Club activities in teaching exists. In addition, no study in Kenya has been conducted to assess to which extent are the teachers assigned to teach agriculture subject in grades 4-6 using the 4-K Club activities in teaching to help learners acquire the required core competencies. It's upon this research gap therefore that this study sought to assess the current use of the 4-K Club activities in teaching of competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya.

### **1.2 Objectives of the Study**

This study sought to assess;

- i. The current use of the 4-K Club activities within the school farm in teaching of the competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya.
- ii. The current use of the 4-K Club activities within the community in teaching of competency based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya.
- iii. The current use of the 4-K Club activities through use of the ICT facilities in teaching of the competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya.

### **1.3 Research Questions**

This study sought to answer the following research questions;

- i. What is the extent of the current use of the 4-K Club activities within the school farm in teaching of the competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya?
- ii. What is the extent of the current use of the 4-K Club activities within the community in teaching of the competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya?
- iii. What is the extent of the current use of the 4-K Club activities through use of the ICT facilities in teaching of the competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya?



## 2.0 LITERATURE REVIEW

The history of agriculture education in primary schools in Kenya can be traced back around the year 1909 during colonial period following the introduction and implementation of Fraiser Commission report (Mackatiani et al., 2016). This is also confirmed by Annah et al. (2019) who asserted that agriculture had been taught in Kenya since the colonial period. According to Kyule (2017) during this period, the education system was designed and offered along racial lines. This meant that Africans, Asians and Europeans had different curriculums with different objectives. In relation to Fraiser report Africans were to be taught vocational subjects such as agriculture as they were thought that they could not handle academic skills. The main objective of this was to prepare Africans by equipping them with skills to provide labor in European farms (Ngure, 2013). This was also reflected in the Phelps-Stokes commission of 1924 which also advocated for Africans to be taught vocational agriculture purposely to get skills such as gardening and produce farm workers to work in European farms (Kyule, 2017). Across that period 4-K Club activities were not used by teachers to implement the agriculture subject curriculum since the club was yet to be established in Kenya.

The 4-K Clubs were introduced into the primary schools in the year 1962 operating under the Ministry of Agriculture (4-K Club Kenya & MoALF&C, 2022). This followed after local leaders visited the USA and benchmarked on various agricultural programs among them being the 4-H Club meaning "Head, Heart, Hands and Health". The 4-K Club meaning "Kuungana, Kufanya, Kusaidia, Kenya" was therefore formed to portray ownership and identity (Ndambuki et al., 2024). The club was formed to help young people learn various agriculture activities by doing as the club motto states "Kujifunza kwa Kufanya". In 4-K Clubs, learners are required to learn by carrying out activities such as field visits, attending agricultural shows, 4-K Club rallies and competitions, agriculture projects on both crops and livestock production among others (Muldoon, 2010). According to Karanu & Oniang'o (2017) the objectives of the 4-K Club are;

*"Teaching young boys and girls better methods in agriculture, promoting appreciation of agriculture as a dignified profession by young people, facilitating food production among youths for both home consumption and selling, promoting the development of leadership skills among young people, and promoting profitable farming among adults"*.

Following the introduction of 8-4-4 education system in Kenya in the year 1984, agriculture subject was also introduced in primary schools (Konyango, 2010). During that period 4-K Clubs were active in most schools and were used to instill agriculture skills to young people aged between 6-14 years. However, following the Koech commission on education reforms of the year 1999, agriculture subject was scrapped from primary school's curricular and integrated with science subject (Recha et al., 2024). This made the 4-K Clubs to cease in most schools as they lost relevance.

With the introduction of Competency-Based Education (CBE) in the year 2017, agriculture subject was re-introduced back to primary schools to be taught as an independent subject starting from

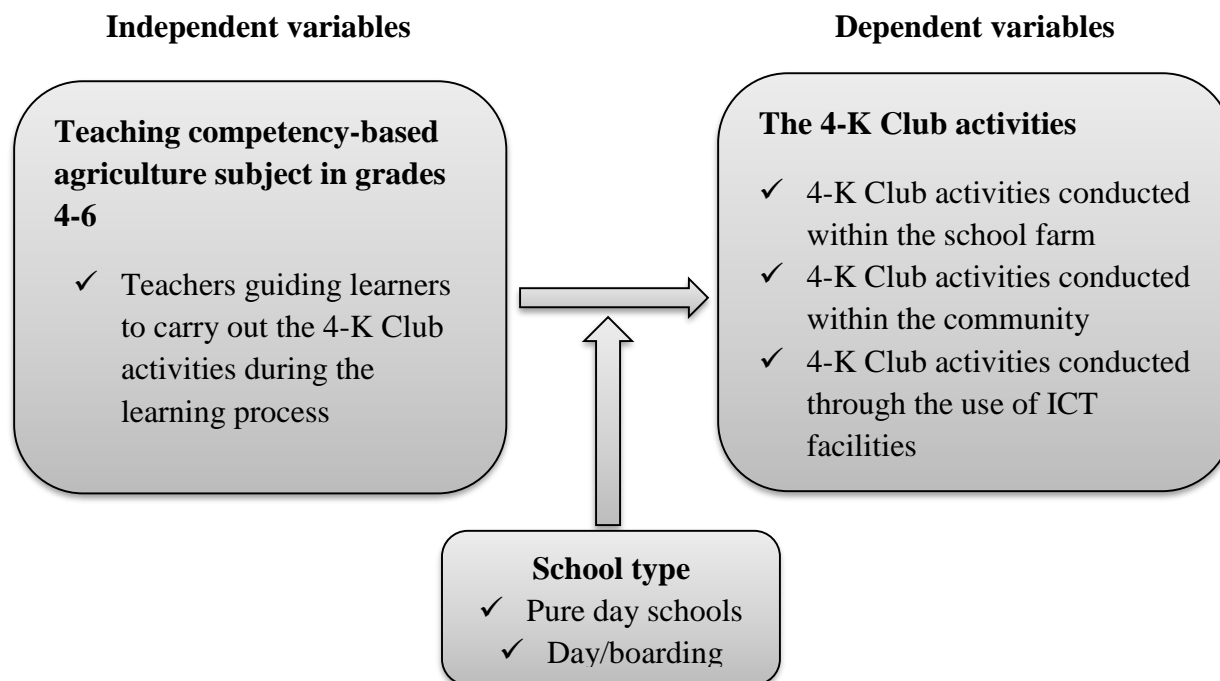
grades 4-6 (upper primary school) (Ouma et al., 2021). Due to this Government of Kenya through the Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MoALF&C) revamped, relaunched and re-introduced the 4-K Clubs back to primary schools in the year 2021. Among the reasons for re-introducing the 4-K Clubs back to primary schools is that they be used in implementing the competency-based agriculture subject curriculum (Shiundu, 2021). Since the year 2021, none of the studies were done to assess the extent to which agriculture teachers in primary schools use the 4-K Clubs in teaching agriculture subject. It's for this reason that this study sought to assess the current use of the 4-K Club activities in teaching of the competency-based agriculture subject in grades 4-6 at primary schools.

## **2.1 Theoretical Review**

This study was grounded on David Kolb's experiential learning theory of 1984 (Kolb, 1984). Kolb defined experiential learning as that which involves the creation of new knowledge from practical hands-on learning experiences and assessments. According to Dung and Minh, (2020) experiential learning, enables learners to connect what is learned in the classroom with hands-on experiences since learning is by doing. This therefore enables them to acquire practical skills when learning. This theory informed this study in that, in teaching of the competency-based agriculture subject teachers are required to learn by doing to create the required learning experiences. This can be achieved by use of the 4-K Club activities which enables the learners to practice all that they learn in the classroom practically in the field to acquire the required core competencies in agriculture subject.

## **2.2 Conceptual Framework**

This study sought to assess on the current use of the 4-K Club activities in teaching and learning of the competency-based agriculture subject in grades 4-6. Therefore, the dependent variable for this study was the current use of the 4-K Club activities. These were indicated by the current 4-K Club activities conducted within the school farm, community and through the use of the ICT facilities. The teaching of agriculture subject in grades 4-6 was the independent variable since it would be enhanced by the use of the 4-K Club activities. School type in Makindu Sub-County which was characterized by pure day schools and day/boarding schools formed the intervening variable in the study. The effect of the intervening variables on the dependent and independent variables was ignored and therefore it was not student. Figure 1 below presents the relationship between the variables in the study.



### Intervening variables

*Figure 1: Conceptual Framework Showing Relationship Between the Variables.*

*Source; Researcher (2024)*

### 2.3 Research Gaps

Prior studies by Karanu & Oniang'o, (2017) and Muldoon (2010) identifies the 4-K Club activities to be appropriate in teaching agriculture subject in schools. However, no study has been done to determine how teachers of agriculture in grades 4-6 are using the club's activities in implementing the competency-based agriculture subject curriculum. According to Shiundu (2021) and the MoALF&C among reasons for revamping and re-introducing 4-K Clubs back to primary schools is that they may be used in teaching of agriculture subject under the new Competency Based Education Curriculum (CBEC). However, paucity of information if any exists on the extent to which primary school teachers have currently used the 4-K Clubs in teaching of the agriculture subject. It's upon this ground that this study sought to assess the current use of the 4-K Club activities in teaching of competency-based agriculture subject in grades 4-6 at primary schools in Makindu Sub-County, Kenya.

## 3.0 MATERIAL AND METHODS

### 3.1 Study Design

This study employed a descriptive survey research design. This is because descriptive survey research design helps to explain the current status of affairs as they are as stated by (Mugenda & Mugenda, 2003). This design therefore necessitated an assessment of the current agriculture teacher's use of the 4-K Clubs in teaching of the agriculture subject. In addition, this design enables

researchers to collect data from respondents through questionnaires, interviews and observations. Therefore, this enabled the researcher to collect data from the respondents by use of questionnaires to meet the research objectives.

### 3.2 Study Location

The study was conducted at Makindu Sub-County, Makueni county in Kenya. The sub-county covers 1034.7 Km<sup>2</sup> with a population of about 84,946 people according to (Mwangi, 2019). The area receives low unreliable rainfall of about 595 mm per annum. This makes the Sub-County to have semi-arid characteristics and therefore the common vegetation in the area comprises of baobab, euphorbia, acacia and other trees that survive in such low rainfall areas (Climate Data Organization, 2020). The major economic activity of the area is small-scale farming, local trade and charcoal production (Makueni County Government, 2018). The area was selected for the study since it has a researchable number of primary schools with active 4-K Clubs where data of interest can be collected from. In addition, no similar study has ever been conducted in the area.

### 3.3 Population

The study target population for the study comprised of 926 teachers assigned to teach at the upper primary school level which comprises of grades 4-6 in the 83 primary schools located in Makindu Sub-County (Makindu Sub-County Education office, 2023). These teachers are distributed in two school types which characterize primary schools in the Sub-County namely; pure day and day/boarding schools. Table 1 below presents the distribution of teachers forming the target population per school type.

**Table 1: Target Population of Teachers Per School Type in Makindu Sub-County**

School type	No. of schools	No. of teachers
Pure day	70	812
Day/boarding	13	114
Total	83	926

Source: Makindu Sub-County Education office (2023)

The accessible population for this study comprises of 32 teachers assigned to teach agriculture subject in grade 4-6 in from 16 schools with active 4-K Clubs in Makindu Sub-County (Ministry of Agriculture Livestock , Fisheries and Cooperatives Makindu Sub-County office, 2022). All teachers assigned to teach at upper primary school (grade 4-6) were targeted because in Kenya there are no teachers specifically trained to teach agriculture subject in primary school and therefore any teacher can be assigned to teach the subject. Only teachers from schools with active



4-K Clubs formed the accessible population because they would give reliable data on the extent to which they use 4-K Club activities in teaching competency-based agriculture subject in grades 4-6.

### **3.4 Sample and sampling techniques**

According to Israel (2003) for small accessible populations of 200 respondents or less census method of selecting sample size is recommended. Therefore, all the 32 teachers assigned to teach agriculture subject in grades 4-6 in schools with active 4-K Clubs were selected to participate in the study. The above sample size was in line with Mugenda and Mugenda (2003) who recommended for at least a population sample size of 30 respondents for any scientific research conducted to facilitate the collection of a reliable data.

### **3.5 Data Collection**

This study used questionnaires to collect data from teachers assigned to teach agriculture subject in grades 4-6. The questionnaire comprised of sections A, B, C and D. Section gathered data on the demographic characteristics of the respondents. Sections B, C and D gathered data on the extent to which the 4-K Club activities within the school farm, within the community and through use of ICT facilities are being used by teachers to teach competency-based agriculture subject in grades respectively in grades 4-6.

### **3.6 Statistical Analysis**

The collected data was first cleaned, coded and a codebook was prepared. The data was analyzed by use of Statistical Package for Social Sciences (SPSS) version 28. Descriptive statistics such as frequencies, percentages and means were used in data analysis on all the objectives and demographic information. This helped in assessing the extent of the agriculture teacher's use of the 4-K Club activities conducted within the school farm, community and through use of the ICT facilities in teaching of the competency-based agriculture subject curriculum.

## **4.0 FINDINGS**

### **4.1 The Current Use of 4-K Activities Within the School Farm in Teaching of the Competency-Based Agriculture Subject in Grades 4-6**

This section presents analyzed data and discussions on the extent of current use of the 4-K Club activities conducted within the school farm in teaching of the agriculture subject in grades 4-6. These activities were such as carrying out crop and livestock production, farming competitions, sharing experiences, and consulting with each other while carrying out the activities. The results were summarized and presented in Table 2.

**Table 2: The Current Use of the 4-K Activities Within the School Farm in Teaching**

n=32

Item	Response in frequencies and percentages						Total
	Not at all	Rarely	Some times	Often	Most often		
Guiding learners to carry out projects on crop production	Freq	0	1	7	19	5	32
	%	0	3.1	21.9	59.4	15.6	100
Guiding learners to carry out projects on livestock production	Freq	6	10	8	7	1	32
	%	18.8	31.3	25.0	21.9	3.1	100
Organizing 4-K Club farming competitions among individual learners	Freq	3	8	16	5	0	32
	%	9.4	25.0	50	15.6	0	100
Organizing learners to share experiences when carrying out 4-K Club activities	Freq	1	4	8	16	3	32
	%	3.1	12.5	25.0	50.0	9.4	100
Organizing 4-K Club farming competitions among learners in groups	Freq	1	7	13	6	5	32
	%	3.1	21.9	40.6	18.8	15.6	100
Organizing learners to consult each other when carrying out 4-K Club activities	Freq	2	2	14	10	4	32
	%	6.3	6.3	43.8	31.3	12.5	100

From the results in Table 2, it was noted that all the teachers who participated in the study at least guided learners to carry out crop production projects within the school farm to help learners acquire the required competencies. a large number of the teachers (59.4%) often while 15.6% guided most often. These findings were in line with the findings by Njura et al. (2020) who established most agriculture teachers expose learners to crop production projects when learning more than any other type of the project. This study also observed that this could be the reason why very few teachers 3.1% guided learners to carry out projects on livestock production. Over 75% of the agriculture teachers in grades 4-6 stated that they poorly guide learners to carry out livestock production projects with over 18% of the teachers indicating that they never guided at all. This could be linked to views by Odhiambo (2020) that livestock production projects are expensive to establish and run. In addition, a study by Mugambi et al. (2022) established that most livestock-based learning projects do not succeed and therefore they are rarely preferred for teaching by agriculture teachers.

On carrying out farming competitions both among individual learners and in groups large number of learners only guided learners sometimes, rarely while others never guided at all in both activities. Only a few teachers engaged learners in 4-K Club competitions often and most often. For example, on carrying out 4-K Club farming competitions among individual learners none of the teachers guided most often while for group competitions only 15.6% out the 32 teachers who participated in the study engaged learners most often. Contrary to the findings of this study 4-K Club (2023) recommends agriculture teachers to often engage learners in farming competitions

both individually and in groups to acquire the required core competencies and agriculture-related skills.

On guiding learners to share experiences when carrying out 4-K Club activities, 50% and 9.4% of the teachers guided learners often and most often respectively. This suggested that a large number of grade 4-6 agriculture teachers guided learners to carry out this activity. When asked whether they allowed learners to consult each other when carrying out 4-K Club activities, only 6.3% of teachers did not engage learners in carrying out this activity. All the other 93.7% of teachers guided the learners to some extent. Emphasis on both sharing experiences and consultation when learning is supported by (Ministry of Education [MoE], 2019a; Ministry of Education [MoE], 2019b; Ministry of Education [MoE], 2021) as it helps learners to master various core competencies when learning. These competencies are such as critical thinking and problem-solving and communication and collaboration.

#### 4.2 The Current Use of 4-K Activities Within the Community in Teaching of the Competency-Based Agriculture Subject in Grades 4-6

Respondents were also asked to indicate the extent to which they use the 4-K Club activities conducted within the community in teaching the agriculture subject in grades 4-6. The results were analyzed and recorded in Table 3.

**Table 3: The Current Use of the 4-K Activities Within the Community in Teaching**

n=32

Item	Response in frequencies and percentages						Total
	Not at all	Rarely	Some times	Often	Most often		
Taking learners to field visits	Freq.	1	18	6	5	2	32
	%	3.1	56.3	18.8	15.6	6.3	100
Linking learners with community resource persons	Freq.	4	17	8	2	1	32
	%	12.5	53.1	25.0	6.3	3.1	100
Linking learners to agriculture extension officers	Freq.	16	11	3	1	1	32
	%	50.0	34.4	9.4	3.1	3.1	100
Guiding learners to establish 4-K Club plots at home	Freq.	3	14	8	5	2	32
	%	9.4	43.8	25.0	15.6	6.3	100
Taking learners to ASK shows and competition	Freq.	2	10	11	8	1	32
	%	6.3	31.3	34.4	25.0	3.1	100

From the results in Table 3, it was noted that over 50% of teachers rarely took learners to 4-K Club field visits as well as linking them to the community resource persons during learning. The two activities recorded very few teachers who guided learners to carry them out either often or most often. This could be linked to very little time within the regular timetable (3 lessons per week) set for teaching agriculture subject by the (Kenya Institute of Curriculum Development, 2017) which may have limited teachers from taking learners away from the school environment regularly to carry out such activities. In addition, a study by Jane et al. (2020) also attributed this to the school type where she cited that in boarding or day/boarding schools learners have limited access to the community. Therefore, according to the study, this has limited the carrying out of community-based learning activities such as field visits and interaction with community resource persons.

On linking learners to the agriculture extension officers, half (50%) of the teachers to participated in the study indicated that they never linked learners at all. Only one teacher out of the 32 teachers who participated in the study linked the learners to the agriculture extension officers. This was contrary to the expectations by the Ministry of Agriculture Livestock, Fisheries and Cooperatives Development (2021) that agriculture extension officers should work closely with the 4-K Clubs in schools to keep the clubs vibrant for learning. However, the low agriculture extension to 4-K Club's interaction can be attributed to the low ratio of the two which according to (Ministry of Agriculture Livestock , Fisheries and Cooperatives Development Makindu Sub-County office, 2022)it rates at 1:17. This means one agriculture extension officer in made to serve 17 schools in Makindu Sub-County therefore agriculture teacher have limited access to the agriculture extension services. In addition, an assessment study by Agwu et al. (2023) noted that the presence of unmaintained vehicles used by the agriculture extension officers has hindered them from reaching schools.

#### **4.3 The Current Use of 4-K Activities Through Use of the ICT Facilities in Teaching of the Competency-Based Agriculture Subject in Grades 4-6**

Teachers were also asked to indicate the extent to which they use the 4-K Club ICT-based activities in teaching of the agriculture subject in grades 4-6. The findings were analyzed and recorded in Table 4.

**Table 4: The Current Use of 4-K Activities Through Use of the ICT Facilities in Teaching**

n=32

Item	Response in frequencies and percentages						Total
	Not at all	Rarely	Some times	Often	Most often		
Guiding learners to market their 4-K Club project's produce on social media	Freq	4	15	11	1	1	32
	%	12.5	46.9	34.4	3.1	3.1	100
Guiding learners to take and create profiles of photos of their projects for record-keeping on electronic devices	Freq	0	10	12	7	3	32
	%	0	31.3	37.5	21.9	9.4	100
Guiding learners to carry out internet searches of information agriculture projects	Freq	3	8	14	5	2	32
	%	9.4	25.0	43.8	15.6	6.3	100
Guiding learners to take videos of their projects for record-keeping	Freq	2	10	9	9	2	32
	%	6.3	31.3	28.1	28.1	6.3	100

Despite the Kenya Institute of Curriculum Development advocating for the incorporation of ICT in teaching of the competency-based agriculture subject across all areas of learning (Mwang'ombe, 2021), it was generally noted that there is low use of 4-K Club ICT-based activities in teaching. For example, from the findings in Table 4 on guiding learners to market their 4-K Club project produce on social media, 46.9% and 34.4% of teachers indicated that they guided learners rarely and sometimes respectively. In addition, over 12% of the teachers had not guided learners to carry out the activity at all. On guiding learners to take photos and videos of their projects for record keeping, majority of teachers indicated that they only guided learners either sometimes or rarely. On whether teachers guided learners to carry out internet searches of information on agriculture projects only a small percentage of teachers who guided learners often and most often that is 15.6% and 6.3% respectively. The low levels of teachers undertaking 4-K Club ICT-based activities can be linked presence of insufficient or lack of ICT facilities to be used in teaching of the agriculture subject (Karani, 2023). In addition, as study by Apolo et al. (2020) established that many teachers are not digitally literate and therefore they rarely incorporate ICT-based activities in teaching. However, according to Malik and Godara (2020) ICT based learning activities are important as they motivate learners to learn, increase knowledge retention as well as the acquisition of competencies such as digital literacy, communication, collaboration, critical thinking and problem-solving among learners Ndambuki et al. (2024). Its therefore important for the grade 4-6



agriculture teachers to employ the 4-K Club ICT-based activities in teaching of the agriculture subject.

## **5.0 CONCLUSION AND RECOMMENDATIONS**

### **5.1 Conclusion**

Based on the findings, this study concluded that there is minimal use of the 4-K Club activities conducted within the school farm, community and through use of the ICT in teaching of agriculture subject in grades 4-6 by most teachers. However, on use of the 4-K Club activities conducted within the school farm, most teachers have emphasized on guiding learners to carry out projects on crop production during learning to help learners acquire core competencies. On why there is low use of community-based 4-K Club activities it was concluded that its mostly due to little time allocated on the regular timetable for teaching agriculture subject. This limited the carrying out of the outside school 4-K Club activities. In addition, there is poor linkage between the 4-K Club in schools and the agriculture extension department of the Ministry of Agriculture Livestock Fisheries & Co-operative Development to help the clubs remain vibrant for learning. On why there is low uptake of 4-K Club ICT-based activities for learning it was established that most teachers teaching agriculture subject in grades 4-6 may be lacking sufficient knowledge on the use of digital devices especially in teaching and the presence of insufficient ICT infrastructure in schools.

### **5.2 Recommendations**

This study recommended that; teachers assigned to teach agriculture subject in grades 4-6 to increase the use of the 4-K Club activities conducted either within the school farm, community and through use of the ICT activities in teaching. This will help learners acquire the required core competencies and skills. In addition, more time for teaching agriculture subject in grades 4-6 to be allocated in the regular timetable to facilitate the undertaking of practical learning activities in or outside the school which are not limited to only 4-K Club activities. The study also recommended that an in-service training of agriculture teachers in primary schools to be conducted train them on the use of 4-K Club activities in teaching. Lastly the study recommended that the Government of Kenya to lay down strategies to ensure 4-K Clubs remain active in schools for current use in teaching of the agriculture subject.

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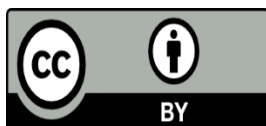
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