Trends in Selection of Agriculture Subject among Students in Secondary Schools in Bungoma and Kakamega Counties, Kenya

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ABSTRACT

While agriculture is a major source of employment, it is notable that youths in developing countries are unemployed, yet the countries' economies are dependent on it. Though there are immense prospects in the agricultural sector in Kenya, agriculture is taught in schools as an optional subject under the 8-4-4 syllabus so that it may stimulate youths' participation in agriculture and improve productivity. In the current competency-based curriculum, agriculture is taught in upper primary and junior secondary to enhance competence through practical and experiential activities, thereby nurturing learners' potential. Despite the above facts, there is a limited selection of agriculture courses for career development among students in tertiary institutions. This is a cause for concern since Kenya requires human resources to drive the agricultural sector. The purpose of this study was to establish the existing trends in the selection of agriculture subjects among secondary students in different categories of schools. The specific objective was to establish the selection trends in agriculture subjects among students in secondary schools in Kakamega and Bungoma counties, Kenya, from 2016 to 2021. The study critically reviewed theories and literature to determine their gaps and sought to address the same, thereby making contributions both to the body of knowledge and practice. A descriptive design was employed. The sample size was determined from the Yamane tables of sample size (1967). One hundred and sixty-two (162) secondary schools were selected, out of 839 proportionately. A total of 249 secondary school students were sampled proportionately out of 7379 respondents. Key informants were selected purposefully. Both qualitative and quantitative data was collected using document content guides, questionnaires, and interview guides. Both descriptive and inferential techniques were employed to analyze the data, which was presented using frequency tables and graphs. Multiple comparison table results revealed the years that differed in agriculture selection for the 5 different categories of schools. A significant factor contributing to the variance in selection was the change in type of school. In general, analysis shows that private schools have the lowest mean of selection of agriculture students, causing a low combined mean in all the years of study. The combined mean of agriculture subject selection in the five categories of schools has shown a consistent increase from the year 2016 to 2021. It is necessary for the ministry of education to increase extra-county schools, county schools, and sub-county schools in order to realize significant selection means in agriculture, which ensures a basis for agriculture career development in Kenya.

Keywords: Agriculture Subject, Secondary Schools, Selection

I. INTRODUCTION

Agriculture, being the economic activity for people worldwide, as stated by the Food and Agricultural Organization (FAO, 2016), serves approximately 70 percent of the people as a means of living and contributes 6.4 percent of the world's gross domestic product. More so, agriculture is of global interest since it has cultural, economic, and social development (World Bank, 2013). The United Nations Development Programme (UNDP, 2014) reported that 85 percent of the global youth are found in developing countries and are unemployed, yet agriculture is a major

source of employment and a source of food. Africa's agriculture contributes 15 percent of its total gross domestic product. As much as many countries have not been able to convince youths to train for agriculture careers (Tiraieyari and Krauss 2018), there are huge prospects in the agricultural sector. In West Africa, despite the contribution to economic growth, a decline in skills and labor has been realized since youths are reluctant to enroll in agricultural professions, as is observed in Nigeria (World Bank, 2013). They therefore stream to the urban center, leaving the old in the rural. This has led to reduced productivity due to the aging farmer population (Bloom *et al.,* 2010). In Kenya, agriculture is next to the services sector in terms of national gross domestic product contribution, providing 17.8 percent, while the services sector gives 32.9 percent. Despite this contribution to economic growth, several researchers have posited unemployment among the youth, yet agriculture is one of the optional and practical subjects learned in secondary schools.

1.2 Statement of the Problem

The agriculture sector is a key driver of achieving food security; hence, it is Kenya's blueprint for development. As a sector, there are many prospects in the agriculture profession, according to Tiraieyari and Krauss (2018). Despite the fact that agriculture is the backbone of the Kenyan economy, contributing 23% of the total gross domestic product (World Bank, 2013), there is limited interest among students to select the subject (Bloom et al., 2010) in secondary schools, leading to decreased agricultural program selection for agricultural career development. Though the same variations in enrolment tendencies have also been noted across countries, it is a worrying trend since Kenya requires human resources to drive the agricultural sector. Studies (Ekwere, 2014; Muchiri et al., 2013) examined the perceptions of students about agriculture as a subject in secondary schools. However, limited studies have been conducted to understand trends in agriculture subject selection in Bungoma and Kakamega counties, Kenya. The study focuses on the trends in the selection of agriculture subjects among secondary school students in Bungoma and Kakamega counties in Kenya.

1.2 Research Objective

Specific objective for this study was; to establish trends in selection of agriculture subject among secondary school students in Kakamega and Bungoma Counties, Kenya from 2016 – 2021.

1.3 Research Question

The study sought to answer the following question: What are the trends in selection of agriculture subject in secondary schools of Kakamega and Bungoma counties, Kenya from 2016-2021?

1.4 Significance of the Study

It is hoped that findings from this study may help the ministry of education to increase selection in agriculture subject in secondary schools and hence increase future enrolment in agriculture programs. The study is also designed to help policy makers to re-orient agriculture so as to realize increased food production**.**

II. LITERATURE REVIEW

Selection in agricultural programs has been declining in many countries, particularly in Africa. Osborne & Dyer (2000) observed that enrollment declines in university agriculture programs in the United States during the 1970s and 1980s paralleled selection declines in high school agriculture programs. In an effort to reverse the patterns of diminishing enrollments, some colleges of agriculture have effectively shifted their recruitment efforts to focus more on sub-urban and urban students with little or no agriculture background. Despite the fact that youths are in the midst of discovering career possibilities and roles to which they can commit, many teachers are still insistent on recruiting students in their subjects (Xu & Lee, 2019) instead of the students selecting the subject willingly, and therefore, the purpose of the current study is to establish the existing trends in the selection of agriculture subjects in various schools found in Bungoma and Kakamega counties.

In Nigeria, young people prefer white-collar jobs in cities. There has been a decrease in per capita productivity and output in agriculture as a result of the country's diminished agricultural production capacity and the aging of its farmer population (Alexandratos & Bruinsma, 2012). Food security is one of Kenya's "big four" agendas; hence, the country needs information about the career interests of the young and future generations. This will help the government plan and curb food insecurity. The focus of the current study was to establish trends in selection in agricultural subjects in secondary schools in Kenya. Mukembo et al. (2014) found that a large proportion of club

members joined primarily to improve their academic performance in agriculture but were not devoted to furthering their agricultural careers. The current study in Bungoma and Kakamega, Kenya, aims to establish selection trends in agriculture subjects in secondary schools in Kenya.

Kamau and Orodho (2014) also analyzed the trend in agriculture enrolment rates as a proportion of total KCSE applicants from 2009 to 2014. They found that between 2009 and 2014, the number of freshmen selecting agriculture dropped from 40.73 percent to 31.73 percent. Despite agriculture's importance in the economy, less than half of KCSE students chose this career.

Cheruiyot (2018) asserts that despite the fact that agriculture has been a high school subject since its inception; its recognition in terms of student choice poses challenges in Kenya due to selection policies. This is due to the fact that students can only take one of the two offered versions of the course because it is grouped with ten other subjects like Home Science, Art and Design, Woodworking, Metalworking, Building Construction, Power Mechanics, Electricity, Drawing and Design, Aviation Technology, Computer Studies, and Business Studies. Because of this setup, picking a major is more challenging than ever.

Ongang'a (2016) contends that subjects of study in secondary schools are chosen, especially in emerging countries. When students start Form Three in Kenya, the Ministry of Education (MOE) mandates them to select for a minimum of seven and a maximum of nine subjects in 8-4-4 curriculum.

According to Ngesa (2006), Kenya implemented the 8-4-4 system of education in 1985 in an effort to vocation this curriculum. When the curriculum was reviewed in 2002, the Kenyan government made an effort to promote the practical side of education by eliminating agriculture from the primary school curriculum and leaving it as an elective in secondary schools. Due to this development, fewer high school students were interested in studying this area. The majority of research conducted in this field indicates a worldwide decline in agricultural selection.

According to Mugwe et al., (2019) the number of secondary students enrolling in agriculture increased steadily in Kisii and Nyamira Counties in the years 2012-9 2016. Although the statistics also revealed a significant fall in agriculture selection of 30.8% between 2012 and 2013, the researchers noted a large increase in agriculture selection of 60.7% between 2013 and 2016.

Makori et al. (2019) in Kisii and Nyamira found that extra-county schools have significantly higher selection rates than schools on the county and sub-county levels. Marcia's identity status theory, as cited by Sitt (2016), posits that two important processes take place as adolescents are forming their identity. The first process is exploration with different components of identity, including occupation, and then they commit to a chosen identity. Youth with an achieved status explore an aspect of identity and make commitment to it, as cited by Sitt (2016). Students who selected agriculture in secondary school and registered for the agriculture program in tertiary institutions have achieved agricultural status. Kenya as a country is not fully food secure, and it aims to achieve food security for its nations. This can only be realized if its population is directly involved in food production. According to Pelco and Ball (2018), awareness of the occupational identity of a population is helpful to the ministry of agriculture and education, which is involved in policies and career development among youths.

2.1 Conceptual Framework

The study was based on the model for choosing a program by Hodges and Karpova (2009), which stated that environmental factors have a role in a student's decision-making process to choose a subject. It explains that environmental factors include those factors that are institution-specific, such as types of schools, as operationalized in this study. Once an agriculture subject is selected by a student, it then acts as a basis to enroll in agriculture programs and hence develop an agricultural career. The quality of students in different types of schools and their perception of the agriculture subject by students in different types of schools will affect their selection of the subject and hence their career development, as shown in Figure 1.

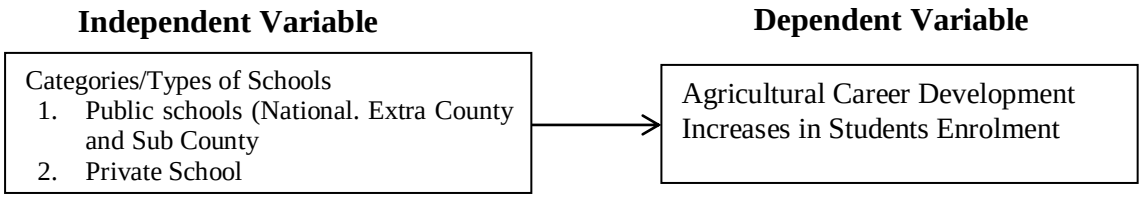

Figure 1
Conceptual Framework for the Study on Selection of Agriculture Subject

III. METHODOLOGY

The study employed a descriptive research design to determine the existing trends in agriculture subject selection from 2016 to 2021. The types of schools selected to provide data on the selection of students in agriculture subjects in secondary schools were national, extra-county, county, sub-county, and private schools, as categorized by the Ministry of Education. Based on the pragmatic paradigm as a lens, both qualitative and quantitative research techniques were used to collect both qualitative and quantitative data (Morgan, 2007). Therefore, both primary and secondary data were collected. This was then subjected to both descriptive and inferential techniques of data analysis. The target population from Kakamega and Bungoma is comprised of secondary schools, directors of studies, county quality assurance and standards officers of education, and school principals. The sampling method and sample sizes are indicated in Table 1.

Table 1

Summary of Study Population, Sampling Methods and Sample Size of the Study in Bungoma and Kakamega Counties, Kenya

Category of Respondents	Study Population Unit	Sampling Method	Sample Size
Secondary school principals	Secondary schools	Proportionate	162
Key informants	Principles.	Purposive.	162
	Director of studies.	Purposive.	162
	County Quality Assurance and Standards officer.		2
Students of agriculture			249

Stratified random sampling was used to select principal of various schools who responded to the questionnaires. Random sampling is that in which every unit in the population has an equal chance of being selected to participate in the survey (Kowalczyk, 2015). The approach, therefore, gave a broad sample of selected school principals ranging from public (national, extra-county, and sub-county) to private schools a chance to participate in the research.

Data was collected from the selected learning institutions located within Bungoma and Kakamega counties. The key informants were subjected to interview guides for them to give their views on the highlighted themes. The school principals analyzed document contents in selected types of schools to get data on the selection of agriculture subjects in their schools. Less structured research instruments with open-ended response questions were used to collect qualitative data, while quantitative data was collected using closed-ended response question instruments. The collected data was subjected to trend analysis using SPSS Version 25 to establish selection trends in agriculture subjects in secondary schools. SPSS, as cited by Odebero et al. (2007), computes multiple comparisons, allowing pairwise comparison of means.

IV. RESULTS AND DISCUSSIONS

4.1 Basic Agricultural Information on Sampled Schools for the Current Study in Bungoma and Kakamega Counties

The study collected basic information on schools in order to have a general knowledge of the context in which agriculture education is conducted. Some of the factors that influence agriculture selection in schools are teachers' availability, access to facilities like the size of the farm available in the school, access to tools needed for learning agriculture and agricultural machinery and the size of the classroom. School principals were therefore asked to indicate the adequacy of this infrastructure on a scale of 1-4, ranging from very inadequate to very adequate, as shown in Table 2.

Table 2

Basic Agricultural Information on Selected Schools for the Study

Infrastructure for Agriculture Selection	VI	I	A	VA
Teachers	82(50.6)	52(32.1)	24(14.8)	4(2.5)
Farm Size	101(62.3)	30(18.5)	19(11.7)	12(7.4)
Classroom Size	98(60.5)	51(31.5)	8(4.9)	5(3.1)
Farm Machinery	101(62.3)	47(29.0)	11(6.8)	3(1.9)

Analysis revealed that the number of teachers in most schools, 82 (50.6%), was very inadequate. It also emerged that farm size, according to most schools, was 101 (62.3%) and was also affirmed by 51 (31.5%) of the teachers who revealed that farm size in their schools was inadequate, classroom size, 98 (60.5%), as well as farm machinery, 101 (62.3%) were very inadequate.

4.2 Distribution of agriculture students in sampled schools in Bungoma and Kakamega counties from 2016-2021

The distributions of Agriculture student population was indicated in Table 3.

Table 3

Selection of Agriculture Subject in Bungoma and KakamegaCounties

Counties	2016	2017	2018	2019	2020	2021
Total selection of KCSE Agriculture Subject in Bungoma County	2,195	2,549	3,108	3,445	3,988	4,041
Total selection of KCSE Agriculture Subject inKakamega County	2,196	2,308	2,564	2,548	2,944	3,338

From the data in Table 3, it was observed that the total selection of agriculture students in sampled schools in Kakamega County was higher than in Bungoma County in the year 2016, selection in the subsequent years was high in Bungoma as compared to Kakamega County. A graphical presentation of selection trends is presented in Figure 4.1.

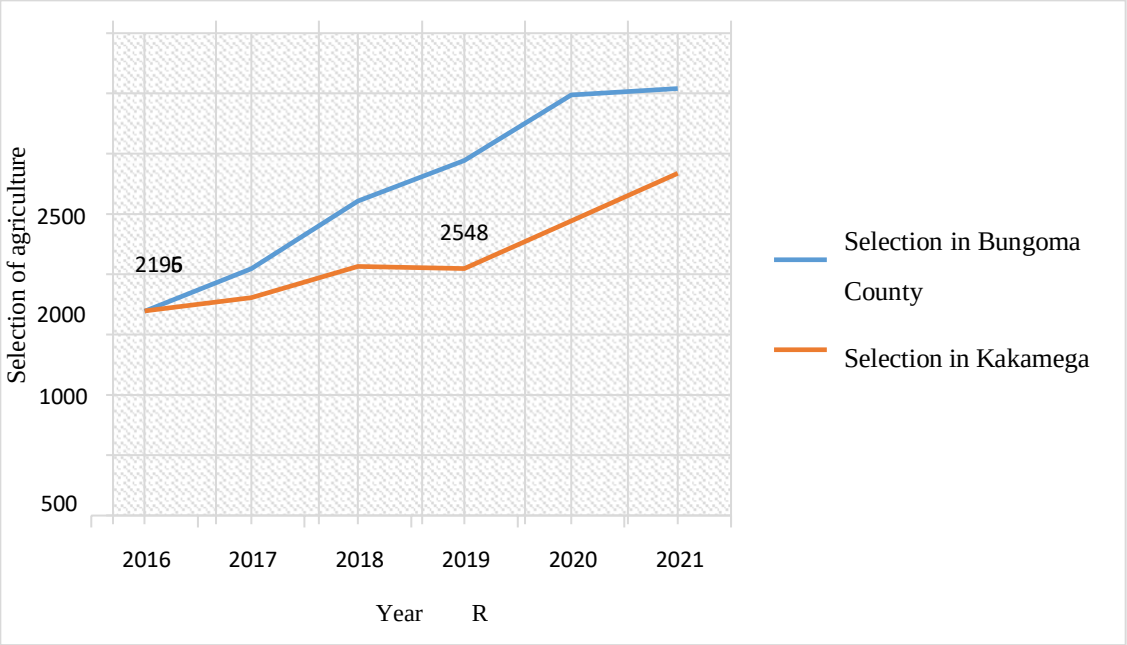

Figure 1

Selection in Agriculture Subject in Kakamega and Bungoma Counties, Kenya

From Figure 4.1, there is increasing selection in both counties. However, Bungoma County selection is higher than Kakamega County. The overall percentage increase in selection between 2016 and 2021 for Bungoma County was 84.10% as compared to that of Kakamega County, which was 52.0%. This implies that selection in Bungoma County is higher than that in Kakamega County. According to County Quality Assurance and Standards Officer Bungoma County, students like agriculture, which is attributed to the excellent grades that students post in the KCSE results every year. To some students, selection in agriculture is a signal of a career identity in the agricultural sector. According to school principals, the subject is a booster for academic performance in most secondary schools. According to Mugwe et al. (2019), the number of secondary students selecting agriculture also increased steadily in Kisii and Nyamira counties in the years 2012–2016.

4.3 Trends in Selection of Agriculture Subject among Secondary School Students in Kakamega and Bungoma Counties, Kenya from 2016 – 2021

The researcher established the selection trends in agriculture subjects using descriptive analysis of different categories of schools by computing the mean number, standard deviation, and mean intervals at 95% confidence intervals. The results are shown in Table 4. In the year 2016, the total combined mean for agriculture selection for the five categories of schools was 27.1049, with a standard deviation of 18.36571 and a standard error of 1.44295. These values lie within a range of 24.2554 to 29.9545 implying that the reliable mean of agriculture students remained within this range. In the year 2017, the total combined mean for agriculture selection for the five categories of schools was 29.9815; in 2018 it was 35.0123; in 2019 it was 36.9938; in 2020 it was 42.7901; and in 2021 the combined mean was 45.5494 implying an increase in the means of selection with time.

Apart from the year 2021, the highest mean for agriculture selection was observed in extra-county schools, while the lowest mean was observed among private schools. According to the director of studies, students in public schools do not fear practical agriculture; instead, they take it as an opportunity to learn more skills and new technologies that will enable them to secure food for their families. He added that students in private schools are influenced by their wealthy social status not to select agriculture subjects, leading to a low combined mean of agriculture students. They believe that agriculture is a poor man's job due to its' dirty farm practicality, and therefore, a few private school students choose to learn agriculture for the purpose of good performance and not for career progression. Though there might be declining selection in agriculture in some schools, the general selection in public schools is higher and increasing. It is generally known that youths in private schools are children of the rich and cannot be occupied by farming since the job is dirty. Their parents cannot support the same, and therefore, they do not select agriculture for career progression but for better academic mean grades.

Table 4

Descriptive statistics for Selection in Agriculture Subject in Categories of Schools in Bungoma and Kakamega Counties

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
2016 agriculture selection.	NS	4	20.7500	2.62996	1.31498	16.5652	24.9348
	ExS	7	43.1429	15.68894	5.92986	28.6330	57.6527
	CS	24	42.7500	20.77676	4.24104	33.9767	51.5233
	Sb/S	120	23.9417	16.54497	1.51034	20.9510	26.9323
	PS	7	15.2857	6.94537	2.62510	8.8623	21.7091
	Total	162	27.1049	18.36571	1.44295	24.2554	29.9545
2017 agriculture selection	NS	4	24.5000	6.13732	3.06866	14.7342	34.2658
	ExS	7	45.5714	23.82476	9.00491	23.5372	67.6057
	CS	24	48.9583	21.12382	4.31188	40.0385	57.8781
	Sb/S	120	26.2000	15.83507	1.44554	23.3377	29.0623
	PS	7	17.2857	6.44759	2.43696	11.3227	23.2487
	Total	162	29.9815	18.84539	1.48063	27.0575	32.9054
2018 agriculture selection	NS	4	30.0000	16.83251	8.41625	3.2157	56.7843
	ExS	7	53.8571	26.21977	9.91014	29.6079	78.1064
	CS	24	53.2917	23.16196	4.72792	43.5112	63.0721
	Sb/S	120	31.3917	20.17457	1.84168	27.7450	35.0384
	PS	7	18.4286	7.99702	3.02259	11.0326	25.8246
	Total	162	35.0123	22.32398	1.75394	31.5487	38.4760
2019 agriculture selection	NS	4	29.0000	15.59915	7.79957	4.1783	53.8217
	ExS	7	55.4286	34.18019	12.91890	23.8172	87.0400
	CS	24	54.2500	26.01546	5.31038	43.2646	65.2354
	Sb/S	120	33.9417	20.96788	1.91410	30.1516	37.7318
	PS	7	16.2857	1.70434	.64418	14.7095	17.8620
	Total	162	36.9938	23.58321	1.85287	33.3348	40.6529
2020 agriculture selection	NS	4	32.5000	19.84103	9.92052	.9285	64.0715
	ExS	7	66.0000	49.77282	18.81236	19.9678	112.0322
	CS	24	62.8750	34.78169	7.09978	48.1880	77.5620
	Sb/S	120	39.2917	22.00206	2.00850	35.3146	43.2687

	PS	7	16.5714	3.45722	1.30671	13.3740	19.7688
	Total	162	42.7901	27.49420	2.16015	38.5242	47.0560
2021 agriculture selection	NS	4	28.0000	16.16581	8.08290	2.2766	53.7234
	ExS	7	55.1429	43.16800	16.31597	15.2191	95.0666
	CS	24	64.7917	34.05364	6.95117	50.4121	79.1713
	Sb/S	120	43.2083	26.74621	2.44158	38.3738	48.0429
	PS	7	20.1429	7.94625	3.00340	12.7938	27.4919
	Total	162	45.5494	29.49704	2.31751	40.9728	50.1260

KEY
NS- National school
ExS- Extra County school
CS- County school
Sb/S- Subcounty school
PS- private school

4.4 Significant Differences in Agriculture Subject Selection in the Five Categories of Schools

Significant differences in agriculture subject selection in the five categories of schools was performed by means of agriculture subject selection. As a requirement for the ANOVA test, the variances of each comparison group should be equal. Hence, a test of homogeneity was performed using the Levena statistic to test for the variances of the comparison group, and they were found to be equal. Results were recorded in Table 5.

Table 5
Test of Homogeneity of Variances in Means of Agriculture Selection from 2016-2021

	Levene Statistic	df1	df2	Sig.
2016 agriculture selection	3.035	4	157	.019
2017 agriculture selection	4.096	4	157	.003
2018 agriculture selection	1.844	4	157	.123
2019 agriculture selection	4.658	4	157	.001
2020 agriculture selection	8.748	4	157	.000
2021 agriculture selection	4.364	4	157	.002

Table 5 shows that there is a difference (p-value < 0.05) between the variances of the agriculture selection except for the year 2018 (p-value >0.05), which implies that the variances are approximately equal. To show whether there is a statistically significant difference between the means of five different categories of schools. ANOVA Table 6 was computed. ANOVA results show that, for all the years, the mean of agriculture subject selection was significant (P<0.05).

From table 6, in 2016, F (4, 157) is 2503.772, and a p-value < 0.05 is significant. This implies that the five categories of schools differ significantly in agriculture selection. The linear term shows no significance (p-value > 0.05). This means a decreasing mean in the five different categories of schools. Therefore, we conclude that in the year 2016, there was no significant difference in all five categories of schools. Similar results can be observed for the subsequent years with the exemption of the F-value, which differs.

Table 6
ANOVA for Statistically Significant Difference between the Means of 5 Categories of School

				Sum of Squares	Df	Mean Square	F	Sig.
2016 agriculture selection	Between Groups	(Combined)		10015.089	4	2503.772	8.875	.000
		Linear Term	Unweighted	526.990	1	526.990	1.868	.174
			Weighted	4400.563	1	4400.563	15.599	.000
			Deviation	5614.526	3	1871.509	6.634	.000
	Within Groups			44290.127	157	282.103		
	Total			54305.216	161			
2017 agriculture selection	Between Groups	(Combined)		13308.643	4	3327.161	11.907	.000
		Linear Term	Unweighted	663.199	1	663.199	2.373	.125
			Weighted	5808.660	1	5808.660	20.788	.000
			Deviation	7499.983	3	2499.994	8.947	.000
	Within Groups			43870.301	157	279.429		

	Total			57178.944	161			
2018 agriculture selection	Between Groups	(Combined)		14103.854	4	3525.963	8.371	.000
		Linear Term	Unweighted	1207.533	1	1207.533	2.867	.092
			Weighted	6882.403	1	6882.403	16.339	.000
			Deviation	7221.451	3	2407.150	5.715	.001
	Within Groups			66132.121	157	421.224		
	Total			80235.975	161			
2019 agriculture selection	Between Groups	(Combined)		13900.759	4	3475.190	7.213	.000
		Linear Term	Unweighted	1277.742	1	1277.742	2.652	.105
			Weighted	6223.784	1	6223.784	12.918	.000
			Deviation	7676.975	3	2558.992	5.311	.002
	Within Groups			75642.235	157	481.798		
	Total			89542.994	161			
2020 agriculture selection	Between Groups	(Combined)		20156.733	4	5039.183	7.791	.000
		Linear Term	Unweighted	1991.105	1	1991.105	3.078	.081
			Weighted	8993.468	1	8993.468	13.904	.000
			Deviation	11163.265	3	3721.088	5.753	.001
	Within Groups			101548.131	157	646.803		
	Total			121704.864	161			
2021 agriculture enrolment	Between Groups	(Combined)		15938.641	4	3984.660	5.039	.001
		Linear Term	Unweighted	443.776	1	443.776	.561	.455
			Weighted	3797.185	1	3797.185	4.802	.030
			Deviation	12141.455	3	4047.152	5.118	.002
	Within Groups			124143.464	157	790.723		
	Total			140082.105	161			

A Turkey post-Hoc multiple comparisons test was computed for the composite years 2016–2021 in order to determine where the differences lie. Multiple comparisons were referred to since it enabled paired combinations of means (Mugenda & Mugenda, 2003; Odebero, 2007; Manyasi et al., 2023).

Table 7

Post Hoc Multiple comparison

Multiple Comparisons							
Tukey HSD							
Dependent Variable	(I) type of school	(J) type of school	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
2016 agriculture selection	extra county school	sub county school	19.20119*	6.53079	.031	1.1779	37.2245
		private school	27.85714*	8.97779	.019	3.0808	52.6335
	county school	sub county school	18.80833*	3.75568	.000	8.4436	29.1730
		private school	27.46429*	7.21489	.002	7.5531	47.3755
	sub county school	extra county school	-19.20119*	6.53079	.031	-37.2245	-1.1779
		county school	-18.80833*	3.75568	.000	-29.1730	-8.4436
	private school	extra county school	-27.85714*	8.97779	.019	-52.6335	-3.0808
		county school	-27.46429*	7.21489	.002	-47.3755	-7.5531
2017 agriculture selection	extra county school	sub county school	19.37143*	6.49977	.027	1.4338	37.3091
		private school	28.28571*	8.93514	.016	3.6271	52.9444
	county school	sub county school	22.75833*	3.73784	.000	12.4429	33.0738

		private school	31.67262*	7.18062	.000	11.8560	51.4892
	sub county school	extra county school	-19.37143*	6.49977	.027	-37.3091	-1.4338
		county school	-22.75833*	3.73784	.000	-33.0738	-12.4429
	private school	extra county school	-28.28571*	8.93514	.016	-52.9444	-3.6271
		county school	-31.67262*	7.18062	.000	-51.4892	-11.8560
2018 agriculture enrolment	extra county school	sub county school	22.46548*	7.98029	.043	.4420	44.4890
		private school	35.42857*	10.97040	.013	5.1531	65.7040
	county school	sub county school	21.90000*	4.58925	.000	9.2349	34.5651
		private school	34.86310*	8.81622	.001	10.5326	59.1936
	sub county school	extra county school	-22.46548*	7.98029	.043	-44.4890	-.4420
		county school	-21.90000*	4.58925	.000	-34.5651	-9.2349
	private school	extra county school	-35.42857*	10.97040	.013	-65.7040	-5.1531
		county school	-34.86310*	8.81622	.001	-59.1936	-10.5326
2019 agriculture enrolment	extra county school	private school	39.14286*	11.73271	.009	6.7636	71.5221
	county school	sub county school	20.30833*	4.90814	.001	6.7631	33.8535
		private school	37.96429*	9.42885	.001	11.9431	63.9854
	sub county school	county school	-20.30833*	4.90814	.001	-33.8535	-6.7631
	private school	extra county school	-39.14286*	11.73271	.009	-71.5221	-6.7636
		county school	-37.96429*	9.42885	.001	-63.9854	-11.9431
2020 agriculture enrolment	extra county school	private school	49.42857*	13.59415	.003	11.9123	86.9449
	county school	sub county school	23.58333*	5.68684	.001	7.8891	39.2775
		private school	46.30357*	10.92477	.000	16.1541	76.4531
	sub county school	county school	-23.58333*	5.68684	.001	-39.2775	-7.8891
	private school	extra county school	-49.42857*	13.59415	.003	-86.9449	-11.9123
		county school	-46.30357*	10.92477	.000	-76.4531	-16.1541
2021 agriculture enrolment	county school	sub county school	21.58333*	6.28778	.007	4.2307	38.9360
		private school	44.64881*	12.07920	.003	11.3134	77.9843
	sub county school	county school	-21.58333*	6.28778	.007	-38.9360	-4.2307
	private school	county school	-44.64881*	12.07920	.003	-77.9843	-11.3134

Results in Table 7 showed that there were statistically significant differences in the mean of agriculture subject selection between extra-county and sub-county schools in favor of extra-county schools and between extra-county and private schools in favor of extra-county schools. It is evident that more students from extra-county schools selected agriculture. The variance in extra-county mean selection was due to more students selecting agriculture in sub-county schools, while few students selected agriculture in private schools.

Similarly, differences were also observed to be significant between county schools and sub county schools in favor of county schools and between county schools and private schools in favor of county schools. In the year 2018, the variance in the mean of selection was observed to be significant between extra-county schools and sub-county schools in favor of extra-county schools and between extra-county schools and private schools in favor of extra-county schools.

Means in extra-county schools are significant in all the years apart from 2021. Looking at the nature of students admitted to extra-county schools, they are the top performers in secondary schools. Such students select agriculture to enhance school performance. Extra-county schools therefore provide all resources and inputs required for teaching agriculture in a context that creates order in the implementation of the teaching and learning processes. They also have large tracts of land that are well fenced. The current findings agree with those observed in Kisii and Nyamira, who reported that extra-county schools have significantly higher selection rates than schools on the county and sub-county levels (Makori et al. 2019).

The significant mean selection in agriculture subjects observed in county and sub county schools is due to the narrow curriculum offered by the school, where students have to choose between agriculture and business studies only. Such schools have no resources that can motivate students to take agriculture, but they rely on a few jembes (hoes) and small plots that are not fenced.

It's important to note that, though low means in agriculture subject selection are observed in national schools across the years, the quality of students admitted to such schools is top performers. Similarly, such schools offer many applied and technical subject options to choose from. These students have the ability to handle the broad curricula available in their schools, which minimizes the number of students selecting agriculture as a subject. It was also noted that students in national schools have a negative perception of agriculture and have a mentality that a top-performing student cannot join a national school to learn agriculture, and they claimed that one makes history when they join national schools to learn digging.

V. CONCLUSION & RECOMMENDATION

5.1 Conclusion

The difference in selection of agriculture subject is due to differences in in selection experienced in different types of schools. Extra county schools experience the highest mean in agriculture subject selection than county and sub county schools.

5.2 Recommendation

The ministry of agriculture should reconsider increasing Extra County, county and subcounty schools while intensifying career education in agriculture subject in national and private schools, to realize increased selection of Agriculture subject.

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