



PERCEIVED CAUSES OF STUDENTS' LOW ENROLMENT IN AGRICULTURE SUBJECT IN SECONDARY SCHOOLS IN KITUI WEST

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ABSTRACT

Agriculture is an important science subject that enables learners to develop skills in cultivating the soil, harvesting crops, and raising livestock. Content of Agriculture subject is relevant to all learners irrespective of the careers they pursue since it provides information and skills that propel forward the country's economy. Despite this importance role Agriculture plays, there has been global decline in enrolment and graduation rate in agriculture related courses at all levels of education systems. The same trend has been recorded in Kitui West where students taking Agriculture as a subject has continued to decline. This study sought to establish the perceived causes of low secondary school students' enrolment in Agriculture subject in Kitui West Sub County. The objective of the study was to establish students' and teachers' perceived causes of low students' enrolment in Agriculture subject in Kitui West. The study adopted a descriptive survey design. The sample size consisted of 176 students, 20 teachers and 20 Secondary schools obtained through simple random sampling. Research instruments used was questionnaires. Descriptive statistics and Correlation analysis were used to establish the nature and magnitude of association between study variables. The study established that there are learners, teachers and school related factors that have contributed to few students taking Agriculture subjects in public secondary schools in Kitui West. The study recommends schools administration to support Agriculture by availing required learning resources and equipment. It also recommends training of more teachers in Agriculture and in-servicing of teachers in the subject.

Keywords: Agriculture, Students enrolment, Secondary schools, Perception

INTRODUCTION

Education systems are characterized by several optional subjects that students have to choose from. According to (Mustapha & Greenan, 2007) vocational education in other parts of the world like the USA is characterized by students taking vocational courses with a substantially better understanding of general educational skills. In Malaysia technical subjects offered in technical education institutions is meant to produce educated, skilled and motivated workforce. Technical and vocational education is considered as an important measure for development of workforce (Alemayehu, 2006). In many secondary schools in Africa, Agriculture subject has received an unfair treatment in that it has not been made compulsory, except in South Africa.

In other countries like Nigeria, agriculture is an optional subject selected alongside others like Islamic Religious Education (Ajidagba,2010). Agriculture subject in schools originated in Europe and was referred to as the classical model of Agricultural education (Case, 2010). In Europe there was emergence of the North European model that offered prevocational education in 1896, and this included apprenticeship. In America 1910, there was the North American model. This model emphasized on vocational education; it included demonstration plots by students in schools and homes. Included in this model were classrooms and a group of Future Farmers of America [FFA] a young, as well as adults' farmer class. The East European model came in between 1930 and 1950. The model offered pre-vocational training that included polytechnic. This model had a state farm, and from 1960 to the present we have a neo-classical model that offers mainly pre-vocational training and education in learning institutions that offer Agriculture as a subject (Dlamin 2004).

In East Africa, agriculture has been placed on top priority in almost all national development plans. This is according to Ngugi (2001) The importance of agricultural development is underlined by its potential contribution to

national food security, foreign exchange earnings, Gross Domestic Product [GDP] and employment. Konyango (2010) posits that, school Agriculture is considered in most countries around the world to be the key to social and economic prosperity. According to Atweh, Taylor and Singh (2005), the schooling years are meant to equip students with skills, knowledge and dispositions to meet their needs for the future citizenship and participation in economic life including employment and careers. Secondary schools must embrace the need to come up with guidelines that help students make informed choices concerning their future studies and work options during various stages of their educational journey Ohiwerei and Nwosu (2009).

School policy, parental guidance, peer influence, academic ability, intelligence, age, gender, ignorance and accidental choice have been identified as some of the factors considered when choosing subjects by students in secondary schools according to Owoyele & Toyobo (2008). Berry (2004) shows that the key factors that are the major contributors in student selection of subjects include: interest in the subject, perceived usefulness or importance of the subject, ability or success of the subject, career preference, subject combination for further studies, teachers 'advice and the teaching strategy. Bordet (2002) posits that students' personality like mental ability and attitude towards the subject can be a factor in subject choice in a school. Teachers have also been seen to have a great role in determining subject choice by students in a school. Students can have and develop interest in a subject when the teacher makes the subject enjoyable by using appropriate teachings methods (Taylor, 2008). A sound student-teacher relationship will help a great deal to build students' attitude towards Agriculture. This in the long run increases their likelihood of choosing the subject. A study by Ohiwerei and Nwosu (2009) revealed that a teacher is the central point of learning in the classroom situation because it is the methods and styles of teaching that he uses that create motivation to students. Employing inappropriate methods and styles of content delivery make learners lose interest in certain subject and when learners lose interest good performance is also not achieved. The study by these scholars goes ahead to reveal that most parents will tell their children not to take careers in Agriculture because there is no future in this field.

Kenyan educational curriculum has Mathematics, English and Kiswahili as the only compulsory subjects, according to Kenya Institute of Education (KIE, 2002). There are other twenty-three subjects, Agriculture included, to choose from. A study by Ngesa (2006) revealed that among the optional subjects, Agriculture was ranked fifth in terms of popularity hence there is an increase in the number of students in the recent past (Kenya National Examinations Council [KNEC], 2013). The introduction of Agricultural Principles and Practices Syllabus in 1969 was a major innovation in curriculum development, for it introduced a new syllabus that never existed, and this formed the foundation in the entire East Africa, as it became the East Africa Examination Council [EAEC] Agriculture syllabus. Agricultural education remains the key to industrialization by the fact that agricultural produce is the main source of raw materials for agribusiness and agric-industry (Ngugi, Temu and Kitalyi 2002).

In Kenya, agriculture is offered at all levels of the formal education system. At primary level there is eight years of compulsory universal education system and agriculture is integrated in the science subject. In the secondary education which lasts for four years Agriculture is offered as an optional subject. At tertiary education levels there are three categories which includes certificate, diploma, and degree, and agriculture is offered in the three levels (Kironchi & Mwangombe, 2007). The teaching of agriculture in Kenya is expected to promote the acquisition of skills for self – reliance in farming according to Mwiria (2002). It is viewed as particularly critical for the development of Kenya as Agriculture is the main economic activity in most parts of the country. The overall objective of the course is the development of basic agricultural skills relevant to Kenya and the learners' home environment. The subject is meant to have a large practical component to enable learners acquire useful agricultural practice skills Mwiria (2002).

Career awareness is important when individuals make choices of subjects because many learners are not aware of the types of careers a particular subject prepares them for. There are many prospects in Agriculture such as in veterinary medicine, farm management as well as teaching of Agriculture, which some students are not aware of (Chee & Leong-Yong, 2011). A close examination of this subject reveal that the nature of the question papers at the EAEC and later Kenya Certificate of Education [KCE], between 1963 and 1984 reflected both the practical and rural nature of the syllabus (EAEC, 1976; Kenya National Examination Council [KNEC], 1987). Konyango et al., (2010), concluded that introduction of Agriculture as a vocational subject contributed not only to curriculum diversification but also towards positive attitude to, not only Agriculture but also practical education in Kenya's education system.

Over the decades we have witnessed the once shining agriculture sector scrambling to its knees with self-esteem and pride decreasing to an extent that most Kenyans no longer feel proud to be associated with the industry. This has not only affected the staff but has spilt down to Kenyan secondary schools thus affecting general performance and the number of students selecting Agriculture as a subject. Many students to date feel agriculture is an old school

subject that was done some decades ago and do not belong to the current generation. The students who select agriculture as a subject are fewer compared to those who select other elective or optional subjects in the technical cluster category like Business studies and Home Science. This has prompted the researcher to investigate the causes of low enrollment in agriculture subject by students in public Secondary schools in Kitui West.

Agriculture is one of the key drivers of the Kenyan economy and therefore there is need to have more students take Agriculture as a subject in secondary school in order to prepare them for Agriculture related careers. Despite the great importance attached by the government on Agriculture in schools and in particular ensuring schools have been staffed with qualified Agriculture teachers, there has been a trend of the subject attracting few students in secondary schools when it comes to selecting it in form three from amongst elective subjects in Kitui West. This study therefore sought to find out the perceived factors by students and teachers contributing to few students selecting Agriculture as a subject in secondary schools in Kitui West.

The purpose of the study was to find out the perceived causes of students and teachers low enrolment in Agriculture in secondary schools in Kitui West. The objective was to determine if selected factors cause students' low enrolment in Agriculture in Secondary schools in Kitui West. The research questions were: Do school related factors cause students' low enrolment in Agriculture in Secondary schools in Kitui West? Do home related factors cause low students enrolment in Agriculture in Secondary schools in Kitui West? Do learner related factors cause low students enrolment in Agriculture in Secondary schools in Kitui West?

The findings of this study will be useful in providing data on the teaching and learning of agriculture by providing the number of students taking agriculture and number of teachers teaching agriculture in secondary schools. This information will help in the evaluation process of teaching and learning of Agriculture thus helping in putting in place the strategies aimed at improving teaching and learning of Agriculture in secondary schools. Findings from this study will also add value to the teaching learning strategies and resources in implementation of agriculture curriculum. Schools teaching Agriculture may use the findings in their attempt to make secondary agricultural education more relevant, effective and attractive to the students and teachers.

METHODOLOGY

The study adopted a descriptive survey research design. The design was suitable to this study since it allowed collection of data necessary for establishing causes of low enrolment in Agriculture subject by students. The researcher carried the study in Kitui West located in Kitui. This sub county has many secondary schools which are accessible. The Teachers Service Commission has ensured there is reasonable distribution of qualified teachers in the schools and therefore under a normal circumstance it is expected that Agriculture subject is taught in all the schools. The county consists of 33 secondary schools.

The study was done on 176 students and 20 teachers in a sample consisting of 20 schools obtained by simple random sampling. Two questionnaires were used in data collection. Questionnaire A contained items on students' perceptions on causes of students enrolment in Agriculture while questionnaire B on teachers perceptions on causes of students' enrolment in Agriculture. Collected data was analyzed using SPSS software version 22. Descriptive analysis such as mean, standard deviation, frequencies and percentages were extracted. Correlation analysis was undertaken to establish the nature and magnitude of association between study variables.

RESULTS AND DISCUSSION

Gender of Respondents

The results on the gender of the students respondents are presented in Table 1. From the above table 1 data indicate that male students were 90 (51.1%) while female students were 86 (48.9%). For teachers, 12 (60%) were male while 8 (40%) were female. From this data it clearly shows that male students were more than female students but each gender was adequately represented.

Table 1: Gender of the students respondents

	Students		Teachers	
	Frequency	Percent	Frequency	Percent
Male	90	51.1	12	60.0
Female	86	48.9	8	40.0
Total	176	100.0	20	100.0

Age of Students

The researcher sought also to find the age of students respondents. The age of an individual determines how the

individual perceives a situation. When it came to the distribution of the age of students, majority of the students respondents were aged between 16-17(59.2%) and mainly in form three followed by 18-20 years with 40.2% and only one was aged 21-23years.

Table 2 Age of students

Age (Years)	Frequency	Percent
16-17	100	59.2
18-20	68	40.2
21-23	1	0.6
Total	169	100.0

Teacher Experience

The researcher further sought the number of years worked by respondents as indicated on Table 3. From the sampled teachers, 12 formed the majority with a teaching experience of between 4-7 years. This represented 60% of the respondents. Teachers who have taught for more years are in better position to make a comparison of how Agriculture has been selected by students in schools for a number of years. From the findings results indicate that 40% of the respondents have taught for between one to three years.

Table 3: Teacher experience

	Frequency	Percent
2-3yrs	7	35.0
4-7yrs	12	60.0
8-11yrs	1	5.0
Total	20	100.0

Students' perception on home related causes

The study sought to find out student's perception on home related causes of students' low enrolment in Agriculture. The results are presented in Table 4. When it came to environment at home helping students to study agriculture, 71.8% agreed that it helped, while 5.5% disagreed. 50% were undecided on parents encouraging them to study agriculture. 43.6% were also undecided on interaction with senior people who performed well in agriculture. 33.3% agreed to have support at home to enable them study agriculture while 34.4% were undecided on that. Majority of students at 40.9% were undecided when it came to their parents' determination of a career for them that required Agriculture while 24.9% agreed that their parents had determination of a career for them that required Agriculture. From this data, the discussion is pointing at the home environment for majority of students supportive of students studying Agriculture in schools.

Table 4. Students' perception on home related causes

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Environment at home helps me to study Agriculture	31	17.1	130	71.8	10	5.5	10	5.5	-	-
My parents encourage me study agriculture	6	3.4	54	30.3	89	50.0	29	16.3	-	-
I interact with seniorpeople who performs well in Agriculture	9	5.0	58	32.0	79	43.6	32	17.7	3	1.7
I have support at home to enableme study Agriculture	8	4.4	60	33.3	62	34.4	39	21.7	11	6.1
My parents have determined a career for me which requires Agriculture	5	2.8	45	24.9	74	40.9	34	18.8	23	12.7

3.5 Teachers' perception on home related factors of students' low enrolment

The researcher sought to find out teachers' perception on home related factors to students' low enrolment in Agriculture. The findings are presented in table 5. The findings indicate that 63.2% of the teachers strongly agreed that enrolment at home helps students study agriculture. 75% agreed that guardians/parents encourage students to study agriculture. When it came to students interacting with senior members in their families who perform well in agriculture, 23.5% of the teachers agreed, 23.5% were undecided, 35.5% disagreed and 17.6% strongly disagreed.

40% agreed that students have support materials at home to enable them study agriculture, 20% were undecided and 25% disagreed on the same. 30% of the teachers agreed that parents have predetermined career for students which require agriculture, 25% disagreed and 25% also strongly disagreed.

Table 5. Teacher home related factors

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Environment at home helps students to study Agriculture	12	63.2	4	21.1	-	-	2	10.5	1	5.3
Guardians/ parents encourage students to study agriculture	-	-	15	75	2	10	2	10	1	5
Students interact with senior people who perform well in Agriculture	-	-	4	23.5	4	23.5	6	35.5	3	17.6
Students have support at home to enable me study Agriculture	1	5	8	40	4	20	5	25	2	10
Parents have determined a career for me which requires Agriculture	2	10	6	30	2	10	5	25	5	25

School related causes

Some of the causes of students' perception are related to the school practices and policies. The study sought to find out more about school related causes of students' low enrollment in Agriculture. The findings are shown on table 6. Majority of students at 75.7% agreed that many students do not study Agriculture therefore they did also not like studying it. 74.6% of the students agreed that as a result of previous students having been failing in agriculture therefor, they also feared to fail. 69.7% agreed that agriculture content is not friendly hence no need to strain. 56.4% of the students agreed that other teachers discouraged them from studying agriculture, 16% were undecided and 13.3% disagreed with the statement. 47.5% agreed that their agriculture teacher was committed to help them understand agriculture while 22.1% disagreed with the same statement. The results from the above data indicate that to a large extent the low number of students taking Agriculture as a subject is attributed by school related factors.

Table 6 School related causes

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Environment at home helps students to study Agriculture	35	19.3	137	75.7	1	0.6	2	1.1	6	3.3
Guardians/ parents encourage students to study agriculture	29	16	135	74.6	6	3.3	3	1.7	8	4.4
Students interact with senior people who perform well in Agriculture	24	13.5	124	69.7	14	7.9	8	4.5	8	4.5
Students have support at home to enable me study Agriculture	11	6.1	102	56.4	29	16	24	13.3	15	8.3
Parents have determined a career for me which requires Agriculture	17	9.4	86	47.5	34	18.8	40	22.1	4	2.2

Teacher perception on school related causes

The study also sought to explore the teachers' perception on some of the school related factors to causes of low enrolment in Agriculture. Table 7 shows the response of teachers towards school related causes of low students' enrolment in Agriculture. Data from table 7 indicate that 60% of teachers Strongly agreed that many students influenced each other not to study Agriculture, 30% strongly agreed while 10% strongly disagreed when it came to the same statement. Previous agriculture students who have not been performing well contributed to low number of students taking agriculture subject at 70% because they feared to fail like their colleagues. 50% agreed that Agriculture content is not friendly hence no need to strain while 35% disagreed. When it came to other students discouraging students from studying agriculture, 30% strongly agreed, 35% agreed, 20% disagreed and 15% strongly disagreed. 45% disagreed that teachers of agriculture are not committed to helping students understand agriculture while 30% agreed.

Table 7 Teacher school related factors

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Environment at home helps students to study Agriculture	6	30	12	60	-	-	-	-	2	10
Guardians/ parents encourage students to study agriculture	4	20	14	70	-	-	2	10	-	-
Students interact with senior people who perform well in Agriculture	2	10	10	50	-	-	7	35	1	5
Students have support at home to enable me study Agriculture	6	30	7	35	-	-	4	20	3	15
Parents have determined a career for me which requires Agriculture	1	5	6	30	-	-	9	45	4	20

Learner related causes

In many learning institutions students may influence one another when making subject and career choices. The study sought to investigate learner related causes on students' low enrollment in agriculture as a subject. Results on learner related causes of students low enrollment in agriculture are in Table 8. On learner related factors, 49.2% of the students agreed that they feel like they are doing what they want to do while learning agriculture; 60% agreed that they fear agriculture because it involves doing manual work; 39.4% agreed that they aspire to study an agricultural related course after KCSE examination; 25.7 were undecided; while 30.9% disagreed. When it came to learning agriculture informs them about life, 35.2% agreed, 22.9% disagreed and 28.5% disagreed. 41.9% agreed that they strain a lot while studying agriculture due its association with farm work. The percentage of those who were undecided and disagreed at 56.6% indicate that the subject has not been embraced by many students in the schools.

Table 8: Students perception on learner related causes

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Environment at home helps students to study Agriculture	47	26.3	88	49.2	31	17.3	11	6.1	2	1.1
Guardians/ parents encourage students to study agriculture	29	16.4	107	60.5	21	11.9	11	6.2	9	5.1
Students interact with senior people who perform well in Agriculture	4	2.3	69	39.4	45	25.7	54	30.9	3	1.7
Students have support at home to enable me study Agriculture	12	6.7	63	35.2	41	22.9	51	28.5	12	6.7
Parents have determined a career for me which requires Agriculture	43	4	75	41.9	17	9.5	28	15.6	16	8.9

Teachers perception on learner related causes

The study sought to investigate teachers' perception on whether there could be learner related factors contributing to low students selecting to take Agriculture as a subject. The findings are indicated in Table 9. Over half of the respondents at 55% strongly agreed that students feel like they are doing what they want to do while learning agriculture. Many students at 80% equated learning agriculture like other science subject and they fear it. 55% of the teachers disagreed that students aspire to study an agriculture related course after KCSE while 25% agreed with the same statement. 60% agreed that students appreciate learning agriculture informs them about life and 25% disagreed. When it came to students' strain while studying agriculture, 20% of the teachers strongly agreed, 45% agreed, 20% disagreed and 15% strongly disagreed.

Students perception on the state of students' enrolment in Agriculture

The study also sought to find out on students' perception on what they feel about the level of students' enrolment in Agriculture. Table 10 shows results of students' perception concerning the state of students' enrolment in Agriculture in their school. A total of 34.7% strongly agreed that students' enrolment in agriculture is at the required standards while 46.6% agreed on the same. 50% of the students were getting interested in studying agriculture as a choice and 26.1% disagreed. 52.8% agreed that many students prefer Business studies to agriculture.

Table 9: Teacher learner related factors

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Environment at home helps students to study Agriculture	11	55	7	35	1	5	-	-	1	5
Guardians/ parents encourage students to study agriculture	3	15	16	80	-	-	-	-	1	5
Students interact with senior people who perform well in Agriculture	1	5	5	25	1	5	11	55	2	10
Students have support at home to enable me study Agriculture	-	-	12	60	1	5	5	25	2	10
Parents have determined a career for me which requires Agriculture	4	20	9	45	-	-	4	20	3	15

Table 10: Students perception

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Students enrolment in Agriculture is at the required standards	61	34.7	82	46.6	17	9.7	12	6.8	4	2.3
More students are getting interested in studying Agriculture as a choice subject	9	5.1	88	50	27	15.3	46	26.1	6	3.4
Many students prefer Business studies to Agriculture when Choosing technical subjects	24	13.6	93	52.8	4	2.3	42	23.9	13	7.4

Teachers perception concerning the state of students' enrolment in Agriculture

The study also sought to find out on teachers' perception on what they feel about the level of students enrolment in Agriculture. Table 11 shows results of students' perception concerning the state of students' enrolment in Agriculture in their school. From the data on the above table 55% of the teachers agreed that students' enrolment in agriculture is at the required standard while 25%. 50% agreed that they get interested in studying agriculture as a choice subject while 5% and 25% were undecided and disagreed respectively. 50% of the teachers strongly agreed to the statement that many students prefer Business studies to Agriculture when choosing technical subjects, 45% agreed to the same and 5% strongly disagreed. Finally, the study concludes students Home and social background influence choice of Agriculture subject among secondary school students.

Table 11: Teachers Perception on enrolment

	SA		A		UN		D		SD	
	N	%	N	%	N	%	N	%	N	%
Students enrolment in Agriculture is at the required standards	4	20	11	55	-	-	-	-	5	25
More students are getting interested in studying Agriculture as a choice subject	2	10	10	50	1	5	5	25	2	10
Many students prefer Business studies to Agriculture when Choosing technical subjects	10	50	9	45	-	-	-	-	1	5

CONCLUSIONS

The findings from the study indicate that the reasons why few students enroll in Agriculture are chiefly attributed by school, home and learner related factors. Parents are not playing their expected role to guide the students at home on the importance of agriculture as a subject. School administration should ensure they have supported the subject by injecting the required equipment to the department and also ensure career guidance department is established and fully operational manned by informed teachers. Students should be discouraged from misleading their colleagues

that certain subject are difficult than others. There is need for school administration to hold pre subject selection meeting before learners select them

RECOMMENDATIONS

1. The government through the Ministry of Education and Teachers Service Commission should employ counselors and empower career masters in schools who will guide and counsel the students on subject choice in secondary schools.
2. There is need for parents to be on the forefront in guiding, teaching and encouraging their children on the role of agriculture in growing the economy of the country.
3. The school management should make sure that students are being given talks on career awareness so as to equip them with knowledge on subject choice like Agriculture among secondary school students. This can be done by teachers and other invited guests in the school.
4. This study has examined the perceived causes of low selection of Agriculture by students amongst other selective subjects in Kitui West Sub County. There is need to carry a comparative study on performance of Agriculture among other selective subject in secondary schools.
5. The study focused on Kitui West Sub County, there could be need to carry a study on the same in other Sub Counties and counties.

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