

THE USE OF SCHOOLS FOR SOCIOECONOMIC TRANSFORMATION:
A STUDY OF TANZANIAN SECONDARY SCHOOL STUDENTS'
BELIEFS, ATTITUDES AND ASPIRATIONS TOWARD
FARMING AND RURAL LIFE

By

Amon Z. Mattee

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TITLE OF THESIS THE USE OF SCHOOLS FOR SOCIOECONOMIC
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STUDENTS' BELIEFS, ATTITUDES AND ASPIRATIONS TOWARD
FARMING AND RURAL LIFE

MAJOR PROFESSOR Walter T. Bjoraker

MAJOR DEPARTMENT Continuing and Vocational Education

MINOR Educational Policy Studies

NAME AMON Z. MATTEE

PLACE AND DATE OF BIRTH Moshi, Tanzania, May 1, 1950

COLLEGES AND UNIVERSITIES: YEARS ATTENDED AND DEGREES

University of Dar-es-Salaam, Tanzania, 1972-1975 B.Sc.

(Agric.)

University of Wisconsin-Madison, 1976-1978 M.S.

University of Wisconsin-Madison, 1980-1983 Ph.D.

MEMBERSHIPS IN LEARNED OR HONORARY SOCIETIES

PUBLICATIONS "Evaluating the Impact of Agricultural Education
Program in The Tanzanian Schools: Some Suggestions for
Action", University of Dar-es-Salaam, AEE Working Paper
(with S. Rimstad) "Practical Instruction in Agriculture:
A Survey of the Utilization of the Agricultural Units in
Selected Secondary Schools in Tanzania". University of
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Under the Supervision of Professor Walter T. Bjoraker

Purpose

The purpose of the study was to assess Tanzanian secondary students' beliefs, attitudes and aspirations regarding farming and rural life, and how these relate to school agricultural experiences and to individual and situational characteristics of the students.

Methodology

Data were secured through a structured questionnaire administered to a sample of 867 Tanzanian government secondary school students.

The dependent variables for the study were students' beliefs, attitudes and aspirations with respect to farming and rural life. The independent variables were the school agricultural learning experiences, the sex, grade and home location of the student, parental education and occupation, and type of farming at home.

The analysis tested the relationship between the independent variables and students' beliefs, attitudes and aspirations toward farming and rural life.

Findings and Conclusions

1. Students' beliefs were mainly positive while their attitudes were either positive or neutral, with very few having negative beliefs or attitudes. About one-third of the students aspired to agricultural careers including farming while half of them preferred working in the rural areas.

2. Although students who have had practical school agricultural experiences were more likely to hold positive beliefs, students' beliefs were more strongly related to home background characteristics. Students from rural farm background were more likely to hold positive beliefs.

3. Students who have had practical school agricultural experiences were more likely to hold positive attitudes. Likewise, male and lower grade students were more likely to hold positive attitudes. Students' attitudes were not related to home background characteristics.

4. Generally, school agriculture seemed to influence students' aspirations toward rural-based agricultural occupations. But as students progressed up the academic hierarchy their aspirations shifted progressively to urban non-agricultural occupations. Also students from

less educated rural backgrounds were more likely to aspire to rural agricultural occupations compared to those from more educated urban backgrounds.

5. Although school agriculture may help in reorienting students' expectations toward rural and agricultural occupations, its effectiveness is severely limited since schools continue to be the sole basis for recruitment to elite positions and as such continue to socialize students toward more elitist expectations, contrary to policy objectives.

APPROVED BY _____

DATE _____

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CHAPTER I

INTRODUCTION

The Purpose of the Study

This study assesses the beliefs, attitudes and aspirations of a sample of Tanzanian secondary school students towards rural life in general and farming in particular, and the extent to which these beliefs, attitudes and aspirations are in line with government policy expectations. It seeks to test the assumption that certain school learning experiences can produce certain predetermined learning outcomes in students by determining the extent to which different school agricultural learning experiences produce a variation in students' beliefs, attitudes and aspirations. Also, the study aims at investigating how students' certain background characteristics are related to their beliefs, attitudes and aspirations.

Statement of the Problem

The policy of Education for Self-Reliance¹ was launched by President Nyerere in 1967 shortly after the announcement of the country's new development doctrine of

Socialism and Self-Reliance embodied in the "Arusha Declaration".² This new development policy aims at building, in Tanzania, a socialist society based on three principles: equality and respect for human dignity; sharing of the resources which are produced by people's own efforts; and work by everyone and exploitation by none. In the context of this general policy, the education which was being offered then was seen to be dysfunctional. Nyerere mentions in the Education for Self-Reliance policy statement that,

The most central thing about the education we are at present providing is that it is basically elitist education designed to meet the interests and needs of a very small proportion of those who enter the school system.... it induces among those who succeed, a feeling of superiority, and leaves the others hankering after something they will never obtain. It induces a feeling of inferiority among the majority, and can thus not produce either the egalitarian society we should build, nor the attitudes of mind which are conducive to an egalitarian society.³

Accordingly, Nyerere suggested reorientation of the educational system in order to turn schools into vehicles of the transformation of the society towards socialism and self-reliance. According to the policy of Education for Self-Reliance therefore, instead of schools being isolated enclaves for the dissemination of literary knowledge, they should become centers where teachers and pupils can learn to understand the aspirations and problems of society at

large. School communities themselves must become integrally involved in the strategy for mass egalitarian development by undertaking productive enterprises on a communal basis and by becoming more effectively integrated with the larger community. In part this is to be achieved by a reform of the school system - its organization and its curriculum -- and as a result of this reform, the graduates of the system will be better prepared in their attitudes for their roles in the rural community and more confident in those practical skills by which that community will improve its standard of living in a socialist and self-reliant way.

The policy of Education for Self-Reliance, therefore, seeks to change the social functions of schooling so that students come to regard it not merely as a means of skill training and personal advancement but as preparation for service to the society. The schools are supposed to be sources of new socialist attitudes for the students who are supposed to go out into the community and personify and diffuse the new values acquired in school in the effort to change societal values and attitudes. The introduction of school agriculture is the cornerstone of this strategy of transforming students' attitudes especially because the government places great emphasis on rural development. As a result of certain school agricultural

experiences students are supposed to graduate with more favorable attitudes toward life in the rural areas in general and farming in particular, so that they can use their knowledge and skills in the effort to transform farming into productive agricultural enterprises organized around communal living and decision-making.

But there is considerable debate as to the extent to which specific school experiences can lead to certain predetermined student attitudes. The totality of one's attitudes as he graduates from school may be shaped by school experiences as well as by other factors. This suggests a question of considerable importance with respect to the educational policy: what sources produce the variation in attitude among students with respect to the government's desire for them to participate in the country's rural transformation effort? Arising logically from this is another question of equal concern: how realistic is it for the policymakers to expect specific school experiences to result in certain predetermined attitudes?

To date most schools are engaged in one kind of agricultural activity or another, and the government is in the process of strengthening the agricultural program by revising the syllabus, training more teachers, providing more teaching/learning materials, facilities and equipment, and even starting new agricultural secondary schools.

Still it is not possible to say with certainty whether or not all those efforts are resulting in a significant change in students as intended by the policy, and how such a change might be related to the various factors operating both within and outside the school. The problem then becomes one of identifying the total framework within which the attitudes of students toward their role in rural development are formed, and how policy may be shaped so that different experiences both within and outside the school may reinforce each other in shaping students' attitudes. This study in particular tried to answer the following question: What are students' beliefs, attitudes and intentions concerning farming and living in the rural areas and how are these beliefs, attitudes and intentions related to school agricultural learning experiences and to individual and situational characteristics?

Background Statement

Although the policy of Education for Self-Reliance was launched early in 1967, actual implementation came much later. Initially this consisted of opening up of large farms by many schools, with students spending many hours doing manual farmwork of little instructional value. This was mainly because teachers were not prepared for the task of practical agricultural instruction. In any case

there was no syllabus or curriculum to follow. Also, since this was considered a political issue, local politicians and Ministry of National Education officials were anxious to show quick results to impress the public and the architect of the policy - the President. The teachers were therefore pressured into implementing the policy the best they could.

It was not until 1971 when the first syllabus for agricultural science was issued by the Ministry of National Education, while some former Ministry of Agriculture extension staff were sent off for a one year agricultural teacher training course at Butimba College of National Education. Agricultural science was added to the curricula of 18 schools in 1972 using the first graduates from the teacher training course to teach the subject. Currently, students in 40 of the country's 133 secondary schools have to study agricultural science as one of the secondary school subjects.

The other secondary schools not teaching agricultural science as one of the subjects are nevertheless supposed to be engaged in a variety of agricultural and non-agricultural production activities depending on the environment of the school and the availability of land. Urban schools may, for example, be engaged in intensive small livestock production or the production of simple

furniture for sale. Each school or group of neighboring schools is provided with a manager, who is supposed to advise students and teachers on technical matters concerning their production enterprises, and liaise with other institutions and agencies in matters of obtaining inputs for the school projects and seeking markets for their products.

School agriculture was made the cornerstone of the new educational policy because the Tanzanian government places a great emphasis on rural development, and the thrust of its development policies has aimed at stimulating the growth of agricultural and other rural economic activities since more than 90 percent of the population lives and works in the rural areas. School leavers are therefore expected to contribute to the social and economic transformation of the rural areas, and to this end the schools are expected to play the central role of influencing the attitudes of students toward farming in particular and toward life in the rural areas in general, while also providing the necessary agricultural skills. The policy statement suggested that

(the educational system) must prepare young people for the work they will be called upon to do in the society which exists in Tanzania - a rural society where improvement will depend largely on efforts of the people in agriculture and village development....It must produce good farmers.⁴

Accordingly, agricultural activities must be part of school life:

...every school should also be a farm, the school community should consist of people who are both teachers and farmers, and pupils and farmers...the farm would be an integral part of the school, and the welfare of the pupils would depend on its output just as the welfare of the farmer depends on the output of his land.⁵

In addition to preparing students for after-school life, school agriculture is important for economic reasons as well, for production generated by the teachers and students will help offset some of the costs of running the schools. In fact, it was specifically suggested that,

...all schools, but especially secondary schools and other forms of higher education, must contribute to their own upkeep, they must be economic communities as well as social and educational communities. Each school should have, as an integral part of it, a farm or workshop which provides the food eaten by the community, and makes some contribution to the national income.⁶

The policy of Education for Self-Reliance therefore emphasizes agriculture for three basic reasons. The first is to effect attitudinal change in students, teachers and the society at large with respect to the purpose of education. It is hoped that emphasizing practical agricultural work will counteract elitist attitudes in those who go through the educational system, and will demonstrate that education is really for service to the community which is

primarily rural and agricultural, rather than as a preparation for white-collar occupations. Also students' experiences in cooperative production projects will help counter the individualistic and competitive tendencies so prevalent in the school system, by fostering group initiative and cooperative spirit.

Secondly, students should be able to offset part of the costs of boarding and other services by revenues from their agricultural production projects.

Finally, it is a preparation of students for life they will be leading after they leave school. For the majority of the students it is expected that they will stay in the rural areas after they finish school and only a few will join the middle-level technical or administrative cadre in the public sector, or go on with further education. It is therefore hoped that teaching agricultural skills in the schools will help school-leavers get more easily started in farming and other related occupations, thereby reducing the 'school-leaver' problem and the rural-urban migration.

The policy of Education for Self-Reliance therefore sees school agriculture as a way of influencing students' perceptions of the realities of the social and economic situation surrounding them, and of shaping their attitudes and aspirations in a manner which will allow them to better

participate in the transformation of that situation.

There is no doubt that formal schooling, apart from serving to transmit knowledge and skills in classroom instruction, forms a setting where certain patterns of behavior are molded and transmitted, i.e., where students are socialized into certain ways of thinking and behaving which are, in turn, diffused into society.⁷ But schooling is also influenced by the society in that schools tend to transmit those norms and values widely and strongly held by that particular society.⁸ Two opposite viewpoints have therefore emerged as far as the relationship of schooling and social change is concerned.

One view holds that schools are an important instrument of social change. By altering what is taught, students can acquire new patterns of behavior which they will transfer to the larger society thus creating change. This view is implicit in the Tanzanian policy of Education for Self-Reliance. The other viewpoint sees society, through its values and expectations which are largely beyond the influence of the school, as the determining factor in what patterns of thinking and behaving students acquire. Phillip Foster⁹ is among the staunchest supporters of this view; according to him the effect of schooling is not so much a result of what goes on in the schools, but rather the result of the status and material rewards the

society confers on an individual upon the attainment of a given level and type of schooling. With respect to Tanzania's educational policy he argues that since schools reflect their social context, they cannot be expected to transmit egalitarian values and attitudes in a society where the educated still hold positions of higher economic and social status.¹⁰

There is considerable evidence to support Foster's thesis as shown by several studies so far.¹¹ These studies show that there is still a contradiction between the expectations of the government and the Party on one hand, based on the underlying philosophy and purpose of the socialist ideology and the expectations held by students and their families based on prevailing reward and status structure which continues to favor the more educated. It seems that the effort to make schools the fountain of socialist commitment and rural orientation has not succeeded because society as a whole continues to view schools as vehicles for individual social and economic mobility. Indeed the occupational structure is still very closely tied to the educational structure, such that the remuneration and status of each occupation is directly related to the level of schooling deemed necessary for that occupation. One study of Tanzanian secondary and college students concluded that,

Although a casual evaluation might show the policy of self-reliance succeeding because students are participating in self-reliance activities, the fact is, students, teachers and parents still retain the old attitudes towards education and life, (and that) schools have not yet succeeded in eliciting a positive response to the principles of education for self-reliance in all pupils, and as long as this is the case...genuine and voluntary participation in self-reliance projects can hardly be expected to flow forth and generate positive attitudes which can be carried over into life outside the schools.¹²

Moreover, it has been argued that school agriculture is not a new phenomenon in Tanzania, and that similar attempts by the British to introduce agriculture in the school system in order to produce school leavers who were willing to live in the rural areas and engage in farming were a failure. The present attempt therefore, which is based on the same assumption that agricultural experiences in the school can somehow influence students' attitude toward rural life in general and farming in particular, is not likely to succeed.¹³ It has been suggested that the main reason for the failure of the earlier attempts by the British is that the introduction of school agriculture was treated as a purely educational issue dealing mainly with designing the syllabus and providing teachers and textbooks, rather than as a social program concerned with improving the economic well-being of the whole native population. Although students learned some basic farming

skills, nothing changed to enable, or even encourage them to enter farming.¹⁴ The success of the present attempt will also depend on the success of the government's effort at improving the social and economic conditions in the rural areas.

Studies by Foster¹⁵ and Clignet and Foster¹⁶ have demonstrated that students' attitudes and aspirations toward their after-school careers are based on their realistic assessment of the opportunities available in the country's economy in relation to their level of schooling. Sommerset's study in Kenya also demonstrated that as a student progresses up the academic ladder his aspirations rise accordingly, while for the same grade-level those with higher achievement levels tended to have higher aspirations.¹⁷ A student's attitude toward farming and living in the rural areas may be shaped not necessarily by the specific learning experiences in the school, but rather by virtue of the student's progression up the academic hierarchy and his ranking in class. The brighter the student and the longer he stays in school the more opportunities open to him and the less chance of him choosing farming as a career, so that, ironically, schooling will have the exact opposite of the intended effect.

The student's attitude and aspirations toward farming are also likely to be influenced by the type of

agriculture practiced at home. If a student comes from an area where farming is a precarious occupation where the parents can hardly be guaranteed enough food for the year, he may view agriculture as an insecure and underpaying occupation to be avoided at all costs, while a student coming from better endowed area where the parents have a steady income from permanent cash crops may come to view farming more favorably. Significantly, since the population is overwhelmingly rural, most Tanzanian secondary students come from poor peasant background. To these students a change in attitude toward farming will probably have to be preceded by a marked improvement in the agricultural sector. This point has been noted by L. Gray Cowan, among others, who cautions that,

Successful teaching about agriculture comes down to whether or not good living can be made on the land. No amount of teaching of agricultural skills either in or outside the school will prove of real value to the young farmer unless it can be demonstrated conclusively that he can make a better living in agriculture than his father did.¹⁸

In connection with the above point it follows that parents who themselves find it difficult to make a decent living on the land are likely to pressure their children into selecting non-agricultural urban-based occupation. In fact studies done in the Phillipines indicate that even among vocational agriculture students, few were

willing to enter farming due to parental pressure to enter the modern employment sector rather than farming.¹⁹ It does not appear that the pressure on students to enter the modern sector is limited only to those from more educated and higher income family backgrounds.

The student's attitude and aspirations toward farming and living in the rural areas may also be influenced by whether the student is from a rural or urban background. One can speculate that those from rural areas may be more used to and sympathetic with rural life and thus may be more willing to live and work there than their urban counterparts. For example, in a study of Tanzania students from a rural background by Noa Zanolli,²⁰ the majority of those in the sample preferred to, at least, maintain a home in the rural areas after they start work, an indication of their attachment to their rural backgrounds.

The way agriculture as a subject is taught at school and how students perceive it relative to other subjects may also influence their attitude toward the subject and hence toward farming. If the quality of teaching is high and students enjoy and do well in this subject, it is likely to increase students' motivation and foster positive attitudes. Likewise if the mobility of the agricultural option graduates is high in the employment sector, this may have a positive effect on students.'

willingness to join an agricultural occupation. The problems which the Tanzanian schools teaching agriculture now face include the lack of well trained and well motivated teachers, lack of adequate teaching materials and equipment and lack of regard for the students' agricultural knowledge by most employers.²¹ This is likely to have a negative impact on how students come to view agriculture as a subject and all that it is meant to transmit.

Finally, one expects that the degree of student involvement in agricultural activities in the school, the way these activities are organized and the reward for students from these activities may have an effect on students' attitude toward agriculture as an occupation. Where activities are well selected, well organized with student participation and where students enjoy the fruits of their labor, the students are likely to have a healthy attitude toward agricultural activities and may even be motivated to try farming as an occupation. Results of studies done so far to assess the economic returns of school agricultural activities are not encouraging. A study conducted by a Ministry of National Education team, for example, found that the average earnings per student in 1975 was T.Shs 77.87 (\$10) or about 3 percent of the total annual running cost of each student.²²

T. Maliyamkono²³ uses the term "The Unproductive School" to summarize his observations of the unsatisfactory economic performance of school agricultural projects, while Simon Nkonoki,²⁴ in comparing the average peasant's performance to the school performance in crop production, found that, of the two, the schools' productivity was lower. Such findings lead one to believe that the students are not likely to acquire a healthy attitude toward agricultural activities because the returns from these activities are so dismal.

In summary, it can be said that students' attitudes and aspirations toward farming and living in the rural areas can not be a result of engaging in agricultural activities in the school or learning agricultural concepts in class only. The whole exercise of redirecting students' attitudes and aspirations is more than just an educational exercise, and involves the interplay of various factors. It is therefore necessary to try to isolate among the various factors those which are important and which the schools or the government can manipulate in order to influence the students' attitudes and aspirations toward farming and rural living in order to prepare them better for the important task of rural socio-economic transformation. Moreover, very little is known to date about the empirical relationship between various forms of agricultural

experiences in Tanzanian secondary schools and their learning outcomes. Faith in the ability of agricultural activities to induce certain attitudes and understandings in students remains blind unless it can be attached to empirical understanding of what kinds of agricultural experiences have what effects under what conditions.

Objectives of the Study

The specific objectives of the study are:

- 1) To assess the beliefs, attitudes and intentions of secondary school students with respect to farming and living in the rural areas.
- 2) To determine the relationship between the type of school agricultural learning experiences and students' beliefs, attitudes and aspirations.
- 3) To analyze the relationship between the following variables and students' expressed beliefs, attitudes and intentions toward farming and living in the rural areas:
 - a) home location, i.e., rural vs. urban, b) types of farming parents involved in, i.e., subsistence vs. cash crop production, c) grade level of student, d) sex of student, e) parents' level of education and f) parents' occupation.
- 4) To recommend some policy measures that may result in significant attitudinal changes in students as required by

the policy of "Education for Self-Reliance", and to suggest areas for further research that can broaden our understanding of the relationship between school experiences and attitudinal outcomes of students.

Hypotheses for the Study

The following hypotheses were derived from the discussion of the research problem and the theoretical framework for the study as presented in Chapter II. The hypotheses are stated in the null form because this form better fits the statistical techniques of hypothesis-testing used in this study which are supposed to determine whether the relationship found between the different variables is a true relationship present also in the population from which the sample was drawn or a mere chance occurrence.

1. There is no significant relationship between school agricultural experiences and a) students' beliefs about farming, b) students' attitudes toward farming and c) students' intentions toward farming.
2. There is no significant relationship between school agricultural experiences and a) students' beliefs about rural life, b) students' attitudes toward rural life, and c) students' intentions toward living in the rural areas.

3. There is no significant relationship between the following variables and students' beliefs about farming: a) home location, b) type of farming at home, c) grade level of student, d) sex of students, e) parents' level of education, and f) parents' occupation.

4. There is no significant relationship between the following variables and students' attitudes toward farming:

a) home location, b) type of farming at home, c) grade level of student, d) sex of student, e) parents' level of education and f) parents' occupation.

5. There is no significant relationship between the following variables and students' intentions toward farming:

a) home location, b) type of farming at home, c) grade level of students, d) sex of student, e) parents' level of education and f) parents' occupation.

6. There is no significant relationship between the following variables and students' beliefs about living in the rural areas:

a) home location, b) type of farming at home, c) grade level of student, d) sex of student, e) parents' level of education and f) parents' occupation.

7. There is no significant relationship between the following variables and students' attitudes toward living in the rural areas:

a) home location, b) type of farming at home, c) grade level of student, d) sex of student, e) parents' level of education, and f) parents' occupation.

8. There is no significant relationship between the following variables and students' intentions toward living in the rural areas: a) home location, b) type of farming at home, c) grade level of student, d) sex of student, e) parents' level of education, and f) parents' occupation.

Significance of the Study

Tanzania's policy of Education for Self-Reliance is an attempt to make the educational system more responsive to the country's problems of rural development. The policy seeks to make schools the fountain of certain values and attitudes which will make it more likely for school-leavers to participate more fully in the agricultural sector. Tanzania is different in this respect only to the extent that schools are expected to play the leading role in radically changing students' (hence society's) values and attitudes, rather than simply perpetuating the current social values and attitudes. Such an approach has been tried in only a few other countries like China, Cuba and the Soviet Union.

There is little empirical information on which to base the strategy to achieve the objectives of the policy. In particular, the mechanism by which students acquire values and attitudes, and the various factors operating

both within and outside the schools are not known. This study, by examining the relationship between the students' various learning experiences in and outside the school, has the potential for broadening our understanding of how, in the Tanzanian context; students come to acquire values and attitudes and how the various factors contributing to students' attitudes may be effectively manipulated to result in certain predetermined attitudes. The study therefore provides policy-makers and curriculum developers with much needed empirical data on which to base policy decisions which can contribute to the achievement of the aims of "Education for Self-Reliance".

Footnotes

¹The policy statement is contained in: Julius Nyerere, Education for Self-Reliance. Dar-es-Salaam, Government Printer (1967).

²Tanganyika African National Union, Publicity Section. "The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance" Dar-es-Salaam, Government Printer (1967). For further elaboration of the country's development ideology see some of the works by Nyerere, for example Ujamaa: Essays on Socialism, Dar-es-Salaam, O.U.P. (1968); Freedom and Socialism/Uhuru na Ujamaa, O.U.P. (1968); and Nyerere on Socialism, -Dar-es-Salaam, O.U.P. (1969).

³Nyerere, Education for Self-Reliance, op. cit., p. 10.

⁴Ibid., p. 8.

⁵Ibid., p. 19.

⁶Ibid., p. 19.

⁷For a speculation of the effects of schooling see Robert Dreeben, On What is Learned in School, Reading, Mass. Addison-Wesley (1968). Also E. Goffman, "The Characteristics of Total Institutions" in A. Etzioni (ed), Complex Organizations: A Sociological Reader. N.Y. Holt, Rinehart and Winston (1961).

⁸See, for example, Samuel Bowles and Hebert Gintis, Schooling in Capitalist America, New York, Basic Books (1976).

⁹Phillip Foster, "The Vocational School Fallacy in Development Planning" in C. A. Anderson and M. J. Bowman (eds.), Education and Economic Development, Chicago, Aldine Public, (1965).

- ¹⁰Phillip Foster, "Education for Self-Reliance: A Critical Evaluation", in Richard Jolly (ed), Education in Africa: Research and Action, Nairobi, EAPH (1968).
- ¹¹Among them, Ruth Besha "Education for Self-Reliance and Rural Development" Dar-es-Salaam, Institute of Education, University of Dar-es-Salaam, Mimeo (1973); A. A. Lema, "Education for Self-Reliance - A Brief Survey of Self-Reliance Activities in Some Tanzanian Schools and Colleges", Dar-es-Salaam, Institute of Education, University of Dar-es-Salaam, Mimeo, (1971); and Ministry of National Education, United Republic of Tanzania, "A Survey of Attitudes of Students Towards Vocationalization of Secondary Education", Dar-es-Salaam, Ministry of National Education (1979).
- ¹²A. A. Lema, op. cit., p. 43.
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- ¹⁸L. Gray Cowan. "Primary Education and Agricultural Development," Rural Africana, No. 9 (Fall 1969), p. 37.

- ¹⁹T. E. Contado, G. E. Castillo and V. Jarmin. "A Search for Trained Young Men in Farming: A Study of Vo-Ag Seniors' Choice of Occupations", Agricultural and Industrial Life, Vol. 27, No. 6 (June 1965), quoted in Gelia Castillo, "Education for Agriculture" in The World Yearbook of Education 1974, N.Y., Columbia University (1974).
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- ²¹A. Z. Mattee and S. Rimstad. "Practical Instruction in Agriculture: A Survey of the Utilization of the Agricultural Units in Selected Secondary Schools in Tanzania". Dar-es-Salaam, University of Dar-es-Salaam AEE Working Paper No. 80.6 Mimeo (1980).
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CHAPTER II

CONCEPTUAL FRAMEWORK

Introduction

The theme of the policy of Education for Self-Reliance is to restructure school experiences so that students can acquire certain predetermined values and attitudes which will make their aspirations more attuned to the government's emphasis on communal and egalitarian rural development. However, although schools do indeed form a setting where students are socialized into certain ways of thinking and behaving, they are not the only factor which will influence the students' values, attitudes and aspirations. Other social institutions like the family, religious organizations, peer groups and political groups exert just as strong, if not stronger, influence over students' values, attitudes and aspirations.

Even where there is an explicit and deliberate attempt to influence students' attitudinal learning through certain school experiences, there is no guarantee that the schools will produce students with certain outlooks. There is no conclusive evidence to support the assumption that manifest socialization in schools leads to certain values

and attitudes. Studies done in western countries, for example, indicate that specific programs in the schools are only marginally effective, and their influence depends on whether or not they reinforce attitudes and values transmitted by other socialization agencies outside the school.¹ In western countries, one can expect the family, the church, peer group, media and civic organizations to reinforce and complement each other and the schools in providing the students with certain values and attitudes. In the developing countries this is less likely to be the case because of the incongruency between the values of the school system (and the polity) and the traditional and parochial values of such important socialization agents as parents and local community groups.² Moreover, the importance of significant others like parents, relatives and peer groups in shaping one's occupational and educational aspirations is well known.

The framework for this study, therefore, provides a means of looking at the way beliefs, attitudes and aspirations are acquired and the interrelationship between the three concepts. The framework is eclectic in nature drawing from both psychological and sociological paradigms.

Belief, Attitude and Intention

The study of attitude has been plagued by two persistent problems: 1) the lack of agreement on the definition of attitude, and 2) the inability to develop measurement techniques to suit the definitions more commonly adopted. For example, Thurstone declared as early as 1928 that, "The concept 'attitude' will be used here to denote the sum total of a man's inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, threats, and convictions about a specific topic";³ while Allport defined attitude as "a mental and neural state of readiness organized through experience, exerting a directive or dynamic influence upon individual's response to all objects and situations with which it is related".⁴ More recently, Cook and Selltiz have proposed looking at attitude as "an underlying disposition which enters, along with other influences, into the determination of a variety of behaviors towards an object or class of objects and approach-avoidance action with respect to it."⁵

The above examples, while in no way exhaustive nor representative of the various definitions of attitude, do illustrate the diversity of definitions which have been suggested. However, despite the wide variety of interpretations of the meaning of attitude, there are

certain common features which can be discerned in most of them. First, there is a wide agreement that an attitude is a state of readiness or a predisposition leading an individual to perceive certain objects in certain ways. Second, attitude is relatively stable over time, although it may change in response to new knowledge. Thirdly, attitude produces consistency in behavior, that is, there will be consistency in the various ways the attitude toward an object is manifested in expressions of feelings and approach or avoidance of that object. Fourthly, attitude has a directional quality in that it connotes preferences regarding certain objects. Finally, attitude is learned in that it is a result of past experiences.

The diversity of definition of attitude has resulted in the use of different measurement procedures to assess the concept of attitude, often with confusing and contradictory results. For example, in a review of the research published between 1968 and 1970 Fishbein and Ajzen⁶ found more than 100 different operations designed to measure attitudes. These included the standard attitude scales (e.g. Likert, Guttman, Thurstone and Osgood's Semantic Differential Scales); other indices across verbal items; single statements of feelings, opinions, knowledge or

intentions; physiological measures like galvanic skin response, palmar sweating, pupillary dilation and contraction and heartbeat rate; and observations of one or more behaviors. Fishbein and Ajzen report that of those studies that reported using more than one attitude measure, about 70 percent found different results, yet since these measures were supposedly measuring the same underlying variable, there was no reason to expect such different results.

The lack of agreement on the underlying theoretical basis for the understanding of attitudes and the application of diverse array of measurement techniques has led to confusion and the lack of distinction between attitude and other related concepts. Different labels like opinions, prejudices, values, beliefs, etc. have been used as synonymous with attitudes.⁷ However, several authors have suggested a distinction between attitude and other concepts. Rokeach,⁸ for example, distinguishes between attitude, values and beliefs and describes their relationship in an individual's cognitive structure. As conceptualized by Rokeach, attitude is a permanent organization of beliefs around an object or situation, while a belief is "any single proposition, conscious or unconscious, inferred from what a person says or does, capable of being preceded by the phrase 'I believe

that ...".⁹ A belief may be descriptive, evaluative or prescriptive; and each belief may be viewed as having three components: cognitive, affective and behavioral. A value according to Rokeach is a single deeply-held belief which gives universal direction to all reactions to objects and situations, present or future, concrete or abstract.

The most useful distinction as far as this study is concerned, however, is that proposed by Fishbein and Ajzen.¹⁰ They propose a distinction between attitude, belief, behavioral intentions and behavior. This distinction is derived from the age-old trilogy of affect, cognition and conation, where affect refers to a person's feelings toward and evaluation of some object, person, issue or event. Cognition denotes his knowledge, opinions, beliefs and thoughts about the object, person, issue or event; and conation refers to his behavioral intentions and his actions with respect to or in the presence of the object, person, issue or event. Fishbein and Ajzen go further to distinguish between behavioral intentions and actual behavior since in attitude studies one is concerned with predispositions to act rather than the actual behavior.

Attitude then is conceptualized as the amount of affect for or against some object. In other words, the most important characteristic that distinguishes attitude from other

concepts is its evaluative or affective nature. This is implied in most definitions of attitude which have been proposed. In fact Katz and Stotland specifically define attitude as "an individual's tendency or predisposition to evaluate an object or symbol of that object in a certain way."¹¹ Although they believe in the componential nature of attitude, they note that the affective component is "the central aspect of the attitude since it is the most closely related to the evaluation of the object....the affective element differentiates attitudinal evaluation from intellectual appraisal."¹²

Whereas attitude refers to an individual's favorable or unfavorable evaluation of an object, belief refers to the information one has about the object. A belief links an object to some attribute e.g. "the world is round" or "going to school leads to a better life." Here the object is "the world" and "going to school" while the attribute is "round" and "leads to a better life" respectively. The object of the belief may be a person, a behavior, an event, a policy, etc., while associated attributes may be an object, a characteristic, a quality, an outcome, an event etc.

The third component refers to a person's intentions to perform certain behaviors. This component may roughly be equated with a person's aspirations towards achieving

certain goals.

Finally, behavior in this classification refers to the overt behaviors that are studied in their own right, in contrast to those used to infer beliefs, attitudes or intentions.

Fishbein and Ajzen propose a conceptual framework for looking at the relationship between beliefs, attitudes, intentions and behavior. On the basis of direct observations, information received from outside sources, or influences, a person learns or forms a number of beliefs about an object, i.e., he associates the object with certain attributes. This way, one forms beliefs about himself, other people, certain behaviors, events, etc. The totality of a person's beliefs serves as the informational base that ultimately determines his attitudes, intentions and behavior. Beliefs about an object already held will influence subsequent beliefs about that particular object.

A person's attitude toward an object is based on his salient beliefs about that object. This view is similar to that of Rokeach who sees an attitude as composed of many beliefs that have been brought to bear on a particular stimulus object or situation.¹³ If those beliefs associate the object with mainly favorable attributes his attitude toward that object is likely to be positive and vice versa. Fishbein and Ajzen emphasize that since most

people will hold both positive and negative beliefs about an object, the attitude toward the object will be determined by the net direction (i.e., mainly positive or mainly negative) of the whole set of beliefs one holds about an object, and not by a single belief.

A person's intentions to perform certain behaviors with respect to a particular object is influenced by the person's attitudes toward that object. One's intentions will also be determined by beliefs about the consequences of the intended behavior and his evaluation of (i.e., attitude toward) those consequences. His beliefs about what important referents think of the behavior will also influence his intentions to perform the behavior.

A student's attitudes toward farming and rural life will be determined by the set of beliefs he holds about farming and rural life in general. These beliefs will have been shaped by the background characteristics of the student. Those from the rural areas, for example, through direct experience at home and participation in the daily farming activities with parents and relatives, will have certain beliefs about farming and living in the rural areas. Those from urban backgrounds, on the other hand, will most likely acquire their beliefs through inferring from what is said by political leaders and the media, discussions with relatives and other students

residing in the rural areas, and by occasional casual observations when travelling in the countryside, and their beliefs are likely to be different from those held by students from the rural areas.

In order for students to acquire mainly positive attitudes toward farming and rural life they must acquire mainly positive beliefs about farming and rural life. The policy of school agriculture is an attempt to make sure that students acquire mainly positive beliefs about farming and rural life so that eventually they can aspire to farming and other rural occupations. But students' beliefs will also be a function of the students' previous and concurrent experiences with farming and rural life. For those who have had positive experiences with farming or living in the rural areas the school agricultural learning experiences may reinforce their beliefs while for those who have had negative experiences or information it will be harder for schools to change their beliefs.

A student's decision to join an agricultural occupation or to live in the rural areas will depend on his attitudes toward farming and rural life. If a student holds mainly positive attitudes toward farming and rural life it is likely that he will aspire to remain in the rural areas and may be, start farming on his own after he finishes school. A student's decision as to whether he

should remain in the rural areas or not will depend on how he perceives the consequences of such an action. If he believes that the consequences of such a decision will be mainly negative, he will be reluctant to make the decision, and vice versa. This means that apart from school agricultural learning experiences, the objective realities of farming and rural life as perceived by the student will also determine whether or not the educational policy objective of directing young Tanzanians' energies toward rural development will be realized. Figure 1 is a diagrammatic representation of the relationship between students' beliefs, attitudes and aspirations toward farming and rural life and the relationship of these psychological variables with students' home background characteristics and school agricultural learning experiences as conceptualized in this study.

Summary

This study is concerned with the learning outcomes of school experiences for secondary school students. It is an investigation of students' response to different stimuli both within and outside the school in terms of a change in their beliefs, attitudes and aspirations. The central variable for the study is attitude.

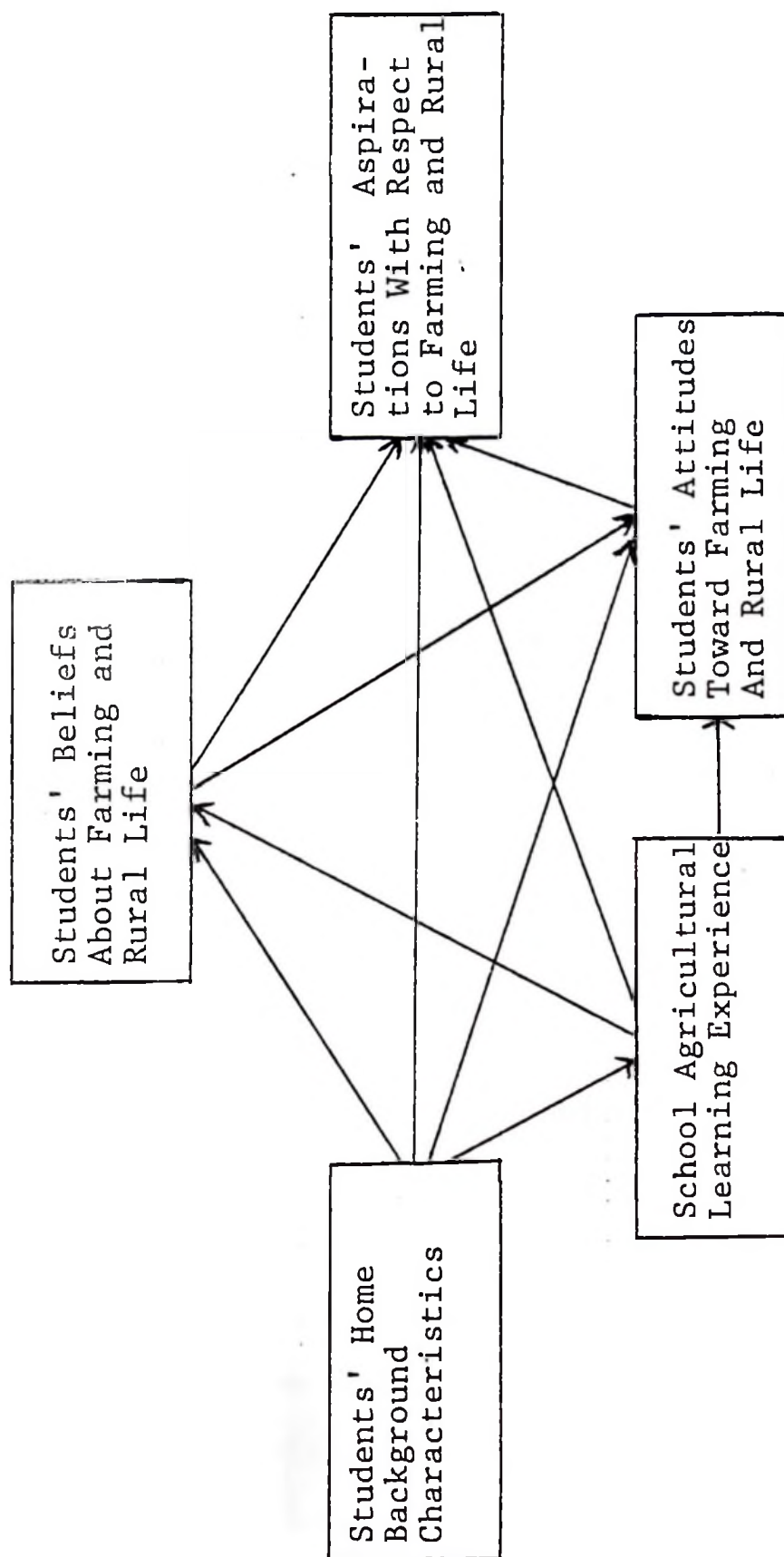


Figure 1: A Schematic Representation of the Relationship Between the Research Variables (Adapted from M. Fishbein and Icek Ajzen, Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, Reading, Mass. Addison-Wesley (1975), p. 15.

Apart from highlighting the problems of defining and measuring a psychological variable such as attitude, the conceptual framework provides a way of looking at the relationship between belief, attitude and aspiration. With reference to students' reaction toward the school agricultural policy, the conceptual framework details the possible ways and factors which will shape students' beliefs, attitudes and aspirations toward farming and rural life.

According to the conceptual framework discussed above, the central characteristic of an attitude is its evaluative nature. Students' attitudes toward farming and living in the rural areas will be perceived to be positive or negative according to their evaluation of farming and living in the rural areas.

A person's attitude is influenced by the set of beliefs he holds about an object, i.e., the type of attributes he associates with the object. Students' attitudes therefore will depend on the totality of their beliefs about farming and rural living. If, overall, their beliefs are mainly favorable, i.e., they associate farming and rural living with mainly positive attributes their attitudes are likely to be positive and vice versa. These beliefs, in turn, will be a result of students' direct experiences with farming at home and in school, learning

in class, inferring from others' experiences, etc.

One's attitude toward an object leads to a set of behavioral intentions relative to that object. These intentions are also influenced by the person's beliefs about the consequences of that behavior and what important referents think about that behavior. A student's future intentions or aspirations with respect to farming and rural living will be influenced by his attitude and also by his beliefs about the rewards, costs and security of entering farming relative to other occupations. His aspirations will also depend on what people in the student's life like parents, relatives or friends think about entering farming. The policy of Education for Self-Reliance requires schools to change students' attitudes and aspirations with respect to farming and living in the rural areas, so that students can be more willing to join farming as they finish school. But the schools have to compete with other sources of students' beliefs which may influence the students' beliefs and hence their attitudes and aspiration in a different direction.

Footnotes

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- ³L. L. Thurstone, "Attitudes Can Be Measured" American Journal of Sociology, Vol. 33 (1928), pp. 529-554.
- ⁴G. W. Allport. "Attitudes" in C. Murchison (ed). Handbook of Social Psychology, Worcester, Clark University Press (1935).
- ⁵Stuart W. Cook and Claire Selltiz, "A Multiple-Indicator Approach to Attitude Measurement", Psychological Bulletin, Vol. 62, (1964), pp. 36-55.
- ⁶M. Fishbein and Icek Ajzen, "Attitudes and Opinions". Annual Review of Psychology, Vol. 23 (1972), pp. 467-544.
- ⁷For example, Louise H. Kidder and Donald T. Campbell contend that, "A host of seemingly unrelated terms such as acquired drive, belief, conditioned reflex, fixation, judgment, stereotype, valence, to mention only a few, are functionally synonymous with the concept of attitudes", in "The Indirect Testing of Social Attitudes", Gene Summers. (ed). Attitude Measurement, Chicago, Rand McNally (1970), pp. 333-385.
- ⁸Milton Rokeach, Beliefs, Attitudes and Values, San Francisco, Jossey-Bass, Inc. (1969).

- ⁹Ibid., p. 113.
- ¹⁰M. Fishbein and Icek Ajzen, Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, Reading, Mass.: Addison-Wesley (1975).
- ¹¹D. Katz and E. Stotland, "A Preliminary Statement to a Theory of Attitude Structure and Change", in S. Kock (ed), Psychology: A Study of a Science, Vol. 3, New York, McGraw-Hill (1959), p. 423-475.
- ¹²Ibid., p. 429.
- ¹³M. Rokeach, loc. cit., p. 160.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

This chapter deals with the methodological process which generated the data for this study and outlines the statistical procedures which were used in analyzing the data.

The chapter is divided into six sections. The first section presents the sample from which the data were obtained and the procedure for selecting that sample. The next two sections describe the variables used in this study and their operationalization, while the fourth section describes the development of the instrument and the methodological safeguards used to enhance the validity and reliability of the instrument. Finally, sections five and six deal with the actual data collection and data analysis procedures respectively.

Sources of Data

Data were secured through a structured questionnaire obtained from a sample of 867 secondary school

students. The population for this study was all government secondary school students, and the sample constituted 2.2 percent of this population. The reason for focusing on government secondary schools was due to the fact that these schools provide higher quality and more standardized educational experiences compared to the private schools which vary widely not only in the quality of teachers and facilities but also in curriculum focus with some schools emphasizing religious education while others limit their offerings to purely vocational subjects.

On the basis of statistical records obtained from the Ministry of National Education, fifteen schools were purposefully selected for the study on the basis of the following criteria:

1. The selected schools had to include the following categories: a) schools which offer inclass instruction in agricultural science and practical farm activities, b) schools which offer practical farm activities only, c) rural-based schools, d) urban-based schools, e) girls' schools, f) boys' schools, and g) co-educational schools.

2. The selected schools had to represent as many geographic regions as possible while at the same time being fairly accessible by road to enable the researcher to complete the data collection phase in the short time which was available.

3. For those schools offering inclass instruction in agricultural science and/or practical farm activities they must have been doing so for not less than four years to ensure that all grade levels in the school had had an agricultural learning experience.

After schools were selected (see Appendix B for the list of schools selected for this study) permission was sought and granted from the Ministry of National Education to visit and administer the questionnaire to selected students in these schools.

Within each school one stream (of about 35 students) was randomly selected by a system of writing the names of the streams for one grade level on a piece of paper and randomly picking one to be included in the study. This was done for form one, form four and form six grade levels, and all the students in the selected streams were asked to respond to the questionnaires.

Although this procedure of purposeful sampling did not provide an entirely random sample, it was considered the most efficient procedure for obtaining a sample which was representative of the population in terms of the variables which were considered important for this study. Also, the fact that students are allocated to schools (taking sex into account) and to streams randomly in the first place reduced the possibility of self-selection.

The sex and grade level composition of the sample is presented in Table 1 below.

TABLE 1
THE SEX AND GRADE LEVEL COMPOSITION OF THE SAMPLE

Sex	Grade Level of Student			Total
	Form One	Form Four	Form Six	
Male	228	212	59	499
Female	155	161	42	358
No Answer	9	1	0	10
Total	392	374	101	867

The Dependent Variables

Belief About Farming and Rural Life

As mentioned earlier, a belief links an object to some attribute, i.e., it is a hypothesis concerning the nature of and relationship between different objects.

However, there is need to distinguish between two types

of beliefs: belief in an object and belief about an object. Thus a person may believe in the existence of an object and may also believe in certain relationships between the object and certain other objects. Fishbein and Raven comment that,

The various beliefs in the relationships between an object and other objects or qualities would then be defined as beliefs about. While beliefs in refers to the existence of an object, belief about deals with the nature of that object, the manner in which it exists.¹

This study was concerned with the beliefs students hold about farming and life in the rural areas. The aim was to see what concepts students relate to farming and rural life, or what they see as the relationship between the objects "farming" and "life in the rural areas" and other objects or concepts like comfort, prestige, hard work, financial reward, etc.

But every concept contains an evaluative component. Thus, in considering a belief statement, an individual not only has an attitude toward the object of the belief, but he also has an attitude toward the "related object". For example, with respect to the statement that "farming is hard work", an individual has an attitude toward "farming" as well as toward "hard work". An individual will evaluate both the belief object and the related object or concept. It follows, therefore that every belief

about an object is evaluative, and has a positive, a negative and a neutral evaluative aspect. In other words, every belief statement relates the object of belief to some other concept that is positively, negatively or neutrally evaluated by an individual.

This is an important point, because in order to judge whether a belief statement suggests a positive or negative attitude toward that object, it is important to know how the person making that statement evaluates the related concept or attribute. If he evaluates the attribute positively then the belief statement may suggest a positive attitude and vice versa.

In this study respondents were asked to respond to a series of multiple-choice items about farming, the farmer and life in the rural areas when compared to other occupations and to life in towns. Each item consisted of three alternatives which could be viewed as positive, neutral or negative attributes. The responses were scored and added together to obtain an index of an individual's overall evaluative direction of his beliefs toward farming and life in the rural areas.

Attitude Toward Farming and Rural Life

The major characteristic that distinguishes attitude from other concepts is its evaluative or affective

nature. Indeed there is widespread agreement that affect is the most essential part of the attitude concept. However, despite this general agreement the concept of attitude is characterized by a large degree of ambiguity and confusion. In part this may be attributed to its use as an explanatory concept in diverse areas of investigation, for example in studies dealing with racial prejudice, job performance, voting behavior, consumer behavior and interpersonal behaviors which has meant, in many cases, that investigators have been concerned with different underlying concepts all of which have been subsumed under the rubric "attitude", or have been concerned with different aspects of the same concept. This has been inevitable because of the complex nature of an attitude which almost defies description by a single index.. As a result investigators have intuitively selected measurement procedures that have seemed to fit the purpose of their study. In most cases the aspect of one's attitude being measured is stated in advance but in other cases it has to be derived from the context. This has tended to further compound the confusion surrounding the attitude concept both at the conceptual and operational levels.

Because of this lack of consistency in the definition and operationalization of the concept of attitude there has always been an apparent inconsistency between

an individual's attitude toward an object as determined by different measures and also between observed behavior and that predicted from an instrument intended to measure attitude toward that object.

The discrepancy between one's actual attitude and its index as obtained by a measuring instrument was recognized by Thurstone,² who suggested that in measuring an attitude we first determine the attitude variable we want to measure and secondly we devise indices which are internally consistent although they may be just approximations of the actual attitude. This means that studies of attitude will often obtain different results because investigators are measuring different aspects of the attitude and/or using different indices for the attitude.

In this study, attitude is conceptualized as the amount of affect for or against an object, consistent with Thurstone's³ position. A student's attitude toward farming or rural life is therefore conceived as the extent to which he evaluates them favorably or unfavorably, or the extent to which he judges them to be appealing or averse. An attempt was made to measure attitude by a procedure which placed the respondent on a bipolar affective or evaluative dimension with respect to farming and life in the rural areas. The respondents were asked to select among a list of 22 words (11 of which would indicate

farming or life in the rural areas as appealing and 11 their exact opposites) only those which they thought applied to farming or life in the rural areas. After scoring and summing up the responses a respondent could be placed on a scale which would indicate whether he viewed farming or rural life as appealing, neither appealing nor averse, or averse which would reflect a positive, neutral or negative attitude respectively.

Aspiration With Respect to Farming and Rural Life

In addition to attitudes, students' intentions or aspirations are used as indicators of how they view farming in comparison to other occupations and life in the rural areas in comparison to urban life. Like attitude, the concept of aspiration has been variously defined in the literature. For example, Houle defined aspiration as

A desired perfection or excellence based on an ideal....(that) may arise from such sources as careful thought and philosophical positions, expressions of basic human needs, internalized cultural patterns of beliefs or simple surface values derived from reflection or from interaction with other people.⁴

Wilkening and Bharadwaj,⁵ on the other hand, conceive of aspiration as a comparison of the goals an individual strives for with those of others, i.e., the level of goals one is trying to achieve and the extent to which one is trying to achieve those goals when compared to

other people.

Like attitude, different aspects or variables of aspiration can be discerned. One's aspiration can be measured by the type of occupation or level of education one hopes eventually to reach.⁶ Aspiration can also be measured by the place of residence preferred or the type of people one would like to associate with.⁷

Aspiration then is a complex psychological variable which is affected by several factors like one's values, beliefs, needs, self-perception, past-experience, cultural patterns and social interactions. For example, a lack of aspiration does not necessarily mean that a person does not value a certain condition. It may just as well reflect his low expectation when different factors are taken into account. What one aspires to, depends on what he sees as possible given the situation at hand. This discrepancy between "what is hoped for" and "what is expected" because of less than optimal situation, has been recognized by some researchers who have distinguished between aspirations and expectations.⁸

It is obvious, therefore, that the concept of aspiration is a complex conglomerate of forces and processes that are not quite well understood. However, for the purpose of this study an operational definition of aspiration was considered adequate. Aspiration here is

defined as what the student desires or hopes for after finishing school. This definition is preferred since the study is concerned with the psychological outcome of different school experiences. Hopes or desires reflect this psychological dimension of aspiration which can be attributed to school experiences. Expectations, on the other hand, reflect the social and economic realities which the student will face when he leaves school, i.e., desires or hopes modified by realities.

As with attitude, students' aspirations were classified as to whether they reflected favorable or unfavorable disposition on the part of the student toward farming and living in the rural areas.

The Independent Variables

Type of Agricultural Experience at School

School agriculture is the cornerstone of the policy of Education for Self-Reliance as a means of influencing students' learning outcomes with respect to 1) agricultural knowledge and skills, 2) values and attitudes concerning farming and rural life in general, and 3) school-leaver aspirations. The government has therefore devoted a lot of resources to establishing a program of teacher training, development of teaching materials, laboratories,

workshops, tools and equipment.

Almost all rural-based schools and some urban schools are engaged in one kind of agricultural activity or another, with some schools combining classroom instruction of agricultural science with practical experience in various agricultural production enterprises, while others provide practical farm experiences without the benefit of classroom instruction. One would hope that the cost of mounting the agricultural program in the schools will be justified in that indeed those students who have this experience will be more likely to have the desired attitudinal orientations as compared to those who do not benefit from this program. This study compared the learning outcomes of those students who benefited from inclass instruction with practical experience, those who had practical experience only and those who did not have any agricultural experiences in school. Originally it was thought to include also those who had inclass instruction without any practical activities, but since all students who study agricultural science must be involved in practical farm experience, such a category of students did not exist in the population.

Background Characteristics

Background characteristics here refer to situational conditions outside the school and individual characteristics of the student that are expected to be related to students' beliefs, attitudes and aspirations with respect to farming and life in the rural areas. The variables included as background characteristics are:

1. Home Location

The location of the student's home is likely to influence his beliefs, attitudes and aspirations as a result of the types of life experiences and people the student encounters. Those student's from the rural areas are likely to have different beliefs, attitudes and aspirations concerning farming and rural life compared to their urban counterparts.

The respondents were therefore asked to indicate whether they had spent most of their lives up to this point in the village or in a town.

2. Parents' Level of Education

Parental education has been found to be one of the most important factors, along with parental occupation, income, ethnicity and religion, in influencing the course of a students' educational path, at least in East Africa. For example, there is increasing evidence of disproportionate representation at all levels of schooling, of

children from parents with nonfarm income, formal education and higher standards of living.⁹ Urban children likewise have much greater educational opportunities than rural.¹⁰ But these factors not only influence a child's educational opportunity but also the learning outcomes, especially with respect to values, attitudes and aspirations. Research in this area has concentrated on the relationship between the occupational and educational levels of parents and the aspirations of youth. Generally, social scientists agree that parents, as significant others, do exercise a powerful influence on educational and occupational aspirations of youth. Rehberg,¹¹ on the basis of more than 200 studies of the determinants of educational career orientations of high school age adolescents, mentions, among other generalizations, that the adolescent's aspirations to obtain higher education varies positively with the intensity of parental pressure, stress and encouragement. McClelland likewise mentions that,

in the case of achievement motivation the situation should involve 'standards of excellence' presumably imposed on the child by the culture - particularly by parents who are representative of the culture.¹²

In other words, youths' levels of aspirations are related to parents' levels of aspirations for their children, which in turn are related to their social-economic status levels. Various other studies have supported this thesis.

For example, Sewell and Haller, in a study of Wisconsin farm boys, concluded that,

the greater the degree to which significant others expect high achievement for him, the less likely the farm boy is to plan to go into farming, or to choose a blue-collar occupation and the more likely he is to choose a professional or executive occupation.¹³

It is obvious, therefore, that the beliefs, attitudes and aspirations of students are likely to be related to their parents' levels of education, via the knowledge, values and aspirations parents have for their children.

3. Parents' Occupation

Parents' occupation is very closely linked to education and income and is likely to be related to a child's educational outcome in the same way. However, the aim in this study was to see if there is any difference between farm and nonfarm occupations of parents in influencing students' beliefs, attitudes and aspirations with respect to farming and living in the rural areas.

4. Type of Farming at Home

It is assumed that students' beliefs, attitudes and aspirations in connection with farming and living in the rural areas will be related to the type of farming practiced by parents at home. Those students whose parents make good and steady income from selling their

crops are likely to view farming more favorably than those whose parents engage in purely subsistence farming. Strictly speaking, however, there are no purely subsistence farmers to the extent that every farmer is likely to sell a small portion of his product in order to pay for clothing, fuel and other basic essentials. But since students could not be expected to know how much income their parents made from selling farm produce, it was decided to distinguish between those who grow only what are considered subsistence crops like maize (corn), sorghum and beans, and those who grow what are considered cash crops like cotton, tea and cashewnuts, either by themselves or in addition to subsistence crops. This was based on the assumption that those who grow cash crops or cash and subsistence crops will be able to make a significantly more reasonable and steady income compared to those who grow subsistence crops only even when every farmer does sell part of his produce.

5. Grade Level of Student

Interest in this variable lay in the wish to determine to what extent students' beliefs, attitudes and aspirations are related to their level of schooling. Students at different grade levels were therefore selected: from one students have just joined secondary education and the effect of secondary schooling on them is minimal.

Form four students are midway and at a crossroads in their secondary schooling career. At this level they will sit for a national examination which will determine those who will go on with further schooling and possibly on to the university, and those who have to enter the labor market with less qualifications or follow a training program that will lead to less paying jobs. Form six students on the other hand are at the pinnacle of their secondary education. After their final examinations most of them will eventually qualify for the university and high paying professions while a few will end up as middle-level administrative and technical cadres.

Not only do the students in each grade have different knowledge and skills, but aspirations after school are likely to be different at each grade level. In fact, there are two factors which are in operation here in shaping students' beliefs, attitudes and aspirations. First, the longer the student stays in school the more agricultural knowledge and skills he is likely to acquire which, presumably, should influence the student positively about the whole question of farming and rural life. On the other hand, the higher the grade level of the student the better are his chances of obtaining a good non-agricultural occupation which will most likely be in town, and the less likely for him to consider farming as a possible

occupational choice. A comparison was therefore made between the students at the different grade levels. But it was recognized that in order to get a more accurate picture of the effects of schooling on the learning outcome of a student one needs to do a longitudinal study following the same student through the different grade levels and determining how his beliefs, attitudes and aspirations change with time in school. For practical reasons this could not be done in this study.

6. Sex of the Student

That the occupational and educational aspirations of male youth differ slightly from those of female youth has been shown in various research studies.¹⁴ But it is not clear to what extent beliefs, and attitudes are also related to the sex of the individual. In particular, the question of interest here was: Are female students' beliefs, attitudes and aspirations toward farming and rural life different from those of male students?

Development of the Instrument

The questionnaire was developed by the researcher both as a basis for recording the background variables of interest for this study and also as an instrument for measuring the probable direction of students' beliefs, attitudes and aspirations toward farming and rural life.

The problems of survey research are well known. When compared to experimental research, in survey research there is much less control of the experimental situation and recording of results. Several factors like the respondent's physical comfort or frame of mind may influence his reaction to the research instrument. Respondents understand and interpret questions differently, while the physical presence of the researcher may affect the responses. Attitudes are particularly difficult to measure because of individuals' tendency to agree or to disagree with statements regardless of their content ("response set"),¹⁵ and the wish to give a socially acceptable picture of oneself ("social desirability").¹⁶

Moreover, for this particular student population there were the additional problems of lack of experience and language. The students in this sample had had very little experience in responding to a research instrument of this type, and there was the possibility of the students viewing the questionnaire as a test with right and wrong answers. Also, for the lower grade students whose command of the English language was not very good, there was the possibility of them not understanding the questions or of not being able to respond adequately.

The questionnaire was developed with these problems in mind. First, scaled items were avoided because they

have rarely been used and would most likely confuse the students. Instead, simple forced-choice questions were used in order to make it easier for the students to understand the questions and to respond to them. This was especially important for those students in the lower grades who would have had trouble in expressing themselves in writing. Secondly, the introduction to the questionnaire specifically stated that it was not a test with right or wrong answers but rather a form for gathering information which would be pooled and used as a basis for making improvements in the educational system.

Pretesting the Questionnaire

The first draft of the questionnaire was pretested by administering it to a group of twenty students each from form one, form four and form six in one school which was not one of those selected for the actual study. An interview was also held with these students after they had responded to the questionnaire to elicit their feelings about the difficulty and suitability of the different items in the questionnaire, paying particular attention to the lower grade students who were the most likely to find difficulty with the items. The draft was also discussed with the Ministry of National Education's research department officials to obtain their views on

the suitability of the various items.

On the basis of insights gained from reviewing the responses of the students to the draft questionnaire and from the discussions with students and Ministry officials it became obvious that some adjustments had to be made in the instrument. The final draft of the instrument which was used for the study is presented as Appendix A.

The Validity and Reliability of the Instrument

Validity of an instrument refers to the extent to which it measures what it is intended to measure. Selltitz define validity of an instrument as

...the extent to which differences in scores on it reflect true differences among individuals, groups, or situations in the characteristics it seeks to measure, or true differences in the same individual, group or situation from one occasion to another, rather than constant or random errors.¹⁷

The problems of survey research which tend to affect the level of validity were mentioned in the previous section. Selltitz has identified the following sources of errors as influencing the validity of the measurement of a characteristic in a research study: relatively stable characteristics of an individual, transient personal factors, situational factors, variations in the administration of an instrument, selection of items as indicators of the variable, lack of clarity of the

measuring instrumentt and mechanical factors.¹⁸

Reliability on the other hand, refers to the extent to which an instrument provides consistent results when applied in repeated measures. According to Selltiz, for an instrument to be reliable,

....independent but comparable measures of the same object (or attitude or whatever) should give similar results (provided of course, that there is no reason to believe that the object being measured has in fact changed between two measurements).¹⁹

However, an instrument can be totally reliable, i.e., yield identical scores in repeated measures, but still be absolutely invalid if it does not measure what it is intended to measure, although a valid instrument is also reliable. According to Selltiz,

If we knew that a measuring instrument had satisfactory validity for the purpose for which we intended using it, we would not need to worry about its reliability.²⁰

Attention was therefore paid, in this study, to improving the validity of the instrument with the hope that this would result in improvement in its reliability making a reliability test unnecessary:

1. Effort was made to minimize the effects of the differences in the individual characteristics of the students which could influence their responses although they were not relevant for the study. These characteristics like the level of the English language proficiency,

intelligence, the tendency to agree or disagree with statements ("response set") or to give socially desirable answers ("social desirability"), could produce differences in responses reflecting not only differences in the characteristics of interest but also differences in these personal characteristics. In order to minimize the effects of these characteristics, an effort was made to ensure that the questions were asked in a simple-to-understand way and any sign of ambiguity of the questions was checked during the pretest of the instrument. Also to reduce the "social desirability" effect, it was emphasized to respondents from the start that this was not an examination with right and wrong answers. Respondents were assured that their responses were confidential and would be pooled for analysis. In order to reduce the "examination feeling" teachers were requested not to be in the room, and students were instructed not to put their names on the questionnaire. Also, in order to reduce contamination of responses, students were requested to work individually and not to communicate with each other in case of uncertainty but rather to raise their hands so that the researcher could help them individually.

2. The effects of other more temporary personal factors like fatigue, hunger and anxiety were also minimized by careful selection of the time for

administering the questionnaire. Effort was made to avoid weekends, times just before meals or private study periods when the respondents would be hungry or impatient, and instead to schedule meetings with respondents at the beginning of the school day in order to ensure their maximum cooperation. An effort was also made to minimize the length of the questionnaire so as not to tire or bore the respondents, but even then some respondents, especially those from form one grade level were taking up to 40 minutes to respond to the questionnaire which was considered too long for them to maintain interest in the questionnaire.

3. To reduce the influence of situational factors the interview situation was standardized as far as possible. The researcher always administered the questionnaire to a group of students assembled in the school assembly hall after he had been introduced to the students by one of the teachers who immediately left the hall. The same format was adopted for self-introduction by the researcher and for explaining the purpose of the questionnaire.

4. To minimize differences due to variations or lack of clarity in the administration of the instrument structured questions and fixed response alternatives were used. Also the instrument was made as simple as possible

so that the respondents could follow, without any difficulty, the sequence of the items. Most importantly, the researcher made a point of administering the questionnaire personally at every school and of answering any questions by the respondents about the items in the questionnaire.

5. The most important determinant of the validity of the instrument is the selection of the items for the measurement of the characteristics of interest for the study. Generally in survey research the researcher is faced with a set of abstract or theoretical concepts which must be specified, i.e., reduced to rather simple empirical indicators in order to permit their measurement. But the same concept may be defined in terms of different indicators or measurements used individually or in combination, and the indicators or measurements used will depend very much on the purpose of the research. As pointed out by Babbie, "In a very real sense, then, the researcher can never make accurate measurements, only useful ones."²¹

Each concept, then, is measured in terms of the various attributes which are thought to accurately describe the concept and in terms of the dimension of the values of the various attributes. The validity of an instrument will depend on the extent to which the selected attributes and dimensions in the instrument accurately reflect on the basic concepts being studied.

This is called construct validity. But construct validity also depends on the accuracy of the conceptualization of the relationships between various concepts or variables in the study since this conceptualization determines to a great extent the way in which the different variables are operationalized and measured.

Effort was, therefore, made to base the conceptual framework and the operationalization of the variables for the study on sound theoretical basis and on previous research studies.

Data Collection

Data were collected during the months of April and May, 1982 by the researcher personally. Each school was visited at least one day in advance to schedule the meeting with the students, although the students were not told of the impending task until the day of the interview.

For the interview, all the students in the selected streams of a given school were assembled and each given a copy of the questionnaire. The researcher explained the purpose of the questionnaire and what students were to do, before distributing the questionnaire. The students were asked to work as fast as possible and were discouraged from discussing the questions amongst themselves.

Although the interviews were expected to take less than 30 minutes, in some cases respondents took up to 40 minutes to go through all the questions.

Because most of the schools were very far apart, it took extensive travelling, so that on average it took about two days per school during the data collection period.

Data Analysis

The data analysis sought to test the relationship between selected variables and students' beliefs, attitudes, and aspirations toward farming and rural life.

After the data were coded and transferred to computer files, two statistical procedures were performed using the SPSS (Statistical Package for the Social Science)²² computer program:

1. The FREQUENCIES program determined the basic distributional characteristics of each of the variables to be used in the subsequent statistical analysis. The program provided the frequency count and percentage tabulations for each response category, means, and variances.

2. The CROSSTABS program provided a joint frequency distribution or crosstabulation of two or more variables

in order to determine whether or not the variables are statistically independent. The program therefore provided the tables of various response categories, chi-square values to test for statistical significance and contingency coefficients.

Hypotheses were rejected or not on the basis of the chi-square values computed for the association between selected variables. A significance level of .05 was selected as the criterion for determining a significant relationship. This significance level was thought to be the best compromise for minimizing Type I error while at the same time protecting against Type II error.

But chi-square values by themselves help only to decide whether or not variables are statistically related. They do not tell how strong a relationship between variables actually is. This is partly because the chi-square value is greatly influenced by the sample size and the number of cells in a table. The contingency coefficients which are really adjusted chi-square values were therefore used as indicators of the relative strength of association between the different variables.

Footnotes

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CHAPTER IV

DESCRIPTION OF SAMPLE AND DISTRIBUTION OF STUDENTS' BELIEFS, ATTITUDES AND ASPIRATIONS TOWARD FARMING AND RURAL LIFE

Introduction

This chapter presents a profile of the sample in terms of the distribution of the background characteristics of the respondents and their beliefs, attitudes and aspirations with respect to farming and rural life.

The chapter is divided into four sections. The first section describes the sample in terms of the distribution of respondents by their background characteristics. The second section presents the distribution of students' responses with respect to their beliefs about farming and rural life, while the third section presents students' responses with respect to their attitudes toward farming and rural life. Finally, the fourth section describes the students' responses concerning their aspirations with respect to farming and rural life.

Background Characteristics of Respondents

Home Location

The home location of students was determined by three questions which tried to determine (1) where the student was brought up as a child before entering primary school, (2) where the student spends most of his holiday time as a student, and (3) where the student's parents live. The distributions of responses to the three questions were very similar as can be seen in Table 2 below.

TABLE 2
PERCENTAGE DISTRIBUTION OF RESPONDENTS BY
HOME LOCATION

Location	Where Brought as a Child	Where Spends Holidays as a Student	Where Parents Live
In a Town	18.9	19.2	19.5
In a Village	81.1	80.8	80.5
Total	100.0	100.0	100.0

Nearly 20 percent of the students in the sample were brought up in urban areas before they went to school,

spend their holidays in urban areas as students and have parents living in urban areas. On the other hand, 80 percent of the students grew up in the rural areas before they went to school, spend their holidays in the rural areas as students and have parents living in the rural areas. Most of the students in the sample, therefore, spent their childhoods in the rural areas before they went to school and continue to spend most of their out-of-school lives there.

Parents' Education

Respondents were required to indicate the levels of schooling their parents had reached. Fairly rough classification was used to distinguish levels of education since the students were not expected to know the exact years their parents had spent in school. The classification presented in Table 3 shows that 18.4 percent of the male parents and 32.6 percent of the female parents have had no schooling, while 31.2 percent and 39 percent of the male and female parents respectively have completed primary school, i.e., about four years of learning the three R's. This would mean that although some of these primary school leavers could read and write some of them would have lapsed back into illiteracy. In other words, 50 percent of the male parents and 72 percent of the female parents are illiterate

or barely literate.

TABLE 3
PERCENTAGE DISTRIBUTION OF RESPONDENTS BY
THEIR PARENTS' LEVEL OF EDUCATION

Level of Education	Father	Mother
No Schooling	18.4	32.6
Primary Schooling Level	31.2	39.0
Middle School Level	34.0	22.3
Secondary School Level	11.4	5.1
University Level	5.0	1.0
Total	100.0	100.0

Thirty four percent of the male parents and 22.3 percent of the female parents have completed middle school (about eight years of schooling) which means they are literate and possibly hold low-status jobs like primary school teaching. On the other hand 15.4 percent and 6.1 percent of the male and female parents respectively have completed secondary or even university education. These would be educated with high social and economic status positions in the society.

Parents' Occupation

Respondents were requested to indicate whether or not their parents were full-time farmers or had another occupation, and the responses indicate that the majority of the parents (62.5 percent and 78.5 percent of the male and female parents respectively) are full-time farmers as indicated in Table 4.

TABLE 4
PERCENTAGE DISTRIBUTION OF RESPONDENTS BY
PARENTS' OCCUPATION

Parents' Occupation	Father	Mother
Full-time Farmer	62.5	78.5
Has Another Occupation	37.5	21.5
Total	100.0	100.0

In comparison, a study of secondary school students from rural Busoga, Uganda showed that 52 percent of male and 26 percent of female parents were farmers while about 2 percent and 61 percent of male and female parents respectively were unemployed.¹ The author of the study

acknowledges, however, that there was a strong possibility that students reported mothers unemployed when they were involved in work on the family farm.

Type of Farming at Home

As a way of determining the economic rewards of the farming activities at home respondents were asked to indicate whether their parents were purely subsistence farmers or raised cash crops as well. The responses indicate that 53 percent of the parents engaged to some extent in cash crop farming while 26 percent were purely subsistence farmers with no cash crop as indicated in Table 5.

TABLE 5
DISTRIBUTION OF RESPONDENTS BY TYPE
OF FARMING AT HOME

Type of Farming at Home	Number	Percentage
Subsistence with Varying Amounts of Cash Crops	458	53.0
Subsistence Only	226	26.0
Not Farmers/No Answer	183	21.0
Total	867	100.0

Distribution of Respondents' Beliefs About
Farming and Rural Life

Beliefs About Farming

In order to judge students' beliefs about farming they were asked to respond to a series of questions related to farming. Tables 6 through 11 show the questions which were used as indicators and the percentage distribution of the responses.

TABLE 6

DISTRIBUTION OF RESPONSES TO THE QUESTION: "COMPARED
TO MOST OTHER PEOPLE, HOW MUCH DOES THE FARMER
HAVE TO WORK?"

	Number	Percentage
Works More	632	72.9
Same as Others	107	12.3
Works Less	39	4.5
Don't Know/No Answer	89	10.3
Total	867	100.0

TABLE 7

DISTRIBUTION OF RESPONSES TO THE QUESTION: "DO
YOU THINK THE FARMER ENJOYS HIS WORK?"

	Number	Percentage
Doesn't Enjoy	172	19.8
Enjoys	599	69.1
Don't Know/ No Answer	96	11.1
Total	867	100.0

TABLE 8

DISTRIBUTION OF RESPONSES TO THE QUESTION: "DO
YOU THINK THE FARMER GETS THE RETURNS HE
DESERVES?"

	Number	Percentage
Gets Less Than he Deserves	198	22.8
Gets What he Deserves	195	22.6
Gets More Than He Deserves	354	40.8
Don't Know/No Answer	120	13.8
Total	867	100.0

TABLE 9

DISTRIBUTION OF RESPONSES TO THE QUESTION: "COMPARED
TO OTHER OCCUPATIONS HOW MUCH PRESTIGE
DO YOU THINK FARMING HAS?"

	Number	Percentage
Lower Than Most Occupations	157	18.1
Same as Most Occupations	216	24.9
Higher Than Most Occupations	413	47.6
Don't Know/No Answer	81	9.4
Total	867	100.0

TABLE 10

DISTRIBUTION OF RESPONSES TO THE QUESTION: "COMPARED
TO MOST OTHER OCCUPATIONS, TO WHAT EXTENT DO
YOU THINK THE FARMER LEADS A COMFORTABLE
LIFE?"

	Number	Percentage
Less Comfortable Than Most	227	26.2
Same as Most	218	25.1
More Comfortable Than Most	346	39.9
Don't Know/No Answer	76	8.8
Total	867	100.0

TABLE 11

DISTRIBUTION OF RESPONSES TO THE QUESTION: "IF YOU ACTUALLY BECAME A FARMER, DO YOU THINK YOU WILL BE BETTER-OFF OR WORSE-OFF THAN YOUR FRIEND WHO TAKES ANOTHER OCCUPATION AFTER FINISHING SCHOOL?"

	Number	Percentage
Will be Worse-off	94	10.8
Same as Him	210	24.3
Will be Better-off	385	44.4
Don't Know/No Answer	178	20.5
Total	867	100.0

About 70 percent of the respondents believe that a farmer enjoys his work while about 48 percent believe that farming has higher prestige than most other occupations. Forty percent of the respondents believe that the farmer leads a more comfortable life compared to those in other occupations and 44.4 percent actually believe they would be better-off joining farming compared to someone who joined another occupation after finishing school. Most respondents (about 63 percent) seem to believe that the farmer receives what he deserves or more than what he deserves for his efforts, but at the same time most of

them (about 73 percent) also recognize that farming is hard work.

Overall, it can be said, therefore, that the students generally view farming favorably. But is this reflected in their attitudes and aspirations with respect to farming? This question is explored in later sections.

Beliefs About Rural Life

Students' beliefs about rural life were judged in the same way as their beliefs about farming by having them respond to a multiple choice question. The question and distribution of responses are shown in Table 12.

TABLE 12

DISTRIBUTION OF RESPONSES TO THE QUESTION: "DO YOU THINK PEOPLE LIVING IN THE RURAL AREAS HAVE MORE OR LESS COMFORTABLE LIFE COMPARED TO THOSE LIVING IN TOWNS?"

	Number	Percentage
Rural People Have a Less Comfortable Life	199	23.0
Rural People Have About the Same Comfort as Town People	129	14.9
Rural People Have a More Comfortable Life	455	52.5
Don't Know/No Answer	84	9.6
Total	867	100.0

More than half of the respondents (about 53 percent) seem to believe that life in the rural areas is more comfortable compared to town life, while about 15 percent believe life in rural areas is just as comfortable as life in town. Again this would indicate that students seem to be favorably inclined to rural life, but, again is this reflected in their attitudes and aspirations with respect to living in the rural areas?

Distribution of Respondents' Attitudes Toward
Farming and Rural Life

Attitudes Toward Farming

The attitude of a student toward farming was seen as the extent to which he or she evaluates farming favorably or unfavorably, and respondents were asked to select among a list of words those which they thought applied to farming. The responses were scored and placed on a scale according to how one viewed farming. Table 13 shows the distribution of the responses.

TABLE 13
DISTRIBUTION OF RESPONDENTS BY ATTITUDE
TOWARD FARMING

	Number	Percentage
Farming is Averse (Negative Attitude)	30	3.5
Farming is Neither Appealing nor Averse (Neutral Attitude)	472	54.4
Farming is Appealing (Positive Attitude)	335	38.6
No Answer	30	3.5
Total	867	100.0

About 4 percent of the respondents view farming as completely averse, while the majority of them (about 55 percent) view farming as neither appealing nor averse. These probably feel that farming has both positive and negative characteristics which more-or-less balance each other out. More than one-third of the sample feel that farming is appealing.

Attitudes Toward Rural Life

Here an attempt was made to determine how students feel about life in the rural areas by asking respondents

to select among a list of words those they thought applied to life in the rural areas. The responses were scored and placed on a scale according to how one evaluated life in the rural areas. The distribution of responses is shown in Table 14.

TABLE 14
DISTRIBUTION OF RESPONDENTS BY THEIR ATTITUDES
TOWARD RURAL LIFE

	Number	Percentage
Rural Life is Average (Negative Attitude)	44	5.1
Rural Life is Neither Average nor Appealing (Neutral Attitude)	392	45.2
Rural Life is Appealing (Positive Attitude)	393	45.3
No Answer	38	4.4
Total	867	100.0

Again about 5 percent of respondents feel life in the rural areas is averse while 45 percent see life as neither averse nor appealing. Another 45 percent of the respondents see life in the rural areas as appealing. It can be said, therefore, that students generally have either

a positive or neutral disposition toward the rural areas contrary to popular belief that schooled youth despise life in the rural areas and are more attracted to life in the city.

Distribution of Respondents' Aspirations With
Respect to Farming and Rural Life

Aspirations With Respect to Farming

Respondents were asked to select among a list of career possibilities the one they would like to join the most. The responses were classified according to whether their choice was agricultural-related or not. In this classification farming, agricultural and veterinary scientists were placed in the same category while all the other non-agricultural choices were placed in another. The distribution of responses is shown in Table 15.

About a third (29.2 percent) of the students in the sample indicated an agricultural-related career including farming as their first choice, while about two-thirds (67.8 percent) indicated other careers as their first choice. These results are similar to those obtained by Maxwell² in a study of Kenyan secondary school students. The study showed that 33.1 percent of the students in the sample aspired to becoming agricultural or veterinary officers or farmers.

TABLE 15
DISTRIBUTION OF RESPONDENTS BY
PREFERRED CAREER

	Number	Percentage
Farming/Agricultural Related	253	29.2
All Others	588	67.8
No Preference/No Answer	26	3.0
Total	867	100.0

Aspirations With Respect to Rural Life

Closely related to the question of occupational choice is the choice of where students would prefer to work after they finish school. Respondents were asked to indicate where they would like to work after they finish school and they were to choose among five locations: the country's capital city, any other town, the student's hometown, the student's home village or any village. The students were almost equally divided in their preferences, with 43.6 percent preferring to work in the rural areas while 48.3 percent prefer to work in a town. About 8 percent had no preference (Table 16).

TABLE 16
DISTRIBUTION OF RESPONDENTS BY
PREFERRED WORKING PLACE

	Number	Percentage
In a Village	378	43.6
In a Town	419	48.3
No Preference/No Answer	70	8.1
Total	867	100.0

The results here differ significantly from those obtained by Marvin³ in his study of a sample of Ugandan secondary school students. In the Uganda study the students overwhelmingly chose to work in the major cities (83 percent of the boys and 89 percent of the girls). However it was also found that locational choice was closely tied to the occupational choice of the students since many of the occupations to which students aspired were in towns, so that even where a student preferred rural life nevertheless listed an urban preference because the occupation he aspires to can not be pursued in the rural areas.

Summary

This chapter presented the background characteristics of the respondents in the sample. A description of the distribution of their responses with respect to beliefs, attitudes and aspirations toward farming and rural life was also presented.

As a whole it can be said that most of the respondents in this sample are of rural origin having grown up and spent most of their out-of-school lives in the rural areas. Most of them have parents who are barely literate or illiterate full-time farmers who grow various combinations of crops for food and some cash income. However, about 20 percent of the students are from urban background while 40 percent of their fathers and 21 percent of their mothers have non-farm occupations.

Generally, it can be said that respondents in this sample have positive beliefs about farming and rural life--they believe farming has some prestige, and that it pays to enter farming. Most of them believe that although the farmer has to work very hard he leads a comfortable life. Likewise about half of the respondents believe that life in the rural areas is more comfortable than in town. Respondents' attitudes toward farming and rural life are either positive or noncommittal--very few feel that

farming or life in the rural areas is completely unattractive.

About one-third of the respondents aspire to agricultural careers, including farming. Although it cannot be ascertained whether or not this proportion is in accordance with manpower requirements of the country, it is not likely that the government would expect more than one third of the school graduates to enter the agricultural sector. What is even more encouraging is that almost half of the respondents would prefer to work in the rural areas after they finish school.

Footnotes

- ¹Richard Marvin. Land or Wages: The Evaluation of Occupational and Residential Alternatives by the Rural Basoga. Munich, Weltforum Verlag (1978), p. 21.
- ²Robert Maxwell. "Occupational Inclinations and Attitudes Toward Rural Modernization of Students in Selected Kenyan Secondary Schools" East African Journal of Rural Development, Vol. 2, (1969), pp. 60-75.
- ³Richard Marvin, loc. cit.

CHAPTER V

THE RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMING AND RURAL LIFE AND THEIR BACKGROUND CHARACTERISTICS

Introduction

This chapter examines the relationship between students' beliefs about farming and rural life and their agricultural learning experiences and background characteristics.

The chapter is divided into four sections. In the first two sections an analysis of the relationship between beliefs about farming and school agricultural learning experiences, and between beliefs about farming and students' background characteristics is presented. The following two sections examine how students' beliefs about rural life are related to students' school agricultural learning experiences and to their background characteristics. The relationships are examined by chi-square analysis. However, the chi-square value helps in deciding whether variables are independent or related but does not show how strongly they are related. The contingency coefficient, C , was therefore used as a measure of the strength of the relationships between variables.

Students' Beliefs About Farming

It was noted earlier that beliefs are hypotheses concerning the nature and relationships between different objects. They are people's perceptions of the reality surrounding them. These beliefs are acquired through various means including direct experiences, influences and didactic means. One's beliefs about an object form the informational base which helps shape the individual's attitudes, aspirations and ultimate action with respect to that object. In trying to influence students' attitude and aspirations with respect to farming, it is necessary, therefore, to start by influencing students' beliefs about farming. School agricultural learning experiences are therefore a means of influencing students' beliefs about farming, and the beliefs students acquire will have a bearing on the success of the educational policy for they will determine whether or not students have aspirations which are in tune with the goals of the government.

But the schools are not the only source of students' beliefs about farming. The majority of the students have been brought up in rural farm backgrounds, which means that in the process of growing up in the village they have acquired certain beliefs about farming and rural life in general. Even those from urban

background have formed beliefs about farming by inferring from what they have been told by friends and relatives or what they have read and heard in the media.

The distribution of students' beliefs about farming across the six indicators showed that indeed students vary with respect to what they believe about farming (Chapter IV). The next concern of this study was to see whether there is any relationship between students' beliefs about farming and their school agricultural learning experiences (or lack of them), or their background characteristics. This was done by testing the following hypotheses:

Hypothesis: There is no significant relationship between school agricultural learning experiences and students' beliefs about farming.

This hypothesis was tested by chi-square analysis, the results of which are presented in Table 17.

The results show that there is a significant relationship between four of the six indicators of students' beliefs about farming and students' school agricultural learning experiences. It can be said, therefore, that students beliefs about farming are significantly related to school agricultural learning experiences and the hypothesis is therefore rejected. An examination of the contingency coefficients, however,

reveals that this relationship is not a very strong one.

TABLE 17

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR
THE RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT
FARMING AND THEIR SCHOOL AGRICULTURAL
LEARNING EXPERIENCES

Belief Indicators	School Agricultural Learning Experiences
How Much the Farmer has to Work	$X^2 = 8.6060$ NS $C = .0991$
How Much the Farmer Enjoys his Work	$X^2 = 23.2335^*$ $C = .1615$
How Much the Farmer Gets What he Deserves	$X^2 = 13.9193$ NS $C = .1257$
How Much Prestige Farming has	$X^2 = 37.7117^*$ $C = .2042$
How Comfortable Farmer's Life is	$X^2 = 36.8909^*$ $C = .2020$
Would be Better-off or Worse-off as a Farmer	$X^2 = 23.1728^*$ $C = .1613$

The asterisk indicates significant relationship at $< .05$ significance level.

NS = Not Significant

Those students who have had practical learning experiences were the ones most likely to hold positive beliefs about farming as illustrated in Table 18. The table shows that more of those who are involved in practical agricultural activities see the farmer as leading a comfortable life compared to those who have had no agricultural experience in the school or those who have had both practical and inclass experiences (51.3 percent compared to 35.2 and 36.1 percent respectively). It seems that inclass agricultural learning does not change students' beliefs as expected. It is possible that these students, because of their superior knowledge about farming acquired in class, are able to make more realistic and skeptical assessment of the situation of the farmer as compared to the other students who may not be so knowledgeable.

TABLE 18

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMING AND SCHOOL
AGRICULTURAL LEARNING EXPERIENCES (PERCENTAGE)

Compared to Other Occupations a Farmer Leads:	School Agricultural Learning Experiences		
	None	Practical Experience Only	Practical with Inclass Experience
A Less Comfortable Life	24.8	20.5	31.3
A Life Same as Others	27.9	20.6	26.0
A More Comfortable Life	35.2	51.3	36.1
Don't Know/No Answer	12.1	7.6	6.6
$\chi^2 = 38.890^*$ df = 6 C = 2020			

Hypothesis: There is no significant relationship between students' beliefs about farming and a) their grade levels, b) sex, and c) home location.

Table 19 presents the results of the analysis of the relationship between students' beliefs about farming and their grade level, sex and home location.

The grade level of the student is significantly related to four of the six belief indicators, while sex is significantly related to only two of the indicators. Home location as measured by where a student was brought up as a child is significantly related to three of the six belief indicators. Likewise home location as measured by where a student spends most of his holidays is significantly related to three of the belief indicators, while the relationship between student beliefs and home location as measured by where a student's parents live is significant for four of the six indicators. Overall, it can be said that students' beliefs about farming are significantly related to the grade level, sex and home location of the student, and the hypothesis is therefore rejected. An examination of the contingency coefficients shows the grade level of the student as the one most strongly related to students' beliefs about farming, followed by student's home location (as measured by all three indicators), with sex the least strongly related to students' beliefs.

TABLE 19

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR THE RELATIONSHIPS BETWEEN STUDENTS' BELIEFS ABOUT FARMING AND STUDENTS' GRADE LEVEL, SEX AND HOME LOCATION

Belief Indicator	Grade Level of Student	Sex of Student	Students' Home Location			
			Where Brought Up	Where Parents Live	Where Spends Holidays	
How Much the Farmer has to Work	$\chi^2 = 12.0910$ C = .1102 NS	11.1907 NS .1128	14.6356 NS .1128	26.5463* .1723	32.2042* .1892	
How Much the Farmer Enjoys his Work	$\chi^2 = 10.0798$ C = .1072 NS	22.3789* .1586	49.6590* .2327	44.3800* .2206	27.5167* .1754	
How Much the Farmer Gets What he Deserves	$\chi^2 = 63.6700$ C = .2615	13.9908 NS .12602	8.4508 NS .0982	20.2922* .1512	12.0344 NS .11701	
How Much Prestige Farming has	$\chi^2 = 50.4991$ C = .2546	12.0308 NS .11699	19.8038* .14955	9.3123 NS .1030	3.5690 NS .0666	
How Comfortable Farmer's Life is	$\chi^2 = 54.9624$ C = .2441	17.9250* .1423	19.8610* .14965	31.048* .1859	23.9492* .1639	
Would be Better-off or Worse-off as Farmer	$\chi^2 = 58.3043$ C = .25102	8.3349 NS .09758	9.5360 NS .1043	13.7116 NS .12478	12.0799 NS .1172	

The asterisk indicates significant relationship at $< .05$ significance level.

NS = Not Significant

Results presented in Tables 20 to 22 show that, indeed, students' beliefs about farming vary with the grade level, sex and home location of the student. Students in lower grades are more likely to hold more positive beliefs compared to those in higher grades, while male students and those from rural areas are also more likely to hold positive beliefs compared to female students or those from urban backgrounds.

TABLE 20

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMERS AND THEIR GRADE LEVEL (PERCENTAGE)

Compared to Other Occupations a Farmer Leads	Grade Level of Student		
	Form One	Form Four	Form Six
A Less Comfortable Life	16.4	32.9	39.6
A Life Same as Others	28.1	21.1	27.7
A More Comfortable Life	45.8	38.0	24.8
Don't Know/No Answers	9.7	8.0	7.9
Total	100.0	100.0	100.0

$$\chi^2 = 54.962^*$$

$$df = 6$$

$$C = .2442$$

TABLE 21

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMING
AND THE SEX OF THE STUDENT (PERCENTAGE)

Compared to Other Occupations a Farmer Leads	Sex of Student	
	Male	Female
A Less Comfortable Life	19.8	16.2
A Life Same as Others	23.6	26.3
A More Comfortable Life	48.9	45.8
Don't Know/No Answer	7.7	11.7
Total	100.0	100.0

$$\chi^2 = 17.925^*$$

$$df = 3$$

$$C = .1423$$

TABLE 22

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMING AND
AND THEIR HOME LOCATION (PERCENTAGE)

Compared to Other Occupations a Farmer Leads	Where Parents Live	
	In Town	In a Village
A Less Comfortable Life	34.7	24.3
A Life Same as Others	23.4	25.8
A More Comfortable Life	28.1	42.5
Don't Know/No Answer	13.8	7.4
Total	100.0	100.0

$$\chi^2 = 13.048^*$$

$$df = 3$$

$$C = .1859$$

Hypothesis: There is no significant relationship between students' beliefs about farming and a) parental level of education, b) parental occupation, and c) type of farming at home.

Table 23 presents the results of the chi-square analyses of the relationships between students' beliefs about farming and parents' education, parents' occupation and the type of farming at home.

Among the three background characteristics of the student, parents' occupation (as measured by fathers occupation) is significantly related to most of the indicators of students' beliefs about farming, followed by the type of farming at home. Fathers' education is significantly related to three of the belief indicators while mothers' education is related to only two. Students' beliefs about farming therefore can be said to be significantly related to parents' occupation, parents' education (as measured by fathers' education) and to the type of farming at home. The hypothesis is therefore rejected. The contingency coefficients show that the relationship between students' beliefs and parental occupation is the strongest followed by that between students' beliefs and parental education, and finally that between students' beliefs and the type of farming at home.

TABLE 23

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR THE RELATIONSHIPS BETWEEN STUDENTS' BELIEFS ABOUT FARMING AND PARENTS' LEVEL OF EDUCATION, PARENTS' OCCUPATION AND THE TYPE OF FARMING AT HOME

Belief Indicator	Parents' Level of Education Fathers' Education	Mothers' Education	Fathers' Occupation	Mothers' Occupation	Type of Farming at Home
How Much the Farmer has to Work	$X^2 = 34.0020^*$ C = .1942	33.4168 [*] .1926	8.2760 NS .0972	23.2022 [*] .1614	15.8901 [*] .1341
How Much the Farmer Enjoys his Work	$X^2 = 33.9143^*$ C = .1940	29.3353 NS .1809	16.3124 [*] .1358	24.5813 [*] .16703	19.5146 [*] .14837
How Much the Farmer Gets What he Deserves	$X^2 = 19.8207$ NS C = .1495	36.7253 [*] .20159	23.3445 [*] .1619	12.2097 NS .1178	11.7415 NS .1155
How Much Prestige Farming Has	$X^2 = 14.9743$ NS C = .1303	19.3212 NS .1476	21.9679 [*] .15718	22.2087 NS .1580	11.6307 NS .1150
How Comfortable Farmer's Life is	$X^2 = 35.9674^*$ C = .1995	24.1065 NS .1644	21.238 [*] .1546	39.8730 [*] .2096	31.7710 [*] .1880
Would be Better-off or Worse-off as a Farmer	$X^2 = 25.4242$ NS C = .1687	20.4559 NS .1518	9.5529 NS .1044	10.6409 NS .1101	8.4899 NS .0984

The asterisk indicates significant relationship at <.05 level of significance level.

NS = Not Significant

Tables 24 and 25 show that those students whose parents are more educated and hold a non-farming occupation are more likely to hold positive beliefs compared to those whose parents are less educated or are farmers. However, Table 26 shows that those students whose parents are engaged in cash crop farming are the ones more likely to hold negative beliefs compared to those whose parents are subsistence farmers only.

TABLE 24

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMING AND
PARENTAL EDUCATION (PERCENTAGE)

Compared to Other Occupations a Farmer Leads:	Father's Lack of Education			
	No Schooling	Primary Level	Middle Level	Secondary Level University Level
A Less Comfortable Life	32.0	22.4	24.3	36.3 24.5
Life Same as Others	18.4	26.4	27.9	29.7 19.5
A More Comfortable Life	42.2	43.2	39.0	28.6 34.1
Don't Know/No Answer	7.4	7.6	8.8	5.4 21.9
Total	100.0	100.0	100.0	100.0 100.0
$\chi^2 = 35.957^*$ df = 12 C = .1995				

TABLE 25

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMING AND
PARENTAL OCCUPATION (PERCENTAGE)

Compared to Other Occupations a Farmer Leads	Mother's Occupation	
	A Fulltime Farmer	Has Another Occupation
A Less Comfortable Life	25.6	29.5
A Life Same as Others	25.3	23.5
A More Comfortable Life	42.1	31.7
Don't Know/No Answer	7.0	15.3
Total	100.0	100.0

$$\chi^2 = 22.208^*$$

$$df = 3$$

$$C = .1580$$

TABLE 26

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT FARMING
AND THE TYPE OF FARMING AT HOME (PERCENTAGE)

Compared to Other Occupations a Farmer Leads	Type of Farming at Home	
	Subsistence Only	Subsistence With Cash
A Less Comfortable Life	23.5	26.0
A Life Same as Others	24.8	26.6
A More Comfortable Life	42.5	41.5
Don't Know/No Answer	9.2	5.9
Total	100.0	100.0

$$\chi^2 = 31.771$$

$$df = 3$$

$$C = .1880$$

Overall, therefore, it appears that students' beliefs about farming are related not only to the students' school agricultural experiences, but also to the characteristics of the student like grade level, sex and home background factors like parental education, parental occupation, home location and the type of farming at home. The relationship between students' beliefs about farming and the sex of the student, however, is very weak.

Students' Beliefs About Rural Life

The analysis in Chapter IV showed that most students seem to have positive beliefs about rural life but a significant proportion did have negative beliefs. The next question for the study was how are students beliefs about rural life related to their school agricultural learning experiences and to their background characteristics. The following hypotheses were therefore tested:

Hypothesis: There is no significant relationship between school agricultural learning experiences and students' beliefs about rural life.

A chi-square analysis showed that students' beliefs about rural life were significantly related to students' school agricultural learning experiences (Table 27) and the hypothesis is therefore rejected.

TABLE 27
RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT RURAL LIFE AND
SCHOOL AGRICULTURAL LEARNING EXPERIENCES
(PERCENTAGE)

Rural Life is:	School Agricultural Learning Experiences		
	None	Practical Experience Only	Practical With Inclass Experience
Less Comfortable than Urban Life	24.8	15.0	26.8
As Comfortable as Urban Life	16.4	15.8	12.8
More Comfortable than Urban Life	47.7	62.8	49.6
Don't Know/ No Answer	11.1	6.4	10.8
Total	100.0	100.0	100.0
$\chi^2 = 21.5^*$ $df = 6$ $C = .1626$			

A close look at the relationship between students' beliefs about rural life and the school agricultural learning experiences as presented in Table 27, however, shows that this relationship is fairly weak with $C = .1626$, and does not support the assumption that those students involved the most in agricultural learning activities will have more positive beliefs about rural life. The results show that those students who have had

practical experiences without any inclass learning are the ones most likely to believe that rural life is more comfortable than urban life. On the other hand, there is very little difference between those students who have had both practical and inclass learning experiences and those who have no school agricultural experience of any kind. In other words, those students who have had in-class learning experiences in addition to practical activities do not differ significantly in their beliefs about rural life from those who have had no school agricultural learning of any kind.

Hypothesis: There is no significant relationship between students' beliefs about rural life and a) their grade level, b) sex, c) home location, d) parental education, e) parental occupation, and f) type of farming at home.

Table 28 shows that students' beliefs about rural life are significantly related to all the students' background characteristics except the sex of the student. The hypothesis is therefore rejected except for the sex of the student where it can not be rejected.

Table 28 also shows that students' beliefs are most strongly related to parental level of education ($C = .2351$ and $.2116$ for fathers' and mothers' education respectively) followed by parental occupation as measured by mother's occupation ($C = .2015$) and the grade level of

TABLE 28

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR THE
RELATIONSHIPS BETWEEN STUDENTS' BELIEFS ABOUT RURAL
LIFE AND THEIR BACKGROUND CHARACTERISTICS

Background Characteristic	Belief Indicator: "Is Rural Life More or Less Comfortable than Urban Life?"
Grade Level of Student	$X^2 = 23.5512^*$ $C = .1863$
Sex of Student	$X^2 = 10.5883$ NS $C = .1098$
Home location:	
Where Brought Up as Child	$X^2 = 17.2565^*$ $C = .1397$
Where Parents Live	$X^2 = 28.847^*$ $C = .1794$
Where Spends Holidays	$X^2 = 23.4906^*$ $C = .1624$
Parents' Level of Education:	
Fathers' Education	$X^2 = 23.0461^*$ $C = .1609$
Mothers' Education	$X^2 = 36.6828^*$ $C = .2014$
Type of Farming at Home	$X^2 = 23.7310^*$ $C = .1632$

The asterisk indicates significant relationship at $< .05$ significance level.

NS = Not Significant

the student ($C = .18630$).

As illustrated in Table 29 for father's level of education, those students whose parents have had little or no schooling tend to have more positive beliefs than those whose parents have had secondary or university education.

The results in Table 30 show that a higher proportion of farm background students believe rural life is more comfortable compared to urban life, than nonfarm background students (58 percent compared to 44 percent).

In addition, the direction of the relationship between students' beliefs about rural life and home location is in the expected direction. A higher proportion of students from rural areas than from urban areas believe that life in the rural areas is more comfortable than life in town, while a lower proportion of students from rural areas than from urban areas believe that life in the rural areas is less comfortable than life in towns. This is illustrated in Table 31 where home location is measured by where parents live. Not surprisingly, therefore, students from a rural background are more likely to have positive beliefs about rural life than those students from an urban background.

TABLE 29

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT RURAL LIFE AND PARENTS' LEVEL OF EDUCATION AS MEASURED BY FATHERS' EDUCATION (PERCENTAGE)

Rural Life is:	No Schooling	Fathers' Level of Education			University Level
		Primary Level	Middle Level	Secondary Level	
Less Comfortable than Urban Life	23.8	23.2	20.6	28.6	14.6
As Comfortable as Urban Life	14.4	11.6	15.0	23.0	24.4
More Comfortable than Urban Life	54.5	57.2	54.8	28.5	43.9
Don't Know/ No Answer	7.4	8.0	9.6	9.9	17.1
Total	100.0	100.0	100.0	100.0	100.0

$$X^2 = 50.7306^* \quad df = 12 \quad C = .2351$$

TABLE 30

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT RURAL
LIFE AND PARENTS' OCCUPATION AS MEASURED BY
FATHER'S OCCUPATION (PERCENTAGE)

Rural Life is:	Father's Occupation	
	Full-time Farmer	Has Another Occupation
Less Comfortable than Urban Life	21.7	25.2
As Comfortable as Urban Life	12.0	19.4
More Comfortable than Urban Life	57.9	43.9
Don't Know/ No Answer	8.4	11.5
Total	100.0	100.0

$$\chi^2 = 23.0461^*$$

$$df = 3$$

$$C = .1609$$

TABLE 31

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT RURAL
LIFE AND HOME LOCATION AS MEASURED BY WHERE
PARENTS LIVE (PERCENTAGE)

Rural Life is:	Where Parents Live	
	In a town	In a village
Less Comfortable than Urban Life	26.3	22.3
As Comfortable as Urban Life	20.4	13.3
More Comfortable than Urban Life	39.5	55.8
Don't Know/ No Answer	13.8	8.6
Total	100.0	100.0

$$\chi^2 = 28.847^*$$

$$df = 3$$

$$C = .1794$$

Grade level differences are more marked, with lower grade students holding more positive beliefs about rural life than the upper grade students (Table 32). While 53.5 percent of students in form one believe that rural life is more comfortable than urban life, 40.6 percent of the students in form six believe so. On the other hand while 18.7 percent of form ones believe that life in the rural areas is less comfortable a substantially higher proportion of form six students (33.7 percent) believe the same. It is possible that as a result of maturity and the ability to travel and compare experiences in different parts of the country the student gradually modifies his knowledge base and becomes more skeptical of rural life as he progresses up the academic ladder.

Although the data analysis shows that students from rural farm background are more likely to have positive beliefs than those students from urban background, the possibility remains that even among farm background students, beliefs may be influenced by the type of farming undertaken at home. It is possible that those students whose parents can obtain some cash income from farming are more likely to have positive beliefs compared to those whose parents hardly obtain any cash from their farming activities. Table 33 shows that there is a relationship between students' beliefs and the type of farming at home,

TABLE 32.

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT RURAL
LIFE AND THE GRADE LEVEL OF THE STUDENT
(PERCENTAGE)

Rural Life is:	Grade Level of the Student		
	Form One	Form Four	Form Six
Less Comfortable than Urban Life	18.7	24.3	33.7
As Comfortable as Urban Life	16.4	12.3	18.8
More Comfortable than Urban Life	53.5	54.8	40.6
Don't Know/ No Answer	11.4	8.6	6.9
Total	100.0	100.0	100.0

$$\chi^2 = 31.1862^*$$

$$df = 6$$

$$C = .1863$$

TABLE 33

RELATIONSHIP BETWEEN STUDENTS' BELIEFS ABOUT RURAL
LIFE AND THE TYPE OF FARMING AT HOME
(PERCENTAGE)

Rural Life is:	Type of Farming at Home	
	Subsistence Only	Subsistence With Cash Crops
Less Comfortable than Urban Life	20.4	23.1
As Comfortable as Urban Life	12.4	14.0
More Comfortable than Urban Life	58.4	54.4
Don't Know/ No Answer	8.8	8.5
Total	100.0	100.0
$\chi^2 = 23.7310^*$ $df = 3$ $C = .1632$		

but the relationship is not in the expected direction. A higher proportion of students whose parents are pure subsistence farmers believe that rural life is more comfortable than urban life (58 percent compared to 54 percent), while a higher proportion of students whose parents raise some cash crops believe that rural life is less comfortable than urban life (23 percent compared to 20 percent). The contingency coefficient of .1632 indicates that this relationship is rather weak.

Summary

This chapter was concerned with analyzing the relationship between students' beliefs and their school agricultural learning experiences and also between students' beliefs and their background characteristics.

Chi-square analysis was applied to test these relationships, and it was found that there is a relationship between students' beliefs about farming and rural life and their school agricultural experiences although this relationship was not a strong one. It does seem, however, that those students involved in practical agricultural learning activities in the school will be more likely to hold positive beliefs about farming and rural life compared to those who do not have any such experience, or, curiously, those who have inclass

agricultural learning experiences.

Students' beliefs were more strongly related to the grade level of the student, and only marginally related to the sex of the student. The analysis also showed that there is a relationship between what the student believes and his or her background characteristics. In particular, there is a strong relationship between students' beliefs and their home location, parental occupation and type of farming at home. The relationship between students' beliefs and parental education is not a strong one and the effect of parental education may be only due to its being a determinant of parental occupation and home location insofar as the more educated parents tend to work and reside in towns while the less educated parents are mainly farmers in the rural areas.

Overall, it appears that there is a stronger relationship between a student's beliefs and his background characteristics especially as measured by parental occupation and home location, than there is between a student's beliefs and his school agricultural learning experiences. A student from rural farm background is more likely to have positive beliefs about farming and rural life compared to a student from an urban background. Additionally, a student's beliefs are related rather strongly to the grade level one is in, with those in the

lower grades being more likely to hold positive beliefs than their fellows in higher grade levels.

In assessing the effect of schools in shaping students' beliefs one can see that factors outside the school play a more significant role than school learning experiences. The effect of schooling is not so much due to the specific learning experiences it provides, as to its' institutional properties which tend to socialize the student toward a specific way of looking at society and his role in it. As the student progresses up the academic ladder his view of the society and his expectations of it change progressively.

Students' beliefs are the knowledge-base on which they base their attitudes and aspirations about different phenomena surrounding them. The major purpose of engaging Tanzanian students in agricultural learning is to shape their beliefs and hence their attitudes and aspirations in a particular direction. The following chapter examines students' attitudes and aspirations as they relate to agricultural learning experiences and to the background characteristics of the students.

CHAPTER VI

THE RELATIONSHIP BETWEEN STUDENTS' ATTITUDES AND ASPIRATIONS AND THEIR BACKGROUND CHARACTERISTICS

Introduction

This chapter examines the relationship between students' attitudes and aspirations and their school agricultural learning experiences and also between these attitudes and aspirations and the background characteristics of the students. The chapter is therefore divided into four main sections.

The first section examines the relationship between students' attitudes toward farming and their school agricultural learning experiences and background characteristics. Likewise the second section examines the relationship between students' attitudes toward rural life and their school agricultural learning experiences and background characteristics.

The following two sections are concerned with students' aspirations with respect to farming and rural living and how they relate to their school agricultural learning experiences and to their background characteristics.

Students' Attitudes Toward Farming

As it was observed earlier in Chapter IV, about

half of the students in the sample evaluated farming neither favorably nor unfavorably, that is, they felt farming was neither appealing nor completely averse, while about one-third felt farming was appealing and a very small proportion felt farming was unattractive. The assumption of the policy-makers in Tanzania is that school experiences can be designed in such a way as to result in certain predetermined attitudinal learning outcomes for the students. Specifically, it is assumed that through certain agricultural learning activities students will be more likely to acquire more positive attitudes toward farming and rural life in general. On the other hand, it has been argued that students' attitudes (and especially their occupational attitudes) are shaped not so much by specific learning experiences in school but rather by what students perceive to be the opportunities and limitations present in the employment sector vis-a-vis their level of education and their academic standing in class.¹ Research has also shown that factors outside the school like students' home background characteristics are likely to influence the learning outcomes of the student in the school and that in terms of attitudinal learning the school is merely one of the factors which will influence students' attitudes.² One of the objectives of the study was to see whether or not there was any relationship between certain school learning

experiences and the attitudinal learning outcomes for students. The following hypotheses were therefore tested:

Hypothesis: There is no significant relationship between students' attitudes toward farming and their school agricultural learning experiences.

Results presented in Table 34 shows that students' attitudes toward farming are significantly related to their school agricultural learning experiences and the hypothesis is therefore rejected.

TABLE 34

RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD
FARMING AND THEIR SCHOOL AGRICULTURAL LEARNING
EXPERIENCES (PERCENTAGE)

Attitude Toward Farming	Type of Agricultural Learning Experience		
	None	Practical Experience Only	Practical with In- class
Negative	5.4	2.1	2.7
Neutral	52.3	50.0	59.4
Positive	37.9	45.3	34.6
No Answer	4.4	2.6	3.3
Total	100.0	100.0	100.0

$$\chi^2 = 12.900^*$$

$$df = 3$$

$$C = .1211$$

Table 34 shows that although the relationship is not strong ($C = .1211$), more of those who have not had any agricultural learning experiences in school have negative attitudes toward farming compared to those who have had either practical experiences alone or practical with inclass learning experiences (5 percent versus 2.1 and 2.7 percent respectively). But while about 38 percent of those who have had no agricultural experience in school hold positive attitudes, a smaller proposition of those who have had both practical and inclass experience (about 35 percent) hold positive attitudes. What is interesting is that those who have had practical experiences only are the ones most likely to have positive attitudes and the least likely to have negative attitudes toward farming (45 percent and 2 percent respectively). It appears that agricultural science as taught in schools does not result in more positive attitudes toward farming on the part of the students. This could be either because agricultural science provides more knowledge and better tools of analysis to the students which make it easier for students to be more critical of the farming sector, or it could be that as a result of the extra work load and the way it is taught makes students have negative reaction to the subject and to farming in general.

Hypothesis: There is no significant relationship between students' attitudes toward farming and a) the grade level, and b) the sex of the student.

The relationships between students' attitudes toward farming and their grade level and between attitudes and the sex of the student are significant as shown in Tables 35 and 36, and the hypothesis is therefore rejected.

TABLE 35

RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD
FARMING AND THEIR GRADE LEVEL (PERCENTAGE)

Attitude Toward Farming	Grade Level of Student		
	Form One	Form Four	Form Six
Negative	2.1	4.8	4.0
Neutral	61.1	47.3	55.4
Positive	33.5	44.2	37.6
No Answer	3.3	3.7	3.0
Total	100.0	100.0	100.0

$$\chi^2 = 18.381^*$$

$$df = 6$$

$$C = .1441$$

TABLE 36

RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD
FARMING AND THE SEX OF THE STUDENT (PERCENTAGE)

Attitude Toward Farming	Sex of Student	
	Male	Female
Negative	3.8	2.9
Neutral	51.7	57.5
Positive	42.1	34.6
No Answer	2.4	5.0
Total	100.0	100.0

$$X^2 = 14.024^* \quad df = 3 \quad C = .1262$$

The association between students' attitudes and the grade level or the sex of the student is not strong as can be seen from the contingency coefficients, but what is striking here is the high proportion (61 percent) of form one students who feel that farming is neither appealing nor averse. Still among the higher grade students more of form four students (44 percent) feel that farming is appealing compared to form six students (38 percent) who feel the same.

Although it is widely acknowledged that males differ from females in their educational and occupational aspirations because of the differences in expectations for boys and girls by their parents, research has shown that males and females differ little in their attitudes to the occupational structure, especially as determined by student rankings of occupations on the basis of prestige or income.³ For example, in a study of Ivory Coast secondary school students, Clignet and Foster⁴ detected a high level of consistency between occupational ratings by sex with a rank-order correlation between male and female ratings of .98.

But the results of this study show that there is a relationship between a student's attitudes toward farming and the sex of the student. More of the male students have a positive evaluation of farming compared to the female students (42 percent and 35 percent respectively). In comparison, in a Tanzanian study by Zanolli⁵ in which pupils were asked to evaluate farming, the majority of the pupils considered farming a good and necessary activity which is advantageous and beneficial, but more of the girls (62 percent) made positive statements as compared to the boys (55 percent).

Hypothesis: There is no significant relationship between students' attitudes toward farming and a) home location, b) parental education, c) parental occupation, and d) type of farming at home.

Results presented in Table 37 indicate that, contrary to expectations, there is no significant relationship between students' attitudes toward farming and their home background characteristics as measured by a) home location, b) parental education, and c) type of farming at home. However, there is a significant relationship between students' attitudes and parental occupation as measured by mother's occupation. The hypothesis that there is no significant relationship between students' attitudes toward farming and a) home location, b) parental education, and c) type of farming at home cannot be rejected. However, the hypothesis that there is no significant relationship between students' attitudes and parental occupation is rejected.

TABLE 37

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR THE
RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD
FARMING AND THEIR HOME BACKGROUND CHARACTERISTICS

Characteristics	Attitude Toward Farming
Home Location:	
Where Brought Up	$X^2 = 4.327$ NS $C = .0705$
Where Parents Live	$X^2 = 5.520$ NS $C = .0795$
Where Spends Holidays	$X^2 = 8.469$ NS $C = .0984$
Parents' Level of Education:	
Father's Education	$X^2 = 6.481$ NS $C = .0861$
Mother's Education	$X^2 = 13.746$ NS $C = .1249$
Parents' Occupation:	
Father's Occupation	$X^2 = 7.453$ NS $C = .0923$
Mother's Occupation	$X^2 = 37.514^*$ $C = .2036$
Type of Farming at Home	$X^2 = 10.922$ NS $C = .1115$

The asterisk indicates significant relationship at $< .05$ significance level.

NS = Not Significant

Table 38 suggests that students' attitude toward farming is related to the occupation of the mother. As expected more of the students whose mothers are farmers feel that farming is appealing compared to those whose mothers have other kinds of occupations (41 percent and 30 percent respectively). The majority of the students whose mothers have occupations other than farming feel that farming is neither appealing nor averse, perhaps a reflection of their lack of knowledge about farming or a 'don't care' attitude toward farming.

TABLE 38

RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD
FARMING AND PARENTAL OCCUPATION AS MEASURED BY
MOTHER'S OCCUPATION (PERCENTAGE)

Attitude Toward Farming	Occupation of Mother	
	Farmer	Has Another Occupation
Negative	3.4	3.3
Neutral	51.9	63.4
Positive	41.3	29.5
No Answer	3.4	3.8
Total	100.0	100.0

$$\chi^2 = 37.514^*$$

$$df = 3$$

$$C = .2037$$

Students' Attitudes Toward Rural Life

Closely related to students' attitudes toward farming is their attitudes toward rural life and in this study the distribution of students' attitudes toward farming is consistent with that of their attitudes toward rural life (Tables 13 and 14, Chapter IV). But again interest lay in determining the relationship between students' attitudes toward rural life and their school agricultural learning experiences and their background characteristics. The following hypotheses were therefore tested:

Hypothesis: There is no significant relationship between students' attitudes toward rural life and their school agricultural learning experiences

Table 39 shows that the relationship between students' attitudes toward rural life and their school agricultural learning experiences is significant, and the hypothesis is rejected. One striking feature is that those students who have had a practical farm experience only are the ones most likely to have positive attitudes toward rural life compared to those who have had no school agricultural experience of any kind or those who have had both practical and inclass agricultural learning experiences (54 percent compared to 43 and 41 percent respectively).

TABLE 39

RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD RURAL
LIFE AND THEIR SCHOOL AGRICULTURAL LEARNING
EXPERIENCES (PERCENTAGE)

Attitude Toward Rural Life	Type of School Agricultural Learning Experiences		
	None	Practical Experience Only	Practical Plus Inclass Experience
Negative	5.7	4.3	5.1
Neutral	45.0	37.6	50.7
Positive	43.3	53.8	41.2
No Answer	6.0	4.3	3.0
Total	100.0	100.0	100.0

$$\chi^2 = 14.445^*$$

$$df = 3$$

$$C = .2269$$

As with students' attitudes toward farming, inclass agricultural learning experiences seem to have no effect on students' attitudes. Again, a reason for this could be that either the agricultural science classes add to the workload of the students and cause them to detest farming and rural life, or as a result of their inclass learning they are able to make more informed comparisons between farming and other occupations and between rural and urban life conditions. In any case, whatever else

may be said of introducing agricultural science in the schools, it does not seem to result in more positive attitudes toward farming and rural life on the part of the students. Rather those students who are engaged in practical agricultural learning activity only are the most likely to have positive attitudes toward farming and rural life.

Hypothesis: There is no significant relationship between students' attitudes toward rural life and a) the grade level and, b) the sex of the student.

As shown in Tables 40 and 41, students' attitudes toward rural life are significantly related to the grade level the student is in and to the sex of the student. The hypothesis is therefore rejected.

TABLE 40
RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD
RURAL LIFE AND THE GRADE LEVEL OF THE STUDENT
(PERCENTAGE)

Attitude Toward Rural Life	Grade Level of Student		
	Form One	Form Four	Form Six
Negative	2.8	5.3	11.9
Neutral	50.9	39.8	43.6
Positive	40.4	51.1	43.5
No Answer	5.9	3.8	1.0
Total	100.0	100.0	100.0
$\chi^2 = 47.044^*$ df = 6 C = .2269			

TABLE 41
RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD
RURAL LIFE AND THE SEX OF THE STUDENT
(PERCENTAGE)

Attitude Toward Rural Life	Sex of Student	
	Male	Female
Negative	5.2	5.0
Neutral	40.7	50.8
Positive	50.9	38.0
No Answer	3.2	6.2
Total	100.0	100.0

$$X^2 = 19.401^* \quad df = 3 \quad C = .1479$$

Students' attitudes are much more strongly associated with the grade level of the students than with school agricultural learning experiences ($C = .2269$ compared with $C = .1280$). Table 40 suggests that as one progresses up the educational ladder one is more likely to have negative attitude toward rural life (2.8 percent of form one feel rural life is averse while about 12 percent of form six students feel that way). However, of the three grade levels, form four students are the

most likely to have positive attitudes toward rural life followed by form six students. Thus it appears that the effect of school experiences is not unidirectional or necessarily in the expected direction. It may as well be that the more schooling a youth has the more he is likely to feel that rural life is unattractive and the less likely for him to aspire to a rural-based occupation, and this is a real dilemma for educational policy-maker who hope to use schools as vehicles for redirecting students' attitudes and aspirations to be more attuned to rural development objectives.

Although students' attitudes toward rural life are not strongly associated with the sex of the student ($C = .1479$), male students are more likely to have positive attitudes toward rural life compared to female students (51 percent compared to 38 percent) according to Table 41. It will be noted that male students were also more likely to have positive attitudes toward farming as compared to female students (Table 36). This is probably because in the rural areas women have traditionally been saddled with the drudgery of subsistence farming and general care of the family while men have been concerned with cash crops and livestock which are more financially rewarding.

Hypothesis: There is no significant relationship between students' attitudes toward rural life and a) the home location, b) parental education, c) parental occupation, and d) type of farming at home.

According to Table 42 the relationship between students' attitudes and a) home location, b) parental education, c) parental occupation, and d) type of farming at home is not significant and the hypothesis can not be rejected. Students' attitudes toward rural life do not seem to be associated with the home background characteristics of the students.

The attitudes students have toward farming and rural life will influence their future plans with respect to farming and rural living. Indeed previous studies have shown that there is a high correlation between student rankings of occupations based on prestige and income and student aspirations with regard to those occupations. For example, Clignet and Foster⁶ showed that there is a general relationship between students' occupational aspirations and the occupational hierarchy, with individual choices being concentrated largely in the upper sector of the hierarchy. This would support the assumption held by some scholars that students' aspirations are determined mainly by the situation obtaining out in the society rather than what schools teach. In other

TABLE 42

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR THE
RELATIONSHIP BETWEEN STUDENTS' ATTITUDES TOWARD RURAL
LIFE AND THEIR HOME BACKGROUND CHARACTERISTICS

Characteristics	Attitude Toward Rural Life
Home Location:	
Where Brought Up	$X^2 = 6.526$ NS $C = .0864$
Where Parents Live	$X^2 = 10.430$ NS $C = .1090$
Where Spends Holidays	$X^2 = 6.169$ NS $C = .0840$
Parents' Level of Education:	
Father's Education	$X^2 = 17.659$ NS $C = .1412$
Mother's Education	$X^2 = 19.144$ NS $C = .1470$
Parents' Occupation:	
Father's Occupation	$X^2 = 10.205$ NS $C = .1079$
Mother's Occupation	$X^2 = 12.1508$ NS $C = .1176$
Type of Farming at Home	$X^2 = 12.286$ NS $C = .1182$

NS = Not Significant at the .05 level

words, school learning will be but only one of the factors which will help shape students' aspirations while other factors which are beyond the reach of the school play an equally, if not more, important role in shaping students' aspirations. The following two sections examine students' aspirations with regard to farming and living in the rural areas and how these relate to educational factors and background characteristics.

Students' Aspirations With Respect to Farming

Studies of aspirations of African secondary school leavers have generally aimed at providing some indication of whether or not aspirations are in line with actual manpower needs of the country and if not whether the lack of agreement constitutes a problem. Consequently some of these studies have shown that indeed students' aspirations are in line with manpower requirements, contrary to the general assumption that African students have unrealistically high aspirations. For example, Maxwell⁷ in a study of Kenyan secondary school students, showed that students did not limit their aspirations to a narrow range of occupations but rather the majority hoped to find employment in agriculture, engineering, farming, medicine and teaching. Likewise

Foster states in connection with his Ghanaian study that,

Our evidence does not, it should be noted, support the contention that students are markedly oriented to high level government administrative roles or posts in the senior civil service. Somehow, it has always been assumed that this kind of career has had particular appeal for African students.⁸

Others have concluded that although students may have unrealistically high aspirations they are ready to lower their ambitions when the occupations of their dreams can not be attained. Reporting the results of his study of Nigerian students, McQueen⁹ indicates that secondary school leavers have relatively high aspirations but at the same time mention jobs at much lower levels when they are asked what they will do if they cannot pursue the career of their first choice:

Secondary school leavers are almost exclusively aspiring to top professional and white-collar jobs, but they are likewise inclined to drop their sight when circumstances go against them...these school leavers evidence much realism and flexibility in setting their occupational goals and adjusting them to conditions.¹⁰

Yet others have concluded simply that students' aspirations are out of tune with national manpower requirements. Klingelhofer, for example, concludes for Tanzania that "national needs and individual preferences of secondary school students are badly mismatched",¹¹ while Silvey in a study of Kenyan students, emphasized

that,

Substantial differences have been shown between the inclinations of the students and the occupational opportunities likely to be open to them, as foreseen by manpower studies.¹²

In this study no attempt was made to match students' aspirations with the manpower needs of the country, but interest lay in seeing to what extent students aspired to farming and other agricultural-related occupations compared to other occupations and how these aspirations are related to students' agricultural learning experiences (or lack of them) in the school and also to students' background characteristics. The data analysis therefore sought to test the following hypothesis:

Hypothesis: There is no significant relationship between students' aspirations toward farming and a) school agricultural learning experiences, b) the grade level of the student, c) the sex of the student, d) home location, e) parental education, f) parental occupation, and g) type of farming at home.

Table 43 shows that there is a significant relationship between students' occupational aspirations and their school agricultural learning experiences. Students' aspirations are also related to all the background characteristics of the students. The hypothesis is therefore rejected.

TABLE 43

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR THE
RELATIONSHIP BETWEEN STUDENTS' ASPIRATIONS TOWARD
FARMING AND THEIR SCHOOL AGRICULTURAL LEARNING
EXPERIENCES AND BACKGROUND CHARACTERISTICS

Characteristics	Aspirations Toward Farming
School Agricultural Learning Experiences	$X^2 = 78.017^*$ $C = .2873$
Grade Level of Student	$X^2 = 32.508^*$ $C = .1901$
Sex of Student	$X^2 = 33.706^*$ $C = .1934$
Home Location:	
Where Brought Up	$X^2 = 14.805^*$ $C = .1296$
Where Parents Live	$X^2 = 30.572^*$ $C = .1846$
Where Spends Holidays	$X^2 = 29.042^*$ $C = .1800$
Parents' Level of Education:	
Father's Education	$X^2 = 16.254$ NS $C = .1356$
Mother's Education	$X^2 = 21.634^*$ $C = .1560$

TABLE 43 (continued)

Characteristics	Aspirations Toward Farming
Parents' Occupation:	
Father's Occupation	$\chi^2 = 34.754^*$ C = .1964
Mother's Occupation	$\chi^2 = 21.326^*$ C = .1549
Type of Farming at Home	$\chi^2 = 27.750^*$ C = .1761

The asterisk indicates significant relationship at $\angle .05$ significance level.

NS = Not Significant

The debate over the potential role of technical, vocational or agricultural instruction in schools in the economic development of the developing countries has been going on since the colonial times. But recent controversy in Africa has centered on the value and practicality of teaching agriculture to secondary and even primary school children as a means of influencing students' aspirations in such a way as to make them more in tune with a nation's rural development efforts. Among the staunchest

supporters of school agriculture is Thomas Balogh who feels that since between 80 and 95 percent of Africans are dependent on agriculture, the essential need in Africa is the development of large-scale technical and agricultural programs within the schools at all levels.¹³ Balogh sees schools playing a central role in shaping students' attitudes and influencing development in general: "The school must provide the nucleus of modern agriculture within the villages," and play a central role in the general raising of standards of living within the subsistence sector. He further comments that the present educational programs constitute an obstacle to rural progress because people are not trained for agriculture, and academic systems of formal education are the chief determinants of attitudes hostile to the practice of rural agriculture.¹⁴ Tanzania's policy of school agriculture is based on the same assumption; and commenting on that policy Branfman suggests that since Tanzania is engaged in the building of new institutions and modes of behavior compatible with both modern technological world and the Tanzanian situation, the youth must develop quite new ways of thinking, feeling and acting.¹⁵

Branfman goes on to argue that it is the school leavers who can lead the country in employing modern farming techniques and it is they who will find it most

easy to participate in the building of a unique society in Tanzania. Branfman dismisses the notion that school leavers are completely unwilling to return to the land, and maintains that if they are encouraged and guided during their school and post-school years and find that they have a reasonable chance to begin farming profitably when they come of age, the great majority would return to farming.

On the other hand, those who argue against school agriculture maintain that schools cannot be modified to meet new needs. Foster,¹⁶ for example, charges that the argument that school technical, vocational or agricultural programs can shape the ultimate attitudes and aspirations of school leavers is fallacious. He argues that schools, regardless of what they teach, have been used and continue to be used by parents and students as a gateway to the 'emergent' sectors of the economy which, incidentally, means away from subsistence farming. "The schools themselves can do little about this, and so long as parents and students perceive the function of education in this manner, agricultural education and vocational instruction in the schools is not likely to have a determinative influence on the occupational aspirations and destinations of students."¹⁷

The results of the present study show that there is a fairly strong relationship between school agricultural learning experiences and students' occupational aspirations with a contingency coefficient of .2873. Those students who have had school agricultural experiences are more inclined to join farming and other agricultural-related careers compared to those who have had no school agriculture (See Table 44).

TABLE 44
RELATIONSHIP BETWEEN STUDENTS' OCCUPATIONAL
ASPIRATIONS AND SCHOOL AGRICULTURAL
LEARNING EXPERIENCES (PERCENTAGE)

Occupational Aspirations	School Agricultural Learning Experiences		
	None	Practical Experience	Practical plus Inclass Experience
Farming and Agricultural-related	17.4	23.5	43.6
Other Occupations	81.5	74.8	50.6
No Answer	1.1	1.7	5.7
Total	100.0	100.0	100.0

$$\chi^2 = 78.0177^*$$

$$df = 4$$

$$C = .2873$$

These results support the general hypothesis that involving students in certain learning experiences can influence their aspirations in a particular direction. In this case involving students in school agricultural programs seems to influence more students toward agricultural-related career choices.

But although specific school programs may be able to influence students' aspirations in the desired direction, schools may also influence students in ways not directly related to specific instructional experiences. Table 45 shows the relationship between students' occupational aspirations and their grade levels. More students in the lower secondary school grades (forms one and four) are likely to choose agricultural-related careers compared to students in higher grades (form six). While about 31 percent and 33 percent of form one and four students respectively aspire for an agricultural occupation only 8 percent of form six students aspire to the same. The explanation here seems to be that since only 12 percent of form four students are selected to proceed on to form five and six and hence on to the university, a good number of them are willing to consider an agricultural occupation since this is the best they can hope for. But as soon as students are selected for

further schooling in form five their career options are wider and hence they are less likely to consider farming or any agricultural-related career as their first choice.

TABLE 45
RELATIONSHIPS BETWEEN STUDENTS' OCCUPATIONAL
ASPIRATIONS AND THEIR GRADE LEVEL
(PERCENTAGE)

Occupational Aspiration	Grade Level of Student		
	Form One	Form Four	Form Six
Farming and Agricultural-related	30.9	33.2	7.9
Other Occupations	65.2	63.9	92.1
No Answer	3.9	2.9	0.0
Total	100.0	100.0	100.0

$$\chi^2 = 32.508^*$$

$$df = 4$$

$$C = .1901$$

Sex differences are quite marked in students' occupational aspirations with a higher proportion of boys choosing farming and agricultural-related careers than girls. Table 46 shows that boys are twice as likely as girls to choose an agricultural-related career (36 percent versus 19 percent). Sex differences in aspirations

TABLE 46
RELATIONSHIP BETWEEN STUDENTS' OCCUPATIONAL
ASPIRATIONS AND THE SEX OF THE STUDENT
(PERCENTAGE)

Occupational Aspirations	Sex of the Student	
	Male	Female
Farming and Agricultural-related	36.3	18.7
Other Occupations	60.7	78.2
No Answer	3.0	3.1
Total	100.0	100.0

$$X^2 = 14.805^* \quad df = 2 \quad C = .1296$$

have been demonstrated in several other studies. For example, in a review of previous studies on students' aspirations, Marvin concluded that, "in all four studies the results for the girls are clearly different from those of the boys in that girls seldom aspire to scientific or technical jobs while boys are far less interested in clerical work than girls."¹⁸ Marvin's Ugandan study show that boys were more likely than girls to choose farming (18 percent versus 4 percent). Likewise Zanolli's study

indicate a smaller percentage of girls willing to engage in farm work after finishing school: 64 percent of the girls compared to 80 percent of the boys.¹⁹ On the whole, the sex differences in occupational preferences of students in this study are comparable to those which have been obtained in other studies conducted in Africa.

Predictably, the occupational aspirations of students are likely to be influenced by their socio-economic background including home location, parental occupation and level of education, and, specifically with respect to farming, the perceived income from farming activities at home. Table 47 illustrates that students from rural background are more likely than urban background students to choose agricultural-related occupations. Whereas about 33 percent of students whose parents live in the village aspire to an agricultural-related career, only 14 percent of students whose parents reside in town aspire to the same. These findings confirm the evidence from the Clignet and Foster study of Ivorian students, where it was found that agricultural careers tend to be chosen more frequently by individuals from rural, illiterate backgrounds. Their explanation is that,

TABLE 4 7

RELATIONSHIP BETWEEN STUDENTS' OCCUPATIONAL ASPIRATIONS
AND THE HOME LOCATION OF THE STUDENTS (PERCENTAGE)

Occupational Aspirations	Where Parents Live	
	In a Town	In a Village
Farming and Agricultural- related	14.4	32.9
Other Occupations	85.0	63.6
No Answer	0.6	3.5
Total	100.0	100.0

$$\chi^2 = 30.572^* \quad df = 2 \quad C = .1846$$

This occupation enables the individual to acquire a stable income and status within the modern occupational hierarchy without removing him from familiar social and economic environment.....Furthermore one must bear in mind that the school teacher and the agricultural demonstrator are the two primary modern-type occupational models that are presented to the rural child. By contrast urban children with higher socio-economic backgrounds have more models available to them.²⁰

To this might be added the speculation that rural background students, having lived there for a good part of their lives are more used to and sympathetic with farming and rural life and thus may be more willing to live and

work there than their urban counterparts.

Parental education as measured by mother's level of education is not strongly related to students' aspirations in this study ($C = .1560$) although the trend is in the expected direction. Table 48 indicates that students whose mothers have completed secondary and university education are less likely than those whose mothers have had primary or no schooling at all to choose farming or an agricultural-related occupation. This pattern appears to be universal and requires no further explanation.

Parental level of education is closely related to parental occupation and the two are commonly used together or singly as a measure of socio-economic status, but in this study the question was not so much whether students' aspirations are influenced by parental socio-economic status as to see whether a student's aspiration with respect to farming and rural living has something to do with the fact that the parents are rural farm people or not. In other words, are farmers' children more or less likely to select an agricultural related career compared to the children of non farmers?

TABLE 48

RELATIONSHIP BETWEEN STUDENTS' OCCUPATIONAL ASPIRATIONS
AND PARENTS LEVEL OF EDUCATION (PERCENTAGE)

Occupational Aspirations	Mother's Level of Education			
	No Schooling	Primary Level	Middle Level	Secondary Level
Farming and Agricultural-related	29.3	31.2	28.3	11.6
Other Occupations	65.9	66.7	70.1	88.4
No Answer	4.8	2.1	1.6	0.0
Total	100.0	100.0	100.0	100.0

$$\chi^2 = 21.634^* \quad df = 8 \quad C = .1560$$

Table 49 shows that farmers' children are more likely to select an agricultural occupation as compared to children of non farmers. Whereas 35 percent of students from a farm background aspire to an agricultural occupation, 19 percent of non farm background students aspire to a career in agriculture. Again a plausible explanation could be the different role-models available for farm children as compared to those from non-farm background. It could also be a result of the greater attachment these farm children have for their traditional vocation.

TABLE 49
RELATIONSHIP BETWEEN STUDENTS' OCCUPATIONAL
ASPIRATIONS AND THEIR PARENTAL OCCUPATION
(PERCENTAGE)

Occupational Aspirations	Father's Occupation	
	Farmer	Has Another Occupation
Farming and Agricultural-related	34.7	19.3
Other Occupation	61.4	79.5
No Answer	3.9	1.2
Total	100.0	100.0

$$\chi^2 = 34.754^*$$

$$df = 2$$

$$C = .1963$$

It has been argued that students' attitudes and aspirations with regard to farming will depend on whether entering farming can be perceived as a rewarding option, and that the presumed distaste for farming on the part of school leavers is a result of their perception that farming offers an inferior income alternative compared to other occupations. The results of this study lend some support for this argument for, as seen in Table 50, those students from backgrounds where some cash can be made on the farm are more likely to select an agricultural occupation compared to those coming from a purely subsistence background. Admittedly, the classification is rather crude in the absence of real cash income figures earned from farming, but it does appear that income is a factor which will influence a student's aspirations. This means that the extent to which students will be willing to settle on the land after they finish schooling will depend, among other things, on the extent to which efforts at transforming traditional farming into viable commercial undertaking succeed.

TABLE 50
RELATIONSHIP BETWEEN STUDENTS' OCCUPATIONAL
ASPIRATIONS AND THE TYPE OF FARMING AT
HOME (PERCENTAGE)

Occupation Aspirations	Type of Farming at Home		
	Not Farmers	Subsistence Crops Only	Subsistence with Cash Crops
Farming and Agricultural- related	16.9	28.8	34.3
Other Occu- pations	82.5	68.6	61.6
No Answer	0.6	2.6	4.1
Total	100.0	100.0	100.0

$$x^2 = 27.749^* \quad df = 4 \quad C = .1761$$

Closely related to the problem of occupational choice of students is the question of the location at which students hope to work. The following section examines students' locational choice in relation to their school learning experiences and background characteristics.

Students' Aspirations With
Regard to Rural Life

It is true that among African school leavers a particularly high rate of migration to urban areas has been observed, and various explanations have been suggested. The most common explanation has been economic. It has been suggested that the more educated tend to migrate to towns because the returns they expect from migration exceed their costs.²¹ Also since almost all modern-sector jobs are in towns, and since these jobs pay much higher than rural alternatives, and education is a requirement for them, there is a natural tendency for those with more education to migrate to the urban areas.²²

Non-economic factors have also been advanced to explain school leaver migration to towns. The two most common non-economic explanations are what have been called "bright-lights hypothesis" and "the white-collar hypothesis." The "bright-lights hypothesis" suggests that people go to the city because they believe that life there, with modern amenities and entertainment, can be enjoyed more fully. School leavers, it is said, are especially likely to be influenced by such factors since the school curriculum is oriented toward a modern life style which is available in the cities but not in the rural areas.

Schools have been blamed for being too academic in orientation and for being irrelevant to rural life. For example, Nyerere had remarked that "...Tanzanian education is such as to divorce its participants from society it is supposed to be preparing them for", and that schools had become "a place where children go to and where they and their parents hope will make it unnecessary for them to become farmers and continue living in the village".²³

According to the "white-collar hypothesis" school leavers migrate to towns because of their occupational preferences. According to this hypothesis, non-manual urban employment is desired not only because of the higher wage levels of such occupations but also because these white-collar occupations enjoy higher prestige quite independent of their income levels. Since these white-collar jobs are essentially urban jobs requiring a certain level of schooling school leavers have tended to migrate to the towns in search of them. On the other hand, manual occupations which include farming and most other rural-based occupations have been accorded lower prestige and have even been despised by the school leavers. The belief in the "white-collar" and "bright-lights" hypotheses has prompted much discussion concerning the need to make

schooling less academic and to establish a rural or agricultural bias in the curricula.

To be sure, not all school leavers migrate to the towns. Some evidence already exists that young people, including those with a number of years of schooling, seek and find opportunities in the rural areas.²⁴ For secondary school leavers, opportunities in the rural areas may be taken up only after the possibilities of employment in the city have been fully explored,²⁵ but for primary school leavers the tendency has been to stay at home and help on the family farm.²⁶ The results of this study show that almost half of the respondents would prefer to work in the rural areas. These results appear to confirm the observation made by Zanolli that the wish to 'escape' to towns was not evident in the answers given by respondents in his study to the question "where would you like to live?" In the study 50 percent of the boys and 21 percent of the girls preferred to reside in the rural countryside.²⁷ But students' locational preference may be influenced by several factors both within and outside the school. The following hypothesis was therefore tested:

Hypothesis: There is no significant relationship between students' aspirations toward rural life and a) school agricultural learning experiences, b) grade level of the student, c) sex of the student,

d) home location, e) parental education, f) parental occupation, and g) type of farming at home.

Table 51 shows that there is a significant relationship between students' locational aspirations and their school agricultural learning experiences. Students' locational aspirations are also related to all the background characteristics of the students, and the hypothesis is therefore rejected.

TABLE 51

CHI-SQUARE VALUES AND CONTINGENCY COEFFICIENTS FOR THE
RELATIONSHIP BETWEEN STUDENTS' ASPIRATIONS TOWARD
RURAL LIFE AND SCHOOL AGRICULTURAL LEARNING
EXPERIENCES AND BACKGROUND CHARACTERISTICS

Characteristics	Aspirations Toward Rural Life
School Agricultural Learning Experiences	$X^2 = 49.848^*$ $C = .2332$
Grade Level of Student	$X^2 = 64.544^*$ $C = .2409$
Sex of Student	$X^2 = 16.256^*$ $C = .1357$
Home Location:	
Where Brought Up	$X^2 = 47.336^*$ $C = .2275$
Where Parents Live	$X^2 = 56.288^*$ $C = .2469$

TABLE 51 (continued)

Characteristics	Aspirations Toward Rural Life
Home Location:	
Where Spends Holidays	$\chi^2 = 53.599^*$ $C = .2412$
Parental Level of Education:	
Father's Education	$\chi^2 = 48.588^*$ $C = .2139$
Mother's Education	$\chi^2 = 24.259^*$ $C = .1650$
Parental Occupation	
Father's Occupation	$\chi^2 = 31.389^*$ $C = .1869$
Mother's Occupation	$\chi^2 = 26.661^*$ $C = .1727$
Type of Farming at Home	$\chi^2 = 29.187^*$ $C = .1805$

The asterisk indicates significant relationship at $< .05$ level of significance.

NS = Not Significant.

There is a relationship between students' locational preferences and their school agricultural learning experiences with those students who have had some school agricultural learning being more inclined to work in the rural areas. Table 52 shows that whereas only about 30 percent of those students who have had no school agricultural experience prefer to work in the village, 44 percent of those who have had practical farm experience in school and up to 55 percent of those who have had both practical and inclass farm experience prefer to work in a village.

TABLE 52

RELATIONSHIP BETWEEN STUDENTS' LOCATIONAL ASPIRATIONS
AND THEIR SCHOOL AGRICULTURAL LEARNING EXPERIENCES
(PERCENTAGE)

Locational Preference	Type of Agricultural Learning Experience		
	None	Practical Experience Only	Practical with Inclass Experience
In a Town	62.8	47.9	35.8
In a Village	29.8	44.4	55.5
No Preference	7.4	7.7	8.7
Total	100.0	100.0	100.0

$$\chi^2 = 49.848^*$$

$$df = 4$$

$$C = .2332$$

The results lend support to the argument that establishing agricultural bias in school curricula can reduce the tendency for school leavers to migrate to towns.

But, again, although specific learning experiences in the school can influence students' occupational and locational aspirations, schools also seem to have another influence. As it was noted for occupational aspirations of students, as one moves up the academic hierarchy, his or her occupational and locational aspirations tend to change.

For example, whereas 52 percent of form one students prefer to work in a village when they finish school, the proportion of students preferring to work in the village drops to about 44 percent for form four students and to only 14 percent for form six students (Table 53).

Again, as the student moves up the academic ladder his opportunities in the modern urban-based employment sector increase and the student is less likely to consider rural-based occupations. It is obvious, therefore, that the locational aspiration of the student is closely tied to his occupational aspiration, since most of the occupations for which the student aspires are found only in towns, so that as the student proceeds up the academic hierarchy his occupational aspirations and hence his

locational aspirations change accordingly.

TABLE 53
RELATIONSHIP BETWEEN STUDENTS' LOCATIONAL ASPIRATIONS
AND THE GRADE LEVEL OF THE STUDENT (PERCENTAGE)

Locational Preference	Students' Grade		
	Form One	Form Four	Form Six
In a Village	51.7	43.6	13.9
In a Town	41.4	48.7	73.3
No Preference	6.9	7.7	12.8
Total	100.0	100.0	100.0

$$X^2 = 53.433^* \quad df = 4 \quad C = .2409$$

As with occupational aspirations, sex differences are evident although not pronounced for locational aspirations as shown in Table 54. A higher proportion of females prefer to work in towns as compared to males (53.6 percent compared to 45.5 percent). This seems to be the trend for several other studies done to assess locational aspirations of school leavers. For example Marvin reports that for his sample 83 percent the boys and 89 percent of the girls wished to work in town,²⁸

while Zanolli found that whereas 18 percent of the girls wanted to live in town only 11 percent of the boys wanted to live in town.²⁹

TABLE 54

RELATIONSHIP BETWEEN STUDENTS' LOCATIONAL ASPIRATIONS
AND THE SEX OF THE STUDENT (PERCENTAGE)

Locational Aspirations	Sex of Student	
	Male	Female
In a Village	45.6	39.7
In a Town	45.3	53.7
No Preference	9.1	6.7
Total	100.0	100.0

$$X^2 = 16.256^* \quad df = 2 \quad C = .1357$$

Locational aspirations of students are, however, more strongly related to the students' home background as measured by home location, parental level of education, parental occupation, and the type of farming at home. Table 55 shows that students from rural areas are more likely to choose working in the rural areas compared to those from an urban background.

TABLE 55
RELATIONSHIP BETWEEN STUDENTS' LOCATIONAL ASPIRATIONS
AND HOME LOCATION (PERCENTAGE)

Locational Aspirations	Where Parents Live	
	In a Town	In a Village
In a Town	71.2	43.3
In a Village	19.8	49.2
No Preference	9.0	7.5
Total	100.0	100.0

$$\chi^2 = 56.288^* \quad df = 2 \quad C = .2469$$

Likewise, according to Tables 56 and 57 those students whose parents are farmers are more likely than those whose parents are not farmers to consider working in the village (50 percent compared to 33 percent); whereas students whose parents have completed middle school level and above are more likely to prefer an urban location compared to those whose parents have had a more limited level of education.

TABLE 56

RELATIONSHIP BETWEEN STUDENTS' LOCATIONAL ASPIRATIONS
AND PARENTS' OCCUPATION (PERCENTAGE)

Locational Aspirations	Occupation of Father	
	Farmer	Has Another Occupation
In a Town	43.3	57.4
In a Village	49.8	33.0
No Preference	6.9	9.6
Total	100.0	100.0

$$\chi^2 = 31.389^*$$

$$df = 2$$

$$C = .1869$$

The results here support the thesis that parents are a powerful influence on the aspirations of their children and that the particular aspirations children have are a function of the socio-economic status of the parents. These results show that those children from educated non-farm background are more likely to choose to work in urban areas compared to those from less educated farm background.

The relationship between locational aspirations and the type of farming is not in the expected direction. The assumption that those students whose parents obtain

TABLE 57

RELATIONSHIP BETWEEN STUDENTS' LOCATIONAL ASPIRATIONS
AND PARENTS' LEVEL OF EDUCATION (PERCENTAGE)

Locational Aspirations	Father's Level of Education			
	No Schooling	Primary Level	Middle Level	Secondary Level
In a Town	38.8	42.0	50.7	67.0
In a Village	50.3	50.8	40.8	24.2
No Preference	10.9	7.2	8.5	8.8
Total	100.0	100.0	100.0	100.0

$$\chi^2 = 41.588^*$$

$$df = 8$$

$$C = .2139$$

some cash income from their farming activities would be more willing to choose working in the rural areas was not supported. Although the difference is small, Table 58 shows that a higher proportion of students whose parents raise some crops for cash than those whose parents raise subsistence crops only prefer to work in town (45 percent compared to 43 percent).

TABLE 58

RELATIONSHIP BETWEEN STUDENTS' LOCATIONAL ASPIRATIONS
AND TYPE OF FARMING AT HOME (PERCENTAGE)

Locational Aspirations	Type of Farming at Home		
	Not Farmers	Subsistence Crops Only	Subsistence With Cash Crops
In a Town	62.8	43.4	45.0
In a Village	27.4	49.6	47.1
No Preference	9.8	7.0	7.9
Total	100.0	100.0	100.0

$$\chi^2 = 29.187^*$$

$$df = 4$$

$$c = .1805$$

Summary

In this chapter chi-square analyses were used to examine the relationship between students' occupational and locational attitudes and aspirations and students' school agricultural learning experiences and background characteristics.

The analyses showed that students' attitudes toward farming and rural life were associated with school agricultural learning experiences, sex and grade level of the students. Students' attitudes were most strongly related to the grade level of the student followed by the sex of the student and the school agricultural learning experiences. Contrary to expectations, the relationship between students' attitudes and home background characteristics as measured by home location, parental education and occupation, and the type of farming at home was not significant. Although the relationship between school agricultural experiences and students' attitudes was weak, ironically, those students who have had practical school agricultural experiences only are the ones most likely to have positive attitudes compared to those who have had both practical and inclass learning experiences or those who have had no experience of any kind. In other words, while practical farm activities in the schools

may influence students' attitudes toward farming and rural life positively, the teaching of agricultural science in the classroom does not seem to have any effect on students' attitudes toward farming and rural life.

In addition, students' occupational and locational aspirations are related to school agricultural learning and to students' background characteristics. Students' aspirations are most strongly related to agricultural learning experiences followed by the grade level and the home location of the student. While certain agricultural learning activities in school seem to influence students' aspirations toward rural agricultural occupations, as the students progress up the academic hierarchy the tendency is for them to choose urban non-agricultural occupations. At the same time students' home background characteristics seem to play an important role. Those students from less educated rural backgrounds are more likely to aspire to rural-based agricultural occupations compared to those from more educated urban backgrounds who are more likely to choose an urban-based non-agricultural occupation.

A weakness of these results arises from the tendency for locational aspirations of students to be tied to occupational aspirations and the failure of the study to determine students' locational aspirations independent of their occupational aspirations. Since most occupations

which are available to the school leaver are urban non-agricultural occupations it may very well be that a student will choose to work in a town because that is where the occupation of his choice is rather than for the fact that he prefers an urban life.

Nonetheless, the results show that certain school agricultural activities can have a limited effect on students' attitudes and aspirations. At the same time, students' home background characteristics also play an important role in influencing students' future aspirations.

Footnotes

- ¹See, for example, Phillip J. Foster, "The Vocational School Fallacy in Development Planning", in C. Arnold Anderson and Mary Jean Bowman (eds), Education and Economic Development, Chicago, Aldine Publishing Company (1965).
- ²Most research has concentrated on the effects of schooling on the political attitudes of youth. See for example, Edmond J. Keller, "Education, Ethnicity and Political Socialization in Kenya", Comparative Political Studies, Vol. 12, No. 4 (January 1980), pp. 442-469.
- ³Richard Marvin, Land or Wages: The Evaluation of Occupational and Residential Alternatives by the Rural Basoga, Munich, Weltforum Verlag (1978).
- ⁴Remi Clignet and Phillip Foster, The Fortunate Few: A Study of Secondary Schools and Students in the Ivory Coast, Evanston, Northwestern University Press (1966).
- ⁵Noa V. Zanolli, Education Towards Development in Tanzania, Basel, Phalos-Verlag Hansrudolf Schwabe A. G. (1971), p. 177.
- ⁶Remi Clignet and Phillip Foster, op. cit., p. 171.
- ⁷Robert Maxwell, "Occupational Inclinations and Attitudes Towards Rural Modernization of Students in Selected Kenyan Secondary Schools." East African Journal of Rural Development, Vol. 2 (1969), pp. 60-75.
- ⁸Phillip J. Foster, Education and Social Change in Ghana, London, Routledge and Kegan Paul (1965), p. 277.
- ⁹Albert J. McQueen, "Aspirations and Problems of Nigerian School Leavers." Inter-African Labour Research Bulletin Vol. 12 (1965), pp. 35-42.

- ¹⁰Ibid., p. 40.
- ¹¹E. L. Klingelhofer, "Occupational Preferences of Tanzanian Secondary School Pupils." Journal of Social Psychology, Vol. 72 (1967), pp. 149-159.
- ¹²Jonathan Silvey, "The Occupational Attitudes of Secondary School leavers in Uganda", in Richard Jolly (ed.), Education in Africa: Research and Action. Nairobi, East African Publishing House (1969), p. 150.
- ¹³Thomas Balogh, "Catastrophe in Africa". The Times Educational Supplement (5th January 1962), p. 8.
- ¹⁴Ibid., p. 9.
- ¹⁵Fred Branfman, "Developing the Potential of Standard Seven Leavers". Mbioni, Vol. 3, No. 4 (September 1966), p. 13.
- ¹⁶Phillip Foster, loc. cit.
- ¹⁷Ibid., p. 151.
- ¹⁸Richard Marvin, loc. cit., p. 37.
- ¹⁹Noa V. Zanolli, loc. cit., p. 154.
- ²⁰Remi Clignet and Phillip Foster, loc. cit., p. 131.
- ²¹International Labour Organization, Employment, Income and Equality: A Strategy for Increasing Productive Employment in Kenya. Geneva, International Labour Organization (1972).
- ²²Edgar O. Edwards and Michael P. Todaro, "Education and Employment in Developing Nations", in Edgar O. Edwards (ed.), Employment in Developing Nations, New York, Columbia University Press (1974).

- ²³Julius K. Nyerere, Education for Self Reliance, Dar-es-Salaam, Government Printer (1967), p. 11.
- ²⁴Tina Wallace, "Working in Rural Buganda: A Study of the Occupational Activities of Young People in Rural Village". Paper presented at the 8th Annual East African Social Sciences Council Conference, Nairobi, December 19-23, 1972, and Tina Wallace and Sheldon G. Weeks, "Success or Failure in Rural Uganda: A Study of Young People". Kampala, Makerere Institute of Social Research (1975).
- ²⁵Kabiru Kinyanjui, "Opportunities for School Leavers Outside the Major Towns of Kenya?" Rural Africana No. 25 (Fall 1974), pp. 81-90.
- ²⁶Lewis Brownstein, Education and Development in Rural Kenya: A Study of Primary School Graduates. New York, Praeger Publishers (1972).
- ²⁷Noa V. Zanolli, loc. cit., p. 161.
- ²⁸Richard Marvin, loc. cit., p. 43.
- ²⁹Noa V. Zanolli, loc. cit., p. 162.

CHAPTER VII

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Summary

The Purpose of the Study

This study was undertaken with the specific purpose of assessing Tanzanian secondary school students' beliefs, attitudes and aspirations concerning farming and living in the rural areas, and how these beliefs, attitudes and aspirations relate to school agricultural learning experiences and to individual and situational characteristics of the students.

The research problem was conceptualized as being related to the problem of the Tanzanian government's effort to introduce curricula changes in the school system in order to make students' attitudes and aspirations more in tune with the whole socio-economic transformation exercise being attempted by the government. The choice of the specific problem arose out of the understanding that students' learning and especially attitudinal learning is shaped by school experiences as

well as by other factors outside the school, and the need, therefore, to identify the factors which contribute to a variation in students' attitudes and aspirations as they go through the school system. Since the government has made school agriculture the cornerstone of its educational policy, and since it has committed enormous resources in establishing a program of agricultural learning activities in the school system, interest also lay in the relationship of school agricultural learning activities to students' beliefs, attitudes and aspirations especially those concerned with farming and rural life.

Apart from school agricultural learning experiences students' individual and homebackground factors such as sex, grade level, parental education and occupation, home location and type of farming at home were investigated to determine how they relate to students' beliefs, attitudes and aspirations. These were believed, on the basis of previous studies, to influence a student's educational chances and learning outcomes.

Objectives and Hypotheses for the Study

The specific objectives of the study were:

1. To assess the beliefs, attitudes and aspirations of secondary school students with respect to farming and living in the rural areas.

2. To determine the relationship between school agricultural learning experiences and students' beliefs, attitudes and aspirations.
3. To analyze the relationship between the following factors and students' expressed beliefs, attitudes and aspirations: (a) grade level of student, (b) sex of student, (c) home location, (d) parents' level of education, (e) parents' occupation, and (f) type of farming at home, that is, subsistence versus cash crop farming.
4. To recommend some policy measures that may result in significant attitudinal changes among students as required by the policy of Education for Self-Reliance, and to suggest areas for further research that can broaden our understanding of the relationship between school experiences and the attitudinal learning outcomes of students.

The hypotheses for the study were stated in the null form and formed the basis for empirically testing the relationship between the dependent variables (students' expressed beliefs, attitudes and aspirations with respect to farming and rural life), and the independent variables namely, school agricultural learning experiences, grade level of student, sex of student,

student's home location, parents' level of education, parents' occupation and type of farming at home, variables which were expected to represent the most important factors likely to influence the learning outcomes of a student.

Theoretical Framework

The theme of the educational policy in Tanzania is to provide certain learning experiences which will influence students' learning outcomes in a particular direction, these learning outcomes being mainly in terms of knowledge, skills, attitudes and aspirations. The study was concerned with knowledge (in the form of students' perceptions or beliefs), attitudes and aspirations and how they are related to factors in and outside the school. The theoretical framework for the study provided a means for looking at the way in which beliefs, attitudes and aspirations are acquired and the relationship between them.

The framework was based on the conceptualization proposed by Fishbein and Ajzen¹ for relating an individual's beliefs, attitudes and behavioral intentions. Whereas a belief refers to the information one has about an object, an attitude is conceptualized as a person's feelings toward and evaluation of that object. Behavioral

intentions denote a person's predisposition to perform certain behaviors with respect to or in the presence of the object, and can be equated with a person's aspirations to perform certain behaviors or to achieve certain objectives.

An individual's beliefs about an object are acquired in various ways and will shape that individual's attitudes and behavioral intentions with respect to a particular object. While the schools attempt to shape students' beliefs and hence attitudes and aspirations, the society is also responsible for shaping students' beliefs, attitudes and aspirations and the theoretical framework highlights some of the factors in the society which will help shape students' beliefs, attitudes and aspirations.

Research Design and Methodology

The dependent variables for the study were (1) students' beliefs about farming, (2) students' beliefs about rural life, (3) students' attitudes toward farming, (4) students' attitudes toward rural life, (5) students' intentions or aspirations with respect to farming, and (6) students intentions or aspirations with respect to living in the rural areas. The variables were operationalized in such a way as to provide an indication of an individual's overall evaluative direction of his beliefs,

attitudes and aspirations with respect to farming and rural life. The independent variables were the school agricultural learning experiences, the individual characteristics of the student and the situational conditions outside the school which were expected to be related to an individual's beliefs attitudes and aspirations.

Data for the study were secured through a structured questionnaire administered to a sample of Tanzanian government secondary school students which formed about 2.2 percent of all the government secondary school student population in the country.

The data analysis sought to test the relationship between the independent variables and students' beliefs, attitudes and aspirations toward farming and rural life. The data were therefore coded and submitted to the SPSS computer program which yielded the frequency count, percentage tabulations for each response category; and the joint frequency distribution or cross-tabulations, chi-square statistics, contingency coefficients, and significance levels for the various response category combinations.

The hypotheses for the study were accepted or rejected on the basis of the significance level of the chi-square statistic. A significance level of .05 was selected as the criterion for determining whether a

relationship was significant or nonsignificant. Contingency coefficients were used to determine the relative strength of the relationships between different variables.

Findings

The findings of this study show that although the majority of the students in the sample were of rural farm origin, there was also a significant proportion of students from more educated urban non-farm backgrounds.

There was considerable variation in students' beliefs, attitudes and aspirations with respect to farming and rural life, although a significant majority of the respondents held positive beliefs about farming and rural life. Respondents' attitudes toward farming and rural life were either positive or neutral, with very few having negative attitudes; and about one-third of the respondents aspired to agricultural careers including farming while about half of them preferred to work in the rural areas.

Students' beliefs about farming were significantly related to students' school agricultural learning experiences, grade level, home location, parental occupation and type of farming at home. The relationship between students' beliefs about farming and the sex of

the student or parental level of education were non-significant. Likewise students' beliefs about rural life were significantly related to the students' school agricultural learning experiences, grade level, home location, parental level of education, parental occupation and type of farming at home. There was no significant relationship between students' beliefs about rural life and the sex of the student. Although students who have had an agricultural learning experience of one kind or another were the most likely to hold positive beliefs about farming and rural life, students' beliefs were more strongly related to the students' background characteristics especially as measured by parental occupation and home location. Those students from rural farm background were more likely to hold positive beliefs. Students' beliefs were also rather strongly related to the grade level of the student with lower grade students being more likely to hold positive beliefs.

The students' attitudes toward farming and rural life were significantly related to school agricultural learning experiences, grade level and sex of students, and to parental occupation. There was no significant relationship between students' attitudes and their home location, parental level of education or type of farming

at home. Those students who have had agricultural learning experiences in school were more likely to hold positive attitudes toward farming and rural life. Male students and those in lower grades were more likely to hold positive attitudes compared to female or higher grade students. In addition, those students whose mothers were farmers were more likely to have positive attitudes.

The occupational and locational aspirations of students were significantly related to students' school agricultural experiences and to all the background characteristics of the students. Generally, school agricultural learning experiences seemed to influence students' aspirations toward rural-based agricultural occupations. On the other hand, as the students progressed up the academic hierarchy their aspirations were likely to shift progressively from rural-based agricultural careers to urban-based non-agricultural careers. Background characteristics were also a powerful influence on students' aspirations with those students from less educated rural background being more likely to aspire to rural and agricultural occupations compared to those from more educated urban background who were more likely to choose urban non-agricultural occupations.

Conclusions

The general purpose of this study was to explore the extent to which schools can perform certain social functions as prescribed by policymakers, and the extent to which they are constrained by factors operating outside the school system. This question is of considerable importance because of the faith Tanzanian policymakers have placed on the school system to be able to transform the attitudes and values of the students and hence act as a vehicle for the massive socio-economic transformation being attempted in the country.

The following conclusions can therefore be derived from the findings of this study:

1. The Tanzanian policy of school agriculture seems to have a limited impact on students' learning outcomes. In particular, it seems that involving students in practical farm activities on the school farm can make students view farming and rural life more positively. School agricultural learning can also make students more likely to aspire to farming and rural-based careers. However, the teaching of agricultural science in the classroom does not seem to have the same positive effect. Inclass agricultural learning does not seem to improve students' beliefs or attitudes at all, although it

influences them toward farming and rural-based occupations. This is certainly contrary to the expectations of the policy of Education for Self-Reliance, and it may be because the teaching of agricultural science makes the students more aware of the problems of farming and rural life and hence more skeptical. On the other hand, these students' aspirations toward agricultural careers may reflect their belief that their specific agricultural knowledge and skills increase their chances of advancement in an agricultural career compared to any other career.

2. While forms one and four students have more positive beliefs and attitudes and are more likely to aspire to agricultural careers, form six students show little interest in joining an agricultural career or working in the rural areas. This is possibly because form six students have more career options available to them which makes it easier for them to ignore any agricultural related career. This means that school agriculture may influence students' aspirations only insofar as there are few other career options available, and as soon as the career opportunities widen the students are likely to shift their interests to other non-agricultural occupations. Thus the effectiveness of the school agriculture in influencing students' attitudes and aspirations toward agricultural careers is limited to those who

terminate their studies at form four. Fortunately, in Tanzania only about 12 percent of the form four students can proceed on to forms five and six, and 88 percent of them have to terminate their education at form four. For the majority, therefore, the policy of school agriculture can have an impact on their career plans. For those who continue with further schooling the school continues to heighten their expectations and to pull them away from agricultural careers.

3. The general trend of the findings of this study confirm the findings obtained elsewhere that male students are more positively inclined toward agricultural and other rural-based occupations compared to females. Girls are much more likely to hold negative beliefs and attitudes and to aspire to urban-based non-agricultural occupations. This trend is perhaps understandable. It is possible that because of the disadvantaged position of women in the rural areas, especially in Tanzania and most other developing countries, going to school for the female opens the way out of their disadvantaged position. This makes them more reluctant to want to return to the life from which education may help them escape. The trend, therefore, is for them to aspire to anything but an agricultural or any rural-based occupation.

4. Students' beliefs and aspirations are also a function of their home background factors. Those students from rural areas tend to hold positive beliefs about farming and also tend to aspire to agricultural or rural-based occupations, compared to their urban counterparts. This may be because those students from the rural areas are more used to and sympathetic with farming and rural life and thus may be more willing to live and work in the rural areas. Fortunately for the government, most of Tanzanian students are from rural background and are more likely to aspire to rural-based agricultural occupations. Involving these students in school agricultural activities may reinforce their desire to join an agricultural career.

5. This study confirms the findings of many other studies that students' aspirations are shaped by the socio-economic conditions at home. Those students from higher socio-economic conditions tend to aspire to urban non-agricultural occupations while those from lower socio-economic conditions tend to aspire to rural agricultural occupations. While the majority of the students come from illiterate or barely literate rural farm backgrounds, it is also a fact that students from more educated urban backgrounds are over represented in the school system and as such form a significant proportion of the school population. These will

continue to aspire to urban non-agricultural occupations and to maintain their distance from the rural areas. Also the parents of these students are the ones involved with educational policy decisions, and their influence may act to subvert the effort of the policy of Education for Self-Reliance of ensuring participation by every Tanzanian student in the country's rural transformation exercise.

Overall, it can be said, therefore, that school agricultural learning activities can have a limited impact on the beliefs, attitudes and aspirations of students with respect to farming and life in the rural areas. But this impact is limited to those whose career alternatives are few in the first place. For the others, schools continue to socialize them toward more elitist expectations, and this poses a real dilemma for the government. At the same time, the students' home background characteristics, especially the parents' socio-economic status continues to play a significant role in influencing students' occupational and locational aspirations. Even among those from rural farm backgrounds aspirations are tied to the income which can be obtained from the farm activities. Those whose parents raise some cash crops are more likely to aspire to rural

agricultural occupations compared to those whose parents grow only subsistence crops.

Thus although the program of school agriculture seem to have a slight impact on students' outlook on society as required by the policy objectives, its effectiveness is limited by factors operating outside the schools and over which the schools have no control. For example, the schools can not change the expectations parents have for their children (and the students' efforts to meet those expectations), or the economic realities obtaining in the society and on the basis of which both parents and students make their future plans. The success of the policy of Education for self-Reliance therefore hinges on the extent to which the government can take into account both the social and economic factors existing outside the school system as well as its ability to design the right learning experiences in the schools.

Implications

Theoretical Implications

The results of this study seem to have certain implications for our understanding of the relationship between education and society. The educational policy statement of Tanzania are based on the traditional socialization model in which schools provide certain

experiences which instill in the students knowledge, skills, attitudes and values which can be diffused into the society as the students leave school to participate in the larger social system in their adulthood. Critics of this policy have invoked the allocation theory which argues that people in modern societies are allocated to adult roles on the basis of the type and duration of schooling rather than on the basis of what they have learned in school. Schools therefore can not socialize individuals into particular ways of thinking and behaving but rather act as selectors, sorters, and allocators of graduates to certain positions existing in society. These critics charge that policy based on socialization theory fails to take into account the setting in which schools have to function, that is, the social, economic and political climate in which schools operate. The milieu of the educational system, it is argued, is the sole determinant of the learning outcomes of students.

Results of this study show that indeed schools, through certain learning experiences in the schools, can socialize their participants into certain patterns of thinking. School agriculture tends to influence students toward rural agricultural occupations. The extent to which these students actually join these particular occupations is not known. What is known is that students

from less educated rural backgrounds tend to aspire to rural agricultural occupations while those from more educated urban backgrounds tend to aspire to urban-based non-agricultural occupations. These findings give a partial support to an assertion of the allocation theory, that students from a particular socio-economic status are socialized into accepting their positions as legitimate. But this study also demonstrated that parents of school children have come to place certain expectations on the school system; in particular they have come to expect the school system to confer certain material and symbolic reward on their children, and the strength of their expectations is reflected in their unwillingness to change them even in the face of explicit policy pronouncements by the government. This means that even for those outside school, the school system has a profound effect on them especially in terms of their perceptions and expectations for those in schools. In other words, while the school system does have an important influence on those in the school system, it also has a significant influence on those outside the system, and neither the traditional socialization theory nor the allocation theory takes into account the influence of the school system on those outside the system.

Meyer² has extended the allocation theory to account for the effects of education on society especially

with regard to legitimation of knowledge and personnel categorization. The basic tenet of Meyer's legitimation theory is that the educational system as an institution influences the social structure of a society and the behavior of people throughout society by constructing and altering the network of status and authority positions in society and allocating individuals to these positions. The educational system constantly defines new categories of knowledge and personnel and thus conditions those in as well as outside the educational system to think and behave in certain ways.

Viewing the effects of education as an institution and considering the effects of other factors beyond the confines of the school boundary will have certain implications for the design and implementation of educational policy. Some of these implications are discussed below.

Policy Implications

Evidently the student faces contradictory messages from the school and from the society. While schools try to inculcate in students attitudes and values which are in line with the government's emphasis on rural development, the society itself may not be ready to view schooling as a means of preparing the youth for a career in farming. For a significant portion of the society going to school opens the way out of a difficult subsistence life. To

transform the educational system in order for it to better support rural development efforts therefore requires the reeducation of the whole society with respect to the changing role of education. But more importantly, in order to change status expectations associated with schooling the structure of opportunities and reward system has to be changed. This may be done by shifting around the income and status incentives associated with various occupations, rewarding those occupations with direct bearing on farming and rural development more, or by developing social incentives to replace conventional monetary and status rewards which will make it as satisfying to join an agricultural occupation as it would be to join an urban-based technical or administrative career.

But schooling and especially agricultural education can not be expected to contribute much to the process of agricultural or rural development in the absence of strong government policy, backed by financial and political support, for developing the agricultural potential of the country. Simply training and encouraging young people to choose farming as a career without trying to broaden the range of opportunities available in the rural areas is likely to be futile. School leavers will not be satisfied to simply adopt the life styles of their parents, but will most likely try other alternatives and join farming only as

a last resort. If agricultural education is to contribute significantly to rural development then it must be linked to a vigorous program of developing agriculture and other sectors of the economy in the rural areas like crafts, small-scale industries and commerce. In other words, the rural areas must first be perceived by the youth and adults alike as viable living and working places.

Overall therefore, educational policy decisions must take into account what needs to be done both inside and outside the schools for any educational innovation to prove effective.

Research Implications

It must be conceded that the results obtained from this study do not permit more than tentative conclusions and suggestions. Definitely they do not resolve the many issues surrounding the debate over the usefulness of school agriculture. But they do provide a benchmark from which to proceed in search of better understanding of the effectiveness of school agriculture. This search can proceed on two basic fronts: First, research can proceed along the lines of this study, by further studying the attitudes and aspirations of those students still in school. In particular, there is a need to better isolate the effects of school agricultural learning experiences by controlling for the effects of student background factors better. This

may be achieved by an application of regression analysis on survey data which can help determine the extent to which students' attitudes and aspirations are predictable from specific agricultural learning experiences and the extent to which they are predictable from background factors.

In the same vein, there is a need to clarify the curious finding of this study that the teaching of agricultural science in the classroom does not seem to have any effect on students' beliefs or attitudes. It is necessary to determine the factors of the agricultural science curriculum which tend to dampen students' enthusiasm for farming and rural life. In order to further clarify the relationship between specific agricultural learning experiences and certain learning outcomes there is a need for an intensive investigation, on a case study basis, of various schools deemed to provide different learning experiences in order to assess the learning outcomes of the students for the different learning situations.

Another line of enquiry which has to be pursued is to use tracer studies to assess the behavior of students after they leave school in order to assess the extent to which students' aspirations are fulfilled. In particular, there is a need to know how many students actually joint farming or other agricultural occupations. For those who

join farming there is a need to know whether the knowledge and skills learned in school were adequate. For those not able to join farming there is a need to know why they were not able to do so. Clignet and Foster³ have suggested that one of the reasons why African students do not join farming more is because of their preoccupation with security and stability of employment and their unwillingness to take risks. Considering the risky nature of farming in most African countries it is hardly surprising therefore that few students are willing to try to establish themselves in farming immediately after they leave school. In assessing the economic, social and psychological factors impinging on the decision to join farming, school agricultural programs can be structured to take these factors into account. The government can also determine better ways to help those ready to become farmers get established on their own.

For those who were able to join other agricultural careers there is a need to know whether or not their agricultural learning at school was useful in their present employment, while for those not able to obtain an agricultural occupation there is a need to know why. A common complaint among teachers and students is that employers and post-secondary training institutions do not take into account the agricultural knowledge and

skills the students bring from secondary school, and that these students are treated exactly the same way as those who have had no agricultural learning of any kind. It is possible, therefore, that even where a student is eager to join an agricultural career and put his agricultural knowledge to use he is unable to do so because the government ignores his agricultural knowledge when allocating him to a job or further training.

Ultimately, however, there is a need to know the extent to which school agriculture contributes to agricultural and rural development. There is a need for empirical studies to determine whether or not school agriculture contributes significantly to increased agricultural productivity and rural prosperity, for this will be the ultimate test of the justification for investing so heavily in school agricultural programs as a strategy for accelerating agricultural development.

Footnotes

- ¹M. Fishbein and Icek Ajzen, Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. Reading, Massachusetts Addison-Wesley (1975)
- ²John Meyer, "The Effects of Education as an Institution", American Journal of Sociology, Vol. 83, No. 1 (1977), pp. 55-77.
- ³Remi Clignet and Philip Foster, The Fortunate Few: A Study of Secondary Schools and Students in the Ivory Coast. Evanston, Northwestern Press (1966), p. 161.

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APPENDIX A
INTERVIEW QUESTIONNAIRE

UNIVERSITY OF DAR ES SALAAM
DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

Questionnaire for students of selected Tanzanian Secondary Schools.

Dear Student,

The following are questions which are designed to seek your opinion about various aspects of your school and out of school learning experiences. Your opinion will, hopefully, enable the government to provide better learning experiences for those who will be coming after you.

We emphasize that this questionnaire is not an examination. There are no right or wrong answers, and you should not write your name anywhere on this paper. Please answer all questions as fast as possible in the order in which they are presented, mostly by putting a small check mark (like this (✓)) in the box which you think correctly reflects your opinion. If you have any questions please raise your hand and you will be assisted.

1. Name of School _____

2. What class are you now in? (Check one)

() Form one () Form four () Form six

3. What is your sex? (Check one)

() Male () Female

4. Where were you brought up when you were a child?
(Check one)
- ☐ In a village ☐ In town
5. Where do your parents or guardian live now? (Check one)
- ☐ In an ujamaa village
- ☐ In a traditional village
- ☐ In Dar es Salaam
- ☐ In another town
6. Where do you spend most of your time during the holidays? (Check one)
- ☐ In town with my parents or guardian
- ☐ In the village with my parents or guardian
- ☐ In the village with my relatives
- ☐ In town with my relatives
- ☐ Other (Please specify) _____
7. What is the highest level of education that your father or guardian reach? (Check one)
- ☐ Did not go to school
- ☐ Reached primary school level
- ☐ Reached middle school level
- ☐ Reached secondary school level
- ☐ Reached university level

8. What is the highest level of education that your mother reached? (Check one)
- ☐ Did not go to school
 - ☐ Reached primary school level
 - ☐ Reached middle school level
 - ☐ Reached secondary school level
 - ☐ Reached university level
9. What is the occupation of your father or guardian? (Check one)
- ☐ Is a full time farmer
 - ☐ Has another occupation (please name the occupation _____)
 - ☐ Unemployed
10. What is the occupation of your mother? (Check one)
- ☐ Is a full time farmer
 - ☐ Has another occupation (please name the occupation _____)
 - ☐ Unemployed
11. If your father, guardian or mother are fulltime farmers what crops do they grow? (Check all those applicable)
- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Beans | <input type="checkbox"/> Cashew-nuts |
| <input type="checkbox"/> Coffee | <input type="checkbox"/> Maize |
| <input type="checkbox"/> Cotton | <input type="checkbox"/> Millets |
| <input type="checkbox"/> Sorghum | <input type="checkbox"/> Pyrethrum |
| <input type="checkbox"/> Tea | <input type="checkbox"/> Tobacco |
| <input type="checkbox"/> Others (please specify) _____ | |

12. Where would you like to work after you finish school?
(Check one)

☐ In Dar es Salaam

☐ In my hometown

☐ In any town

☐ In any village

☐ In my home village

☐ No preference

13. Among the following careers, choose the one you would like to join the most? (Check one)

☐ Teaching

☐ Engineering

☐ Law

☐ Farming

☐ Agricultural specialist

☐ Veterinary science

☐ Managerial

☐ Secretarial/clerical

☐ Medicine

14. What bias are you now studying?

☐ Secretarial/Commercial bias

☐ Technical bias

☐ Agricultural bias

☐ Domestic/Home Economics bias

☐ General bias

15. Here is a list of words. Check all those you think apply to farming.

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Pleasant | <input type="checkbox"/> Rich |
| <input type="checkbox"/> Chaotic | <input type="checkbox"/> Wellfed |
| <input type="checkbox"/> Easy | <input type="checkbox"/> Healthy |
| <input type="checkbox"/> Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Difficult | <input type="checkbox"/> Peaceful |
| <input type="checkbox"/> Unpleasant | <input type="checkbox"/> Clean |
| <input type="checkbox"/> Bad | <input type="checkbox"/> Boring |
| <input type="checkbox"/> Comfortable | <input type="checkbox"/> Uncomfortable |
| <input type="checkbox"/> Miserable | <input type="checkbox"/> Interesting |
| <input type="checkbox"/> Enjoyable | <input type="checkbox"/> Unhealthy |
| <input type="checkbox"/> Dirty | <input type="checkbox"/> Hungry |

16. Compared to most other people, how much does a farmer have to work? (Check one)

- ☐ Farmer works more
- ☐ The same as most other people
- ☐ Farmer works less
- ☐ I don't know

17. Do you think the farmer enjoys his work? (Check one)

- ☐ Enjoys his work
- ☐ Does not enjoy his work
- ☐ I don't know

18. Do you think a farmer gets the returns he deserves?
(Check one)
- ☐ Gets more than he deserves
 - ☐ Gets what he deserves
 - ☐ Gets less than what he deserves
 - ☐ I don't know
19. Compared to most other occupations how much prestige do you think farming has? (Check one)
- ☐ Higher than most other occupations
 - ☐ Same as most other occupations
 - ☐ Less than most other occupations
 - ☐ I don't know
20. Compared to most other people, to what extent do you think, a farmer leads a comfortable life? (Check one)
- ☐ More comfortable than most people
 - ☒ Same as most people
 - ☐ Less comfortable than most people
 - ☐ I don't know.
21. If you eventually become a farmer, do you think you will be better-off or worse-off than your friend who takes another occupation after finishing school?
(Check one)
- ☐ I will be the same as him
 - ☐ I will be worse-off
 - ☐ I will be better-off
 - ☐ I don't know

22. The following is a list of words: Please check all those you think apply to life in the rural areas.

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Pleasant | <input type="checkbox"/> Bad |
| <input type="checkbox"/> Chaotic | <input type="checkbox"/> Wellfed |
| <input type="checkbox"/> Easy | <input type="checkbox"/> Healthy |
| <input type="checkbox"/> Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Difficult | <input type="checkbox"/> Peaceful |
| <input type="checkbox"/> Unpleasant | <input type="checkbox"/> Clean |
| <input type="checkbox"/> Rich | <input type="checkbox"/> Boring |
| <input type="checkbox"/> Comfortable | <input type="checkbox"/> Uncomfortable |
| <input type="checkbox"/> Miserable | <input type="checkbox"/> Interesting |
| <input type="checkbox"/> Enjoyable | <input type="checkbox"/> Unhealthy |
| <input type="checkbox"/> Dirty | <input type="checkbox"/> Hungry |

23. Do you think people living in the rural areas have more or less comfortable life compared to those living in town?

- ☐ People in rural areas have a more comfortable life
- ☐ Have about the same comfort
- ☐ People in rural areas have a less comfortable life
- ☐ I don't know

Thank you for your time and patience.

APPENDIX B

LIST OF THE SECONDARY SCHOOLS SELECTED FOR THE STUDY

LIST OF SECONDARY SCHOOLS SELECTED
FOR THE STUDY

Ashira

Ifunda

Ilboru

Jangwani

Kilakala

Kilosa

Lyamungu

Magamba

Mawenzi

Minaki

Morogoro

Msalato

Tosamaganga

Umbwe

Usagara

ACK. SPE
LB 16/7
T. M3