"Education for Self-Reliance" in Tanzania

A study of its vocational aspects

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(A Study of its Vocational Aspects)
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TEACHERS COLLEGE PRESS
Teachers College, Columbia University
New York, New York
Preface

Educators have been increasingly aware that the solutions to many crucial issues in African education are found in the social science disciplines and in history and psychology. Education is viewed in most African countries as a major vehicle for development. But education takes place within the mainstream of African society. The social, political, and economic conditions of the current African situation have a profound effect on the development and direction of African education; history provides an understanding of the strengths and limitations of the educational structure inherited by independent African states. Studies presented in this series will be concerned primarily with the application of the disciplines of the social sciences, history, and psychology to the study of African education.

The author of this fifth monograph in our series draws upon his many years of experience as an Education Officer in Tanganyika to discuss the vocational aspects of the current Tanzanian educational policy. President Julius Nyerere’s statement of that policy, Education for Self-Reliance, represents much more than the efforts of a few Ministry of Education officials; it constitutes the total commitment of an entire government to mobilize the resources of the Tanzanian people in the modernization of their own country. This monograph brings the perspective of history—its experiences and its lessons—to Education for Self-Reliance.

L. Gray Cowan
David G. Scanlon
Introduction

I shall take it as self-evident that each generation must define afresh the nature, direction and aims of education to assure such freedom and rationality as can be attained for a future generation.

Jerome S. Bruner

President Julius K. Nyerere's booklet *Education for Self-Reliance* is an important document, important not only for Tanzania, but also in thinking about educational development in agriculturally-based societies throughout Africa if not, indeed, throughout the "Third World" of rural communities. It is already the subject of excited discussion whenever educators with an interest in the developing world meet, in East Africa, in West Africa, and far beyond.

Part of the reason for this interest is, of course, that *Education for Self-Reliance* was written by the philosopher-President himself. Part of the reason is that it is written with a precision, a clarity, and a logic that appeal to the educator; it eschews the turgid jargon of so much writing about current educational problems. But it is mainly discussed for what it has to say, and what it has to say is important.

The theme of *Education for Self-Reliance* is the use of education to create a new and appropriate kind of society in Tanzania. The concept of this new society, with its roots in the traditional past of Tanzania, was first clearly stated in Julius Nyerere's earlier pamphlet, *Ujamaa*. In his definition of *ujamaa* the President developed the concept of the traditional family as the basis of a socialist society in twentieth-century Tanzania. In *Education for Self-Reliance* the aim is stated thus: "We have said that we want to create a socialist society which is based on three principles: equality and respect for human dignity, sharing of the resources which are produced by our efforts; work by everyone and exploitation by none." In the body of the pamphlet itself, the role of education in the realization of these goals is stated with impressive lucidity.

Briefly, the thesis is that schools have a dual role in the regeneration of society. First, there is the social role; through education pupils learn attitudes appropriate for a socialist society in a rural economy. Education "has to foster the social goals of living together, and working together, for the common good, . . . . Our education must therefore inculcate a sense of commitment to the total community and help the pupils to accept the values appropriate to our kind of future, not those appropriate to our colonial past." This social
role applies at all levels of education—primary, secondary, and university—but it is crucially important at the secondary and university levels because of the patent danger that the students in post-primary education will become alienated from the rural community from which they come. It is here that the dangers of elitism are strongest.

Second, there is the vocational role. Particularly in the primary school, where the majority of children who go to school at all will be educated, the pupils should learn those vocational skills which will prepare them for their roles as better farmers in a predominantly agricultural society. Through the development of such skills at school the farmers of the future will be able to contribute substantially to that improvement of agriculture which is at the heart of economic improvement through “self-reliance.”

Each of these roles, the social and the vocational, has implications for the other. “But although these aspects are in some ways separate, they are also interlocked. We cannot integrate the pupils and students into the future society simply by theoretical teaching, however well designed it is. Neither can the society fully benefit from an education system which is thoroughly integrated into local life but does not teach people the basic skills—for example, of literacy and arithmetic, or which fails to excite in them a curiosity about ideas.”* The social role of the school bears upon the attitude toward farming and the recognition of its importance for the future. On the other hand, the vocational role of the school bears upon the social role because, without a consequent improvement in agriculture and the emergence of the “good life” in rural society, there is a danger that the social vision will become a mockery.

It is with this second aspect, the vocational role of education in the primary school, that this essay is concerned, and for three reasons. First, the social aspects of Education for Self-Reliance and the social goals for Tanzanian society are, in a sense, private to Tanzania; they are matters for the leaders and people of Tanzania, and it is logical indeed that the civics and citizenship courses in the schools are now taught by Tanzanian citizens only. Second, in a very practical sense, it will be the vocational aspects of education which impinge most directly upon the teachers and pupils in Tanzanian schools, particularly the primary schools, as the schools develop into farms. Third, and most important, an earlier experiment in rural education in the middle (or upper primary) schools of Tanganyika was conducted by the colonial administration from 1952 onwards. This experiment was based on the Provisional Syllabus of Instruction for Middle Schools,* the implementation of which has significant lessons for the implementation of plans being currently
devised for education in practical agriculture in the primary schools of Tanzania. Therefore, in Chapter II, the colonial experiment in rural education will be described in detail and the subsequent argument of this essay relates that experience to present plans. There is at least an echo of much of the Provisional Syllabus of Instruction for Middle Schools of 1952 in Education for Self-Reliance of 1967.
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Vocational "Education for Self-Reliance"

Let us first consider in detail the underlying thesis of *Education for Self-Reliance* in its vocational aspect and, as far as possible, in the words of the document itself. The argument of the pamphlet is based on the premise: “Only when we are clear about the kind of society we are trying to build can we design our educational system to serve our goals. [p. 5]” That kind of society is “a socialist society which is based on three principles: equality and respect for human dignity; sharing of the resources which are produced by our efforts; work by everyone and exploitation by none. [pp. 5 f.]” However, in working to that end, it is necessary to recognize the truth concerning the present economic situation of the country. “And the truth is that our United Republic has at present a poor, undeveloped, and agricultural economy. We have very little capital to invest in big factories or modern machines; we are short of people with skill and experience. What we do have is land in abundance and people who are willing to work hard for their own improvement. [p. 6]” Consequently, it will be necessary to work from the village level. “It is therefore the villages which must be made into places where people live a good life; it is in the rural areas that people must be able to find their material well-being and their satisfactions. [p. 7]”

Thus the schools must emphasize not only the appropriate social attitudes—“the social goals of living together and working together for the common good. [p. 7]” They must also “prepare young people for the work they will be called upon to do in the society which exists in Tanzania—a rural society where improvements will depend largely upon the efforts of the people in agriculture and village development. . . . It (education) must produce good farmers. [p. 8]” The educational system inherited from the colonial government with its emphasis on “the individualistic instincts of mankind” must be completely overhauled. Among other changes, there must be a complete revision of the primary school system, because the primary schools must remain the schools to which the mass of children will go. Nyerere recognizes that “it is going to be a long time before we can provide universal primary education in Tanzania; for the vast majority of those who do get this opportunity, it will be only the equivalent of the present seven years’ education. [p. 15]”
Such an approach has many implications for a total reorganization of the primary school system. First, it means a raising of the age of admission of children into Standard I, "so that the child is older when he leaves, and also able to learn more quickly while he is at school. [p. 14]" Second, primary schooling must be complete in itself. "It must not continue to be simply a preparation for secondary school. Instead of the primary school activities being geared to the competitive examination which will select the few who go on to secondary school, they must be a preparation for the life which the majority of the children will lead. [p. 15]" Third, there must be a downgrading of the examination system in public esteem. "What we need to do now is think first about the education we want to provide, and when that thinking is completed think about whether some form of examination is an appropriate way of closing an education phase. Then such an examination should be designed to fit the education which has been provided. [p. 16]" Fourth, and most important, it is necessary to change the character of the schools themselves.

... We should not determine the type of things children are taught in primary schools by the things a doctor, engineer, teacher, economist, or administrator needs to know. Most of our pupils will never be any of these things. We should determine the type of things taught in primary schools by the things which the boy or girl ought to know—that is, the skills he ought to acquire and the values he ought to cherish if he, or she, is to live happily and well in a socialist and predominantly rural society, and contribute to the improvement of life there. ... Our sights must be on the majority; it is they we must be aiming at in determining the curriculum and syllabus. [p. 18]

This means that "schools must, in fact, become communities—and communities which practise the precept of self-reliance. [p. 17]" Furthermore, it follows that "every school should also be a farm; that the school community should consist of people who are both teachers and farmers, and pupils and farmers. [p. 17]" On these school farms pupils will learn by doing.

... The important place of the hoe and of other simple tools can be demonstrated; the advantages of improved seeds, of simple ox-ploughs, and of proper methods of animal husbandry can become obvious; and the pupils can learn by practice how to use these things to the best advantage. The farm work and products should be integrated into the school life; thus the properties of fertilizers can be explained in the science classes, and their use and limitations
experienced by the pupils as they see them in use. The possibilities of proper grazing practices, and of terracing and soil conservation methods can all be taught theoretically, at the same time as they are put into practice. . . .

But the school farms must not be, and indeed could not be, highly mechanized demonstration farms. We do not have the capital which would be necessary for this to happen, and neither would it teach the pupils anything about the life they will be leading. . . .

. . . Pupils should be given an opportunity to make many of the decisions necessary—for example, whether to spend money they have earned on hiring a tractor to get land ready for planting, or whether to use that money for other purposes on the farm or in the school, and doing the hard work themselves by sheer physical labour. By this sort of practice and by this combination of classroom work and farm work, our educated young people will learn to realize that if they farm well they can eat well and have better facilities in the dormitories, recreation rooms, and so on. If they work badly, then they themselves will suffer. . . .

. . . . . . . .

For example, they can learn to keep a school farm log in which proper records are kept of the work done, the fertilizers applied, or the food given to the animals, etc., and the results from the different parts of the farm. Then they can be helped to see where changes are required, and why. For it is also important that the idea of planning be taught in the classroom and related to the farm. . . . [pp. 18–20]

In all this the primary schools must not be separated from the community and their rural environment. “The pupils must remain an integral part of the family (or community) economic unit. The children must be made part of the community by having responsibilities to the community, and having the community involved in school activities. [pp. 21 f.]”

It will also be necessary for school terms and holidays to be re-organized: “It should not be impossible for school holidays to be staggered so that different forms go at different periods or, in double-stream secondary schools, for part of a form to go at one time and the rest at another. [p. 23]”

Throughout the book there is great emphasis on learning through doing, on learning through practical work, but this approach to learning should not affect standards. “It will probably be suggested that if the children are working as well as learning they will therefore be able to learn less academically, and that this will affect standards of administration, the professions and so on, throughout our nation in time to come. In fact it is doubtful whether this is nec-
essarily so. . . . But even if this suggestion were based on prov-
able fact, it could not be allowed to over-ride the need for change in the direction of educational integration with our national life. [p. 24]"

The argument is completed with a statement of the details of the curriculum which the new-style primary school farm will follow:

. . . For the majority of our people the thing which matters is that they should be able to read and write fluently in Swahili, that they should have an ability to do arithmetic, and that they should know something of the history, values, and workings of their country and their government, and that they should acquire the skills necessary to earn their living. (It is important to stress that in Tanzania most people will earn their living by working on their own or on a communal shamba [farm], and only a few will do so by working for wages which they have to spend on buying things the farmer produces for himself.) Things like health science, geography, and the beginning of English are also important, especially so that the people who wish may be able to learn more by themselves in later life. But most important of all is that our primary school graduates should be able to fit into, and to serve, the communities from which they come. [p. 24]

To summarize the argument of Education for Self-Reliance in its vocational aspect, the school system and the education provided are to be used to regenerate Tanzanian society both socially and economically. In part this will be done by a radical reform of the primary school system, its organization and its curriculum; and, as a result of this reform, the pupils of the new school farms 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 agricultural life.
II

The Provisional Syllabus of Instruction For Middle Schools

The Concept

In 1947 the British colonial administration of Tanganyika launched its Ten-Year Development Plan for African education. Priority in this plan was given to the expansion of a primary school system based on a six-year primary course. However, by 1950, doubts were being expressed about the effectiveness and value of such a course. In particular it was questioned whether a six-year primary course served any useful purpose for that large majority of African children who would receive no formal education at all beyond Standard VI. The problem of the primary school leaver from Standard VI was already becoming a serious one in 1950. Therefore in that year, the Ten-Year Development Plan was recast and a new structure for education was introduced. This was based on three four-year cycles: first, the primary school (Standards I–IV), then the extension of the primary course in the middle school (Standards V–VIII), and finally the secondary school (from Standard IX onwards). It was envisaged that, in the beginning, about 20 per cent of those pupils who completed education up to Standard IV would be selected to enter the upper bracket of primary education in the new middle schools. It was also envisaged that gradually more and more pupils would be thus promoted until, in the very distant future, all children entering Standard I would complete a full eight-year course of primary education.

More than a revision of the organization of education was involved. It was recognized that this new structure for primary education postulated a new curriculum based on the assumption that the middle school must serve two purposes. First, for the minority (perhaps some 25 per cent of its pupils) the middle school would provide a preparation for secondary education, teacher education, and various kinds of vocational training; second, for the majority, the middle school would provide a preparation for future life as citizens in a rural community. For both groups, for the few who
went on to further education and for the thousands who would go no further, there would be a common curriculum with a strong practical bias toward agricultural and pastoral activities.

Parenthetically, it is important to stress that this reorganization of the primary school system and the new curriculum for the middle schools applied to African children only. At that time there were separate educational systems with differently oriented curricula for Asian and European children; for them there was to be no curriculum based on practical agriculture or pastoral activities. This fact, not surprisingly, influenced African attitudes toward what was going on, and the significance of this will be considered later.

The aims of the new curriculum for African children were clearly stated in the introduction to the Provisional Syllabus of Instruction for Middle Schools:

The middle school is planned to provide a four-year course for pupils who have successfully completed the four-year primary course...the middle school course is designed to be complete in itself so that those who pass through it, whether they proceed further or not, will have received an education which will assist them to follow in a more intelligent and capable manner whatever pursuits they take up and, generally, to play a more useful part in the development of the locality to which they belong. To this end the form and bias of the course at any particular school will, so far as is possible, be related to the needs and reflect the life of the area in which the school is situated. In an agricultural area, for example, the bias will be agricultural, in a pastoral area the bias will be more towards animal husbandry, while in an urban area the bias may be commercial or industrial. In the girls' middle schools there will also be, in all cases, a bias towards homecraft. These biases will be of a practical nature and will form a special feature of the middle school course.10 (Italics added.)

All this had clear implications for the kind of education which ought to be provided in middle schools. First, it implied an emphasis on practical activities:

Apart from the value of it for its own sake practical work related to the needs of the district can very usefully and properly be made to lead to the acquisition of theoretical knowledge of wider application. This theoretical knowledge will not, in most cases, be introduced in a formal manner or in too much detail, but will be imparted as and when and in such degree as is required. For example, practical agriculture and animal husbandry can lead to a knowledge of general principles of chemistry, biology and geography.11
It was not considered that such a practical approach to education need lead to any lowering of standards. "The practical approach not only makes the knowledge gained more real to the pupil and of more immediate value to him but can also enable a higher academic standard to be reached if the practical work is intelligently applied." 12

Second, it was recognized that this new concept of the middle school would have implications for the teaching of citizenship. "In the activities and project work of the middle school programme every opportunity will be given for group work and for the demonstration of the need for and practice of cooperation as well as for leadership and initiative." 13 (Italics added.)

Third, the course would aim not so much at training young people to be fully-qualified farmers but rather would instill in them the proper orientation toward their future roles as farmers.

The concept of the middle school course as an experiment in practical education to meet the needs of Tanganyika in 1952 is summed up in the introduction to the Provisional Syllabus:

The middle school course is planned to be complete in itself while, at the same time, providing a sound base from which to proceed to further study or training; it is to provide a practical approach to learning, the practical and theoretical parts of the training being closely integrated, and the practical activities reflecting the life and needs of the locality in which the school is situated; and it is to provide sound character training and moral instruction. The aim is in short to produce boys and girls of character with a lively interest and understanding of what is going on around them who will be the better able to play a useful part in the development of the country to which they belong. 14 (Italics added.)

Such then was the broad concept of the middle school curriculum, a concept which in many ways foreshadowed the vocational thesis of Education for Self-Reliance. The curriculum was highly praised at the time in the report of the Binns Mission 15 which devoted a whole chapter to it and advocated its adoption elsewhere in east and central Africa. Even ten years later it was still being praised by visiting educators; for example, in The Educated African, we read that "it may be one of the outstanding experiments of its kind on the continent." 16
The Program in Detail

The Provisional Syllabus of 1952 went far beyond a mere statement of broad aims. It made detailed suggestions for their implementation in specific types of schools. Although there were some middle schools for girls and a few with an urban or industrial bias, the great majority were boys' middle schools with an agricultural or animal husbandry bias. What happened in schools of this kind merits detailed examination.

The subjects taught in these rural, boys' middle schools were: Arithmetic and Practical Geometry, English, Swahili, General Knowledge (comprising Geography, History, Civics, and Current Affairs), General Science (including Health Science, Biology, and Agricultural Science), Agriculture and Animal Husbandry, Handcraft, and Religious Instruction. With different emphases, these subjects are virtually the same as those given in Education for Self-Reliance (see page 4 above). The "core" of the curriculum was practical agricultural work. Indeed, in the course which was followed between 1952 and 1956, the syllabus of practical agricultural activity was set out in great detail, and was to follow up the practical agriculture which had already been done in Standards I-IV. It described in detail the kinds of experiments and the kinds of work which might be carried out in the different climatic and agricultural areas of Tanganyika. It detailed diagrammatically the experimental plots required for cultivation by each standard in the school. It detailed the practical syllabus for each standard; for example, for Standard V there was:

- Spacing
- Seed selection
- Timely planting
- Catch cropping

For Standard VIII, the senior standard, it was stipulated that the boys should cultivate for themselves a model farm which would summarize all their agricultural education from Standards I–VII. There was also to be a Young Farmers Club for those senior boys who were particularly interested in agriculture and in showing the products of their labor in competition.

However, by 1956, it was evident that such a rigid agricultural syllabus was impossible to apply in the wide variety of agricultural situations in the country, and thereafter the development of middle
school plots and farms tended to be more closely attuned to local conditions. [See Appendix.]

Because the core of study was to be centered upon the school experimental plots and farm, there had to be close correlation between the teaching of the subjects in the classroom and the practical work outside. For example, for the teaching of Arithmetic and Practical Geometry, the syllabus made the following suggestion:

Every effort should be made to interest the pupils in the various aspects of the school management in which the use of arithmetic is necessary and of a routine nature. The purchase, weighing in and daily issues of rations and materials for the school, the costing and payment of bills, payment of labour employed in the school and on the farm are all matters not usually discussed and dealt with by the pupils of a school but are ones which can well be introduced in the middle school. The keeping of all records, agricultural, dairy and meteorological are obvious examples of work which can be entrusted to pupils in the upper classes under a good teacher’s supervision. Here, particularly, there is a valuable correlation with the teaching of civics in so far as honesty, accuracy and a due sense of responsibility to the community are so essential if records are to be trusted and of real value.  

In the teaching of General Science also there was to be correlation between the classroom work and the experimental work outside. Whole sections of the General Science syllabus of 1952 are, in fact, Agricultural Science and are directly concerned with such topics as water, plant growth, germination, food values, fertilization, animals, man, and, finally, “Man’s dependence on Agriculture and Farming.”

Even the teaching of Geography and History, it was suggested, might be linked with certain aspects of agricultural development in the area, though in practice this was to prove more difficult than was envisaged.

Jon Moris’ assertion in his paper delivered to the Kericho Conference that “the Tanzania case excellently illustrates the difficulty of reform through syllabus alone (even though an exceptionally good syllabus),” is misleading because the effort of the 1950’s was not based on the “syllabus alone.” Teachers were specially trained. Each school was to have one teacher, the Agricultural Instructor, who, in addition to his general professional training, had also received special instruction in the teaching of practical agriculture and the related sciences. However, it was recognized that he could not assume the sole responsibility both for these tasks and for the correlation of practical work with other subjects. Therefore, all pri-
mary school teachers in their professional training were to learn how to correlate their subject teaching with the agricultural core of the curriculum. In fact, in the 1950's, most teacher training colleges made some attempt to orient their work toward practical activity relevant to the needs of primary and middle schools, because in those schools all teachers were expected to cooperate in subject correlation and in the supervision of pupils at work on the plots and on the farm.

These forms of teacher education, it was recognized, would not be enough in themselves. There would also have to be teaching materials appropriate to the curriculum. Hence the syllabus contained both detailed schemes of work and a list of recommended books on practical agriculture and its scientific aspects—although some of these recommended texts were inadequate. Given the calibre of the teachers and the inadequacy of the teaching materials, it was also necessary that the teachers, in launching such an experimental curriculum in schools, should receive special guidance. This was to be given by the local Education Officers in collaboration with the officers of the Agricultural and Veterinary Departments.

It was clear that the school year would have to be completely reorganized for the purpose. The Provisional Syllabus therefore specified that the year should be divided into two parts following the seasonal requirements of work on the farm. "Two suggested timetables are given . . . , one for the 'light farm work' period and the other for the 'heavy farm work' period; it is estimated that the heavy farm work time during the course of the year will amount to a total of about three months, which will leave at least six months, excluding holidays, when the light farm work programme should be followed." 21 During the period of "light farm work," practical agriculture would occupy a few of the boys on duty between 6:00 a.m. and 7:30 a.m., and the whole school between 4:00 p.m. and 6:30 p.m. During the period of "heavy farm work," the early morning duties would remain, and the whole of the morning, from 8:00 a.m. to almost noon, would be spent by all the pupils and staff on practical agriculture and, where appropriate, animal husbandry. These emphases are reflected in the number of classroom lessons suggested for each of the two educational seasons of the year. During the "light farm work" period, there were to be 40 classroom sessions a week, eight on each of five working days; during the period of "heavy farm work," there were to be 25 classroom periods a week, five on each of five days, in addition to the long hours spent on the farm. No wonder that there was no room or need for physical recreation! Although the idea was not mentioned in the Syllabus itself,
the middle schools in some provinces followed an arrangement of “staggered holidays,” whereby there were always some pupils at school to look after the farm and livestock.

In all this, again, there are ideas and practices which are echoed in some passages of Education for Self-Reliance.

The Implementation

In the years following 1952, a tremendous effort was expended on the implementation of the idea of the middle school. The Provincial Education Officers and their growing cadre of assistants in the Districts tried enthusiastically, and with varying degrees of expertise, to implement the plan. They were supported by Agricultural Officers and Veterinary Officers who had, on the whole, less enthusiasm but more knowledge; for these officers this work was marginal to their main task and some of them were inclined to question its value. Education Secretaries of the Voluntary Agency, or mission, school system did likewise. In some areas District Officers of the Administration showed interest and enthusiasm. From three training centers—but mainly from Ukiriguru—Agricultural Instructors went forth to spread the gospel of practical agriculture. And from the teacher training colleges each year more primary school teachers with some idea of what was expected were going out to reinforce the efforts of those teachers already in service.

Thus, a remarkable and concerted effort was made to ensure the success of the middle school idea. In the schools themselves the effort and enthusiasm varied, but in perhaps a majority of schools a real effort was made to implement the syllabus despite an initial reluctance on the part of many teachers and persistent reluctance on the part of some.

Between 1957 and 1959, the middle school system was working as well as it ever did, and those who were striving and hoping for its success could find some basis for optimism. There were schools with excellent farms, schools which grew quantities of produce for sale and food for their own dining rooms, schools which bred chickens and calves, schools which were really centered on the farm. There were schools where the pupils, under the guidance of the teachers, were able to purchase items for the improvement of the farm or their comfort in the school. This was the period of school-farm competitions, with prizes presented by the local cooperative or interested firms, when in some areas school vied with school in producing the best example for the local community.
In many schools a serious attempt was made to correlate the work outside the classroom and the theoretical work inside. In some, pupils were keeping accounts and planning the work on their farm. Most of these examples of successful work were to be found in areas where the Education Officers or the Agricultural Officers were especially enthusiastic, or in schools where the headmaster or the trained Agricultural Instructor was particularly keen. And occasionally, but very, very rarely, a few pupils on completing Standard VIII left school to become farmers rather than clerks, or primary school teachers, or assistants in the local dispensary.

In a sense, this catalogue of successes is misleading, but something of the official optimism and enthusiasm of the time can be caught in the reports of the Education Department of these days. The Department of Education's *Triennial Survey of Education, 1955–1957* reported:

The middle schools are developing on sound lines and their value is now more appreciated by the African community. There was at first considerable reluctance on the part of both the teaching staff and of the parents to appreciate the value of the practical training included in the curriculum and the reasons for its inclusion . . . but practical agriculture has, whenever feasible, been insisted upon, and with the full cooperation of the Department of Agriculture a number of the schools in rural areas have developed useful mixed farms where much interesting and valuable instruction is given to the pupils.\textsuperscript{22}

This was a modest assessment of what was happening in comparison with the assessment of the Ministry of Education's *Triennial Survey of Education, 1958–1960*, which reported with self-satisfaction:

A tremendous amount of work and thought had been put into middle school agriculture, which, at best, was very good indeed. Permanent enthusiasm had been aroused in a number of headmasters and agricultural teachers, and in certain areas staff and boys viewed with pride the Provincial Agricultural Officer conducting the Council of Chiefs around their school farm to show them how agriculture might be conducted in the district by those who had the knowledge and the energy to do it.\textsuperscript{23}

Yet, in fact, this was the last time that the middle school curriculum was mentioned in an official report.
Failure

Despite the enthusiasm and effort at all levels, and despite the signs of apparent success, the middle school idea was failing. The reasons for this failure can be conveniently grouped under four headings.

1. Educational Reasons

Up to 1956, the syllabus for practical agriculture was too rigid; it made too little allowance for regional variations, with the result that in some cases the recommended crops failed completely or grew in ways which completely belied the intended “lesson” of the experiment; the plot without manure sometimes produced the best crops!

The guidance provided by the Education Officers and those of the Agricultural and Veterinary Departments was, in some areas, inadequate; in other areas there was too little collaboration. Education Officers sometimes lacked the necessary knowledge, and the specialist officers sometimes lacked the desired interest. And some of the books available at the time were inadequate in the guidance they offered, though it can hardly be argued that there was a shortage of books or that the books on agriculture were worse than the books for some of the other subjects.

There were also weaknesses in the teaching. There was a shortage of Agricultural Instructors, but not a very serious one; in 1956, there were nearly two hundred boys' middle schools in rural areas, and A Draft Five-Year Plan for African Education (1957–1961) assumed one hundred and seventy trained Agricultural Instructors in employment at that time. Much depended upon the attitude of the headmaster; even so, some teachers were unsympathetic to the whole idea of the syllabus, whereas others could not handle the job of correlating their subject to the core of practical agriculture. Enthusiastic teachers who were strangers to the locality of the school sometimes found local agricultural problems beyond their comprehension. Sometimes unthinking headmasters and teachers used extra work on the farm as a form of punishment, an approach which was hardly likely to encourage a favorable attitude towards agriculture.

At some schools the areas cultivated were far too extensive and became an intolerable burden for teachers and pupils alike. Very
often this occurred at mission middle schools where the food grown, or the profit made, was used for the benefit of the school and the mission "station." The fault was not that this was done, but the extent to which it was done. In a few areas, in fact, the middle school pupils tended to become a free labor force.

Finally, in an education system in which for various reasons examinations loomed large, the fact that agriculture was not an examination subject in the Standard VIII examination lowered its prestige as a subject in the eyes of pupils.

Although this may appear a formidable catalogue of educational failings, there is no way of knowing how widespread each failing was, and to list them, as was done in the Fuggles Couchman Report of 1956, is misleading. In fact, the general impression of the period is that far more official interest and effort were centered upon the agricultural aspects of the primary course than any other, and that the general quality of the teaching of practical agriculture, though variable, was much the same as that of the teaching of other school subjects. Schools also varied in the teaching of Mathematics or Swahili, and one could quite easily catalogue the faults in the teaching of those subjects as well. Contrary to what was suggested by the Fuggles Couchman Report, it was not in any important sense because of its educational weaknesses that the practical curriculum of the middle school proved such a failure. The reasons for failure lay deeper than that.

2. Political Reasons

In the middle schools and in the meetings of local education committees and committees of parents in the 1950's, there arose the argument and accusation that the middle school syllabus was deliberately designed to provide a special kind of inferior education for Africans. The colonial administration, it was asserted, had devised this curriculum to condemn its primary school leavers to be forever "hewers of wood and drawers of water." Those who argued this went on to say, with absolute truth, that in the Asian and European primary schools of Tanganyika the children were not taught practical agriculture; not surprisingly, attempts to explain the reasons for this distinction met with complete failure.

The attitude so often voiced in schools and meetings was neither peculiarly Tanganyikan nor particularly new. The history of experimental education throughout the "Third World" is littered with similar, if not identical, reactions to similar experiments in curricular development. Nevertheless, it should be recognized that the middle
school syllabus of 1952 was introduced by a colonial administration without any serious consultation with the population or its leaders.

However, the fact that the 1952 syllabus was introduced by the colonial administration does not mean that it failed simply because it was so introduced. After all, much that was taught in the formal educational system of the time was accepted, and indeed became popular, even though it was imposed by the colonial rulers. Whether or not the curriculum was introduced by the colonial administration is of less importance than the fact that, given the agricultural and economic conditions of the time, it was unlikely to be popular anyway.

3. Agricultural Reasons

The agricultural reasons for the curriculum's failure were stated frankly and boldly by the African Director of Agriculture in Tanzania in 1966; he was much more realistic about the basic problems than Fuggles Couchman had been ten years before.

There was the major problem of land acquisition by youths graduating from Standard VIII. The conditions for acquiring uncleared and unclaimed land with the blessing of those in authority locally, the rights regarding the transfer of land from one cultivator to another, and the rules governing inheritance all made it extremely difficult for the middle school graduates to establish themselves as farmers. Furthermore, if they were allowed to cultivate part of their parents' land, undesirable land fragmentation followed.

Even if, despite these difficulties, the youths were able to obtain land for cultivation, there was another major problem—that of bush clearing before cultivation. This is a demanding physical task, beyond the strength of many youths and necessitates the use of tools and equipment which the youths of the time were unable to obtain.

When, alternatively, these primary school graduates went back to their parents' land, they found that their parents were either unwilling to fragment their holdings or to listen to their offsprings' advice concerning the "modern" methods of agriculture which the youngsters had been taught at school.

In short, it was too optimistic to expect pupils leaving middle schools to be able to set up for themselves as farmers immediately upon graduation, even if the temptation to seek jobs in the wage sector had not been so overwhelming.

4. Economic Reasons

Most fundamental of all the reasons for failure of the 1952 syllabus was the fact that it was possible for the brighter pupils to
obtain a better living in other kinds of employment, even if they
failed to enter secondary school or go on to further education. Pupils
graduating from Standard VIII (with an age range of 15 to 19 years
in the 1950’s) were unlikely to reconcile themselves to becoming
farmers as long as it was clear that a better living, or at least more
money, could be obtained through employment as a clerk, a me-
chanic, or as a worker in some small-scale industry. The parents who
had invested so much in their son’s education, and had probably paid
fees for a period of four years at a comparatively low rate (Shs 10
per year), and for a further period of four years at a more expensive
rate (Shs 250 per year), were most reluctant to accept as the result
of their investment the return of their son to the homestead.

In those rare and isolated areas where boys went into farming
from middle schools by preference, it was because in those areas more
money could be made from the cultivation of cash crops than from
employment in lowly clerical posts. For example, in the Songea Dis-
trict in 1957–1958, there were some nine boys’ middle schools, all in
rural areas, all following an identical middle school curriculum, all
with an agriculturally-trained teacher, all following a similar time-
table. Yet it was from one of those middle schools only that some
boys preferred to become farmers rather than seek low-grade wage
employment. This one middle school was successful only because it
was in an area where at that time reasonable quantities of money
could be made through the cultivation and sale of coffee.

It is not at all surprising that in the 1950’s the majority of parents
and pupils saw that the way out of the traditional village economy
was through the primary and middle school system. As long as more
cash could be obtained through further education, or indeed as long
as there appeared to be a chance that this was so, both parents and
pupils were keen to follow that road. There is nothing unusual about
this attitude. Parents and their children all over the world have used
the education system as a means of “improvement.” Ambitious coal
miners have not sent their children to school to become better coal
miners using “modern” mining methods, but so that the children could
avoid being coal miners at all. It is most illogical to expect African
parents to behave differently from parents all over the world. Indeed
such an expectation would indicate a kind of racism.

On the evidence of past experience in Tanganyika, it would ap-
ppear that the basic reason why the agricultural syllabus failed was
that it was seeking an educational solution to a problem that was not,
and is not, fundamentally educational. It is not the agricultural ex-
periment in Tanganyika in the 1950’s alone that leads one to this con-
clusion. The evidence of other countries and the experience of other
people seem to confirm the same point of view. The Uganda Education Commission Report of 1963 states bluntly that:

Until there has been a substantial break-through from relatively unproductive subsistence land-use to much more intensive and profitable forms of farming in which young people can see a reward for their efforts, school leavers will continue to seek other means of employment. Hence, paradoxically, the problems of agricultural education are not primarily educational. They are intimately bound up with the solution of economic, technical and social problems over which the Ministry of Education has no control—systems of land tenure, improved land-use, finance and marketing, research and development, traditions and tribal customs being amongst them.²⁸

V. L. Griffiths, in his paper to the Kericho Conference entitled “The Education of the Young in Rural Areas,” argues in the same way:

I hold the view, based on my own experience (and I have seen no evidence to the contrary) that in backward rural areas the schools cannot be made a main instrument of economic progress . . . only when economic development is already taking place can the schools be expected to play any part—and then it will be an important but subsidiary part.²⁷

And Guy Hunter, in his I.I.E.P. monograph Manpower, Employment and Education in the Rural Economy of Tanzania, takes a similar view:

Without help, these teen-age boys and girls, upon whom almost 50 per cent of the educational budget has been spent, have neither the social standing, nor the knowledge, nor the resources to alter the pattern of subsistence farming among their elders. It is an illusion to suppose that formal education by itself achieves economic change in the traditional rural communities characteristic of tropical Africa.²⁶

Conclusion

After a trial that lasted almost a decade, the experimental middle school curriculum of 1952, and indeed the agriculturally-oriented curriculum of the primary course from Standard I to Standard VIII, proved a failure. With rare and isolated exceptions, it neither predisposed youths towards farming as a career nor enabled youths to return to their rural communal life as better farmers.
In summary, there are four reasons for this failure. First, there were educational reasons, but these were of comparatively minor importance and, indeed, had other factors been favorable, the educational weaknesses would have done no more than limit success; they would not in themselves have caused failure. Second, there were the political reasons which centered upon the charge that the colonial administration had devised a special kind of inferior education for Africans; but it is extremely doubtful whether the authorship of the curriculum in itself would have caused it to fail if there had been a strongly favorable disposition towards it for economic reasons. Third, there were the difficulties in taking up farming that faced the middle school leavers—the problems of obtaining land, of clearing land, or of influencing their parents. Finally, it has been argued, most important of all was the economic reason for failure: both parents and pupils knew that a better living could be obtained in forms of employment other than farming and that formal education was the road to that better life in the "modern" sector of the economy.

But there was perhaps a fifth reason for lack of success, or rather another factor which accelerated the rate of failure. This was the educational climate in the early 1960's, and that is examined in the following chapter.
III

The Neglect of Agricultural Education and its Revival

In the two years prior to the achievement of Independence in December, 1961, it became evident that the Department of Education of the colonial administration would be unable to pursue those educational policies that were becoming increasingly unpopular. One of those policies was the whole concept of middle school education and the middle school curriculum. Thus, in 1960 and 1961, less and less effort was made to enforce and implement the practical elements of the course. Increasingly, attention in all types of middle schools came to be concentrated upon the more strictly academic subjects.

In the year of Independence and immediately afterwards, it became clear that Tanganyika had a woefully inadequate number of high-level administrators and other personnel educated to a comparable level. In *Education for Self-Reliance*, President Nyerere forcefully makes this point: “So little education had been provided that in December, 1961, we had too few people with the necessary educational qualifications even to man the administration of government as it was then, much less undertake the big economic and social development work which was essential.” The clamant need in 1961 was for high-level manpower. The whole educational atmosphere of that time, reinforced by the recommendations and resolutions of the Ministers of Education of African States in the Addis Ababa Conference, required that priority should be given to secondary and higher education in order to produce the necessary high-level manpower. The manpower planning approach to education, coming at that time, hastened the transformation of the middle school (now called the “upper primary school”) from a school with a practical bias to one with an increasingly dominant academic bias. From the beginning, middle school education had been in part a preparation for secondary and further education; increasingly this was now regarded as its exclusive aim. It is true that in some schools after 1962 practical agriculture continued to be taught; however such survivals were not so much a matter of policy as a reflection of the individual enthusiasm of the headmaster or agricultural teacher.
From 1960 onwards, work had continued on the preparation of a new Primary School Syllabus to replace those produced in 1952 and 1953, and to meet the educational needs of a new, integrated primary school system. That work of syllabus revision was completed in 1962, and the new, Approved Primary School Syllabus for Standards I–VIII appeared in 1963. A significant feature of the Primary School Syllabus of 1963 is that in both its English and its Swahili versions practical agriculture as a core of the curriculum disappears entirely; only gardening as a means of beautifying the school, and a little experimental work linked with General Science, survive from the old agricultural curriculum. While it is true that much, but by no means all, of the work in the production of this syllabus was done by expatriates, those expatriates were doing no more than reflect the educational thought of the time.

That thought concentrated attention upon the production of secondary school graduates as the top priority, and, at the primary level of education, the unspoken implication was that primary schools should prepare pupils for the educational stages above.

However, by 1965, the atmosphere was changing once again. It was becoming clear that the ratio between the number of pupils completing primary school and the number of places available in Form I of secondary school was moving into imbalance. Since Independence there had been a remarkable increase in the number of places in Form I, but that increase had not kept pace with the upward growth of primary schools, which had hitherto terminated at Standard IV or VI, up to Standard VIII. In other words, whereas after Independence a serious attempt had been made to restrict the opening of new primary schools with Standard I, it had proved more difficult to control the addition of higher standards to existing primary schools which had already developed up to Standard IV or VI. The position was further complicated in 1964 when the Five-Year Development Plan (1964–1969) announced the intention of the government gradually to convert the primary school course into a seven-year course instead of an eight-year one. This meant that for the three-year period of transition to the new system some pupils in both Standards VII and VIII would be competing for Form I places in secondary schools. This decision further reduced the chances of primary school pupils getting into secondary school.

The figures for the aided and maintained schools of Tanzania (p. 21) indicate what was taking place.

While such opportunities for further education at the secondary school level were declining, other opportunities for primary school graduates were also disappearing: teachers' colleges offered fewer and fewer places to primary school leavers, and both public and pri-
The Neglect of Agricultural Education and its Revival

<table>
<thead>
<tr>
<th>Pupils in Standards</th>
<th>Places available in Form 1</th>
<th>Percentage of pupils selected for secondary education</th>
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<tbody>
<tr>
<td>VII and VIII</td>
<td></td>
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</tr>
<tr>
<td>1962</td>
<td>13,730 (VIII)</td>
<td>1963</td>
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<tr>
<td>1963</td>
<td>17,042 (VIII)</td>
<td>1964</td>
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<tr>
<td>1964</td>
<td>20,348 (VIII)</td>
<td>1965</td>
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<tr>
<td>1965</td>
<td>46,647 (VII &amp; VIII)</td>
<td>1966</td>
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<tr>
<td>1966</td>
<td>32,574 (VII &amp; VIII)</td>
<td>1967</td>
</tr>
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vate employers, who had once welcomed pupils from Standard VIII, were now raising their sights to those more highly educated.

By 1966, a combination of these factors—the upward growth of existing primary schools, the conversion to the seven-year primary course, and the decline in opportunities generally for the primary school graduates—revived the problem of the school leaver in a new and more acute form. Concern throughout the country became widespread and, in this atmosphere, people began again to consider the kind of education that ought to be provided in the primary school for that majority of pupils who would never go beyond Standard VII. Already in 1966, therefore, the officers of the Ministry of Education, the staff of the Institute of Education of the University College of Dar es Salaam, and other educators began to work upon schemes for the reintroduction of primary school agriculture. They began to turn to a curriculum based on primary school agriculture as the solution, or a partial solution, to the problem of the primary school leavers. This revival of interest in agriculture in the primary school, it should be noted, predates the appearance of Education for Self-Reliance.

Other relevant and significant events also occurred in 1966. Among the rapidly increasing numbers of those who had been educated in secondary schools and higher institutions, dangerously elitist attitudes were becoming more and more evident. In Education for Self-Reliance President Nyerere has much to say about these “attitudes of inequality, intellectual arrogance and intense individualism among the young people who go through our schools.” These are the ones, he says, who have “a feeling of having deserved a prize—and the prize they and their parents now expect is high wages, comfortable employment in towns, and personal status in the society.” In the section of the pamphlet headed “Some salient features of the existing Educational System,” the President concentrates upon the aspect of elitism: “First, the most central thing about the education we are at present providing is that it is basically an elitist education designed to meet the interests and needs of a very small proportion of those who enter the school system. . . . Equally important is the second point; the fact that Tanzania’s education is such as to divorce its participants from the society it is supposed to be preparing them for.”

The products of this system expressed what the government re-
garded as elitist attitudes in 1966, when some three hundred students at the University College of Dar es Salaam voiced their opposition to participation in the government's plans for a form of National Service which would have enabled them to repay a poor society for the privilege of their own education. This student strike, and the dangers for society that it symbolized, were major factors in turning the leaders' attention to a revision of the educational system. “The events of 1966,” writes President Nyerere, “do suggest, however, that a more thorough examination of the education we are providing must be made.”

There is another facet of the atmosphere of 1966 that is relevant to any consideration of Education for Self-Reliance. The Five-Year Development Plan that was launched in July, 1964, had been based on assumptions about the availability of massive overseas aid to Tanzania. But by 1966 it was clear that much of this aid was not forthcoming, or that it could only be obtained on conditions that threatened the independence and political integrity of the country. It appeared more and more necessary that Tanzania should “go it alone” to a great degree, and the process of reappraisal that followed culminated in the Arusha Declaration of February, 1967. This important statement of policy defines the socialist goal for Tanzanian society to be achieved largely through the self-reliant efforts of its own people and through development of the land. In the words of the Arusha Declaration: “... because the economy of Tanzania depends and will continue to depend on agriculture and animal husbandry, Tanzania can live well without depending on help from outside if they use their land properly. Land is the basis of human life and all Tanzanians should use it as a valuable investment for future development.” Shortly after the publication of the Arusha Declaration, Education for Self-Reliance showed the way in which the schools would contribute to the creation of an agriculturally-based socialist society in Tanzania:

This is what our educational system has to encourage. It has to foster the social goals of living together, and working together, for the common good. It has to prepare our young people to play a dynamic and constructive part in the development of a society in which all members share fairly in the good or bad fortune of the group, and in which progress is measured in terms of human well-being, not prestige buildings, cars, or other such things, whether privately or publicly owned. Our education must therefore inculcate a sense of commitment to the total community, and help the pupils to accept the values appropriate to our kind of future, not those appropriate to our colonial past.
The Neglect of Agricultural Education and its Revival

... It is, however, not only in relation to social values that our educational system has a task to do. It must also 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 upon the efforts of the people in agriculture and in village development.58

This statement takes us back to the first chapter of this essay wherein the vocational aspect of Education for Self-Reliance was examined. The intervening examination of the Provisional Syllabus of Instruction for Middle Schools and the failure of the concept underlying that syllabus would appear to indicate quite clearly that in their endeavors to implement the new educational policy for contemporary primary schools, the Tanzanian educators should take into account the experience of the past. Perhaps indeed they will, for many of the present education administrators and school inspectors were headmasters and teachers in the middle schools of the 1950's, and, furthermore, there are many teachers in the present primary schools who were teaching at these same levels ten or fifteen years ago.
Conclusions

The experience and failure of the experiment in practical education which so dominated primary education in the 1950's holds out many lessons for the implementation of the vocational aspect of Education for Self-Reliance.

In the experiment of the 1950's there were weaknesses in the purely educational implementation of the scheme, and these have already been considered. Future success will depend in part upon avoiding those weaknesses. Certainly much will depend upon the careful preparation of varied syllabuses to meet local needs, upon the quality and frequency of the guidance given to schools, upon the education of future teachers, upon the reeducation of those already in service, and upon the provision of appropriate texts and materials to schools. A great deal of hard thinking and planning and detailed administrative preparation will be necessary, and equally important will be the slow, hard grind of subsequent implementation year by year. It will be several years, and many mistakes, before the results of all the effort will have become apparent. Yet, even when the scheme is successful within the schools themselves, real success will depend upon what happens when the youths leave school; and that, in turn, will largely depend upon factors beyond the control of the Ministry of Education. Too frequently and too easily it is assumed that success within the school will mean success in the transformation of society. The schools alone can achieve little or nothing. Philip Coombs, the Director of the International Institute of Educational Planning, writes:

Even under ideal circumstances, it would be enormously difficult for school systems to instill in their students a set of attitudes, motivations and career preferences that would promote national economic and social development—in defiance of so many family and environmental forces working on individuals and giving them personal inclinations which often run contrary to national aims and needs. In the particular case of the developing countries, the difficulty is all the greater. Their schools, and especially those staffed by teachers who, themselves only a few years away from work on the land, are but one jump ahead of their pupils, cannot all of a sudden unbend the twig already hard bent by the weight of centuries of cumulative tradition and misery.

The 1952 Syllabus was implemented in the teeth of apathy and suspicion which stemmed from the belief that the colonial govern-
ment was deliberately denying to Africans the kind of education which would ensure their progress. No longer do such political factors operate, for Tanzania is now independent, and its government has a fundamentally different relationship with the people it leads. In this regard the situation has changed so radically that some would argue that the popular attitudes and loyalties are so different and so strong that in themselves they are likely to ensure the success of the new policy. Nevertheless, there will be some teachers, some parents, and some pupils who will have to be convinced of the rightness of the new policy. In other words, the success of the vocational aspect of Education for Self-Reliance will partly depend upon the success of its social and political aspects, and upon whether the social goals for Tanzania are accepted with the heart as well as the mouth.

But neither educational efficiency nor political socialization will be enough unless steps are taken to ensure that the primary school graduates are helped and guided once they emerge into the adult world of farmers. It will be necessary to create in the rural village communities those conditions which will facilitate youthful participation in agriculture. The conditions governing the occupation, transfer, and use of land, and the problem of obtaining equipment militated against the success of the experiment launched in 1952; success in the 1960's or 1970's must presuppose the removal of such difficulties, as well as the provision of viable markets for the increasing agricultural products. Success for the youthful graduates from primary schools also presupposes the establishment of really effective agencies for ongoing agricultural education that will take over where the formal primary school course stops. The elaboration of this point falls outside the scope of this essay, but it is persuasively argued in Guy Hunter's monograph Manpower, Employment, and Education in the Rural Economy of Tanzania and figures largely in the report of the Kericho (Kenya) Conference on Education, Employment and Rural Development. In brief, therefore, the third condition for success is the creation of a situation in which youth can effectively participate in communal agricultural development, and be guided in a wider program of integrated rural transformation founded on adult education and agricultural extension work of all kinds.

Finally, and most important, the main lesson to be learned from the experiment of the 1950's is that the success of what is done in the primary schools will depend most directly upon the degree of agricultural development in the rural communities outside the schools. As soon as it becomes evident that a better living, even a marginally better living, can generally be made in agriculture than in the lower grades of employment in the “modern” sectors of the economy, then
it is likely that the attitudes of parents and pupils will undergo an appropriate and beneficial change. Arnold Curtis, in "The Primary System of Education in Kenya with Reference to Employment and Rural Development," makes the point in these words: "The ineffectue study of the subject of agriculture, and the lack of keenness to consider it as a career, are reflections of the way in which agriculture is regarded by the adults of the particular community. When prosperous farmers appear in significant numbers, and there are good farms to be visited near a school, it is reasonable to expect interest in the subject, and effectiveness in the teaching, to rise." 41

However, it may be protested that this whole argument stems from an individualistic attitude towards human motive that runs contrary to the fundamental concept of *Ujamaa*. In President Nyerere's more recent pamphlet of September, 1967, *Socialism and Rural Development*, he expresses concern about the emergence of prosperous individualistic farmers: "The small-scale capitalist agriculture we now have is not really a danger; but our feet are on the wrong path, and if we continue to encourage or even to help the development of agricultural capitalism, we shall never become a socialist state." 42 Instead the road to agricultural development will be through "rural economic and social communities where people live together and work together for the good of all." The emphasis will be against the encouragement of prosperous individual farmers and towards cooperative living. The emphasis will be on the community, communal effort, and cooperative endeavor.

Nevertheless, whether the agricultural organization is a socialist organization or one based on small-scale capitalist farmers, the fact remains that the success of what happens in the schools is directly related to the success of what is happening outside. In other words, it is reasonable to assume that parents, teachers, and pupils in Tanzania will become more convinced of the value of "education for self-reliance" in the schools when they see the communal benefits of self-reliance emerging in the villages and rural settlements. As President Nyerere says in *Socialism and Rural Development*, "The farmers in Tanzania, like those elsewhere in the world, have learnt to be cautious about new ideas however attractive they may sound; only experience will convince them, and experience can only be gained by beginning." 43 The alternative road, both in school and community, is that of compulsion, but in Tanzania the road of compulsion has been rejected.

Given, therefore, the operation of normal human motive in a free society, this paradox still holds: that success in the vocational aspect of *Education for Self-Reliance* depends in the last resort upon
what happens in the adult world of agricultural development. Without development in that area, all the educational activity in the schools, all the political socialization, and all the extension services for youthful farmers, will be of no avail.
Notes

8 All quotations in this chapter are taken from Nyerere, *Education for Self-Reliance*.
9 In East Africa, a village is most commonly a scatter of homesteads rather than a tightly clustered settlement on the Western pattern. Throughout this essay the term is used in its East African sense.
11 *Loc. cit.*
12 *Loc. cit.*
14 *Loc. cit.*
17 Tanganyika, Department of Education, *Provisional Syllabus of Instruction for Middle Schools*, p. 47.
21 Tanganyika, Department of Education, *Provisional Syllabus of Instruction for Middle Schools*, p. 3.
29 Nyerere, Education for Self-Reliance, p. 4.
34 Nyerere, Education for Self-Reliance, p. 9.
35 Ibid., pp. 9 f.
36 Ibid., p. 5.
37 The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance (Dar es Salaam: Publicity Section, TANU, 1967).
38 Ibid., p. 17.
39 Nyerere, Education for Self-Reliance, pp. 7 f.
43 Ibid., p. 21.
Appendix:
The Middle School
Agricultural Syllabus

The agricultural syllabus for middle schools, which appeared in the 1952 mimeographed English version and again in the Swahili version of 1955, attempted to provide detailed schemes of practical agricultural and pastoral work appropriate to all the varied regional conditions of Tanganyika. It gave precise measurements for the demonstration plots for Standards V (Weeding and Spacing), VI (Seed Selection), and VII (Timely Planting and Catch Cropping); it described what was required for the Standard VIII “Model Farm”; it stated the variety of seed appropriate to each area; and it explained in complicated detail how the rotation of crops was to be planned and carried out. It was a brave effort, but it proved to be far too rigid.

Therefore, following the Fuggles Couchman Report of 1956, the Department of Education issued in pamphlet form a new syllabus for practical agriculture which allowed for greater flexibility to meet local needs and which restricted the cultivation of demonstration plots to Standard V only, while Standards VI–VIII worked on the “Model Farm.” This new and more flexible syllabus was followed from 1957 onwards and was incorporated in the Provisional Syllabus of Instruction for Middle Schools of 1959. It is reproduced here in full.

Natural Resources Instruction

Owing to the great variations in conditions throughout Tanganyika details of the schemes contained in this syllabus will vary from one locality to another. The teacher concerned must consult the local Agricultural or Field Officer of the Department of Agriculture, who will, in consultation with other members of the District Council Natural Resources Team where available, submit detailed proposals for the approval of the provincial representatives of the Agricultural, Education, Forest and Veterinary Departments. This syllabus lays down the broad lines of instruction both practical and theoretical to be given in natural resources subjects but it will be necessary to adapt the details to the suitability and needs of local conditions. These broad lines are:

Standard V.—Demonstration plots will continue the teaching of specific lessons which follow on from the Primary School syllabus. These demonstrations will be selected from the following:
Spacing
Seed Selection
Timely planting
Catch cropping

Where applicable, plots demonstrating disease resistance or other quality of particular varieties of crop may be included, but these Standard V demonstrations will normally be limited to the three most important lessons required by local conditions in the area in which the school is situated. The size of these Std. V demonstration plots will be governed by the amount of land available to the school and the requirements of the school demonstration farm including the forestry section. Preferably the plots should not be less than 30 yards by 20 yards.

Standards VI, VII and VIII.—These classes will be responsible for the working of the school farm which, by integrating all the separate lessons taught from Standard I onwards, will teach the pupils the best form of land usage including cropping, animal husbandry and forestry for the particular piece of land allocated to the school, and show as far as possible that an average holding properly managed, will bring in a good living.

Both in the Standard V plots and in the farm the crops to be grown, the trees to be planted and the stock to be kept will be decided in consultation with the local Agricultural or Field Officer of the Department of Agriculture, who will take the advice of the local representatives of the Forest and Veterinary Departments with regard to trees and stock. In general, the crops to be grown and the trees to be planted will be confined to those most important in and best suited to the area.

(a) In planning the farm, the Agricultural or Field Officer will take into account the acreage of the arable land farmed by the most energetic farmers on neighbouring farms, and to this should be added an allowance for fallow grazing (if applicable), farm buildings, vegetable plots and tree plantations. The area of land to be farmed by the school should correspond approximately to this figure. The total figure will vary considerably from area to area and it will not always be possible to find sufficient land at the school for this purpose. In such cases a smaller area should be laid out and where land is extremely short work should be concentrated on the best local cash crop and its husbandry carried out in the greatest possible detail, e.g. coffee in such closely settled areas as Kilimanjaro. However, where sufficient land is available the full acreage corresponding to the best local usage should be laid out. If stock is to be kept, the carrying capacity of the grazing land should be ascertained and, making allowance for fallow grazing and stover, the appropriate number of stock units can be calculated.

(b) Soil conservation measures, where necessary, will be planned by the local Agricultural or Field Officer and constructed by the pupils.
(c) The grazing area should be divided up into paddocks by means of hedges and natural features, such as gullies, incorporated in this planning.

(d) The necessary farm buildings should be sited and erected.

(e) Where land is available adequate provision should also be made for small fuel and pole plantations, these being so sited as to provide wind breaks and shelter for stock and should be integrated into anti-erosion measures. These plantations will form the basis of the practical work of the Forestry syllabus.

(f) The implementations of any farm must await the approval of the local representative of the Agricultural Department who will be a member of the District Natural Resources team where one is in being. It is impossible to give details of farm planning in this syllabus as conditions throughout the Territory vary enormously and each separate Middle School farm must be planned individually on the ground. While the following examples illustrate what might be the result of planning under certain conditions, they must not be taken as plans which can be applied under all similar conditions.

Example A.

(a) The average arable acreage of neighbouring farms was found to be 4½ acres. To this must be added a fallow allowance of 2½ acres, say 25 acres of grazing, plus ½ acre for farm buildings and vegetables, and 2 acres for tree plantations giving a total of 34½ acres.

(b) If the land will carry one stock unit per 2½ acres with due allowance for stover, and 25 acres of permanent pasture plus 3 of temporary ley are available, then the farm will carry a total of 14 stock units which could consist of—

1 bull
2 work oxen
4 milk cows
3 young cattle
5 sheep
5 goats
5 young sheep and goats.

(c) With an adult herd of 9 stock units, paddocks of approximately 3 acres each would be suitable.

(d) Simple but improved local types of farm buildings will be constructed.

(e) The selected crops, sorghum, millet, cotton, maize, groundnuts, cassava, cowpea and gram, must be arranged into a suitable simple rotation:

Seven fields of 1 acre each as below:
(1) Sorghum and Millet ½ acre each
(2) Cotton manured
(3) Maize interplanted with groundnuts
(4) Cassava interplanted with cowpeas and gram
(5) Cassava carrying on from (4) and reverting to ley (6)
(6) Ley
(7) Ley

(f) The two acres allocated to trees need not and indeed probably will not be in one compact unit. Small blocks should be planted along the windward side of each pasture, as a shelter belt for the homestead and in any particular situation where they will help soil and water conservation.

Example B.

A Middle School on Kilimanjaro with only 2 acres of land available in addition to ¾ acre for the Standard V plots, should concentrate mainly on coffee growing with a smaller bananas section and a vegetable garden in which many basic lessons can be taught on a miniature scale. A possible division would be—

¼ acre vegetables
¼ acre trees
¼ acre bananas
¼ acre coffee nursery and area for compost making.
1 acre coffee plantation in which the greatest possible detail of all operations for the best management of that crop will be carried out.

Example C.

Where cattle cannot be kept the problem is more difficult as manuring on a fairly wide scale will be impossible, though in some cases small quantities may be produced from poultry units or compost heaps sufficient at least for the vegetable gardens.

In such a case the other methods of increasing or at least maintaining fertility must be employed to the full e.g. rotation and intercropping. A possibility might be:—

1 year maize interplanted with legumes.
2 Cassava carry on into 3
3 Ley
4 Ley
5 Grain
6 Groundnuts
7 Ley
8 Ley

the leys to be planted or tumbledown according to local recommendations.
NATURAL RESOURCES

STANDARD V

The following summary includes, as far as practicable, alternative lessons for all classes in all the Natural Resources subjects. It is emphasized that all these sub-divisions will not be taught in every school. The representative of the Agricultural Department will adapt this syllabus to local conditions by deleting those sections which are not applicable. The teachers concerned will then follow only those parts which have been approved. For example, in a non-cattle area, all references to cattle in both the theory and practical sections will be deleted.

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<thead>
<tr>
<th>THEORY</th>
<th>PRINCIPAL</th>
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<tbody>
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<td>Agriculture and Animal Husbandry</td>
</tr>
<tr>
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<td>Revision of methods of cultivation, weeding, manuring and rotation.</td>
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<tr>
<td>2. Direct forest values.</td>
<td>Crops.</td>
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<td>3. Nursery work. Raising of transplants.</td>
<td>(a) Reasons for: Spacing Timely planting Catch cropping.</td>
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<td>4. Bee-keeping.</td>
<td>(b) Explanation of: Disease-resistance and characteristics of special varieties.</td>
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<td>Vegetables. Local vegetables to be specified by local Agricultural Department. Animal Husbandry. Dairying or beef production.</td>
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## STANDARD VI

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<td>Husbandry</td>
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<tr>
<td>policy</td>
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<tr>
<td>2. Work of Forest</td>
<td>2. Recognition of local useful trees and</td>
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<tr>
<td>Department</td>
<td>collection of forest produce (gum, etc.).</td>
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<tr>
<td>3. Forest Reserves,</td>
<td>3. Assist in arable work on School farm.</td>
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<td>plantations and</td>
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<td>land utilization.</td>
<td>Poultry keeping, using methods suitable for</td>
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<td>4. Uses of local trees.</td>
<td>area.</td>
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<td>5. Pig keeping (where applicable).</td>
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<td><strong>Forestry</strong></td>
<td><strong>Agriculture and Animal Husbandry</strong></td>
</tr>
<tr>
<td>1. Planting of fuel and pole plantations.</td>
<td>1. Crop husbandry of crops grown on farm but not dealt with in VI including pests and diseases.</td>
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<td>2. Direct sowing of trees in (1).</td>
<td>2. Farm implements and their care.</td>
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<tr>
<td>3. Tending of plantations.</td>
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</tr>
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<td>5. Silvicultural notes on local trees grown.</td>
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## STANDARD VIII

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<td><strong>Agriculture and Animal Husbandry</strong></td>
</tr>
<tr>
<td>1. Indirect value of forests, emphasizing climate, water supplies and soil conservation.</td>
<td>1. Farm Records and Accounts.</td>
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<td>2. Effects of wholesale forest clearance.</td>
<td>2. The financial benefits of good farming.</td>
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<td>4. Natural Regeneration (1) Coppice and pollarding (2) Burning (Black Wattle).</td>
<td>(b) Maintaining Animal health.</td>
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Bibliography


