



The Relationship between Secondary School Students' Attributes and their Attitudes Towards Agriculture Subject: The Case of Migori District, Kenya

Atela Judith A. and Ogang'a Peter O.

Abstract

Students acquire attitudes within their classrooms, in their homes and within their community. The study focused on secondary school students attributes related to their attitudes towards agriculture as a subject and as career goal of students within Migori district of Kenya. Success in the subject and decision to pursue agriculture at secondary levels could be attributed to their personal attributes. Enrolment in agriculture as a subject and as a career goal in Migori depends on positive attitudes cultivated amongst the students. The study adopted a cross-sectional survey research design. The target population consisted of all the form 4 students in Migori district who had made subject choices and had enrolled for Kenya National Examinations Council while the accessible population included the form 4 students in the 6 schools purposely selected for the study. Random sampling technique was used to select 100 form 4 students both taking and those not taking agriculture subject from both rural and urban district schools. A questionnaire with reliability coefficient of 0.85 and had both closed and open-ended items was used to collect data. Data was processed and analyzed using descriptive statistics and inferential statistics to test the hypotheses. Statistical Package for Social Sciences version 17 was used for the analyses. The study found out that the attitudes of school students towards agriculture as a subject and career choice was low. It concluded that there was no evidence to show that the student attitudes were related to the attributes studied. The study recommends that parents, teachers of agriculture and universities with programs which prepare professionals for agriculture-related careers to cooperate with secondary schools to provide information about a wide variety of agricultural careers and make visits to schools and produce high quality media which positively portray the wider range of opportunities of careers in agriculture.

Key Terms: Agriculture subject; Parents' occupation; Socio-economic background; Students' Careers choice

Introduction

Success in the subject and decision by students to pursue agriculture and related courses at secondary and tertiary levels may be attributed to their personal attributes that relate to their attitudes towards the subject. In order to realize the roles played by agriculture to the national economy, a positive attitude must be cultivated among the students undertaking agriculture subject so that they enroll in the subject in large numbers at secondary school level where it is an optional subject. Kamau (2014) cited that students develop interest in different subjects because of their background, personal characteristics and others due to anticipated future career goals and this would motivate them to work hard. According to Njoroge (2014) the intention to participate in an activity could be predicted based upon knowledge, observation or other information about some issue. This suggests that a person's intent to become actively involved in an agricultural career may be predicted by analyzing his/her belief about agriculture and that, individuals with positive attitudes towards a subject tend to evaluate it positively (Kotrlik et al, 2007). In Migori District there are several agricultural based industries involved in agricultural related activities such as sugarcane growing and processing, tobacco growing, dairy keeping and subsistence



farming, fifty secondary schools within the district offer agricultural education, but despite this, the trend in performance and enrolment in agriculture subject has been declining (Migori/Kuria/Rongo District Secondary Schools Examination Council, 2006).

The Problem

Enrolment in agriculture subject in Kenya compares favourably with other subjects but the same is not with Migori District which took a declining trend in enrolment in the agriculture subject. This implies a negative attitude towards the subject, declining selection of the subject by secondary school students as an examinable subject and as a career choice. The role that students' attributes like student personal characteristics such as age, gender, students' career goals and student socio-economic background for example, family income and parents' occupation played in influencing attitudes towards agriculture was not clear. Parents of the students and their high school teachers in agriculture play an important role in students' enrolment in a subject. Students who have completed high school agriculture courses have more positive attitudes towards agricultural careers and the most influencing persons in their decision making were their high school agriculture teachers. There is a concern that the agriculture teachers' characteristics in schools are turning children off the agriculture subject and the results has been fewer students enrolling in agriculture subject in KCSE. Secondary school students have mixed attitudes towards agriculture subject and have little or no interest in pursuing agriculture and related careers. This research therefore aims at investigating "The relationship between secondary school students' gender, career goals and socio-economic background and their attitudes towards agriculture subject" the case of Migori District Kenya.

Objectives of the Study

The following objectives were formulated to guide the study:

1. To determine the relationship between students' career goals and their attitudes towards agriculture subject in Migori district, Kenya.
2. To determine the relationship between students' socio-cultural background and their attitudes towards agriculture subject in Migori district, Kenya.
3. To determine the relationship between parents' occupation and attitudes towards agriculture subject in Migori district, Kenya.

Literature Review

According to Udoukpong et al. (2012) students experience significant barriers which may restrict their preparation for and entry into professional roles. These barriers may be both cultural and institutional. He concluded that students perceive more overall barriers to participation in higher education. He noted that lack of consideration and pursuit of professional careers in agriculture among minorities may be the result of social and cultural barriers. A study of agriscience students in Texas high schools found out that minority students had more negative attitudes towards agriculture and agricultural occupations. Talbert and Larke (2004) however noted that negative attitudes toward agriculture as a source of profession is not unique among minorities. According to Ostovic et al. (2017) the students perceive agriculture as farming and ranching only and they have a pervasively negative opinion of pursuing a career in agriculture.

The variables include students' primary school experience, family background, culture and area of residence. The way a child grows to be, largely relies on his parents and relatives, the social



set-up, and his experience in early stages of formal education and the process by which the child's mind and character are developed through informal instruction he receives prior to formal instruction. According to Scofield (2007) students bring into social environment two modes of operation; the cognitive mode, which represents the pupils academic achievement and which may receive the greatest emphasis and reinforcement within school environment and the affective mode which includes attitude towards learning, in this case of agriculture subject.

According to Njoroge (2014) high school students quoted a variety of reasons for development of negative attitudes towards agriculture namely; lack of interest, failing grades, inability to get along with other students, desire to find a better career job, inability to get along with teachers, marriage, pregnancy, military enlistment and expulsion. Imitation of some influential person or groups or suggestions made by them act as source of reference to children as they consider pursuing agriculture as lifetime career, the totality of decision is reinforced by how best or how worst he attaches his past experience to the subject.

According to Baliyan (2015) parents and those who are closely related to the child have a certain amount of influence on his/her personality. On many occasions, a child's success or failure in school can be as a result of his earlier and present relationship with his parents and other family members. He also cited that in most African cultures women and children are the major sources of farm labour. In the family such activities like tilling land, weeding crops, herding livestock milking and harvesting are heavily accomplished by women and children. Work forced on children without the slightest motivation will cause the child to develop a negative attitude towards agricultural work (Baliyan, 2015). This negative attitude will count later in life in the child's behaviour, especially when it comes to the attitude of the child towards agriculture subject. Coupled with attitude development from the parents irrationality in division of labour is the mentality parents have towards agriculture education. Some parents may discourage their children from pursuing agriculture in high school level hence in a school where agriculture is a compulsory subject, a child admitted there will have already developed a negative attitude.

According to Herr and Cramer (2002) there has been an assumption that educated boys and girls would be wasted if returned to their homes to work as farmers. The implication is that training and intelligence is unnecessary to agriculture, secondly as children also cherish the success of their parents and in doing so they respect and admire what has made their parents to succeed. If it is through agriculture that their parents have grown up the wealth ladder, then children automatically develop attitudes positively inclined to agriculture subject and as a career.

According to Bennaars, et al.(1994) culture influences the whole of a community's life. Children are integrated into the society through the exposure to the actions and opinions of its older members. Accordingly, children who are born in complex societies for example in urban areas have grown a greater tendency to seek attention, recognition and dominance. On the other hand, children born in simple societies say rural areas are conditioned early in life to offer support and help in the farms and to one another. Most rural families practice agriculture in one way or another and children being members of these families are subsequently exposed to these activities on the other hand, urban children least concern themselves with agricultural activities since the society they live in urban areas do not engage in them.



According to Ostovic et al. (2017) culture is an important source of students’ strengths and resilience. It provides a means by which children learn to appreciate their developing sense of self. While undergoing agricultural education the child knows at the back of his mind what culture calls “don’ts” and what it calls “dos”. Adegoke & Osokoya (2015) concluded that some of the barriers which may restrict the preparation for and entry into professional roles may be both cultural and institutional, for example Hispanic students perceive more overall barriers to participation in higher education and that they differ particularly on barriers related to family and cultural factors. Lack of consideration and pursuit of professional careers in agriculture among minorities may be the result of social and cultural barriers (Baliyan, 2015).

According to Roberts et al. (2004), a child begins to develop attitudes in primary schools. At this level they receive correction of behaviour from teachers. The teacher therefore is entrusted to take the responsibility of the parent. It is here also that children come into contact with peers who through learning and playing share their experiences. According to Baliyan (2015) there is a relation between negative statements made by teachers about students and their scores in agriculture at primary level and that attitudes are also learned through teacher modeling which involves the acquisition of attitudes through observations and imitation of the teacher.

Methodology

The study adopted a cross-sectional survey research design involving data collection from members of population that sought to obtain information that described existing phenomena by asking individual students about their attitudes towards agriculture as a subject; as an elective and as career goals. A cross – sectional survey method of data collection was used in which case data was collected from a sample drawn from a predetermined population at one point in time (Mugenda, & Mugenda, 1999). The target population of the study consisted of all the candidates in Migori district which according to 2007 KCSE mock release were 3,027. The study targeted all the form fours from 40 secondary schools in Migori district who had already settled for their subject choices and enrolled with the Kenya National Examination Council to sit for examinations, October 2007 in six secondary schools both in rural and urban areas of Migori District. A sample of 20 students from each school was randomly selected from the 6 secondary schools within district schools of Migori District, thus giving a total of 120 students. Stratified random sampling was used to select 10 students who take agriculture subject from the agriculture class and also 10 who do not take agriculture in each school and therefore getting a total of 20 students enrolled in form 4 from each of the six schools selected for the study, however only 100 questionnaires were returned.

Table 1: Number of schools and students in the study

<i>Location of schools</i>	<i>Type of school</i>	<i>Number of Students</i>	<i>Number of responses</i>	Response rate
Urban schools	Migori Boys	20	17	13.8
	Kakrao mixed	20	17	13.8
	Moi suba Girls	20	16	13.7
Rural schools	Moi nyatike Boys	20	16	13.7
	St. Michaels	20	17	13.8



	Mixed			
	Nyabisawa Girls	20	17	13.8
Total	6	120	100	83.3

Data was collected using semi-structured questionnaires with both closed and open-ended items. The instrument was organized into sections A and B. Section A addressed demographic information such as gender, age, occupation of parents, location of residence and grade scored in science at primary school, section B covered areas on attitudes towards agriculture as an elective subject and as a career goal. These sections used a five-point Likert – type scale. (1-strongly agree, 2- Disagree, 3-Uncertain, 4-Agree, 5-Strongly Disagree). The validity of the questionnaires was determined after pilot testing in one of the schools in Migori district that had not been selected for study which was also offering agriculture subject. Responses obtained from the study were coded, entered and cleaned. Analysis was done using SPSS version 17.0 for preparation, summarizing, presentation, variable definitions and hypothesis testing. In the study the following descriptive statistics were used; means, standards deviations, frequencies and percentages. To document the attitude level of secondary school students, the overall mean of students’ responses were calculated and then ranked on an attitude scale ranging from 1-5. This was divided into three classes based on an equidistant scale ranging from low attitude (1-2:35), moderate attitude (2.36-3.66) and high attitude (3.67-5). Data visualization techniques of tables and charts were employed to present the results and ensuing discussions. To test the hypothesis, Chi- square was used in order to determine whether there was any significant relationship between the independent variables (gender, location of residence, parents occupation and students career goals) and the dependent variable (attitude towards agriculture as a subject, as an elective and as careers goal).

Results and discussion

Students’ career goals and attitudes towards agriculture subject

Figure 1 shows that 59% of the respondents opted for non-agriculture related careers. This figure also represents the number of students that did not select agriculture subject in the study. The focus on careers and career preparation has long been a major component of secondary agricultural education programs (Levon, & Blannie, 2005). Not only is the mission of agricultural education to prepared and support individuals for careers, but also to have a successful record of helping students set and achieve career and educational goals (Philips, & Osborne, 2002). Career aspirations are influenced by numerous factors including gender, academic factors including academic background, parental support and socioeconomic status (Talbert et al.,2005). The career goals of the students in this study were not inclined to agriculture.

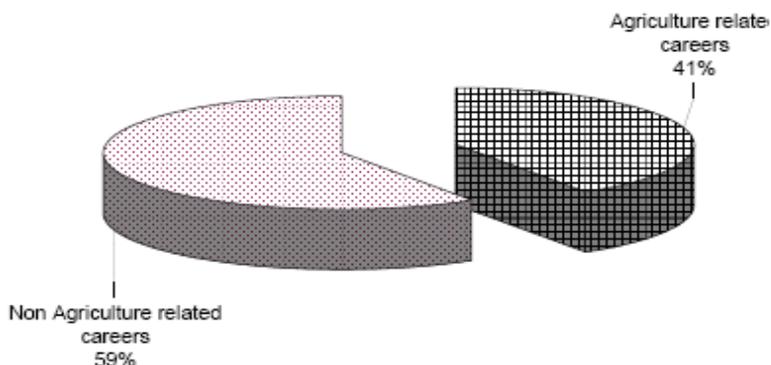


Figure 1: Career goals of the students

Area of Residence

Majority of the students in the study were from rural areas (62%) while the rest were from towns and 3.8% from cities (Figure 2). Socio economic factors such as parents' area of residence and occupation have been known to influence curriculum choice and careers aspirations by students (Talbert and Larker, 2005) hence high school agriculture curriculum development need to redesign efforts in the schools to make major changes in subjects and students enrollment in optional subjects. Area of residence was studied as most agricultural activities are carried out in the rural areas and this is known to affect the attitudes of the learners towards agriculture as they may already have formed opinions about agriculture without being aware and thus affect their attitudes as cited by Thornburg (1999).

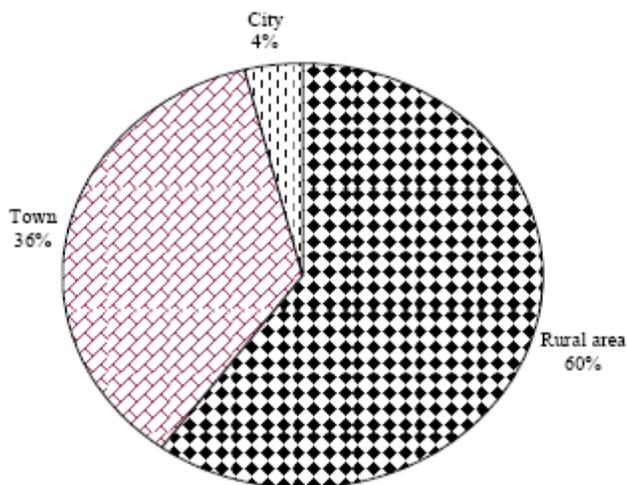


Figure 2: Area of residence

The students were asked to indicate where their parent's guardians lived most of the time. The residential areas were put into three categories that i.e. city, town and rural. It was revealed that most students resided in rural areas. Results indicate that majority of the students (91%) had low



attitude levels towards agriculture as a subject. Majority of the students residing in rural areas (97.9%) in the study area had very low opinion of agriculture as a subject and therefore would not rather study it. This is also the case with majority of students in towns and cities who also had low attitude towards the subject. There were no high attitude levels for agriculture subject by students residing in both city and rural areas. The results showed that only 7% had moderate attitude levels for agriculture subject. Most of the students chose other elective subjects in the same category as agriculture subject such as commerce, music, electronics and computer studies. Results in Table 2 show that 78% of the students had moderate attitude level towards agriculture as a career goal, 22% had low attitude levels. There were none with high attitude level towards agriculture as a career goal. Students from rural areas had the least percentage (48%) moderate attitude levels towards agriculture as a career goal compared to other students from cities and towns respectively. The results indicate that the overall attitude level towards agriculture as career goal by the students was generally low.

Parents' occupation and attitudes towards agriculture

The students were asked to indicate their parents/guardians occupation. The occupations were put in four categories and later coded into agriculture related and non-agricultural related occupations. The results from the analysis presented on Table 2 indicate that the majority of the students whose parents were peasant farmers (96.2%) had low attitude level towards agriculture as a subject, the same applied to the other students whose parents were employed in other occupations.

Table 2: Parents' occupation and students' attitudes

			Overall Attitude level		
Occupation		Count	low	moderate	Total
Peasant farmer		Count	12	14	26
		%	46.2%	53.8%	100%
Government		Count	24	25	47
		%	51.1%	48.9%	100.0%
Parastatal		Count	4	7	11
		%	36.4%	63.6%	100.0%
Private		Count	8	8	16
		%	50.0%	50.0%	100.0%
Total		Count	48	52	100
		%	48.0%	52.0%	100.0%

$$\chi^2 = 0.855: df=3: p\text{-value} = 0.841$$

The results show that 86% of the students had moderate attitude level towards agriculture as an elective subject while 14% had low attitude level. The results also indicate that 7.7%, 14.9%, 9.1% and 25.0% were the proportions of the respondents whose parents were peasants, government employees, parastatal workers and private workers respectively. The low attitude by students towards agriculture subject was generally observed across all the students regardless of their parents' occupation. According to Werunga et al. (2013) parents had a significant effect on students' choice of career and subjects and their characteristics played a vital role in students' choice of technical subjects. They have a crucial task of preparing the child for educational and



future life choices. These may have spillover effects on subject choice. He also affirmed that members of the family can provide guidance and information, directly or indirectly to influence a young person's career choice. Family members' choices of career influence students' career decision and form a strong belief in what kinds of career are the best for the students. This is supported by Adegoke and Osokoya (2015) who stated that knowledge about engineering was correlated to having an engineer in the family.

Conclusions and recommendations

There was no significant relationship in the attitude levels of students living in the rural areas and those living in the towns and city. It was concluded that parents' residence did not influence the attitudes of secondary school students towards agriculture as a subject and as a career goal. The overall students' attitude levels towards agriculture as a subject, as an elective and as a career goal was moderate. No significant difference in attitude levels of students' attitudes towards agriculture as a subject, as an elective and as a career goal between students whose parents engaged in agriculture related occupations and those in non-agriculture related occupations. There was also no significant relationship between students' career goals and their attitudes towards agriculture subject. The career goals had no influence on their attitudes, though their overall attitudes levels towards agriculture as a career were moderate. It is recommended that students should be taken for field trips, excursions and agricultural shows to enhance their agricultural skills and experience. This would boost their morale and attitudes towards agriculture. The agriculture teachers should demystify agriculture as a science subject to make the students acquire positive attitudes towards the subject. Students should be guided to choose their career as early as in form one and two in order to develop their positive attitude towards the subject. It is recommended that Agriculture professionals should make a concerted effort to cooperate with school officials in gaining access to provide them with information about professional careers. These professionals should portray professional careers in agriculture in a positive light. Schools should also provide written information on careers and opportunities in higher education and also arrange for visits by career professionals to their schools. It is further recommended that colleges and universities with programs which prepare professionals for agriculture careers cooperate with schools to provide information by producing high quality media which positively portray the wider range of opportunities of professional careers in agriculture and technologies. Additionally, colleges and universities should provide experiences in agriculture outside their communities such as mentoring programmes for secondary school students.

Suggestions for Further Research

A follow up study should be carried out to investigate the real effect of teachers' characteristics on the students' choice of agriculture in secondary school and as a career. Such a study would give findings on the impact of secondary school agriculture teachers on students' choice of the subject. A major focus and research should be done on the job market trends and the future career opportunities offered by agriculture as compared with other optional subjects as conceptualized by students. Further research should be done to find out the effects of curriculum review on the attitudes towards agriculture subject.

References



- Adegoke S. P., & Osokoya M. M. (2015) Socio-economic background and access to internet as correlates of students' achievement in agricultural science. *International Journal of Evaluation and Research in Education*, 4(1), 16-21.
- Baliyan, S. P. (2015). Factors underlying attitude towards agriculture as predictors of willingness to enrol in the subject by senior secondary students in Botswana. *Journal of Educational and Social Research*, 377-385.
- Baliyan, S. P. (2015b) Demographic factors influencing senior secondary school students' attitude towards agriculture in Botswana. *International Journal of Education and Research*, 3(10).
- Bennars, G.A., & Otiende, R. (1994). *Theory and practice of Education*. Nairobi; East Africa Educational Publishers Ltd.
- Council Secretary. (2007). Migori/ Kuria/Rongo/ districts secondary schools examination council, 2007 KCSE MOCK release. At St. Joseph's School Rapogi on 6th September 2007 Mock results. Kombengi press, Migori.
- Herr, E.L., & Cramer, S. H. (2002). Career guidance and counseling through the life span: Systematic approaches. New York Harper Collins Press. USA.
- Kamau T. N. & Orodho J. A. (2014). Secondary school student's perception towards agriculture subject in public secondary schools in Nairobi County, Kenya. *Journal of Humanities and Social Science*, 19, 30-36.
- Kathuri, N.J. (1990). A study of the new agricultural education curriculum in the secondary Schools of Kenya (Unpublished PhD. Dissertation: Urbana Hampaign, Illinois, University of Illinois).
- Kotrlík, J. W., Redmann, D. H., Harrison, B. C., & Handley, C.S. (2007). Information technology related to professional development needs of Louisiana agriscience teachers. *Journal of Agricultural Education*, 41(1), 25-30.
- Levon, T. E., & Blannie, E. B. (2005). Factor influencing careers choice of urban agricultural education students. *Journal of Agricultural Education*, 46(2), 26-40.
- Migori/Kuria/Rongo District Examinations Council (2006). *Migori District KCSE Results Analysis for the Year 2006*. Hataro Printing Press, Migori.
- Ministry of Education. (2005). *Secondary School Agriculture syllabus for Kenya*. Nairobi, Kenya: Institute of Education.
- Mugenda, O. M. & Mugenda, A.G. (1999). Research methods: Quantitative and qualitative approaches. Nairobi, Kenya, Acts Press.
- Njoroge, K. T. (2014). Secondary school student's perception towards agriculture subject in public secondary schools in Nairobi County, Kenya. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, 30-36
- Ostovic M., Mikus, T., Pavicic, Z., Matkovic, K., & Mesic, Z. (2017). Influence of socio-demographic and experiential factors on the attitudes of Croatian veterinary students towards farm animal welfare. *Veterinarni Medicina*, 62, (8), 417-428.
- Philips, S. H., & Osborne, E.W. (2002). Students perceptions and attitude towards agricultural science education. *Journal of Agricultural Education*, 47(3), 4-7.
- Roberts, T. G. & Dyer, J. E. (2004). Characteristics of effective agriculture teachers. *Journal of Agricultural Education*, 45(4), 1-5.



Scofield, G. G. (2007). College of Agriculture New Students Profiles. Paper Presented at the Central Region 94th Annual Research Conference in Agricultural Education, St Louis, Mo Press, USA.

Talbert, B. A., & Alvin L. Jr. (2005). Factors influencing minority and non-minority students to enroll in an introductory agriscience course in Texas. *Journal of Agricultural Education*, 36(1), 1-6.

Thorburg, H.D. (1994). An investigation of dropout program among Arizona's Minority youth. *Educational Journal*, 94, 248-265.

Udoukpong, B. E., Emah, I. E., & Umoren, S. E. (2012). Student attitudes, parental influence and career aspirations in academic achievement in entrepreneurial curriculum. *Academic Research International*, 2(1).

Werunga K., Owano A., Ayodo T. M. O., & Epari E. (2013) Factors influencing choice of technical subjects among the secondary school graduates in Kenya. *International Journal of Innovative Research & Development*, 2(11).